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Thomas Wunder *Editor*

Rethinking Strategic Management

Sustainable Strategizing for Positive Impact

Springer

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To our children

Foreword by Pratima (Tima) Bansal

What Is Sustainable Development in an Age of Disruption?

I began my sustainability journey in the 1990s when I was completing my doctoral work at the University of Oxford. It was the very early days of sustainability and not yet a movement. What was most remarkable about its discussion in business schools was that there was so little. Most business school professors often assumed sustainable development was antithetical to business or simply irrelevant.

Those of us who were talking about sustainability often simply used the same words and applied the same logic of corporate social responsibility and corporate strategy. Managers and academics alike argued that corporations should pursue sustainable development because it was the "right thing to do" or to deflect stakeholder backlash. In these early days, I conceptualized sustainability as the three pillars (social equity, environmental integrity, and economic resilience) or the triple bottom line (social, environmental, and financial performance). Even though many scholars argued that there is a business case for sustainability, most business school lecturers and managers treated it often as an afterthought.

A decade later, in the early 2000s, I felt I was finally "getting" sustainable development. I felt I understood why corporations were marginalizing sustainability—it was because they did not see the importance of time, space, and scale. Corporations tried to minimize time, expand space, and grow scale. In other words, they were trying to be faster, global, and bigger. It was clear to me that this pursuit of fast international growth would ultimately lead to the collapse of the Earth's systems. I have spent the last 15 years trying to understand how we can introduce the dimensions of time, space, and scale more fully into business thinking and practice.

And, then everything changed.

We now live in a world of disruptions. The pace of change is unprecedented, so the changes are deeper, wider, and more unpredictable than ever before.

When speaking of disruptions, most people immediately think about technological disruptions. Humankind has developed such powerful computers and such expansive connectivity that the world of science fiction is becoming scientific realities. Technology through artificial intelligence, 3D printing, and genomics is infusing how we learn, what we know, what we do, and how we grow.

But these disruptions are more than digital. They include challenges to our social institutions through the rise of populism, weather events propelled and amplified by climate change, and vast numbers of people moving across borders. They are not only disrupting organizational processes but entire systems. To survive and thrive, organizations need to manage turbulence in financial markets, new competition from unexpected places, shifting customer preferences, unanticipated stakeholder demands, and disruptions in supply and infrastructure because of weather events. Business operations that have long been taken for granted are being turned upside down.

It is not clear if these disruptions will make it easier or harder for sustainable development. Will technology make food more plentiful and clean water more accessible, or will it concentrate power and wealth in the hands of a few people, thereby aggravating income inequality and potentially political unrest? Will climate change displace only those people who do not have resources or means to escape weather events? Will trusted social institutions, such as governments, start shaping what is researched, what is reported, and even what is "truth" in order to serve their own interests, or will they protect society's interests?

The question then is: how can corporations operate along the principles of sustainable development in a world in which business systems are continuously disrupted? I believe that businesses, more than ever, need to build *dynamic* capabilities—the ability to learn, innovate, and adapt—in order to navigate through this turbulence. For example, as industry and consumers transition away from fossil fuels, oil and gas companies should think about non-energy uses for oil, such as reusable plastics, or treating their waste as feedstock for other processes, such as the minerals in the toxic sludge of tailings ponds.

However, these capabilities require organizations to see their problems and potential solutions in new ways. Finding these solutions is not easy, as incumbents tend to be locked into old ways of seeing. Dialogue and collaborations, even with unlikely bedfellows such as competitors or activists, can help overcome these challenges by innovating new solutions and achieve better outcomes. The circular economy, for example, is an elusive ambition and can only be achieved through dialogue and with collaboration.

Businesses can either stand off on the sideline and watch this social-economic-environmental tsunami approach, or they can learn new skills to create new forms of value for themselves and a better world. The aspiration of this book is to provide

today's and future's practitioners with actionable guidance on how to master these challenges and find solutions that shape the future and benefit both organizations and the broader systems.

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Foreword by John H. Grant

Strategists, Planet Earth Needs Creative and Proactive Leaders Now!

The context of business and public policy is currently experiencing dramatic shifts in technology, human values, ecological and social conditions, as well as national economic situations; so those leaders who are responsible for organizational strategy must be prepared to explore a variety of new concepts, values, and frameworks to create the ones best suited for their companies during the years ahead. Many executives have missed opportunities to catch a new wave of responsible leadership by failing to recognize the importance being attached to *sustainable strategizing*. This book is organized to assist readers in developing both a broad overview of contemporary organizational strategy and an in-depth understanding of key ecological and social trends and opportunities.

While reading various contributions in this volume, I was reminded of my early days as a doctoral student at the Harvard Business School, as I was transitioning from life as a CPA (similar to Chartered Accountant) doing tax and audit work to that of a corporate strategy researcher, i.e., from mental models based on financial numbers to those built around economic concepts, human behavior, and competitive environments. In 1977, my academic base at the University of Pittsburgh hosted a conference that led to the founding of the Strategic Management Society—another big transition in my understanding of strategic environments, but the natural and physical elements of the economic ecosystem were still largely missing. Strategic management today needs a similar kind of "rethinking" in terms of sustainability as it was the case about 40 years ago with regard to strategic sense-making. Five years *after the 1977 conference*, I had the privilege of serving as a Visiting Professor at IMEDE (now, IMD) in Lausanne. Then the focus was on globalization, tech transfer, and financial inflation; however, glaciers in the Swiss Alps, Himalayas, and North American Rockies then seemed static and secure, but no longer!

During a break from academics around the turn of the century, I analyzed many aspects of business that are not captured in most contemporary financial statements or strategic plans. Within the pharmaceutical industry, the overprescribing of antibiotics and "weight loss" pills were immediate examples, and the disposal of thousands of plastic bottles per day was a more "visible" ecological debt for others to pay. When I returned to academic work, I was asked by the B-school Dean of a major university to participate in the development of an MBA-type program which would bridge the natural sciences and social sciences more systematically than some "green business" certificate programs which had begun to emerge. This year-long process involving faculty from several disciplines examined many of the "externalities" of businesses, including physical damages as well as societal effects across cultures. At about the same time, I wrote a couple papers underscoring the need for much more robust frameworks and scoring systems for organizations in the twenty-first century. Both of these experiences furthered my understanding of organizational effects on the Earth's biosphere. Today, such considerations need to be on the agenda of strategy practitioners who seek to make their organizations fit for the future.

Traditional strategic management frameworks typically encompass internal operations (Scope 1) and the competitive arena (Scope 2), but they seldom incorporate the "externalities" or social and environmental systems which more contemporary analysts would prefer to include as Scope 3 factors, e.g., greenhouse gases (GHGs), social impacts on public health, and notions of community well-being. Just as the value of a firm's software product can decline by 90% with a competitor's introduction of an improved offering, so can a judge or jury's determination of "who knew what and when?" in a major class action judgment capture the sentiments of changing public values regarding "carbon debt," just as they have regarding tobacco products, asbestos, drug abuse, etc. By the time a "triggering event" occurs that alters public sentiment regarding a business practice, it is often too late to take preventative actions, and remedies can be very expensive.

Today, many of the challenges are essentially invisible to the "naked eye." The potent GHG methane (CH_4) is unobservable to humans, but highly visible to both ground and satellite-based chemical detection equipment in Europe, Japan, the USA, and others. Because many GHGs, most notably CO_2, in the atmosphere persist for decades (like heat in the oceans), the time for managerial leadership and action is now! Although the "winds of government policy" often shift emphases every few years, the memories of customers can be very long, as Ford Motor Company (negative), Patagonia and Interface (positive), and others will attest. At a more macro-level, many analysts and commentators are openly questioning how well "Western capitalism" has served society since World War II.

The painful reality is that for most modern economic systems, the "financial numbers" capture only about one-third of the *real* economic activity (not merely "inflation adjusted"), the remaining two-thirds comprising off-the-books assets, e.g., the atmosphere, sea lanes, fertile soil, rainfall, social and political institutions, or

liabilities like contaminated waters, ambient air, and political instability. As we have seen with many examples such as social media companies, consumer and investor "values" can change very rapidly. Corporate executives who do not factor in the current ecological and social realities (Scope 3) into their strategies are either neglecting major business risks or missing tremendous business opportunities, both affecting their viability.

Presently, the term "sustainability" implies many different concepts in various contexts. For the purpose of this book, the term means much more than simply "financial viability"; it encompasses the entire biophysical system surrounding the firm and its many stakeholders, both locally and globally. Executives of today need to understand that water is a very scarce resource in many parts of the world, biodiversity is threatened on land and in the seas, and human climate refugees are moving by the millions on most continents of the globe. On the other hand, leaders with foresight around planet Earth have recognized that thousands of opportunities for assuring a flourishing future abound.

Thomas Wunder has drawn upon his years of consulting and academic backgrounds to identify contributors with special experiences for this volume. Having spent significant portions of his professional career on each side of the Atlantic, Thomas has a deep understanding of decision making in both private and publicly held firms. From practitioners with specialized successes in particular organizations to academics with a deep understanding of the development of sustainability within management, he has clustered their contributions in complementary sections for focused reading and reference.

This book builds on strong foundations developed by the pioneers like D. Meadows from the Club of Rome to Rachel Carson to the many others from various parts of the globe who have helped develop ideas and momentum for sustaining the Earth and civilization. In addition, research from J. Rockström's group at the Stockholm Resilience Center, J. Hansen (retired from NASA), diverse experts from the Potsdam Institute for Climate Impact Research, K. Anderson and the Tyndall Centre, the leadership of N. Stern and colleagues, the writings of C. Henry and L. Tubiana, the *Drawdown* analyses assembled by P. Hawken and dozens of diverse experts, the *Doughnut Economics* by K. Raworth, the corporate and government leadership of M. Bloomberg, A. Gore and the "radical industrialist" R. Anderson, as well as *the Natural Step* methodologies of K.-H. Robèrt developed over 30 years have advanced our collective thinking. Much of their work is addressed and linked to strategic management in various chapters of this book, knowing that such a list can never capture all of the thinkers in this area.

Test your sense of the global challenges ahead and what they mean for your business. Will the global human population in 2100 be ~11 billion or ~2 billion? How might we reach either number? By collaboration, by catastrophe, or by a miracle? The urgency for large-scale corporate action to minimize the negative effects and provide positive impact is tremendous. These notes are intended to be stronger than one might normally write in a Foreword, but milder than my honest

assessments of the coming years. In summary, executives in the early twenty-first century have great opportunities and great responsibility at the same time. As multiple contributors to *Rethinking Strategic Management* have noted, society expects innovative, forward-looking managerial actions today, so that posterity will be able to continue rewarding such actions for the decades ahead!

John H. Grant

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Preface

Sustainability today is very different from what it meant only a few years ago. Today, leaders of significant business enterprises around the globe have major opportunities to change the course of civilization. More and more companies are aligning their purpose with global needs of society, major investors are requesting such commitment from their clients, and consumers as well as employees are increasingly embracing this new business imperative. Given the current state of the planet, now is not the time for a "deceleration parachute" or a moral finger-pointing exercise to slow businesses. It is time for a "boost engine" to go faster in a sustainable direction which will not limit but rather expand the scope of corporate strategic actions. This book offers innovative ways and frameworks for *sustainable strategizing* to advance business by scaling up its positive impact, which is so urgently needed at this time in the twenty-first century.

Strategists have been dealing with foresight activities to identify early indicators or "weak signals" for upcoming discontinuities in their operating environments for a long time. Today, socio-ecological variables provide us with *strong signals* and overwhelming evidence of systems disruption that requires strategic responses and initiatives of companies. The magnitude and scope of current sustainability issues are not only a societal but also a significant business concern in terms of both opportunities and threats. Being nested in social and ecological circles, the economy, organizations, and individuals cannot escape a deterioration of these environmental layers in the long run. Strategy practitioners need to rethink their approach to strategizing in order to either effectively deal with this new disruptive market situation or play an active role in transforming the market toward a sustainable future.

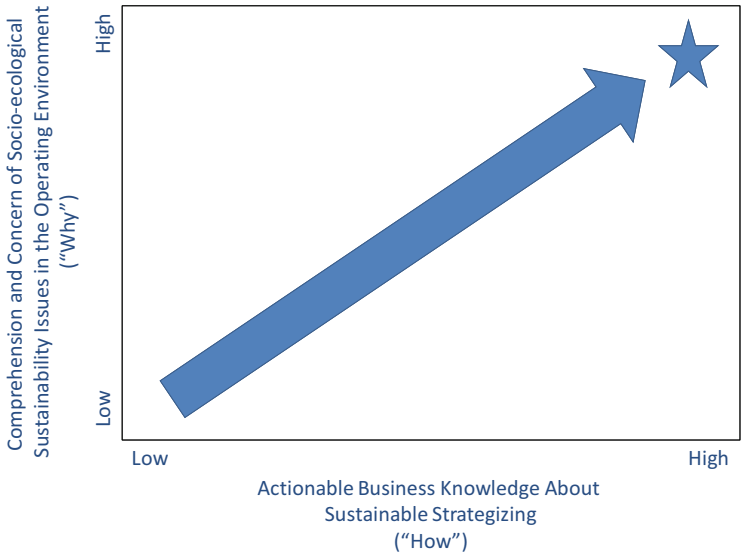

Fig. 1 Aspiration of the Book: Enhance the "Why" and "How" of Sustainable Strategizing

Rethinking Strategic Management has been written for business leaders, strategy practitioners, and all corporate decision makers who want to improve their level of *comprehension and concern* of why sustainable strategizing is important in today's business world and seek *actionable business knowledge* they can apply in their companies. A major objective of this book is to move readers from wherever they are on the 2-dimensional space illustrated in Fig. 1 toward the upper-right area. Strategists may put a "push-pin" into this matrix that will mark the intuitive position of their firm. The book will help them to propose a path to get their organizations to the upper-right corner as fast as possible in order to shape a thriving future for both business and society. Some organizations need to develop more skills first, others will need to start with developing a better understanding of their socio-ecological operating environment, and some can do both simultaneously.

The book is also written for students of management who are on their way to becoming practitioners. I have no doubt that these future business leaders will embrace sustainable strategizing as they are the first generation in the twenty-first century that will most likely be worse off than their parents with regard to the socio-ecological issues they will be facing. Prior to starting their careers, they will know that humans now represent a force of nature so powerful that it undermines the ability of our life-giving Earth systems to support human development, which has caused the Earth to enter a new geological epoch called "Anthropocene." To further their strategic thinking and skills, the book can be used as a supplement reading text by professors of strategy, sustainability, or other disciplines who are looking to enhance their traditional management textbooks with sustainable strategizing approaches in their courses.

An owner of multiple companies asked me a few years ago at a strategy conference about my current research projects. After I mentioned this book, he replied "sustainability is out." He said it is "taken care of by sustainability and CSR departments and has been embedded in operations since the 1990s." Technologies such as digital, artificial intelligence, 3D or 5D printing, nanotechnology, as well as bio- and neurosciences are at the very top of the CEO agenda today, he stated. This business leader was not aware that sustainable thinking today is not the eco- and socio-efficiency of yesterday. As the multidimensional challenges of the twenty-first century such as climate change, resource scarcity, food insecurity, losses of biodiversity, inequality, financial instability, and human mass migration are bigger than ever with news almost every day, corporate managers, shareholders, and strategy scholars alike are confronted with two tremendous challenges. On the one hand, they are facing these evolving sustainability realities which are threatening our natural and social life-support systems. On the other hand, there are unprecedented technological developments that could either help to solve these issues or create even more damage for our society and nature. Much will depend on how these technologies are owned, used, and governed. Both developments and their interdependences need to be considered at the same time to realize business opportunities while crafting a desired future and ensuring business, human, and biosystem viability. What we need is thriving business activity that does not threaten but cherish, restore, and regenerate the socio-ecological systems that support quality human life on the planet.

Sustainability is *not* "out" but very different from what it meant only a few years ago. We have already crossed four of nine "planetary boundaries" as a result of human activity and are facing severe shortfalls in our social foundations. The current state of the world, if we do not change how we see things and do things, will continue on its fatalistic path for our children and grandchildren. Human thriving, even at current population levels, depends on planetary thriving, which both can be positively impacted by thriving business as corporations are the most powerful institutions across most parts of the globe. Business people can make a huge difference in moving toward a sustainable world if they consider the greater society and the limits of nature when crafting strategies, designing business models, and ultimately deciding what to produce, how to produce, and how to distribute it. If they don't lead the way toward scalable solutions for a sustainable world, there might be no solutions.

Having been a strategy consultant, strategy practitioner, and business leader myself, I am fully aware of the powerful passion and problem-solving capabilities corporate managers are able to offer. However, much strategy practice in companies today is still based on the assumption that unlimited economic growth on a finite sphere is both possible and desirable. It still reflects notions of intense rivalry instead of collaboration, embraces the idea of instrumental stakeholder management to achieve business goals, and applies strategic sense-making approaches without any society-oriented pre-analytic vision or worldview. I am optimistic that strategy practitioners seeking guidance for more sustainable strategizing toward a thriving future are open to a new kind of thinking. They will embrace new approaches beyond the dominant neoclassical closed-system paradigm, degenerative linear industry model, and shareholder value myth of the past.

To make this very clear: it is not the intention of this book to preach to experienced practitioners or future leaders in business schools how to do their current or upcoming jobs. Instead, it brings together some of the best emerging ideas and *offers* them new and maybe unconventional approaches for crafting and executing strategies that are required to thrive in the twenty-first century—for business organizations and ecosystems, our society, and our natural environment—all embedded and interdependent. It is my hope that strategic thinking of current and future executives who have the power to make a difference will be enhanced with these ideas. Most of my business career, I have supported these executives to improve top- and bottom-line growth in their organizations. After transitioning into academia in 2010 to become a strategy professor, I broadened my understanding of the issues I have tried to articulate in this Preface and the kind of short-term pressures that sometimes traps business leaders. One of the results of this ongoing effort is the publication in hand.

This book has been developed through the passions of many authors, who were tremendously engaged in providing contributions for *Rethinking Strategic Management*. Using the words of Sandra Waddock, I consider many of them to be "intellectual shamans," i.e., management academics and practitioners who want to make a difference in real life. Each of them is in a position to offer meaningful advice to corporate strategists today. I feel deeply grateful about this valued community of authors, and it has been an honor for me to orchestrate and integrate their valuable ideas that have also furthered my thinking. The chapters have gone through a double-review process with regard to both managerial implications and academic foundations. I appreciate the opportunity to make these ideas available to practitioners, scholars, and students around the globe with the help of the publisher, Springer Nature.

Sustainable strategizing requires comprehensive sense-making and unconventional strategic thinking because the problems to be tackled are complex and multifaceted. No single chapter will be sufficient for full comprehension of the issues and the management approaches needed to solve the related problems. Instead of providing practitioners supposed "solutions," it is my hope that the composition of the various perspectives will help readers to enhance their comprehension in strategic thinking and to develop and implement their own answers for sustainable strategizing toward a thriving future for both business and society.

Neu-Ulm, Germany Thomas Wunder

Acknowledgements

This book was a team effort of various individuals. Some of them contributed directly through writing chapters and forewords while others supported it indirectly. I am grateful to all of them and would like to acknowledge their invaluable support in realizing a book of this quality on such a relevant topic.

First and foremost, my heartfelt thanks go to the various chapter authors in this book. All of them are leading experts in their particular fields and have been tremendously engaged and committed despite their individual projects and tight schedules. Their valuable contributions and sacrifices are greatly appreciated. I feel deeply honored for the opportunity to exchange ideas and learn from such an elect group of people. I consider many of them to be intellectual shamans, i.e., management academics and practitioners who share the same passion of making a positive impact in real business life through offering their ideas, conceptions, and experiences.

I feel very grateful to Jean Garner Stead and W. Edward Stead who were pioneers in linking strategy to sustainability. As founding members of the Organizations and the Natural Environment (ONE) Division of the Academy of Management in the mid-1990s, they were part of a group that provided legitimacy and impetus for hundreds of others to link global natural physical sciences to corporate behavior. I feel fortunate to follow this path with my book. Their chapter along with their inexhaustible inspiration and ongoing expert advice is deeply appreciated.

Another special thank you goes to John H. Grant who not only supported me as foreword author and reviewer but also offered invaluable advice and strong encouragement during the completion of this book. I feel sincerely grateful and fortunate for the opportunity to receive such constructive and kind mentoring from one of the 1977 founding members of the Strategic Management Society. He greatly furthered my thinking and gave me both impetus and momentum, which I will be able to draw on for a long time.

I am also grateful about the inspiration and corresponding foreword I received from Pratima (Tima) Bansal. Her perspective of looking at sustainability in terms of systems disruption is foundational for this book and makes it even more relevant for strategy practice.

My special thanks go to the two series editors René Schmidpeter and Samuel O. Idowu for their continued passion and engagement in facilitating a broad global discussion about business and society. I am very grateful that René approached me a few years ago with the idea to edit a book on linking strategy and sustainability, which turned out to be such a gratifying project for me.

The Neu-Ulm University of Applied Sciences (HNU) provided a conducive environment and outstanding institutional support to make such a book project happen. I would like to particularly thank the University Executive Board and the Dean of the Department of Business and Economics.

I would also like to thank my superb publishing editor, Christian Rauscher, and his colleagues at Springer. He supported this publication not only with his profound professional experience but also with valuable personal advice. His confidence and flexibility are deeply appreciated.

Furthermore, I would like to express my acknowledgement to the leaders of Horváth & Partners Management Consultants who provided me the opportunity to become a strategy expert and small business leader. For over a decade they engaged me in numerous strategy projects, supported my doctorate program, and encouraged me to publish, which enabled me to transition to academia in 2010.

Knowing that such a list of acknowledgements can almost never capture all supporters, I am grateful to all the people who helped to make this book project happen both intellectually and technically.

Last but definitely not least, I would like to take this opportunity to express my sincere appreciation and apology for the great sacrifice editing this book has meant for my wife and my family. I dedicate this book to our two precious children. May they have a thriving future.

Contents

Editor

About the Editor

Thomas Wunder spent more than a decade of his career as a strategy consultant and business leader for Horváth & Partners Management Consultants in both the EU and USA where he was in charge of operations for 6 years. He was associated with the Balanced Scorecard Collaborative (BSCol) in Boston and its thought leaders, Harvard Business School professor Robert S. Kaplan and David P. Norton. Later he became an affiliate of the North Highland Company in Atlanta, where he helped to build Cordence Worldwide, a large-scale global alliance of local consulting firms with over 2800 experts in more than 65 offices today. In all these years, Thomas supported executive leadership teams of MNCs improving their strategy processes at various organizational levels to drive top and bottom line performance.

In 2010, Thomas transitioned to academia as a full professor of Strategic Management at the Neu-Ulm University of Applied Sciences in Bavaria, Germany, where he is leading the Master of Advanced Management program. Since then he has dedicated his research, writing and teaching to the integration of corporate strategy with sustainability, which is summarized in his book *Essentials of Strategic Management. Effective Formulation and Execution of Strategy* (2016). He also edited the practitioner-oriented German book *CSR und Strategisches Management* (2017) for Springer and has published a number of articles and book chapters. Thomas seeks to provide current and future business leaders with practically actionable and impactful science-based knowledge for strategizing toward a thriving future for both business and society. Knowing that a great portion of strategies fail due to poor execution, he puts special emphasis on the translation of strategies into action, both in regional and international cross-organizational settings.

Thomas has taught strategy at various globally recognized universities. He has spoken at international academic conferences, including *Strategic Management Society (SMS), Academy of Management (AOM),* and *Sustainability, Ethics and Entrepreneurship (SEE)* as well as a number of practitioner-oriented symposia. Thomas received his doctorate in the field of Strategic Management from the European

Business School (EBS) in Germany. He earned a master's degree in Business Management and Industrial Engineering (Dipl.-Wirtsch.-Ing.) studying at the University of Kaiserslautern (Germany) and the University of Birmingham (England). Thomas lives with his wife and two children in the Alpine foothills of Southern Germany.

Chapter 1
Mindsets for Linking Strategy and Sustainability: Planetary Boundaries, Social Foundations, and Sustainable Strategizing

Thomas Wunder

1.1 Introduction

Thirty years have passed since the United Nations World Commission on Environment and Development (WCED) released its report titled "Our Common Future," also known as the "Brundtland Report." Signed by commissioners from 21 diverse countries, this document presented a major landmark in the evolution of sustainability considerations.[1] In this "global agenda for change," as it was labeled in the Chairman's Foreword, the business community was considered a leading change agent for sustainable development (WCED, 1987). Since then, the link of strategy and sustainability has come a long way both in business practice and academia. Today we know that companies' social and environmental engagements are not only important contributions to sustainable development, but participating companies can improve their own competitiveness along various dimensions (Eccles, Ioannou, & Serafeim, 2014; Flammer, 2015; Flammer & Bansal, 2017; Orsato, 2009; Ortiz-de-Mandojana & Bansal, 2016; Porter & Kramer, 2011; Willard, 2012).

Over the last decades, the operating environment for business enterprises around the globe has become more challenging both in terms of increased volatility, uncertainty, complexity, and ambiguity (VUCA), which makes it certainly harder to assess, and in terms of sustainability. We have already crossed at least four planetary boundaries (Rockström et al., 2009; Steffen et al., 2015) and are facing severe shortfalls in our social foundations as specified in the United Nations 2015 Sustainable Development Goals (United Nations, 2015). Consequently, sustainability today

[1] An earlier milestone was the reports to the Club of Rome (Meadows, Meadows, Randers, & Behrens, 1972; Meadows, Randers, & Meadows, 2004); see also http://donellameadows.org/. For other classics that deepened and broadened the concern for sustainability, see Rome (2015).

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is very different from what it meant only a few years ago. Humans now represent a force of nature so powerful that it undermines the ability of our life-giving Earth-systems to support human development. This has caused the Earth to enter a new geological epoch called "Anthropocene" (Crutzen, 2002; Kolbert, 2014; Steffen, Crutzen, & McNeill, 2007; von Weizäcker & Wijkman, 2018).

At the same time, business conduct has become more transparent to a broad set of stakeholders around the globe. Investors, customers, and other groups in and beyond a business ecosystem are increasingly demanding that companies manage their impacts and make effective contributions to sustainable development. All this makes sustainability highly relevant for strategic decision makers in practice (Accenture & UNGC, 2014; Bové, D'Herde, & Swartz, 2017; Gyori et al., 2018; Havas Worldwide, 2016; Kiron et al., 2015, 2017; Unruh et al., 2016; WBCSD & BCG, 2018a, 2018b).[2]

Looking at the academic community, embedding sustainability in strategic management has been debated for quite some time among scholars (Engert, Rauter, & Baumgartner, 2016).[3] Furthermore, it has been extensively addressed in contemporary management literature particularly in the last two decades[4] and it is captured in a variety of specialized textbooks (Chandler, 2017; Stead & Stead, 2014; Weybrecht, 2014).

Despite all this practical relevance and academic interest as well as numerous institutional commitments to policy goals around the world, sustainable business conduct is not reflected in the current state of our socio-ecological systems (Howes et al., 2017). Dyllick and Muff (2016: 157) state a "big disconnect" when they refer to this "discrepancy between micro-level progress and macro-level deterioration." Acknowledging the same gap, Hoffman (2018: 35) argues for a next phase of business sustainability: "Sustainable business is reaching the limits of what it can accomplish in its present form. It is slowing the velocity at which we are approaching a crisis, but we are not changing course." In other words, if the corporate world does not rethink strategic management and change how it sees things and does things, then we are at high risk that the socio-ecological systems conditions which support human life will be further deteriorated (Ehrenfeld, 2008; von Weizäcker & Wijkman, 2018).

[2] See also Chap. 3.

[3] Exemplary research papers dealing with the link of strategy and sustainability include Bansal and DesJardine (2014), Barnett and Salomon (2012), Carroll, Primo, and Richter (2016), Davies and Walters (2004), Elkington (1994), Grant (2007), Hart (1995), Hart and Milstein (2003), Kaul and Luo (2018), Kolk and Pinkse (2008), Lowitt (2014), Mackey, Mackey, and Barney (2007), McWilliams and Siegel (2011), Neugebauer, Figge, and Hahn (2016), Russo (2003), and Shrivastava (1995a, 1995b).

[4] Exemplary management books dealing with the link of strategy and sustainability include Anderson and White (2009), Elkington and Zeitz (2014), Esty and Winston (2006), Gleeson-White (2015), Jones (2017), Kane (2010), Lazlo and Brown (2014), Leleux and van der Kaaij (2019), Lenox and Chatterji (2018), Mackey and Sisodia (2014), Makower (2009), Marcus (2015), Phyper and MacLean (2009), Raworth (2017a), Sroufe (2018), Szekely and Dossa (2017), Werbach (2009), and Willard (2012).

One of the reasons for this disconnect might be that making societal contributions while simultaneously creating economic value takes real imagination as well as unconventional approaches and mindsets towards business strategy. This includes managerial mindsets regarding classic issues of strategic management, such as notions of competitive strategy and competitive advantage, but also—more or less obvious and deliberate—social and ecological issues and how they relate to strategy and thus ultimately to business performance (Hahn, Preuss, Pinkse, & Figge, 2014; Stubbs & Cocklin, 2008). Without the corresponding mindsets (e.g. seeing sustainability as a business opportunity or even purpose rather than an obligation), strategists will be struggling to craft symbiotic strategies that integrate economic, social, and ecological performance drivers and make effective contributions to sustainable development. They may not be aware of, or embrace, corresponding theories, methods, and best practices as reference points from their competitive environment (Haugh & Talwar, 2010).

Corporate leaders may be agnostic about specific scientific insights (Tyson, 2017), still embrace managing for shareholder value (Stout, 2012), buy into the idea of endless growth (Higgs, 2014), or be unconcerned by developments outside the market for various reasons (Markman, 2018; Marshall, 2014). However, they will recognize, from a pure business perspective, that sustainable development of today is not the same as it was in the 1990s and early 2000s. Today it is not about achieving eco-efficiency or socio-efficiency anymore but about dealing with a major market transformation and systems disruption (Bansal & Birkinshaw, 2017; Nordhaus, 2013) or "grand challenges" (Reid et al., 2010).[5] Crafting effective strategies, designing new business models, and ultimately deciding what to produce, how to produce, and how to distribute it requires a thorough consideration of both technological and socio-ecological developments. Neglecting one of the two dimensions could put the future fitness of any company at serious risk.[6]

Strategists have been conducting foresight activities to identify early indicators or *weak signals* for upcoming discontinuities in their operating environments for a long time (Ansoff, 1976). Today, socio-ecological variables provide us with *strong signals* and overwhelming evidence of systems disruption that requires strategic response and initiatives of companies, which will be explained in the next sections of this chapter. The magnitude and scope of current sustainability issues are not only a societal concern but also a significant business concern both in terms of opportunities and threats. Being nested in social and ecological circles, the economy, organizations, and individuals cannot escape a deterioration of these environmental layers in the long run. Strategy practitioners need to rethink their approach to strategizing in order to either effectively deal with this new disruptive market situation or play an active role in transforming the market toward a sustainable future for their organizations and billions of people (Hoffman, 2018).

[5] See also Forewords by Pratima (Tima) Bansal and John H. Grant.

[6] See Chaps. 17 and 18.

The following section will first shed some light on the current state of the planet and potential future scenarios, which shine crucial analytical spotlights on the socio-ecological macro-environment of any company. Corporate strategists and business leaders need to have a clear understanding of this macro-environmental situation since human and bio-system viability and thus future business success depends on it. They need to make decisions about whether and how to engage in shaping their desired future. Making strategic business sense of sustainability will help them to become "future smart"[7] and craft effective strategic responses and initiatives. Then a typology of strategizing mindsets will be provided with regard to linking strategy and sustainability. Strategists need to be aware of and reflect their own mindset before they decide what business concepts, tools, and ideas proposed in the various chapters of this book they consider for supporting their strategizing efforts. Finally, a brief overview of the book chapters will be provided.

1.2 Macro-level Situation: Planetary Boundaries, Social Foundations, and Future Scenarios

Overall, economic development has strongly contributed to extraordinary achievements in human well-being. Despite significant global population growth, on average, people live longer, receive better education, have more access to basic social services, and enjoy a decent living standard. "Yet human development has been uneven, and human deprivations persist. Progress has bypassed groups, communities, societies—and people have been left out. Some have achieved only the basics of human development, and some not even that. And new development challenges have emerged, ranging from inequalities to climate change, from epidemics to desperate migration, from conflicts to violent extremism." (UNDP, 2016: 1).

To get a comprehensive understanding of the current state of the planet both in ecological and social terms, the planetary boundaries (Rockström et al., 2009; Steffen et al., 2015) and the social dimensions of the United Nations Sustainable Development Goals (SDG) (United Nations, 2015) will be used as reference.[8] Kate Raworth (2017b) has used these two dimensions for her illustrative visualization of the "Doughnut" (Fig. 1.1). The outer dark green circle shows the ecological ceiling determined by the planetary boundaries. The inner dark green ring reflects the social foundation, i.e. the basics of life no human should be left falling short, which is determined by the corresponding SDG dimensions. In between lies what Raworth calls a "safe and just space for humanity." The area "points towards a future that can provide for every person's needs while safeguarding the living world on which we all depend" (Raworth,

[7] See Chap. 18.

[8] Other sources in which sustainability challenges have been addressed and debated include the World Economic Forum (2018), the Millennium Ecosystem Assessment (2005), the World Business Council for Sustainable Development (2010) as well as the various World Summits for Sustainable Development (WSSD).

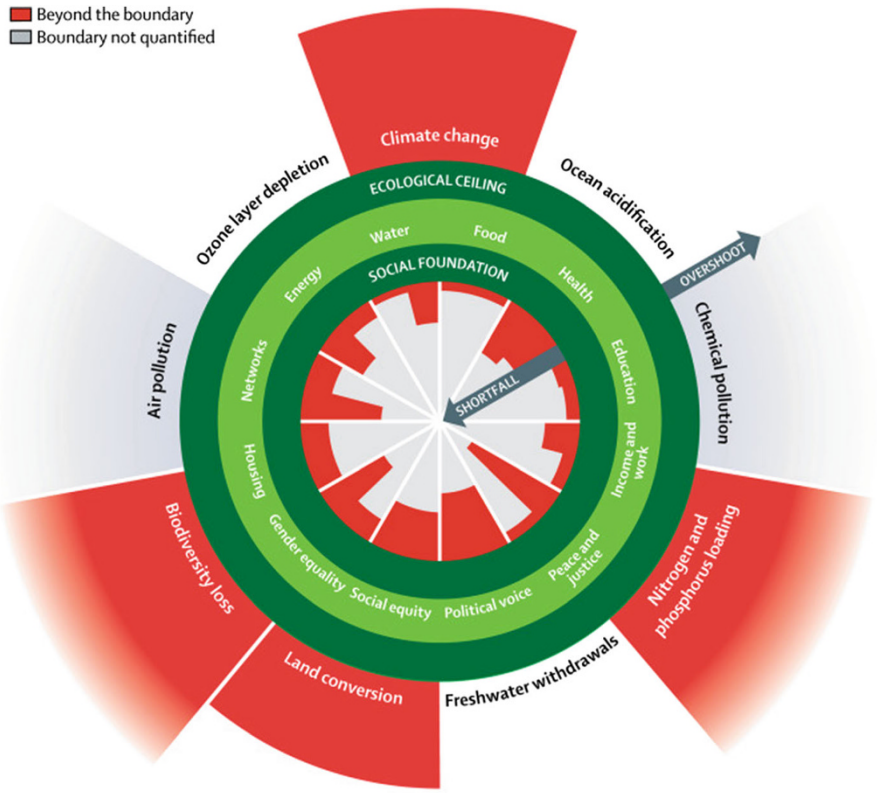

Fig. 1.1 Shortfalls and overshoot in the "Doughnut" (Kate Raworth, 2017b. Reprinted with permission)

2017a: 44f.). The current state of the planet is illustrated with red wedges reflecting both *shortfalls* in the social foundation and *overshoot* of the ecological ceiling.[9]

Corresponding science-based data for determining the current state of the ecological ceiling and the social foundation shows us that the global progress in economic and human development obviously has its downside. It reveals a macro-level deterioration which, if not solved, will continue its fatalistic path of destroying the socio-ecological systems which support human life on Earth (Hansen, 2009; Houle & Rumage, 2015; Kolbert, 2014; von Weizäcker & Wijkman, 2018; Wright & Nyberg, 2015; Randers et al., 2018a, b).[10]

[9]The state of planetary boundaries that are not currently being overshot is not shown in this illustration but explained in Sect. 1.2.1.

[10]See also Chap. 17.

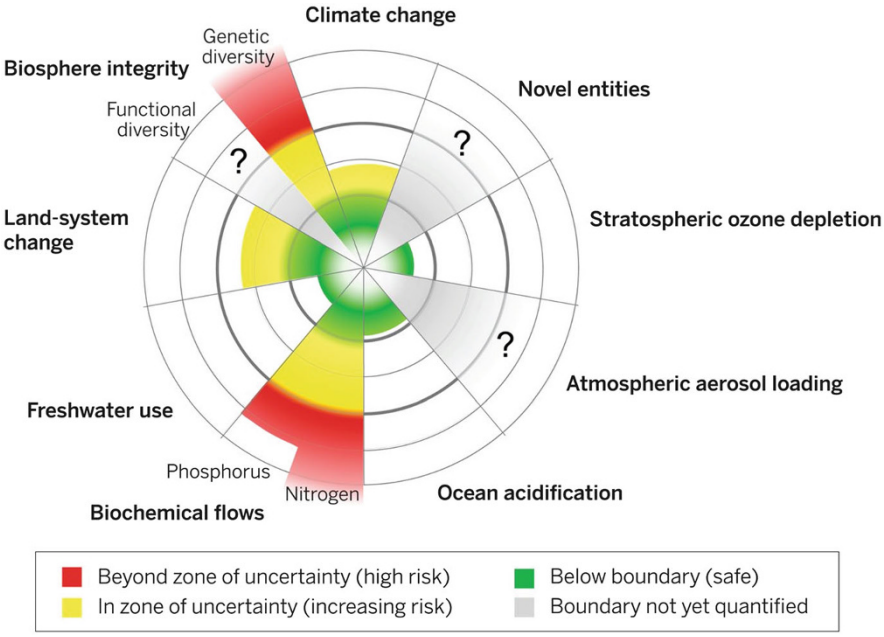

Fig. 1.2 Planetary boundaries with estimated current status of the control variables (From: Steffen W., Richardson, K., Rockström, J., Cornell, S., Fetzer I., Bennett, E., Biggs, R., Carpenter, S., de Vries, W. de Wit, W., Folke, C., Gerten, D., Heinke, J., Mace, G., Persson, L., Ramanathan, V., Reyers, B., & Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. Science 347(6223) 1259855. Retrieved from http://science.sciencemag.org/content/347/6223/1259855. Reprinted with permission from AAAS)

1.2.1 Planetary Boundaries

Developed by a group of 28 renowned scientists in 2009 (Rockström et al., 2009) and updated in 2015 (Steffen et al., 2015) the goal of the planetary boundaries concept is to provide a science-based analysis for gauging the environmental limits within which humanity can safely operate.[11] Based on this precautionary approach, crossing boundaries puts the resilient and accommodating state—the stability—of the Earth system at risk or, in other words, threatens the viability of human life on Earth.

Figure 1.2 provides an overview of the planetary boundaries with estimates of the status of current control variables for seven thresholds. "The green zone is the safe operating space, the yellow represents the zone of uncertainty (increasing risk), and the red is a high-risk zone. The planetary boundary itself lies at the intersection of the green and yellow zones. The control variables have been normalized for the zone of uncertainty; the center of the figure therefore does not represent values of 0 for the control variables. The control variable shown for climate change is atmospheric CO_2 concentration. Processes for which global-level boundaries cannot yet be quantified

[11] See also Rockström and Klum (2012) as well as Whiteman, Walker, and Perego (2013).

are represented by gray wedges; these are atmospheric aerosol loading, novel entities, and the functional role of biosphere integrity" (Steffen et al., 2015).

Of the original nine proposed boundaries, climate change and biosphere integrity are particularly important as they are connected to all others. These so-called "core" boundaries provide the planetary-level overarching systems for supporting human life and they might push the Earth system into a new condition if crossed. However, human well-being is also seriously affected if one or more of the other seven boundaries are crossed, though this might not by itself push the planetary-scale system into a new state. Scientists believe that at least four of the nine planetary boundaries have currently been crossed, i.e. the two core boundaries climate change and biosphere integrity (biodiversity loss) as well as biogeochemical flows (nitrogen and phosphorus cycles) and land system change (land conversion). These four boundaries are above the safe operating space, though, at different risk levels. According to Steffen et al. (2015) there is currently no overshoot of the thresholds at stratospheric ozone depletion, ocean acidification, and freshwater use.[12] For novel entities (chemical pollution) and atmospheric aerosol loading (atmospheric particle pollution) there is currently not sufficient data available for assessment. According to Hoffman (2018: 36), all of these Earth system disruptions "are the result of system failures created largely by our market institutions." Table 1.1 shows the nine planetary boundaries (PB) with their current values and trends.

This critical state of the planet appears even more pressing when looking at recent climate change research. A recent landmark climate report emphasizes the strong risk of crises with serious consequences in the next decades if transformational global action is not taken soon to limit global warming to 1.5 °C above pre-industrial levels (IPCC, 2018). Furthermore, research of Steffen et al. (2018) presents a network of about 15 tipping points that can be expected to "kick in" at various rising temperature points. This "Hothouse Earth" framework emphasizes that just cutting greenhouse gases—as difficult and costly it might be (Hansen & Kharecha, 2018)—is not enough. With regard to the core planetary boundary of climate change, one of the big research questions is whether or not the planetary system can be "parked" at certain temperature conditions such as 2 °C warming or whether when systems reach that temperature—i.e. that tipping event—they will keep rising as a result of "domino" or "knock-on" effects on ice, water, or vegetation. Within a single decade, significant sea level rise caused by this temperature increase could lead to human mass migration, military intervention, egregious exploitation (Funk, 2015) or "Disaster Capitalism" (Loewenstein, 2015) and ultimately a world in chaos, which Hansen (2009) predicted about a decade ago. "Thus, for the sake of the socio-economic well-being of humankind, it is absolutely imperative that the world avoid the kind of environmental disasters resulting from trespassing the planetary boundaries" (von Weizäcker & Wijkman, 2018: 17).

[12] See also the comment of Jaramillo and Destouni (2015) with regard to freshwater withdrawals.

Table 1.1 Planetary boundaries and its indicators of overshoot (Raworth, 2017c; adapted and updated. Reprinted with permission)

Earth-system pressure[a]	Control variable	Planetary boundary	Current value and trend[a]
Climate change	Atmospheric carbon dioxide concentration, parts per million (ppm)	At most 350 ppm	**409 ppm and rising (worsening)**
Ocean acidification	Average saturation of aragonite (calcium carbonate) at ocean surface, as % of pre-industrial levels	At least 80% of pre-industrial saturation levels	Around 84% and falling (intensifying)
Chemical pollution (Novel Entities)	No global control variable yet defined	–	–
Biochemical flows (Nitrogen and phosphorus loading)[b]	Phosphorus applied to land as fertiliser, millions of tons per year	At most 6.2 million tons per year	**Around 14 million tons per year and rising (worsening)**
	Reactive nitrogen applied to land as fertiliser, millions of tons per year	At most 62 million tons per year	**Around 150 million tons per year and rising (worsening)**
Freshwater withdrawals[b]	Blue water consumption, cubic kilometres per year	At most 4000 km^3 per year	Around 2600 km^3 per year and rising (intensifying)
Land-system change (Land conversion)	Area of forested land as a proportion of forest-covered land prior to human alteration	At least 75%	**62% and falling (worsening)**
Biosphere integrity (Biodiversity loss)	Rate of species extinction per million species per year	At most 10	**Around 100–1000 and rising (worsening)**
Air pollution (Atmospheric aerosol loading)	No global control variable yet defined	–	–
Stratospheric ozone depletion	Concentration of ozone in the stratosphere, in Dobson Units	At least 275 DU	283 DU and rising (improving)

Sources: Steffen et al. (2015); For current climate change value see NASA (2018)

[a]Current overshoot highlighted in bold

[b]According to a technical comment by Jaramillo and Destouni (2015) the global freshwater withdrawals are at 4664 km^3 per year and thus have already crossed the associated planetary boundary (not shown in table)

1.2.2 Social Foundations

In addition to ecological considerations, a second indicator for gauging the overall state of the planet is related to social foundations. Table 1.2 shows twelve social dimensions that are derived from the United Nations (2015) Sustainable Development Goals (SDGs). The indicators and percentages illustrate the extent of shortfall in social foundations. It demonstrates that, despite all the advancements in human development, there are still millions of people globally who have to live under severe deprivation.

Table 1.2 Social foundations and its indicators of shortfalls (Raworth, 2017c; adapted and updated. Reprinted with permission)

Dimension	Illustrative Indicators (percent of global population unless otherwise stated)	%	Year
Food	Population undernourished	11	2015–2017
Health	Population living in countries with under-five mortality rate exceeding 25 per 1000 live births	46	2015
	Population living in countries with life expectancy at birth of less than 70 years	39	2013
Education	Adult population (aged 15+) who are illiterate	15	2013
	Children aged 12–15 out of school	17	2013
Income and Work	Population living on less than the international poverty line of $3.10 a day	29	2012
	Proportion of young people (aged 15–24) seeking but not able to find work	13	2017
Water and Sanitation	Population without access to improved drinking water	9	2015
	Population without access to improved sanitation	32	2015
Energy	Population lacking access to electricity	14	2016
	Population lacking access to clean cooking facilities	38	2015
Networks	Population stating that they are without someone to count on for help in times of trouble	24	2015
	Population without access to the Internet	57	2015
Housing	Global urban population living in slum housing in developing countries	24	2012
Gender Equality	Representation gap between women and men in national parliaments	56	2014
	Worldwide earnings gap between women and men	23	2009
Social Equity	Population living in countries with a Palma ration of two or more (the ratio of the income share of the top 10% of people to that of the bottom 40%)	39	1995–2012
Political Voice	Population living in countries scoring 0.5 or less out of 1.0 in the Voice and Accountability Index	52	2013
Peace and Justice	Population living in countries scoring 50 or less out of 100 in the Corruption Perceptions Index	85	2014
	Population living in countries with a homicide rate of 10 or more per 100,000	13	2008–2013

Sources: FAO, World Bank, WHO, UNDP, UNESCO, UNICEF, OECD, IEA, Gallup, ITU, UN, Cobham and Sumner, ILO, UNODC, and Transparency International. All percentages are rounded to the nearest integer

Unfortunately, shortfalls in social foundations and overshoots in planetary boundaries are not independent issues. Tackling shortfalls in the 12 dimensions of social foundations derived from the corresponding SDGs (Table 1.2) may negatively impact the overshoot of planetary boundaries (Table 1.1). It "would make it virtually impossible even to reduce the speed of global warming, to stop overfishing in the oceans or to stop land degradation, let alone to halt the loss of biodiversity. In other

words, assuming no major changes in the way economic growth is defined and pursued, humanity would be confronted with massive trade-offs between the socio-economic and the environmental SDGs." (von Weizäcker & Wijkman, 2018: 39). These trade-offs in pursuing SDGs are currently addressed by the TWI2050—The World in 2050 (2018) initiative. This collaborative international research effort explores science-based transformational and equitable pathways to implementing the SDGs. So far, working groups have identified six big transformations en route to the 17 SDGs. However, they also warn of counter-trends in-process globally. According to Johan Rockström (2017), the four SDGs which relate to the planetary boundaries on water, oceans, biodiversity, and climate are non-negotiable. They provide the safe operating space for thriving humanity through successful social and economic development addressed in the remaining SDGs.

1.2.3 Future Scenarios

Strategy can be seen as a deliberate or emerging path to a destination or some kind of "vision." It requires an explicit or implicit aspirational idea of where the company wants to be in the long run. Strategists typically look at how the world will change in the future based on *scenarios* and then figure out what they can and want do about it in terms of strategic dynamics. Scenarios are plausible views of how the business environment might develop in the future based on an integrated set of key drivers. Given the high level of unpredictability of the future, scenarios are not supposed to provide a quantitative point estimate. The goal is to stimulate imagination and alert managers to think and prepare for a range of alternative developments based on flowing narratives or "stories" about how the future might unfold. With regard to sustainability, Allen Hammond (1998) provided three scenarios which seem to be as plausible today as they were two decades ago (Raskin, 2016; Stead & Stead, 2014):

- A *market world* in which broader sustainability issues are tackled by market forces, i.e. the ingenuity of man reflected in technological innovation,
- A *fortress world* reflected by increased de-globalization, uneven economic growth and other developments that create prosperity sanctuaries surrounded by environmental degradation, social chaos, conflict and violence, and
- A *transformed world* in which fundamental economic, social, and political changes enable businesses, the natural environment and humans to thrive.

These scenarios can also be found in a more recent taxonomy provided by Paul Raskin (2016) in which he provides three major trajectories with two scenario variants in each, i.e. "Conventional Worlds" where sustainability issues are tackled by today's dominant *market forces* of production and consumption as well as *policy reform*. The second path encompasses "Barbarization" where socio-ecological problems have spiraled out of control leading to *breakdowns* and *fortress world* sanctuaries surrounded by chaos and conflict. A third trajectory is labeled "Great Transition" based on the two scenarios of *eco-communalism* and a *new sustainability paradigm*. All scenarios are said to be plausible although recent scientific insights

provide an increasingly pessimistic picture of the future in case no effective action is taken soon (IPCC, 2018). Based on the Earth 3 simulation model, Randers et al. (2018a, b) demonstrate that it will only be possible to achieve all SDGs within all planetary boundaries through a transformational approach.

It comes down to the strategic decisions of business leaders which world comes to pass based on the paths to strategizing they choose. They may pursue strategies for their business to thrive in a brighter future for humankind created through market forces or even foresee business benefiting from a grimmer future such as the fortress world (Funk, 2015; Loewenstein, 2015). Or they may consider their companies as change agents toward a transformed world in which fundamental economic, social, and political changes enable business enterprises and humans to thrive.

Scenario insights or "foresight intelligence" (MAHB, 2018) provided by research and future studies are supposed to help executives to become "future smart" (Canton, 2015).[13] However, these studies differ significantly with regard to scope, time horizon, level of detail, and plausibility (Friedman, 2009; Hannerz, 2016; Randers, 2012; Riahi et al., 2017; Smith, 2011; Watson, 2012). Obviously, strategists do not know the future but need to make strategic decisions today with regard to their anticipated or aspired picture of the future. Given this managerial dilemma, the planning approach and scenario choices corporate strategists follow will strongly determine which world we will ultimately get.

Depending on the extent business leaders want to engage in influencing the future and the assumed environmental predictability, they have four basic options (Linnenluecke, Verreynne, de Villiers Scheepers, Grönum, & Venter, 2014). They might decide to apply a *projection and planning approach* and develop their strategies based on their anticipated scenario which they consider more or less as given. Second, they can follow an *adaptive approach* and enhance their organizational agility by developing dynamic capabilities (Teece, Pisano, & Shuen, 1997). In situations where leaders assume little predictability of future developments, this approach allows them to detect and quickly respond to sometimes abrupt emerging changes. Third, companies may follow a more pro-active approach in which they identify and *actively shape* a desired future for their organization within its macro-environment. And, finally, they may strongly engage in *transformational initiatives* toward a sustainable socio-ecological and economic future recognizing that this is not possible alone but requires a collaborative effort with various stakeholders. This involves co-defining a collective vision and designing coordinated strategic responses.

The understanding of strategy as means to an end or destination is a core principle in strategic management (Wunder, 2016b). "The vision creates the picture of the destination. The strategy defines the logic of how this vision will be achieved. Vision and strategy are essential complements" (Kaplan & Norton, 2001: 74). If companies decide to engage in actively shaping or transforming toward a sustainable future, this will have a significant impact on their strategic management approach. Following a broader socio-ecological purpose, they will assess their current state as well as derive

[13] See also Chap. 18.

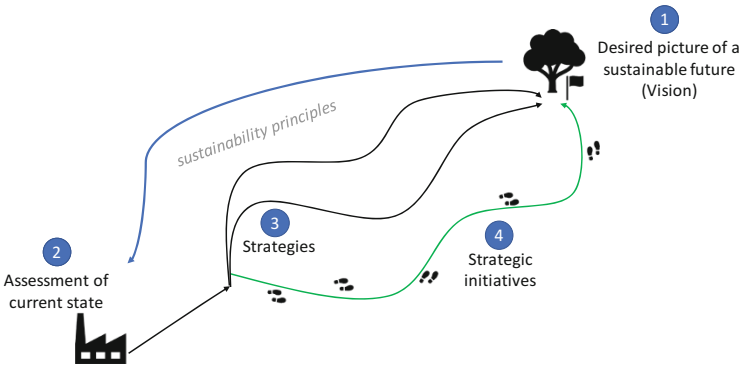

Fig. 1.3 Desired picture of a sustainable future as starting point for strategizing

their business strategies and strategic initiatives consequently from this desired picture of a sustainable future and its underlying principles in an iterative and continuous process (Fig. 1.3).[14]

The socio-ecological state of the planet and the future scenarios presented in this section are two essential elements business leaders may want to consider in their strategizing efforts. How much and in which way they engage will impact the business strategies they develop and those choices ultimately come down to their personal values and worldviews. Strategists need to be aware of and reflect their own strategizing mindset before they make strategic decisions that strongly determine how much their business and society will be able to thrive in the future. Their mindset of how to link strategy and sustainability also impacts the types of business concepts, tools, and ideas they may find useful for supporting strategizing efforts in their companies. In the following section, a typology of strategizing mindsets will be provided for practitioners to advance their understanding with regard to different perspectives of linking strategy and sustainability.

1.3 Three Mindsets for Linking Strategy and Sustainability

Strategic management is about the future of the company. Hereby, the relation of strategy, competitive advantage and firm performance is one of the key principles in the contemporary strategic management paradigm (Rothaermel, 2018). According to this logic, strategy is about gaining and sustaining "advantage" over competitors to achieve *superior* financial performance within a competitive arena, consistent with the dominant values of the primary stakeholders, often investors and top management. This basic relationship will be used in the following to differentiate three

[14]The Natural Step refers to this approach as "backcasting" from sustainability principles. This is a key element in their Framework for Strategic Sustainable Development (FSSD) as described by Broman and Robèrt (2017). See also Chaps. 8 and 17.

mindsets of linking strategy and sustainability. If we assume that companies will only be able to succeed in the long run when they integrate their economic aspirations with social and ecological considerations as mentioned earlier, corresponding mindsets become essential for crafting and executing strategies. Hereby, the focus is on firms with a longer term strategy perspective as opposed to the perspective of short-term benefit oriented traders or exploiters.

It is shown that each strategizing mindset is dominated by a different *strategy orientation*, has a different understanding of *value creation* (e.g. what value and for whom?) follows a different *performance imperative* in terms of what "success" means, and seeks to create a different *type of advantage*.[15] Furthermore, the three mindsets are driven by different *time horizons* in terms of payback and can be linked to three anecdotal statements that are intended to reflect the underlying *motivation for sustainability-orientation* in the company's strategic management approach.

Table 1.3 provides an overview of the different mindsets for linking strategy and sustainability and their various characteristics. The typologies are derived based on the business sustainability typologies proposed by Dyllick and Muff (2016) and the types of sustainable business suggested by Hoffman (2018).[16]

1.3.1 Strategizing-As-Usual: What Can My Business Do for Customers and Shareholders?

Strategizing-As-Usual (SAU) reflects the dominant strategizing paradigm in most privately-held and publicly-traded organizations today. It is grounded in purely economic concerns for the private good. Companies are driven by an explicit management for shareholder value or top-/bottom-line growth—both short- and long-term—based on principles of the *market-based view of strategy* (Porter, 1985, 2008) and/or the *resource-based view of strategy* (Barney, 1991, 2001; Peteraf, 1993; Wernerfeld, 1984). Strategizing is targeted toward gaining, maintaining, and renewing *competitive advantage* to outperform "rivals." This happens either in direct competition or in uncontested market spaces or so-called "blue oceans" (Kim & Mauborgne, 2005). Companies that substantially outperform their peers in terms of economic profit are considered "superstars" (Manyika et al., 2018). Although creating durable or "sustainable competitive advantage" (Porter, 1985: 11)[17] is desirable for any company, the competitive reality forces many firms to continuously create

[15]See Chap. 7 for a comprehensive discussion of the concept of "value" and how it relates to "impact."

[16]The typology shown in Table 1.3 is an advancement of an earlier conceptualization of the paradigm shift between traditional versus sustainable strategic management (Wunder, 2016a, 2017: 13). For stages of corporate sustainability models see also Landrum (2018).

[17]The term "sustainable" in this context does not refer to social, ecological or economic considerations but purely to the durability or half-life period of the competitive advantage.

Table 1.3 Typology and progression of mindsets for linking strategy and sustainability

Strategizing mindset	Dominant strategy orientation	Value creation	Performance imperative	Type of advantage	Time horizon ("Payback")	Motivation for sustainability-orientation (expressed as anecdotal statement)
Strategizing-As-Usual	Market-/ Resource-based view	Customer value	Profitability/ Shareholder value	Competitive advantage	Short-term	"Do what customers, shareholders and relevant other stakeholders require"
Sustainable Strategizing 1.0	Business case for sustainability	Economic, ecological, social value	Triple bottom line	Corporate sustainability advantage	Short-term, medium-term	"Seek to reduce unsustainability or create sustainability . . . if it pays"
Sustainable Strategizing 2.0	Systems-based view	Sustainable value	Positive systems impact	Systems (viability) advantage	Long-term	"Seek to create sustainability . . . as it pays"

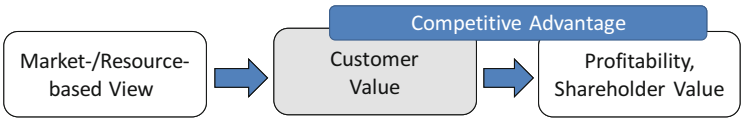

Fig. 1.4 Strategizing-As-Usual

temporary or transient advantages in their competitive arenas (D'Aveni, Dagnino, & Smith, 2010; McGrath, 2013).

"Outperforming" or achieving competitive advantage is typically related to bottom line results and means to achieve *profitability* (e.g. return on sales, return on capital employed) that is greater than the industry average based on accounting numbers. It can also be related to *shareholder value* with the goal to realize earnings above the cost of capital. Or it simply means creating and capturing more *economic value* than rivals (Rothaermel, 2018). Companies are well positioned to create such competitive advantage when they are able to utilize their resources and capabilities for creating and delivering *customer value* in a way their competitors cannot, leveraging the specific market context in which they operate (Collis & Rukstad, 2008).

This understanding, which is illustrated in Fig. 1.4, is typically rooted in assumptions of the neoclassical strategic management paradigm in which value-creating activities of the firm occur within a closed economic system neglecting the broader social and natural environment (Stead & Stead, 2014).[18] Hereby, a great portion of the impact of business activities is not considered or managed, as it is not captured by financial numbers. Companies perceive this impact as "externalities" for which they are not held accountable unless legally required. These off-the-books assets include the atmosphere, sea lanes, soil, rainfall, and air as well as social and political institutions. For example, traditional number counting omits the potentially huge "natural capital" liabilities generated by greenhouse gases (Hansen & Kharecha, 2018), fracking "produced water" to aquifers (AGI, 2018), animal waste lagoons seeping into rivers (Dove, 2018), and many other ecological and social issues.

SAU emphasizes two primary types of stakeholders: value is created for *customers* (customer value) as a means for creating financial value, which is captured by *shareholders or owners* (shareholder value). Consequently, sustainability considerations are relevant for strategizing only if they directly relate to this type of rationale, as articulated by Milton Friedman (1970): "There is one and only one social responsibility of business; to use its resources and engage in activities designed to increase its profits as long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud."

Strategies typically reflect paths towards a long-term aspiration of the company (e.g. many firms develop strategic plans for 5 years or beyond). However, the value creation for customers and the corresponding value capture of the company in terms

[18] See also Chap. 4.

of profitability or shareholder value is typically expected to happen continuously within a *short-term* time horizon (e.g. monthly and quarterly results as well as annual financial performance reviews).

In SAU, sustainability becomes a strategic concern only if it is driven by market forces with potential impact on the financial performance of the company. Hereby, strategy and sustainability are linked if sustainability is seen as an unfolding market shift much like any other business opportunity or threat that needs to be considered for crafting strategy to improve competitive positioning or mitigate market risk. Even though corporate decision makers may be indifferent about ecological or social issues, they recognize the importance as a business concern which is typically driven through primarily external stakeholder concerns as illustrated in Fig. 1.4 (Hoffman, 2018). In general, the likelihood of strategies to be successful depends on how well they deal with and communicate the interests, expectations, and claims of relevant stakeholder groups. Therefore, companies are advised to integrate stakeholder perspectives in their strategic frameworks (Freeman, 2010). In the context of addressing sustainability within a SAU mindset, stakeholder management tends to reflect an instrumental perspective. Hereby, the effects of the most powerful stakeholders on the achievement of strategic goals are analyzed by the firm. The company tries to avoid potentially harmful stakeholder actions, fosters stakeholder support for the sake of making business strategy happen or collects stakeholder perspectives for its own strategic ideation.[19] In other words, corporate strategists and decision makers *do what customers, shareholders and relevant other stakeholders require* for gaining and maintaining competitive advantage as a means to achieve superior financial results. This also applies to sustainability issues.

Following the SAU mindset, corporate contributions to sustainable development can be triggered by a variety of external stakholder pressures (Hoffman, 2016) or drivers (see Fig. 1.5). The most direct trigger is caused by market drivers such as *customers* demanding more sustainable products or more responsible company conduct (Accenture & UNGC, 2014; Havas Worldwide, 2016). An example is the segment of consumers practicing a lifestyle of health and sustainability (LOHAS) which is expected to become a huge market in the future (Cortese, 2003; Yeh & Chen, 2011). Another strong shift is coming from resource drivers such as *investors* who increasingly emphasize societal contributions (i.e. ecological and social business impact) in their investment criteria (e.g. Fink, 2018; State Street, 2018; Unruh et al., 2016).[20] Furthermore, *employees* may evaluate the attractiveness of employers based on how authentically they position themselves with regard to sustainability.

[19]This stakeholder approach is fundamentally different from a *normative* approach to dealing with stakeholders based on moral justifications, which also considers legitimate claims of powerless stakeholders such as the natural environment as well as future generations to which a company has responsibilities but which may seem to be less relevant from a strategic point of view (Waxenberger & Spence, 2003). It also differs from an *integrative* approach that focuses on managing stakeholder relationships for mutual benefits, i.e. co-creating value for (ideally) all stakeholder groups based on elements from various stakeholder theories (Hörisch, Freeman, & Schaltegger, 2014).

[20]See also Chaps. 3, 6 and 19.

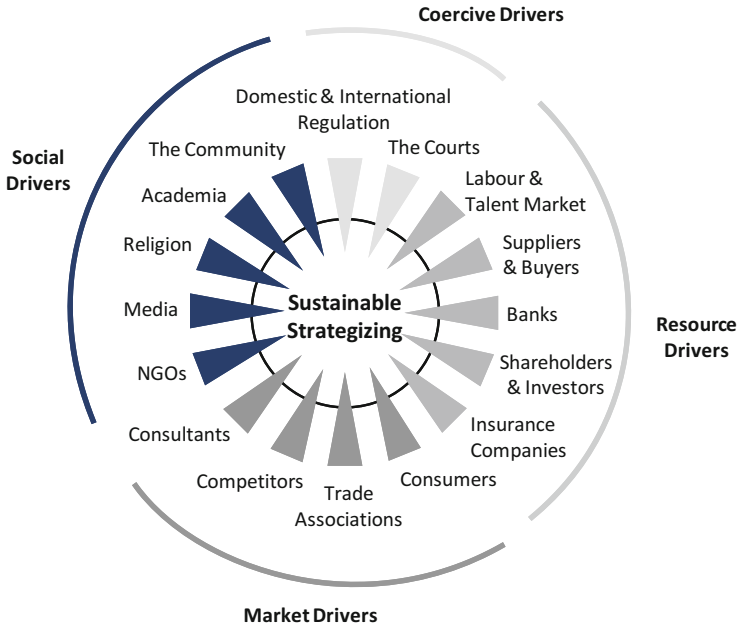

Fig. 1.5 Multiple external stakeholder pressures driving sustainability. Source: *Oxford Encyclopedia of Climate Change Communication* edited by Matthew Nisbet & Saffron O'Neill (2016): Hoffman, A. J. "Communicating about climate change with corporate leaders and stakeholders": Adapted version of figure 1 (p. 4). *By permission of Oxford University Press, USA*

Additional pressures on companies to embed sustainability considerations in their strategy process are also coming from external stakeholders *outside* of the market (Dyllick & Muff, 2016). Due to increased transparency and arising public discussions about the responsibilities of business in society, companies tend to be more sensitive to ecological and social concerns of these groups. New business challenges from outside the market may arise through NGOs or the Media (social drivers) as well as domestic and international regulations imposed by governments or other institutions (coercive drivers). *Governments* imposing new environmental or social policies have a strong impact in a company's sustainability orientation which we currently see in many industries such as in the Energy or Automotive sectors.

All these developments may cause companies to consider ecological or social issues in their strategizing efforts. However, this tends to be reactive and follows the usual strategizing premise of identifying performance-relevant developments in the company's macro- and micro-environment prior to crafting strategies. A first progression of SAU towards incorporating the needs of society with a slightly different rationale will be explained next.

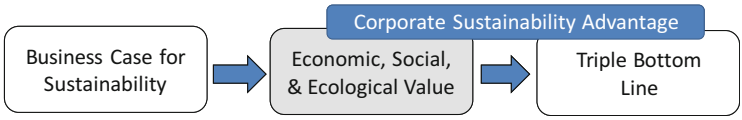

Fig. 1.6 Sustainable Strategizing 1.0

1.3.2 Sustainable Strategizing 1.0: What Can Sustainability Do for My Business?

A further step for linking strategy and sustainability has become popular in academia and company practice alike. It is based on one key message: An organization can improve its competitiveness and financial success *by* doing good for society. Instead of just recognizing the need to react to ecological and social stakeholder concerns as explained earlier (SAU), Sustainable Strategizing 1.0 (SUS 1.0) expands the company's value proposition to deliberately and voluntarily address societal issues *if* there is a positive correlation with financial performance. Based on the understanding that the primary purpose of business is to increase profits, SUS 1.0 leaders actively seek for ways to achieve a symbiosis of *economic, social, and ecological value* creation or so-called "business cases for sustainability" (Schaltegger & Wagner, 2006).[21] This does not include accidental or random economic effects of sustainable business conduct. The understanding makes sustainability an explicit performance driver and strategic concern. Deliberately striving for a *business case for sustainability* becomes a dominant strategy orientation. The corresponding performance imperative finds its expression in an integrative consideration of social, ecological, and economic success (i.e. people, planet, profit), the so-called *Triple Bottom Line* (Elkington, 1997).[22] As business cases for sustainability are strongly linked to the concept of corporate sustainability (Schaltegger & Burritt, 2005, 2015) the type of advantage companies are striving for shall be labeled *corporate sustainability advantage*. The rationale of SUS 1.0 is illustrated in Fig. 1.6.

With a SUS 1.0 mindset, executives try to overcome the traditional tradeoff thinking and pro-actively seek to create win-win situations between economic and social or ecological performance. The goal is to drive economic performance through voluntary social and ecological engagement. Whereas SAU is based on an explicit management for shareholder value with market-based or resource-based strategy

[21] Similar understandings can be found in a specific view of Corporate Social Responsibility (Carroll & Shabana, 2010; Garriga & Melé, 2004; Lee, 2008; Okpara & Idowu, 2013).

[22] In the principle of the "Triple Bottom Line" economic (profit), ecological (planet), and social (people) goals are considered together. The term follows the Anglo-American "Profit-and-Loss Statement" which traditionally has profit as the "bottom line." According to the "Triple Bottom Line" idea, this financial profit perspective at the bottom line should be supplemented by social and ecological output quantities.

principles, this orientation is still followed in SUS 1.0 but more or less implicit and legitimized by the business case for sustainability (Hahn & Figge, 2011).

A recent report by BCG showed that companies that invest in an effective combination of financial, ecological, and social performance drivers outperform their peers. It shows that those companies succeeding in TSI (total societal impact) receive valuations that are 3–19% higher than their respective peers (Beal et al., 2017).[23] In company practice, there is typically not *one* business case for sustainability but *several* which are based on a variety of drivers (Schaltegger & Burritt, 2005, 2015; Schaltegger, Lüdeke-Freund, & Hansen, 2012; Willard, 2012). Examples of such drivers are

- Cost (e.g., through improved resource efficiency such as energy or water usage),
- Revenue (e.g., access to new or changing market segments),
- Price or margin (e.g., price premiums for sustainable products or services),
- Risk (e.g., avoidance of cost or negative sales impact due to ecological or social issues),
- Reputation, brand value (e.g., positive image attracting or retaining customers and employees), and
- Innovation (e.g., broader company purpose leads to breakthrough products and services or new business models that contribute to solving ecological or social problems).[24]

A widely and controversially discussed approach for linking economic to societal value creation is the *shared value* concept provided by Porter and Kramer (2011). It is defined as "(...) policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates" (ibid., 2011: 66). Meanwhile, "Doing well by doing good" has advanced to become a popular slogan used in a variety of publications, websites, and conferences.[25] This indicates the current popularity of a SUS 1.0 mindset in which the key motive for sustainability-oriented strategies is the opportunity to gain economic benefit for the corporation (Bonini & Görner, 2011; McWilliams & Siegel, 2011).

As compelling as a SUS 1.0 mindset may sound for linking strategy and sustainability, it has fundamental limitations with regard to solving our global and systemic sustainability issues. John Elkington (2018) made this very clear in his recent "product recall" with regard to the Triple Bottom Line (TBL) concept mentioned

[23] See also Chap. 3.

[24] Sustainability can be a positive driver for values-based and purpose-driven innovation management. See Chaps. 11 and 14.

[25] One example is the American *Fortune* magazine, which is famous for its yearly rankings of the largest corporations by total revenue (e.g. *Fortune* 100 or 500). In 2015, *Fortune* initiated an annual ranking of companies who are referred to as "doing well by doing good" in a so-called "Change the World List." According to its own statements in its initial release of this list, the aim is not to evaluate social responsibility as a whole, but rather to encourage corporations for more sustainable actions through selected examples of corporate practice and projects (Murray, 2015).

earlier. Following a business case for sustainability may help to tackle certain sustainability issues but it is certainly not sufficient to provide the effective and large scale solutions that are increasingly demanded for solving the socio-ecological challenges society is currently facing (Dyllick & Hockerts, 2002; Hahn & Figge, 2011; Szekely & Dossa, 2017). The same skepticism can be found with regard to the Shared Value concept which is criticized for being a reductionist approach to sustainability. According to critics, it represents just a refined version of the traditional logic of driving superior profitability and shareholder value (Beschorner, 2013; Crane, Palazzo, Spence, & Matten, 2014; Dembek, Singh, & Bhakoo, 2016) which was illustrated with the SAU mindset earlier in this chapter.

When following a SUS 1.0 mindset, it is not clear how economic, social, and ecological company performance is actually "blended" (Emerson, 2003) to one overall performance indicator or "balanced." However, this is one of the key challenges for strategy practitioners when evaluating various alternative strategy options. Which strategy option should they select and allocate resources to, when, for example option 1 is highly profitable with no or little socio-ecological value creation and option 2 is moderately profitable but with strong positive impact on the socio-ecological performance indicators (Wunder, 2016b: 258)? In the managerial reality, strategic decision makers following a SUS 1.0 mindset will face a variety of tensions and conflicts that need to be acknowledged and managed (Hahn & Preuss, 2015; Hahn, Preuss, Pinkse, & Figge, 2014).

Furthermore, how will business leaders pursuing the "doing well by doing good" approach as illustrated before decide in situations, where *no* economic advantages in terms of a win-win situation with the society's interest or even a financial disadvantage will arise? Which mechanisms ensure the alignment of organizational behavior with societal expectations in situations where welfare cannot be reached on all sides of stakeholder groups? Henry Mintzberg (2015: 50) states with regard to this issue: "(. . .) let's applaud companies that 'do well by doing good,' such as installing wind turbines or promoting healthy eating. But let's not pretend that such measures will sweep across the corporate landscape in the form of some win-win wonderland." From a societal perspective, SUS 1.0 is not enough because what is required to solve pressing ecological and social issues does not always have a conventional business case. Ray Anderson, the former CEO of Interface, used to emphasize this point by asking the provocative question: "What is the business case for ending life on earth?"

"Whereas CEOs, CFOs, and other corporate leaders move heaven and earth to ensure that they hit their profit targets, the same is very rarely true of their people and planet targets. Clearly, the Triple Bottom Line has failed to bury the single bottom line paradigm. (. . .) TBL's stated goal from the outset was *system change*—pushing toward the transformation of capitalism. It was never supposed to be just an accounting system. It was originally intended as a genetic code, a triple helix of change for tomorrow's capitalism, with a focus on breakthrough change, disruption, asymmetric growth (with unsustainable sectors actively sidelined), and the scaling of next-generation market solutions." With these statements, John Elkington (2018) refers to a kind of strategizing mindset that is very different from SUS 1.0 elaborated in this section. Such a progression of linking strategy to sustainability will be explained next.

1.3.3 *Sustainable Strategizing 2.0: What Can My Business Do for Sustainability?*

Strategizing based on the two mindsets discussed so far will typically ignore sustainability of the socio-ecological systems unless the market creates incentives for sustainable practices. Only if it provides economically attractive business cases in the short or medium turn (SUS 1.0) or it needs to be addressed as a reaction to stakeholder developments and market shifts (SAU), will sustainability be integrated into preexisting business considerations. Both mindsets are company-focused and primarily based on an opportunistic inside-out perspective which is mainly driven by one question:

What can sustainability do for my business?

In Sustainable Strategizing 2.0 (SUS 2.0) this mindset changes to an outside-in perspective and *systems-based view of strategy*. It extends the boundaries of the business to the broader social and ecological systems within which it is embedded. Hereby, strategists first seek to understand the broader systemic context they operate in and how it relates to their organization's viability. Then they derive strategies to deal with these systemic challenges. Business leaders embracing this approach are driven by a higher purpose and vision of creating sustainability, as they know it is the only way to thrive as organizations, business ecosystems, or individuals in the future. Wayne Visser (2014) as well as Henry Mintzberg[26] refer to this kind of mindset as CSR 2.0, in the typology of Dyllick and Muff (2016) this paradigm is reflected in the concept of "Business Sustainability 3.0," and Andy Hoffmann labels it "Sustainable Business 2.0" when he refers to the next phase of business sustainability (Hoffman, 2018).

Consequently, instead of looking for economic business cases in the first place, leaders following a SUS 2.0 mindset consider socio-ecological future fitness as a prerequisite and opportunity for economic future fitness and ask:

What can my business do for sustainability?

It seems obvious that establishing and maintaining sustainable ecological and social systems conditions is imperative for any organization to be viable. This is illustrated with the **Shifting Nozzle** analogy in Fig. 1.7.[27] The current situation of worsening ecological and social systems conditions to support the fulfillment of human needs is illustrated with the declining walls of the nozzle. Current developments with regard to the violation of planetary boundaries and social foundations (see Sect. 1.2) along with growing population levels causes the human civilization, including the economy and companies, entering deeper and deeper into the tightly constrained nozzle. Further closing it causes "back-pressure and a potential blow-out

[26] See Chap. 2.

[27] For a similar analogy see the "funnel metaphor" in the Framework of Strategic Sustainable Development (Broman & Robèrt, 2017).

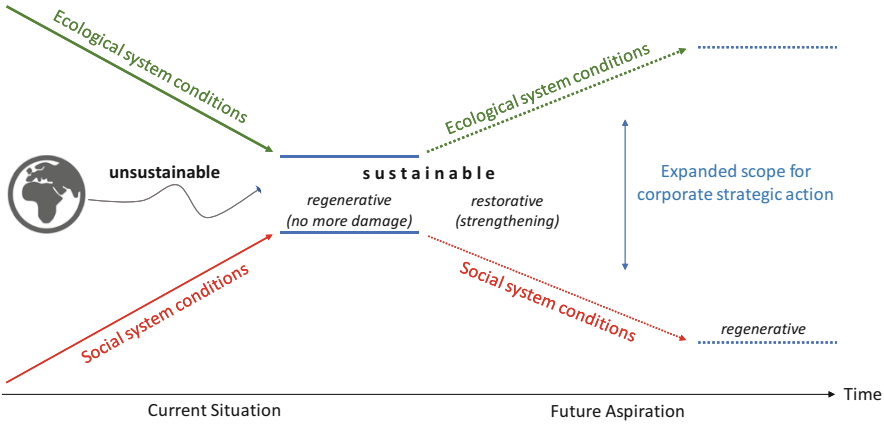

Fig. 1.7 The shifting nozzle: creating sustainability requires positive systems impact

at the faucet" or elsewhere, which illustrates the pessimistic scenario described earlier in Sect. 1.2.3. For most companies, this situation means decreasing space for thriving business activity and the risk of "hitting" the walls. Unfortunately, many sustainability-oriented strategy practices, as illustrated before with SAU and SUS 1.0 mindsets, are happening in this unsustainable area of the nozzle (left side of Fig. 1.7). Through reducing their unsustainability, companies slightly change the incline of the walls and slow the velocity at which the nozzle is closing, but this does not change course.

The primary goal of strategizing with a SUS 2.0 mindset is to achieve a *positive systems impact*, i.e. halt closing of and re-open the nozzle to release pressure. The goal is to shift it to something like an opening sprinkler and ultimately to sustainable, regenerative systems conditions (right side of Fig. 1.7).[28] This means to counter overshoot in planetary boundaries and shortfalls in social foundations (i.e. being restorative) or at least not worsen them (i.e. being regenerative) while pursuing value creation for various stakeholder groups. Hereby, what is considered "sustainable," and what not, depends on the carrying capacity of the systems. With this view, if the systems are able to regenerate from a greater ecological or social footprint caused by business, it may be considered "sustainable." On the other hand, if the systems lack capacity, the same footprints are "unsustainable." As systems conditions change over time, the impact of business activity must be continuously evaluated with regard to sustainability. This is why SAU and SUS 1.0 might not be sufficient anymore given the socio-ecological situation illustrated in Sect. 1.2.

Business leaders with a SUS 2.0 mindset are acknowledging, comprehending, and embracing the current systemic conditions as challenges to be strategically

[28]In other words, it is about creating shared well-being over a prolonged period of time, i.e. for current and future generations, or what others refer to as prospering, thriving, or flourishing (see Chap. 8).

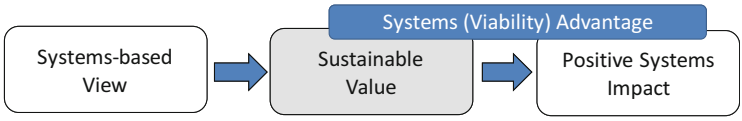

Fig. 1.8 Sustainable Strategizing 2.0

tackled and as new "rules of the game" for which they show sincere commitment. For SUS 2.0 leaders, sustainability does not constrain business but rather offers new opportunities and strategic freedom based on a societal-economic purpose. It provides them orientation for their strategizing efforts with regard to where innovation and collaboration need to take place. SUS 2.0 will not limit, but rather expand the scope for corporate strategic actions.

As shown in Fig. 1.8, SUS 2.0 follows a *systems-based view* of strategy to achieve *positive systems impact* through *sustainable value*[29] (co-)creation with various stakeholder groups. This happens with due consideration of value (co-) destruction, i.e. destroying value for certain stakeholders to create value for others. It also includes the consideration of direct and indirect rebound effects (Chitnis, Sorrell, Druckman, Firth, & Jackson, 2014) as well as the liquidation phase of "value creation" such as producing polluting waste that society needs to have liquidated as gracefully as possible to reduce negative systems impact.[30] Furthermore, the focus in SUS 2.0 shifts from a more short- or medium-term value capture perspective toward creating economic and non-economic value for various stakeholder groups that *can be sustained* for a long period of time. In SUS 2.0 the "payback" time of strategy becomes *long-term* systems oriented and requires a rethinking of the traditional value capture mechanisms toward a value *sustenance* perspective.[31]

For a company, achieving positive systems impact results in what can be labeled *systems* or *viability advantage*. Viability is enhanced because the systems conditions the company is embedded in will support its business model(s) in the long-term. This also implies a "case" for business; less with regard to short-term shareholder value but more to long-term business viability or corporate future fitness. At companies such as Danone, Interface, Patagonia, Siemens, Unilever, Vaude, and many others, that are embracing this kind of mindset,

> the business of business is no longer just doing business (Reeves & Harnoss, 2017),

[29]Note that the term "sustainable value" has been used in different ways by various institutions, companies, and authors such as Stuart Hart or Chris Laszlo. The term in this chapter is not linked to a specific framework.

[30]For example, numbers "obtained by the Guardian reveal that by 2021 the number of plastic drink bottles produced globally will reach more than half a trillion. But only a tiny fraction of these bottles are recycled. Fewer than half of the bottles bought in 2016 were collected for recycling and just 7% of those collected were turned into new bottles. Instead, most plastic bottles produced end up in landfill or in the ocean" (Laville, 2017).

[31]For a comprehensive overview of the "value,", "impact," as well as value "sustenance" concepts see Chap. 7.

but to

ensure long-term conditions for being able to do business.

Strategic leaders with a SUS 2.0 mindset strive to contribute to a restorative and regenerative economy with regard to both ecological and social system conditions. This mindset must not be misunderstood as becoming a purely social or ecological focused non-for-profit enterprise. Following a SUS 2.0 mindset does not necessarily mean a tradeoff with short-term business aspirations. Companies may still strive for gaining temporary competitive advantages as long as it does positively impact the systemic conditions required for viability. Pursuing positive impact could even increase opportunities for businesses to realize future competitive advantage through, for example, providing sustainability solutions like renewable energy or Carbon Capture and Storage (CCS) technology that help to go carbon neutral or carbon negative. New business concepts like the circular economy or biomimicry can support such business aspirations.[32]

Leaders with a SUS 2.0 mindset recognize that it is usually not possible for a single company to create "sustainability" which is a systems condition. However, a company can contribute to this by creating sustainable value in an economically acceptable way and measured with positive impact on ecological and social systems. To achieve this positive systems contribution, business leaders may follow essentially two key imperatives that interrelate with each other (Hoffman, 2018): First, achieving **systemic** impact through a sustainable transformation of markets, and, second, by changing the way of doing **business** itself. For SUS 2.0, following these two imperatives could result in a substantial departure from "business-as-usual" with regard to a variety of elements (Fig. 1.9).

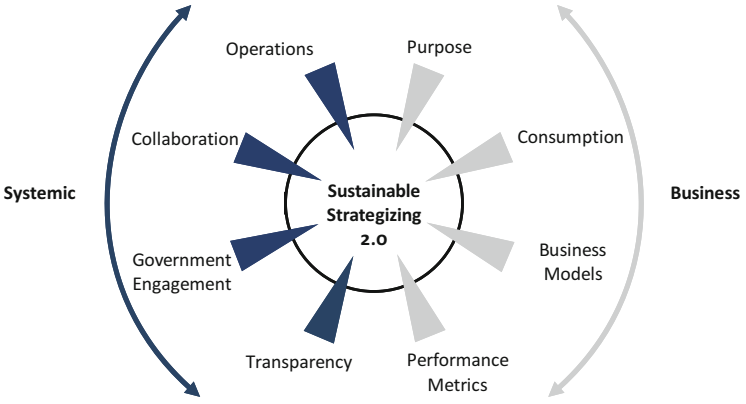

Fig. 1.9 Pillars of Sustainable Strategizing 2.0 requiring new conceptions

[32]See Chap. 15.

First, the company can pursue **systemic** strategies to drive market transformation. The goal of this approach is to collaboratively enhance sustainability of the systems in which the organization is embedded. This active role in guiding the market toward sustainability may require new approaches to *operations* such as optimizing supply chains or moving toward a circular economy. A second pillar encompasses new types of *collaboration*, such as cross-sectoral and multi-stakeholder collaboration with both partners in and outside a company's business ecosystem. This collaborative approach requires openness in the strategy process and may even include competitors as well as NGOs and other organizations seemingly unrelated to the business. Consequently, strategic business concepts in line with a SUS 2.0 mindset typically follow some kind of open strategizing (Whittington, Hautz, & Seidl, 2017).[33] Hereby, exploring opportunities for creating positive linkages between the goals and values of different stakeholders is pursued through actively involving them in the strategy process.[34] Finally, constructive *government engagement*, such as lobbying to participate in policy formation, can help a company to have positive systems impact as well as advocating new forms of *transparency* with regard to external reporting and accounting standards (Elkington & Zeitz, 2014).

Second, the company can change the way of doing **business** itself, which includes new conceptions of the company's *purpose* and its role in society that go beyond short-term shareholder value orientation. This may be expressed through certain organizational forms such as B Corps (www.bcorporation.net) or Benefit Corporations (www.benefitcorp.net) as well as cooperatives (www.ica.coop). It also captures new ways of *consumption* and dealing with customers. For example, a company can foster a transformation of lifestyles and consumption patterns towards sustainability which may require a new mindset of "mattering" instead of traditional marketing (Accenture & UNGC, 2014). Hereby, customers are not primarily viewed as buyers but as change agents and members of a values community with the company that shares the same higher purpose and goals. Striving for viability advantage does not necessarily mean striving for continuous business growth. Another pillar of changing the way of doing business encompasses new *business models* such as business models for the circular economy and many other sustainable business model patterns (Lüdeke-Freund, Carroux, Joyce, Massa, & Breuer, 2018). Finally, following a SUS 2.0 mindset requires advanced and new *performance metrics* that integrate the micro-level focusing on business success and viability with the macro-level in terms of systemic sustainability (Eccles et al., 2014; Eccles & Krzus, 2015; Gleeson-White, 2015; Grant, 2008; Reporting 3.0, 2018). Examples of management methods that provide companies with sustainability principles or socio-ecological performance indicators are the Framework for Strategic Sustainable Development (FSSD) developed by The Natural Step (Broman & Robèrt, 2017) as

[33] See also Chap. 5 and Part III.

[34] Examples can be seen in Chaps. 8, 11, 12 and 15. Value *co*-creation *with* stakeholders is different from the more traditional approach of overcoming and managing supposed "trade-offs" between expectations of various stakeholder groups in the strategy process (Hörisch et al., 2014).

well as, on a more operationalized level, the Future-Fit-Business-Benchmark (http://futurefitbusiness.org) and various forms of societal impact measurement.[35]

The socio-ecological state of the planet as well as the three strategizing mindsets explained in this chapter provide the foundation for making business sense of sustainability at this time in the twenty-first century. Based on this, more specialized business concepts, tools, and ideas are provided in this book. An overview of the upcoming chapters will be given next.

1.4 Structure and Contents of the Book

The aim of this book is to help business leaders, strategy practitioners, and all corporate decision makers as well as students of management to improve their level of *comprehension and concern* of why linking strategy and sustainability is important in the twenty-first-century business world. Based on this understanding they can create awareness for and review their current mindset for strategizing. Furthermore, it provides *actionable business knowledge* based on cutting-edge research and strategy practice that can be applied in companies for becoming fit for the future. Some readers will look for developing a *better understanding* of their socio-ecological operating environment and relevant stakeholder developments and focus on the Parts I and VI of the book first. Others may want to develop *more skills* for sustainable strategizing and jump directly to specific chapters in Parts II–V, and some readers may do both.

Strategizing at this time in the twenty-first century requires comprehensive sensemaking and unconventional strategic thinking because the systemic business challenges are complex and multifaceted. No single chapter will be sufficient for providing full comprehension of the issues and the business knowledge of how to tackle them strategically. Instead of providing supposed "solutions," the composition of the various perspectives will help readers to enhance their comprehension in strategic thinking and develop and implement their own answers for strategizing toward a sustainable future for both business and society.

1.4.1 Part I: Why Strategic Management Needs a Rethink

Part I of this book provides a variety of arguments why strategic management needs a rethink and requires new mindsets when it comes to linking strategy and sustainability.

In Chap. 2, *Henry Mintzberg* addresses business executives not only as corporate leaders, but also as citizens of their societies and neighbors in their communities. He emphasizes the necessity for stopping business-as-usual, especially in the form of corporate social irresponsibility. Beyond the responsible attention of business executives to conditions only, it is time to substantially address cause, which is labeled

[35]See Chaps. 3, 8, 15, and 17. For ESG analysis including impact measurement see also www.trucost.com.

"CSR 2.0." While we should be appreciating damage control, we should be welcoming CSR 2.0 for helping to reverse the damage. It is time for the citizens and neighbors who work in business to get serious about corporate social responsibility.

In Chap. 3, *Alexander Meyer zum Felde* demonstrates with empirical insights from various management studies, including longitudinal research conducted by MIT and The Boston Consulting Group, that sustainability with its complex multifold elements is becoming increasingly important for our business leaders. However, this is still not evident for the majority of firms. He provides empirical insights on current external drivers behind becoming more sustainable, explains the role of top management, expands on profitable business cases, and provides actionable recommendations.

In Chap. 4, *Jean Garner Stead* and *W. Edward Stead* elaborate on the economic foundations of Sustainable Strategic Management. Currently the field of strategic management is in the middle of a paradigmatic shift similar to the one that took place over 40 years ago when the internal, conceptual model of business policy and planning was questioned and then changed to the externally focused paradigm of strategic management. By taking a co-evolutionary perspective, the field is now moving to the next co-evolutionary stage in its development, to sustainable strategic management (SSM). An open-system view of the firm, based on the assumptions of ecological economics, provides strategic managers with conceptual models that better depict the reality of the practice of management.

Timo Santalainen explains in Chap. 5 why extending competitive advantage to viability advantage is an imperative today. There is both practical and research evidence that long-term oriented organizations outperform and deliver wider benefits to stakeholders than short-term oriented ones. Open strategizing, involving external network partners and enhancing internal horizontal collaboration by developing "silo solvents," is a promising vehicle for developing innovativeness and execution power needed for creating and sustaining viability advantage. For making viability advantage real, open strategizing must be driven and powered by strategic thinking.

In Chap. 6, *Andrew Mountfield*, *Matthew Gardner*, *Bernd Kasemir*, *Stephan Lienin* focus on the rationale for more corporate sustainability-orientation from an investor's perspective. They explain the challenges of "value" versus "values" sustainability investment and their consequences for corporate leadership. Companies must develop and align two integrated process loops. First, the information requirements of rating and ranking organizations, as well as the asset managers themselves, must be addressed. As increasingly sophisticated techniques, such as "smart beta" or "factor investment" are used to isolate specific ESG-related risk or opportunity factors, the demands placed on companies to steer, manage, and align information flows will increase. Second, an equally important and challenging process loop will integrate external and internal financial and non-financial objectives in a common, operational framework.

1.4.2 Part II: New Business Concepts for Sustainable Strategizing

After providing various arguments for the need of linking strategy and sustainability, new business concepts practitioners may want to consider for supporting their sustainable strategizing efforts will be presented in Part II of the book.

As a starting point, *Krzysztof Dembek* and *Jodi York* point out in Chap. 7 why rethinking value and impact is important when moving from conventional to sustainable business models (SBM). SBMs expand the scope of value propositions by adding other stakeholders and considering *impact* as well as *value*, enabling companies to strategize for long-term sustainability within their business model. SBMs employ more sophisticated value creation mechanisms that often combine different value creation logics in unique ways, resulting in business models that are difficult for competitors to copy. SBMs make it possible for companies to strategize not merely for their own value capture, but for value sustenance that plans for lasting benefit from value creation for both firm and stakeholders.

In Chap. 8, *Antony Upward* and *Stephen N. Davies* introduce The Flourishing Enterprise Strategy Design Method as a robust procedure that helps leaders craft effective enterprise strategies. It enables leaders to create strategic paths for enterprises and their stakeholders to improve their performance financially, socially, and environmentally. The method integrates business design and strategy techniques with vital science-based principles for flourishing. The method employs the "backcasting" approach and hosts a strategic conversation about the stakeholder's definition of success for the enterprise. This occurs during an iterative co-creative systemic-design process focused on business modelling which is enabled by the Flourishing Business Canvas.

Alexandre Joyce elaborates in Chap. 9 on the design for more sustainable business models, services, and products with support of the triple layered business model canvas. He explains how design foresight outcomes can guide organizational sustainability of five small and medium-sized manufacturers. With the goal of helping organizations design their business models to be more sustainable, a design approach can be used in foresight workshops. This is demonstrated by building on three levels of design outcomes: business models, services, and products, which address three levels of management decisions in organizations, i.e. strategic, tactical, and operational.

In Chap. 10, *Suhaib Riaz* provides the conceptual apparatus and practice toolkit for organizational strategists and stakeholders to engage with the important issue of economic inequality. First, the key spaces where organizations are implicated in the generation and perpetuation of economic inequality are drawn out on a Loci of Inequality map. Second, the impact of these loci of inequality on the organization is disaggregated into three major dimensions—legitimacy, trust, and growth (LTG). Finally, three organizational strategy levers—information, formulation, and execution—are discussed in terms of how they can help the organization act on the loci of inequality in order to reduce its inequality footprint. Taken together,

these ideas provide an essential springboard towards building the inequality-aware organization of the future.

1.4.3 Part III: Stakeholder Engagement and Open Strategy

Part III takes a deep-dive into the two fields of stakeholder engagement and open strategy with regard to sustainable strategizing. These areas are of particular relevance, as crafting and implementing effective solutions to socio-ecological issues requires stakeholder collaboration.

In Chap. 11, *Henning Breuer* and *Florian Lüdeke-Freund* provide concepts and methods for values-based stakeholder management. Based on the difference between interests and values, a values-based reframing of the stakeholder concept and corresponding management methods is suggested and illustrated with exemplary cases. It is shown how to clarify and develop stakeholder values (e.g. by means of ongoing values conversations) and exemplified how to reframe and adapt methods of stakeholder analysis and management (e.g. as an element of values-based business modelling). This way, the course of strategic decisions is not only determined by short-lived attitudes and interests, but driven by long-term objectives of diverse participants.

Petra Kuenkel demonstrates in Chap. 12 what corporate strategists can learn from international multi-stakeholder collaboration and provides a conceptual architecture for transformative change. Based on successful cases of international collaboration, she introduces a radically new approach to strategy: the concept of *stewarding transformative changes collectively*. A conceptual architecture is introduced that functions as a meta-level guidance to improve existing strategic management frameworks in the three phases *co-sending, co-designing*, and *co-creating*. The chapter concludes with an outlook on how transformative processes can accelerate sustainability transformations.

In Chap. 13, *Stefanie Remmer* and *Dirk Ulrich Gilbert* address the question of how to apply materiality assessment in Strategic Management. They point out an implicit coating of the materiality lens by comparing two popular non-financial reporting initiatives. SASB focuses on enhancing performance through risk reduction and business development, but barely deviates from business as usual in terms of the integration of sustainability. GRI is more suited to enable rethinking of strategic management regarding sustainability and open forms of strategizing, but does not primarily serve to increase shareholder value. Firms need to be aware of their own specific objectives regarding the adoption of the tool in order to find the framework that aligns best with their goals.

1.4.4 Part IV: Learning from Strategy Practices

This section of the book provides three cases of standout companies with regard to innovation and sustainability to offer readers the opportunity for learning from strategy practices.

In Chap. 14, *Laura Engelhardt*, *Steffen Mayer*, *Christoph Krois*, and *Bettina Maisch* illustrate the SIEMENS Intrapreneurs Bootcamp which is based on purpose-driven innovation to unleash people's potential for impact-based business. This case study demonstrates the power of large corporations to innovate for a greater good in a VUCA (volatile, uncertain, complex, and ambiguous) world. It portrays the pioneering setup and concept of the Siemens Intrapreneurs Bootcamp: a global initiative for change makers to co-create the future with a consequent focus on people, their unique genius' as well as individual and collective purpose.

Geanne van Arkel describes in Chap. 15 how INTERFACE is creating a climate fit for life and follows a strategic approach for cross-sectoral co-innovation by applying the strategic framework for sustainable development from The Natural Step and a Biomimicry approach. This helped realize a diverse range of benefits with regard to cost savings, innovation, brand reputation, employee engagement, and overall company resilience. Taking a strategic and science-based approach in sustainable development has enabled Interface to create a climate fit for life, moving from its goal to become restorative by 2020 to becoming regenerative.

The third strategy practice example is provided in Chap. 16. *Lisa Fiedler*, *Felix Bongen*, and *Anna Elleke* explain how sustainability and a culture of trust shape entrepreneurial success at VAUDE. With the vision to become Europe's most sustainable outdoor outfitter, it has demonstrated how to successfully integrate environmental and social value creation with economic objectives. The company fosters a corporate culture of trust and innovation which facilitates self-efficacy within the organization and promotes people's creativity, honesty, and loyalty. VAUDE's commitment to sustainability is ideologically anchored. It has been able to realize above average economic success through its entrepreneurial conviction.

1.4.5 Part V: Mastering the Transformation and Looking Ahead

Part V of the book will focus on execution and provide ideas and approaches for mastering the transformation as well as looking ahead.

In Chap. 17, *Rüdiger A. Röhrig* and *Edwin J.M. Janssen* address the issue of sustainability and technology acceleration and explain how to "surf the killer waves" with a systems thinking approach to become fit for the future. This chapter not only answers the question, "Why" any organization must walk through a fundamental transformation to become fit for the future, it also provides a sound response on "What" to do and "How" to do it, taking a systems perspective. The relevance of

collaboration over competition, being context-driven, and providing purposeful innovation and leadership will become obvious, inviting *new leaders* to take over.

In Chap. 18, *James Canton* points out why every CEO needs to be Future Smart with regard to sustainability and artificial intelligence (AI). To thrive within a radically changed environment, companies need to be led into this future by a Chief Executive Officer (CEO) who is aware of fundamental future trends. Being Future Smart describes the ability to see signals that will create a trend and to explore possible future scenarios to better prepare for them today. Ten questions are proposed that business leaders should ask about sustainability and AI to help leverage both trends and their synergies for thriving in the future.

1.4.6 Part VI: Epilogue

While this book was finalized, civilization was confronted with fresh evidence of human sustainability issues particularly with regard to our most pressing global concern, climate change. This confirming evidence is provided in Part VI of the book. It re-emphasizes the need for corporate strategists to take "sustainability" seriously in their strategic sense-making and ideation processes and to develop impactful strategic business responses and actions. The chapters in this book offer ideas, management methods, and strategy practice examples to help mastering this task. In the last chapter, an epilogue, several developments are underscored which seem even more important since the other chapters of this book were completed.

1.5 Conclusion

This introductory chapter provided science-based insights about the current state of the planet and potential future scenarios to provide corporate strategists a realistic macro-environmental assessment from a systems perspective. Having a clear understanding of this macro-environmental situation sets the stage for strategizing, as future business success depends on it. Speaking in the language of strategy practitioners, this can be considered a spotlight in the *initial strategic situation*, which needs to get management attention in any strategy process. The seriousness and urgency of the socio-ecological developments presented may show strategists the need to consider the greater society and the limits of nature when crafting strategies, as proven business models may no longer be successful and new business models may be required for thriving in the future. Making strategic business sense of sustainability will help to craft effective strategic response and action.

This chapter also discussed three types of mindsets for linking strategy and sustainability, i.e., Strategizing-As-Usual as well as Sustainable Strategizing 1.0 and 2.0. Each strategizing mindset is dominated by a different *strategy orientation*, has a different understanding of *value creation*, follows a different *performance*

imperative in terms of what "success" means, and seeks to create a different *type of advantage*. The three mindsets are driven by different *time horizons* in terms of payback and reflect different *motivations for sustainability-orientation* in the company's strategic management approach. In SAU, sustainability becomes a strategic concern only if it is driven by market forces—primarily through external stakeholder concern—with potential impact on the financial performance of the company. With a SUS 1.0 mindset, executives try to overcome the traditional tradeoff thinking and pro-actively seek to create win-win situations between economic and social or ecological performance by asking "*What can sustainability do for my business?*" Strategizing based on the SAU and SUS 1.0 mindsets will typically ignore sustainability of the socio-ecological systems unless the market creates incentives for it.

In SUS 2.0 this mindset changes to an outside-in perspective and *systems-based view of strategy*. Strategists first seek to understand the broader systemic context they operate in and how it relates to their organization's viability. Then they derive strategies to deal with these systemic challenges. Business leaders embracing this approach are driven by a higher purpose and vision of creating sustainability, as they know it is required for thriving as organizations, business ecosystems, or individuals in the future. Consequently, instead of looking for economic business cases in the first place, leaders following a SUS 2.0 mindset consider socio-ecological future fitness as a prerequisite and opportunity for economic future fitness and ask "*What can my business do for sustainability?*" For SUS 2.0 leaders, sustainability does not constrain business but rather offers new opportunities and strategic freedom based on a societal-economic purpose. To achieve *positive systems impact*, business leaders may follow essentially two key imperatives that interrelate with each other: First, achieving *systemic* impact through a sustainable transformation of markets with Operations, Collaboration, Government Engagement, and Transparency as potential pillars. Second, they may change the way of doing *business* itself with Purpose, Consumption, Business Models, and Performance Metrics as potential levers. Strategists need to be aware of and reflect their own strategizing mindset before they decide what business concepts, tools, and ideas proposed in the various chapters of the book they consider for supporting their strategizing efforts toward a thriving future for both business and society.

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Thomas Wunder spent more than a decade of his career as a strategy consultant and business leader for Horváth & Partners Management Consultants in both the EU and USA where he was in charge of operations for 6 years. He was associated with the Balanced Scorecard Collaborative (BSCol) in Boston and its thought leaders, Harvard Business School professor Robert S. Kaplan and David P. Norton. Later he became an affiliate of the North Highland Company in Atlanta, where he helped to build Cordence Worldwide, a large-scale global alliance of local consulting firms with over 2800 experts in more than 65 offices today. In all these years, Thomas supported executive leadership teams of MNCs improving their strategy processes at various organizational levels to drive top and bottom line performance.

In 2010, Thomas transitioned to academia as a full professor of Strategic Management at the Neu-Ulm University of Applied Sciences in Bavaria, Germany, where he is leading the Master of Advanced Management program. Since then he has dedicated his research, writing, and teaching to the integration of corporate strategy with sustainability, which is summarized in his book *Essentials of Strategic Management. Effective Formulation and Execution of Strategy* (2016). He also edited the practitioner-oriented German book *CSR und Strategisches Management* (2017) for Springer and has published a number of articles and book chapters. Thomas seeks to provide current and future business leaders with practically actionable and impactful science-based knowledge for strategizing toward a thriving future for both business and society. Knowing that a great portion of strategies fail due to poor execution, he puts special emphasis on the translation of strategies into action, both in regional and international cross-organizational settings.

Thomas has taught strategy at various globally recognized universities. He has spoken at international academic conferences, including *Strategic Management Society (SMS)*, *Academy of Management (AOM)*, and *Sustainability, Ethics and Entrepreneurship (SEE)* as well as a number of practitioner-oriented symposia. Thomas received his doctorate in the field of Strategic Management from the European Business School (EBS) in Germany. He earned a master's degree in Business Management and Industrial Engineering (Dipl.-Wirtsch.-Ing.) studying at the University of Kaiserslautern (Germany) and the University of Birmingham (England). Thomas lives with his wife and two children in the Alpine foothills of Southern Germany.

Part I
Why Strategic Management Needs a Rethink

Chapter 2
Please Welcome CSR 2.0

Henry Mintzberg

I address this especially to business executives, but as citizens of their societies and neighbors in their communities.

Why do we focus on the conditions of our problems instead of addressing their root causes? Medicine, for example, gives far greater attention to treating diseases than to preventing what caused them in the first place. Jonas Salk provided a telling exception: instead of treating polio, he created a vaccine to eradicate it.

Much the same can be said about corporate social responsibility, or CSR. A corporation is considered responsible when it attends to the evident conditions of some social or environmental problem. But imagine how much more responsible it would be to address the underlying cause of that problem? Finding a new way to recycle waste may be good, but helping to reduce the generation of that waste is better. Not good, however, is Coca-Cola's promotion of exercise programs for obese children, because its own products are a significant cause of that obesity. This, like greenwashing—pretending to be environmentally friendly—borders on what we can call Corporate Social Irresponsibility, or CSI.

We are inundated with CSI these days, some of it verging on the criminal—for example, banks that register customers for accounts they never requested or automobile companies that cheat on emission controls. And how about the massive private funding of American election campaigns? This is a form of legal corruption tantamount to bribery.

Let's label the irresponsible activities, CSI 0.0; the responsible attention to conditions, CSR 1.0; and the substantial addressing of cause, CSR 2.0. While we should be appreciating CSR 1.0 for its damage control, we should be welcoming CSR 2.0 for helping to reverse the damage. We need as much serious corporate social responsibility as we can get.

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2.1 Imbalance as the Root Cause

I see imbalance in society as the root cause of many of our major problems, including global warming and income disparities. In my book *Rebalancing Society*, I trace the tipping point toward the current imbalance back to 1989, when the Berlin Wall fell, signaling the end of the communist regimes of Eastern Europe.

Western pundits at the time declared that capitalism had triumphed, over communism. They were mistaken. Balance had triumphed, over imbalance. A healthy country balances the market forces of the private sector with the democratic needs of the public sector and the community concerns of the plural sector ("civil society"). Those regimes of Eastern Europe were severely out of balance, on the side of their public sectors, while the successful countries of the West were better balanced across their three sectors.

Since 1989, however, there has been a marked decline in the health of many countries, most notably the United States. The country now faces alarmingly high rates of incarceration, obesity, income disparities, and drug taking, accompanied by, of all things, a sharp decline in social mobility (particularly the chances of poor children moving up the social ladder). All of this reflects the escalating imbalance in American society.

The mistaken belief that capitalism triumphed in 1989 has enabled capitalism to triumph since then, tilting the country toward the private sector. Think about the lopsided lobbying that now overwhelms Congress, as a result of that legal bribery—most of it in favor of business interests. How ironic that the very problem of imbalance that brought down communism is now bringing down democracy.

In much of this, corporate America has hardly been an innocent bystander. This is most evident in the congressional lobbying, but also in the intensification of global warming by the promotion of fossil fuels as well as by the stock markets' relentless demand for MORE. Likewise have income disparities been widened by the shift to contract work that has diminished workers' wages while weakening their protections. And at the root of this has been the investor obsession with Shareholder Value, as if no other stakeholders, let alone basic human values, matter.

2.2 The Business Fix?

Most of our major problems reduce to a single foreboding one: how to reverse the imbalance before it's too late? There is widespread belief in America that if the country has a problem, business will have to fix it. Proponents of this fix point to private (so called win-win) ventures for example, that bring down the cost of windmills and solar panels. No doubt "doing well by doing good" is beneficial. Not beneficial, however, are the many companies that do well by doing bad, or else do well by doing nothing. There is no win-win wonderland out there.

Now we see a whole spate of proposals for what can be called adjectival capitalism: Sustainable Capitalism, Caring Capitalism, Regenerative Capitalism, Inclusive Capitalism, Conscious Capitalism, Democratic Capitalism (this one with democracy as the adjective and capitalism as the noun!). All of this indicates the problem more than the solution.

Capitalism certainly needs fixing, especially the frenetic stock markets and the deplorable pursuit of Shareholder Value. But that will happen, not by capitalism getting itself right so much as by society getting capitalism into its rightful place, namely the marketplace. How did a word coined to describe the funding of private enterprises become the be all and end all of human existence? It is the balance in society that we need to get right, and that will not be done by business alone, or, for that matter, by government or community action alone.

2.3 Responsible Responses

What, then, can responsible businesses do? They can start by recognizing the role they may have played in creating these problems—if not deliberately, then as a byproduct of their economic activity—so that they can address their causes. Moreover, decent businesses will have to challenge the indecencies of other businesses, not least by supporting legislation intended to correct these indecencies. Above all is the need for responsible businesses to engage in more collaboration with government organizations and community associations. Consequential solutions, especially for the problem of imbalance itself, will have to come from consolidating the capabilities of the major institutions of all three sectors: communities engage, governments legitimize, businesses invest.

Is the private sector prepared to recognize that it has too much power? Are many of us ready to temper our self-serving individualism for the sake of our collective and communal needs in society? Will international businesses and the international agencies so beholden to economic dogma acknowledge the social, political, and environmental downsides of globalization? History offers scant evidence of centers of power voluntarily relinquishing power. But these are no ordinary times, with the looming threat of global warming and the prevalence of nuclear weapons in a world of so many thugs in high office.

So, please, enough of business as usual, especially in the form of CSI 0.0. Beyond CSR 1.0, it is time for CSR 2.0—time for the citizens and neighbors who work in business to get serious about corporate social responsibility.[1]

[1]This chapter was originally published in: http://www.mintzberg.org/blog.

Henry Mintzberg is an internationally renowned academic and author on business and management. He is currently the Cleghorn Professor of Management Studies at the Desautels Faculty of Management of McGill University in Montreal, Quebec, Canada, where he has been teaching since 1968. Henry Mintzberg writes prolifically on the topics of management and business strategy, with more than 150 articles and 15 books to his name. His seminal book, The Rise and Fall of Strategic Planning (Mintzberg 1994), criticizes some of the practices of strategic planning today. In 2015 he published a book entitled Rebalancing Society which outlines what he believes to be wrong with society driven predominantly by the public sector and the private sector today. His weekly TWOG (tweet2blog, @mintzberg141) has been offering provocative and funny ideas in a page or two (http://www.mintzberg.org/blog).

Chapter 3
Managing the Next Industrial Revolution Successfully: Sustainability

Alexander Meyer zum Felde

3.1 Introduction: Business Leaders Need to Rethink

Undeniably, there are natural limits on how we conduct business today, how we grow our economies, and how we value our products. Simply observing the growth path the global population is on, assuming a continuously increasing demand for food, clothing, transportation, or health care, is a clear road to catastrophe. Resource dependency and increasing depletion need to also be taken into consideration. According to the UN, by 2025 almost two billion people will live in countries or regions with absolute water scarcity and we might run out of phosphorus—which is required to grow plants and hence to produce food—in 50–100 years (Ruz, 2011).

This insight is not new, yet the question remains why businesses, consumers, and regulators have not changed their general approach to conducting business over the past 100 years, which may be the reason some seem to wonder, "Why would we need to now?" Most businesses are increasing their profits year after year, the stock exchanges are rallying like never before—statistically there is as much wealth for humankind as never before. Yet there is also another side to this equation, resources are being depleted quickly, water is becoming scarce in more and more areas (such as California), climate catastrophe occurences and related costs are rising, and waste in oceans is irreversibly increasing. According to a report from the World Economic Forum (WEF) there could be more weight of plastics in the oceans than fish by 2050 (Kaplan, 2016).

As Peter Bakker, CEO of the WBCSD (World Business Council for Sustainable Development) stated in his opening speech to many CEOs and global top executives at their annual conference in 2017, "In the nineteenth century, there were an average of two extreme weather events recorded in a given decade. Last decade, we saw more than 400." These events not only put a significant strain on society and

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governments, but also translate to rising costs for businesses, stemming from destroyed buildings, lost stocks, insurance fees, lost production time.

It would not be fair to state that companies are not aware of the challenges. Most companies have been engaging in sustainability for some time but certainly in many different stages ranging from basic CSR (corporate social responsibility) to singular lighthouse projects to impressive growth and business model innovations on sustainability.

A study by MIT and BCG concludes that corporate sustainability is at a crossroads—there are some characteristic examples of successful business cases, however they are not yet mainstream (MIT & BCG, 2017).

For a long time businesses have been demanded to primarily focus on bolstering financial returns and optimizing their profits, as Milton Friedman once taught. However, the winds seem to be changing.

3.2 Increasing Pressure from Stakeholders Toward Sustainability

External stakeholders often play an important role in getting sustainability on the corporate agenda. The most significant external stakeholders for a company's sustainable agenda (Fig. 3.1), namely customers, regulators, and investors, are introduced in the following.

3.2.1 B2C Consumers

Consumer behavior toward sustainability is complex and multifaceted. Undoubtedly, the transparency, access to information and hence also awareness, is becoming more apparent to consumers. However, to fully assess the relevance of sustainability

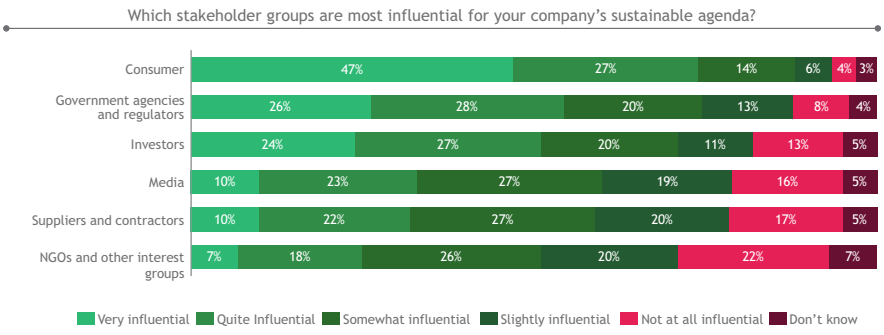

Fig. 3.1 Relevance of stakeholder groups for sustainability agenda (MIT & BCG, 2016)

for consumers, one needs to differentiate between a sectorial approach, emphasizing differences between industries and a topical approach that looks at different aspects of sustainability.

Consumers' awareness of the issue varies depending on the industry. For example, how many consumers truly consider the climate change question when shopping for apparel rather than wondering about sustainable cotton and fair wage? Whereas, when acquiring a new car, fair wages might play a minor role compared to climate change driven by emissions. Though even looking at mobility, decisions don't always seem to be rational. Air travel is a significant polluter in individual travel, yet it's growing by a stunning 6–8% in 2016 and 2017 according to IATA data (IATA, 2017).

Critics sometimes state that consumers are often not willing to restrict themselves, or if so only very selectively. This holds true for most—even the self proclaimed "greenest" people fly to their vacation destination or like eating a good steak or purchase a mobile phone with a non replaceable battery. The sheer complexity and amount of information available also poses a challenge for customers. For some emotional buying decisions, such as for a cell phone, sustainability does not seem to play a role. While other industries, for example in the food sector, are already experiencing a large impact from consumer behavior.

Take some consumer articles for example. Demand for responsible products presents major growth rates, 9% annually, making up for 70% growth in its respective product categories, yet it still makes up only a comparably small share of the market. However, expanding retail chains now expand their product portfolios to green, organic, or natural products ranging from food to shampoos. As consumer awareness rises in some product categories such as coffee, standard certifications like fair trade have become the norm in some countries (Smits et al., 2014).

Increased demand for sustainable or responsible products poses a significant risk to existing business models and to incumbents, but it also offers significant business opportunities for those who innovate and advance these new and growing market segments.

A middle-aged European manager of Toyota recently stated in a large top-executive meeting, "We need to rethink our business model. My parents wanted to own a car, I wanted to lease a car, and my kids don't want a car at all. They are happy with sharing models."

C&A, a large European fashion retailer is an example of a company that innovated from inside, when there was little consumer pressure on comprehensive sustainability and no willingness to pay a premium (for details refer to Sect. 3.5.2). However, once C&A was able to offer a fully cradle-to-cradle (C2C) certified T-shirt at a mass market retail price, it was sold out within a few weeks across Europe. C&A did not receive a premium on this product. However, C&A managed to address new customer segments and was able to cross-sell to customers that would not have previously entered a C&A store, demonstrating that there is significant demand for sustainably produced garments at affordable prices (WBCSD & BCG, 2018a).

These examples show, that the increasing awareness and accelerated transparency change consumer behaviors toward more environmentally responsible decisions.

Businesses need to innovate and carefully consider their actions in order to be part of the future. Shifting consumer demands and preferences will require business leaders to reevaluate their strategies and consider business model disruptions coming faster and more strongly than ever before.

3.2.2 B2B Customers

While the B2C world is still struggling to identify a clear consumer trend toward sustainability, the B2B world is changing even faster with increased sustainability demand from suppliers who aim at being ahead of regulation in order to prevent risk. Plastics are being replaced by biodegradable materials, former waste streams suddenly turn into income streams, supply chains are increasingly pressured to provide additional transparency, and companies are starting to demand information on topics like carbon footprints.

Sustainability is becoming a key driver of competitiveness in the B2B business. Some companies already generate almost half of their profits from sustainable products, such as the large Belgian chemical company Solvay. "Where you have a tangible product for consumers, you don't need to wait for regulation," said Dominique Debecker, Deputy CSO at Solvay (WBCSD & BCG, 2018a, p. 37).

While some industries are already highly advanced, others are just starting to catch up when it comes to innovative environmentalism (Fig. 3.2). For example, LafargeHolcim, a construction materials giant leading in sustainability in its industry, set up focus groups with its customers to understand their needs and expectations (WBCSD & BCG, 2018a).

Collaboration is also critical to transferring waste into value streams, not only within existing supply chains (that eventually evolve to supply cycles) but across sectors and industries. A European example is the Kalundborg Symbiosis (www.symbiosis.dk). This symbiosis is a partnership in which different businesses and production facilities optimize their "waste streams" to turn them into input resources for other facilities to fully utilize resources.

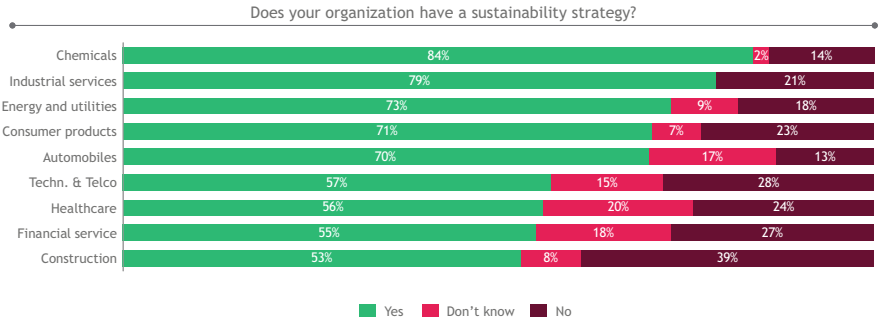

Fig. 3.2 Prevalence of sustainability strategies across industries (MIT & BCG, 2016)

In Latin America, CPMC, a Chilean pulp and paper company, managed to turn waste treatment from costs into profits by turning its waste into new raw materials for other industries (WBCSD & BCG, 2018a).

A recent joint publication by WBCSD and BCG, which focuses especially on circular economy, identified that only very few companies achieve a direct price premium through sustainable products, yet about two-thirds of the leading companies have developed a clear business case. This is often based on attracting new customers, building a unique and innovative offering, and deepening customer relations in the long run—hence providing sustainable value (WBCSD & BCG, 2018a).

As consumer-facing companies step up their game, so do their suppliers. Strategic considerations of sustainability in terms of B2C, but even more so in terms of B2B, become even more critical, also from the perspective of value chain partners.

Customers are certainly key influencers of management decisions. However, boards are well aware of the regulatory limits when making decisions. So how will regulators and international organizations affect the sustainability decisions of management boards?

3.2.3 Regulators and International Organizations

Regulation impacts companies on an international and national level. Internationally, the UNFCCC COP 21 Paris Agreement marks a milestone in creating public awareness and eventually regulation on climate change. One hundred ninety-six countries have signed the treaty and have committed to the two-degree, science-based target, and regulation has followed suit in some countries already. On a national level, the UN SDGs (Sustainable Development Goals) are currently being translated into NDCs (National Development Goals). The increased global political awareness of urgent sustainability matters leads to intensified discussions and, in several regions the SDGs are part of regulatory discussions, that will directly or at least indirectly impact all businesses (IISD, 2018).

Furthermore, regulation varies significantly between industries. Some of the most obvious regulations pertain to combustion engines. Some countries have already passed laws to ban combustion engines fully, some are currently in discussion. Norway, for example, aspires to only allow sales of zero-emission vehicles by 2025. Already today around 40% of all cars sold there are electric or at least hybrid. India set an “aspirational target” that all vehicles sold past 2030 should be electrically powered (Petroff, 2017).

These discussions are usually featured very prominently, as they are directly linked to the Paris Agreement. Regulation on sustainability is constantly tightening and directly affects businesses not only in terms of climate change. For instance, China banned the import of several waste types including plastics. This leads to increasing pressure on exporting regions to identify solutions to handle their waste on their own. The European Union is currently putting forward an ambitious package of legislative directives around waste, reaching from landfill bans to clear

targets on minimum recycling rates, such as for plastics. These directives specifically target packaging producers, incentivizing reuse and green products, hence there is a direct business implication from the changing legislation (EU, 2018).

And even in regions and countries that don't usually come to mind, market-disrupting legislation is being discussed. Take for example Rwanda, where the government is currently considering a ban on imported (secondhand) textiles, as there is currently no sustainable and cost efficient recycling option for textiles (DW, 2018).

Finland is an example of a country "leading the cycle." The country has adopted the first circular economy roadmap to become a carbon neutral economy by setting a very ambitious timeline—within the next 10 years, by 2025. Finland has established the Finnish Innovation Fund Sitra to support this unique journey (Sitra, 2018).

Hence, regulators play a significant role in determining the necessity for business to innovate and to step up their game in terms of sustainability. However, regulators usually challenge the social license to operate and will support in establishing minimum standards and even support innovations through subsidies or tax breaks. Still, innovation of products, collaborations, and eventually business models will need to come from top management.

3.2.4 Investors

Not only customers and regulators, but other key stakeholders also start demanding more transparency of risks and opportunities. While NGOs have done a successful job at creating awareness and pointing to past failures and misbehavior, for instance, it seems other key actors are becoming more aware and concerned as well. Most surprising yet importantly: investors.

Until recently companies cited a lack of investor interest when asked why they weren't stepping up their game on sustainability. The elephant in the room was that investors did not care about ESG (environmental, social, and governance) or broader sustainability activities, as long as they didn't openly present a competitive advantage.

Investors are undoubtedly one of the most important stakeholder groups and strongly influence management's agenda. However, even investors are becoming more conscious about ESG reporting and increasingly demand sustainable business practices. Back in 2016, a major joint study from MIT and BCG showed that investors are increasingly interested in the sustainability of their investments (Fig. 3.3). The study showed that investors believe that sustainability creates tangible value. Of the investors interviewed, 75% want to see improved revenue performance and operational efficiency from sustainability. Furthermore, more than 60% also see improved risk management from stringent sustainability (MIT & BCG, 2016).

The number of companies reporting on ESG is constantly increasing. While in 2006 only 436 companies were reporting under GRI guidelines, in 2017 6710 companies participated. GRI is an independent international organization, having established the most widely adopted sustainability reporting standards worldwide

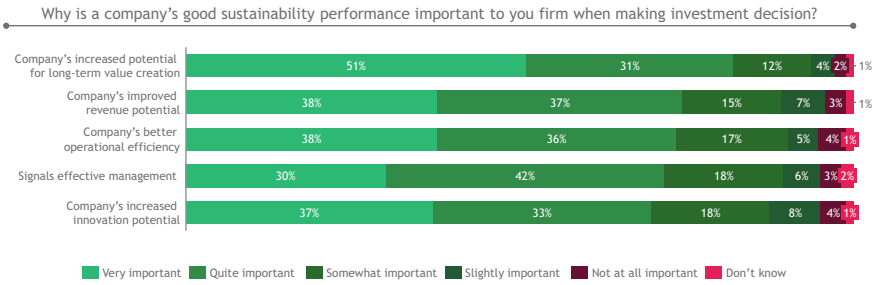

Fig. 3.3 Importance of sustainability performance for investment decisions (MIT & BCG, 2016)

(GRI, 2018).[1] Investors are starting to request these reports to receive a comprehensive overview of companies' performance to aid in making investment decisions.

The MIT-BCG study on investors identified that around 60% of board members of investment firms are willing to divest from companies with a large carbon footprint. Most recently the announcement of Larry D. Fink, CEO of BlackRock—the largest investment firm of the world managing more than $6 trillion in investments—informed business leaders that they will need to deliver more than just profits in the future, demanding a contribution to society as a whole. In a recent publication, he wrote "Society is demanding that companies, both public and private, serve a social purpose. To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society" (BlackRock, 2018).

In 2016, there were a few prominent examples of large institutional investors willing to withdraw from unsustainable business practices, like large global investors such as Allianz and Norway's largest pension fund KLP (Kommunal Landspensjonskasse). KLP withdrew all investments from coal companies and transferred them to renewable energy assets. Allianz announced it would divest from companies sourcing more than 30% of their revenues from coal-related business. While these announcements showcase the sustainability awareness of investors, it must be clearly stated that renewable investments often provide a better risk-return profile and hence are also a financially logical decision.

Interestingly enough, the MIT study revealed a large gap between companies' perceptions and investors' expectations. Only 60% of managers in publicly traded companies believed that good sustainability is materially important to investors (MIT & BCG, 2016).

This gap demonstrates that awareness in boardrooms needs to grow as investors' pressure increases. Taking sustainability into account for strategic considerations is becoming increasingly important (Fig. 3.4).

[1] See also Chap. 13.

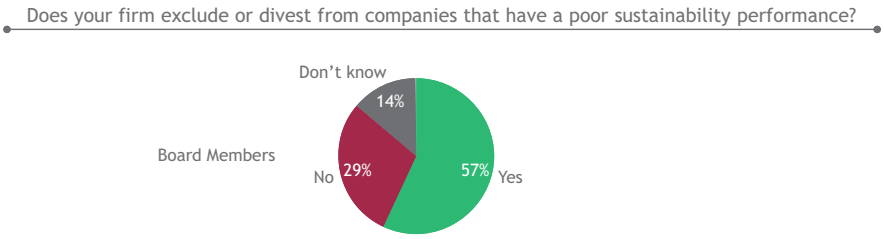

Fig. 3.4 Board members' reaction to poor sustainability performance (MIT & BCG, 2016)

3.3 The Role of Top Management to Anchor Sustainable Behavior

There is a lot of discussion on why management teams act the way they do. And there are many answers too: ill-conceived incentive schemes, legal obligation, lack of awareness, and simply, in some cases, a lack of knowledge about how to conduct business differently. In the past there was a strong focus on optimizing shareholder value, even if that meant neglecting environmental or social considerations. The tide is turning. As was recently published in a report by BCG, companies that invest in the perfect combination of financial, environmental, and social sustainability outperform their peers. The concept is referred to as TSI (total societal impact). The report shows that those companies succeeding in TSI are valued 3–19% higher than their respective peers (Beal et al., 2017).

Also, sustainability as such is a rather vague term, although many managers believe it is increasingly important. Once we look deeper into certain elements of sustainability, such as circular economy—which describes circular streams of resources including reuse, recycling, or refurbishment—it suddenly becomes more tangible and actionable for managers and is tied to clear business value. In a very recent publication by the WBCSD and BCG, 96% of managers interviewed admitted that circular economy will be important for their companies' future success and will help to create long-term value. A considerable 84% of the managers expect to increase their investments in circular economy significantly (WBCSD & BCG, 2018a).

This demonstrates that if companies break sustainability down into manageable and actionable topics, they have an easier time seeing how to move ahead. There is also a surge of strong leaders who set and communicate sustainability goals, going far beyond the direct business case and necessities. To just illustrate a few claims—IKEA has the clear target to become energy neutral and source 100% of their used wood material by sustainably managed forests—both by 2020 (IKEA, 2018). H&M, a large apparel retailer just announced to adjust their full value chain to become climate positive by 2040 (HM, 2018). These are examples of companies who link the pure financial sustainability with environmental and social considerations, resulting in subsequent benefits for society at large. Yet, this is certainly only a small chunk of the large community and words are easier be said than implemented.

Media coverage, NGO campaigns, and public outcry are often focused on misconduct, scandals, and catastrophes and receive more attention than positive action. However, this is certainly needed to further increase awareness and to push business leaders to further advance their sustainability actions. Coverage on Rana Plaza, Deepwater Horizon, "Dieselgate," and other events are prominently featured, whereas environmentally friendly or socially responsible innovations usually don't receive as much attention.

Still there are certainly many—also vocal—business leaders who do not seem to care for the environment or for positive social value, but rather primarily focus on their own profits and those of their shareholders. Hence, the mindset in boardrooms still has a long way to go before fully incorporating the risks and opportunities related to sustainability into daily decision-making processes.

Studies have shown that a true sustainability mindset and innovation need to come from or at least be strongly endorsed by top management. Yet as demonstrated in Fig. 3.5, perception of employees within companies of strong CEO commitment is dropping. This insight makes it even more important to incorporate sustainability in the education of future leaders. Especially, as top management is named the number-one stakeholder for driving circular economy projects within companies (WBCSD & BCG, 2018a). Considering this weighty responsibility, the way top management acts will determine how the organization thinks about sustainability and corporate responsibility. So, if scalable change is the aim, top management needs to be a key driver or at least a vocal supporter.

Management needs to consider that the challenges vary significantly per industry. As Fig. 3.6 demonstrates, while climate change matters most to automobiles, chemical, and energy players, water access is most prominent for commodity players.

While this demonstrates that there are many different challenges to be considered, a few overarching recommendations can be drawn as assessed in the subsequent chapters.

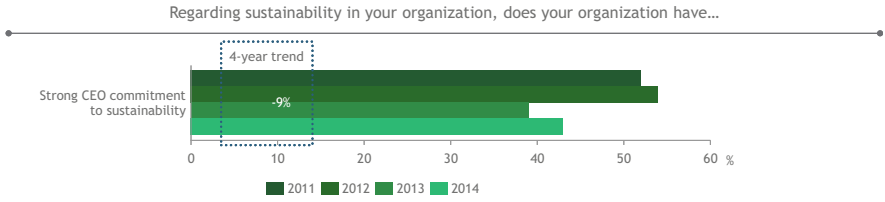

Fig. 3.5 CEO commitment to sustainability over time (MIT & BCG, 2017)

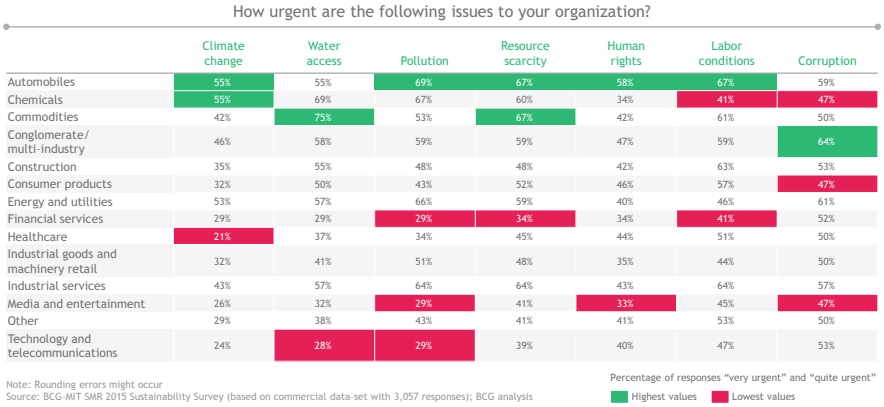

Fig. 3.6 Urgency of sustainability issues per industry (MIT & BCG, 2015)

3.4 Six Areas to Incorporate Sustainability in Strategic Thinking

Business as such has not changed; optimizing profits and developing business cases creating lasting competitive advantage are still key today. Yet the environment businesses operate in has become more complex, faster, and certainly harder to assess. Increased complexity is also driven by increasing transparency and arising public discussions about societal responsibilities.

In order to provide today's students and future business leaders with actionable ideas, a list of six recommendations has been derived to prepare future business leaders to incorporate sustainability and responsibility into their daily decision making processes.

1. Assess the true costs
2. Create awareness and acceptance
3. Act on broader responsibility—innovate
4. Define clear targets and assign accountability
5. Engage in collaborations
6. Enable the organization for successful implementation

3.4.1 Assess the True Costs

Global initiatives have started to discuss standards on social capital and natural capital protocols to provide businesses with a common basis on how to assess the true costs of their actions. True costs include all costs occurred including social and environmental costs that are not necessarily implied in sourcing costs (like pollution, emissions, or recycling costs).

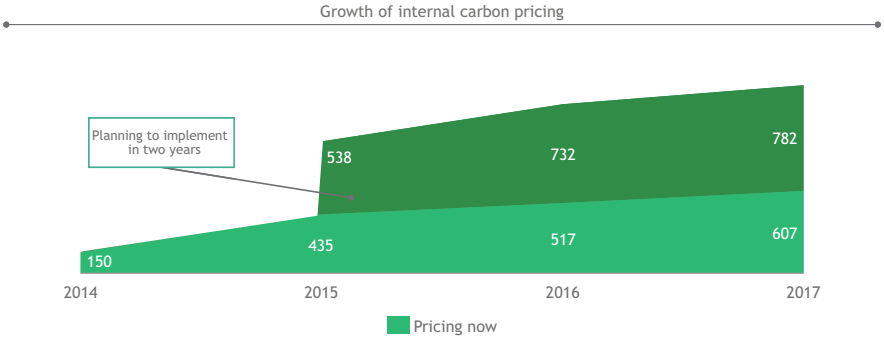

Fig. 3.7 Growth of companies using internal carbon pricing (Bartlett, Cushing, & Law, 2017)

It seems unlikely in the short run that consumers would be willing to accept the full true costs of their products at the cash register. Increasing awareness is a first step in the right direction, however. Some regulators have tried to extend producer responsibility, e.g., by introducing carbon taxes or trading schemes on carbon emissions. Yet, no comprehensive scheme on water, land use, recycling responsibility, or social issues seems to be on the horizon. Figure 3.7 illustrates that even though some companies are stepping up and are implementing internal carbon pricing, they are still very few compared on a global scale.

As previously stated, another stakeholder group—the investors—are becoming increasingly aware of the implications of poor business behaviors. As transparency increases, the risks associated with not adhering to "correct behaviors" as perceived by customers and the broader public increase. Associated risks and their mitigation management are key decision criteria for investors. Considering not only the current input and operational costs alone, but also the true societal and environmental costs provides a more comprehensive and thus optimized basis for decision-making.

3.4.2 Create Awareness and Acceptance

Even though several initiatives and recent large global agreements, like the Paris Agreement, clearly show the necessity to act and adapt current behaviors, there is slow progress in many boardrooms. While awareness of the broader challenges the planet faces is increasing, the specific direct impact of businesses still remains unclear.

Katherine Garrett-Cox, CEO of investment firm Alliance Trust, publicly criticized the lack of interest in climate change in boardrooms, stating, "Within the last 12 months, I've had conversations with CEOs of major corporations in Europe, and they just say, 'It's not real, it's not something I should be bothered about'," concluding that she felt it is "scary" how few discussions about these topics take place in boardrooms (Howard, 2017).

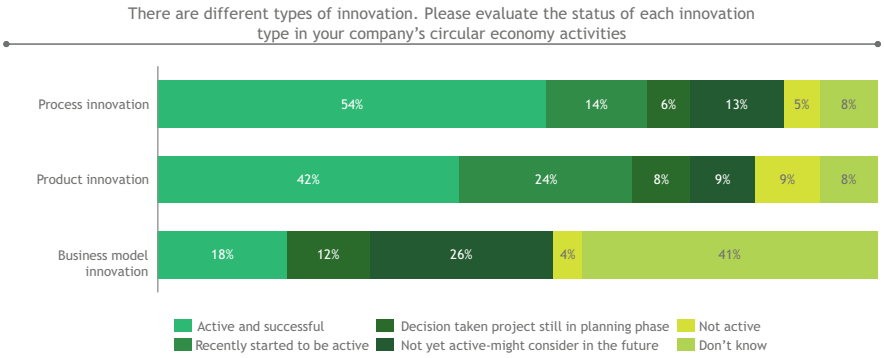

Fig. 3.8 Successful innovation along different dimensions (WBCSD & BCG, 2018a)

Yet, awareness in boardrooms is increasing and programs such as the UN Global Compact (UN GC) among others are fostering the educational element. However, awareness needs to be followed by acceptance of the management team. This starts with the acceptance of being "part of the problem" and acknowledging negative impacts. Moreover, acceptance also requires seeing the opportunity to be the driver for change and improvement. Only once management teams acknowledge their impact and accept they are part of the problem can they become part of the solution.

3.4.3 Act on Broader Responsibility: Innovate

Awareness and acceptance as such lay the foundation for change and innovation. However, only actions ever make a difference. Existing business models are often being disrupted by newcomers and start-ups offering new customer solutions and innovative products. While incumbents usually excel at innovating existing processes, they often struggle to disrupt their own business models. As referenced in the WBCSD publication on circular economy, incumbents succeed in process innovation (Fig. 3.8).

Sustainability is often referred to as a key driver of innovation (MIT & BCG, 2017). Leveraging the positive emotions and employee motivation to drive sustainability will help to drive innovation. As future leaders of the business world, management students should not only be aware of these powerful forces but enable them and act upon greater societal needs.

3.4.4 Define Clear Targets and Assign Accountability

While more than 80% of the world's largest companies have established emission targets (WRI, 2018), they are often not based on science and usually very ambitious.

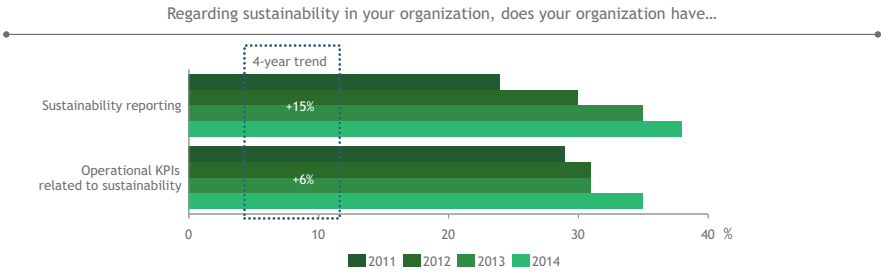

Fig. 3.9 Prevalence of sustainability reporting and KPIs (MIT & BCG, 2016)

Science-based targets are externally checked whether they are in-line with the relative level of decarbonization required to reach the two-degree goal from the Paris Agreement. Looking beyond climate change, the commitments and targets become even scarcer, for example in regard to recycling, circularity, diversity, or land usage.

Science-based targets would help stakeholders such as investors but also the CEO and board of a company to establish a common basis of understanding and a clear alignment on expectations. These targets would help in establishing clear accountability of management to reach those externally validated targets.

A lack of understanding of the impact across the value chain is a major obstacle. Breaking the industry wide targets down into regional sector and eventually individual business responsibilities would allow companies to take on respective responsibility for impacting emissions, extractions, water, or land usage.

As Fig. 3.9 demonstrates, reporting and KPIs to report against are increasing. Assigning clear accountability within a firm—even though already challenging—is much easier than aligning on accountability and hence responsibility if the topic is across the whole value chain. As an example, take a look at the fashion value chain. Fighting climate change along the value chain is fairly easy within a company's own production facilities (so called scope-1 emissions according to the Green House Gas Protocol). However, a significant lever to fight climate change in the fashion industry is avoiding deforestation for cotton fields (so called scope-3 emissions). While the retailers do have some power in sourcing organic and sustainable cotton, truly controlling and being held accountable is more challenging. The question of who will eventually be held accountable for deforestation in this value chain—whether the local regulators, the cotton farmers, the garment suppliers, the retailers, or even the customers—is an ongoing debate and complicates assigning clear accountability.

A lack of accountability could be overcome and serve as an accelerator for more sustainable management practices. In order to overcome the challenges of defining clear targets and assigning accountability beyond scope-1 emissions, collaboration is critical.

3.4.5 *Engage in Collaborations*

As indicated above with the fashion industry example, most sustainability topics, be it carbon emissions, land degradation, water usage, product design for recyclability or others are challenges that affect the whole value chain and require collaboration. While boards are used to collaborating with actors within their value chain and their direct suppliers, collaborating with second- or even third-level suppliers is something most boards don't feel comfortable with.

Therefore, companies have partnered with competitors and with their supply chains to discuss the sustainability challenges within industry organizations. Some examples include Together for Sustainability (TfS) for the chemical sector or the Sustainable Apparel Coalition (SAC) for the fashion industry.

While the challenges within the supply chains may be solved more easily, solutions requiring collaboration with other sectors seem to be even more difficult. In order to manage sustainability successfully, collaboration across sectors becomes inevitably critical. This can be seen in many different examples, including the following:

- Selling waste streams as raw materials to other sectors
- Providing recycled materials as input materials
- Being dependent on solutions provided from other sectors (e.g., Renewable Energy)
- Enabling other sectors to save due to product innovation (e.g., tire as a service, see Michelin example in Sect. 3.5.3) (Fig. 3.10)

For cross-industry sustainability challenges, there are collaboration platforms such as the World Business Council for Sustainable Development (WBCSD). One project example is Food Reform for Sustainability and Health (FReSH). The program is "designed to accelerate transformational change in global food systems, to reach healthy, enjoyable diets for all, that are produced responsibly within planetary boundaries" (WBCSD Fresh, 2018). The program is not only cross-sector, but also

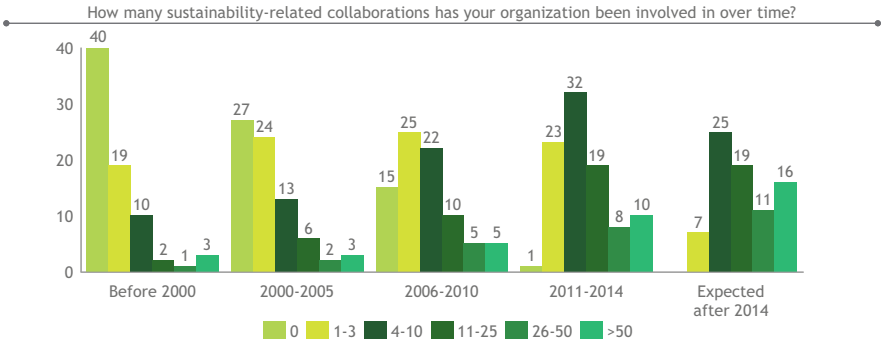

Fig. 3.10 Sustainability-related collaborations over time (MIT & BCG, 2015)

partners with the EAT Foundation to receive scientific support in this complex transition to becoming a more sustainable value chain.

Besides international platforms and organizations, local solutions are also being developed, as described earlier on the Kalundborg symbiosis, which is a great example of cross-sector collaboration to optimize business value while also reducing environmental impact.

While often large international platforms or organizations, such as UNFCCC or WBCSD, can serve as multipliers, a "precompetitive" exchange platform, it is still up to the decision-makers to join them, to share challenges, and to collaborate across sectors on scalable solutions. Luckily, companies seem to be less hesitant to join forces in the broader sustainability scheme than in other fields. Those really being engaged, however, are typically the large global leaders on sustainability.

3.4.6 Enable the Organization for Successful Implementation

A report from the WBCSD on circular economy clearly lays out how sustainability projects are initiated and who drives them. While the decision to engage lies clearly with top management as shown in Fig. 3.11, the implementation is mostly in the scope of the business units' responsibility. In order to succeed with the implementation, the organization needs to be fully enabled and to understand its responsibilities. Top management is a key motivator, however, the knowledge, expertise, and capabilities need to be built up within the organization itself.

Strong management teams provide the required guidance and resources but also empower their teams to implement sustainable practices into their daily operations. According to an MIT survey, enabling the business unit doubles the success rate of sustainability projects (MIT & BCG, 2017). Figure 3.12 illustrates that businesses are still lagging behind in acknowledging the relevance of the business units driving implementation. While the number of clear responsibilities assigned to business units is slightly increasing, the overall level remains low. Moreover, employees are often perceptive and motivated to engage in sustainability projects, and hence should be leveraged more to engage on a successful sustainability journey.

3.5 Creating Competitive Advantage Across Industries

There are many examples across sectors where companies have created significant value through sustainability activities. While the advancement of industries differs (chemicals and renewable energy industries are leading, while fashion and construction lag behind, for instance), there are examples of leaders in each industry.

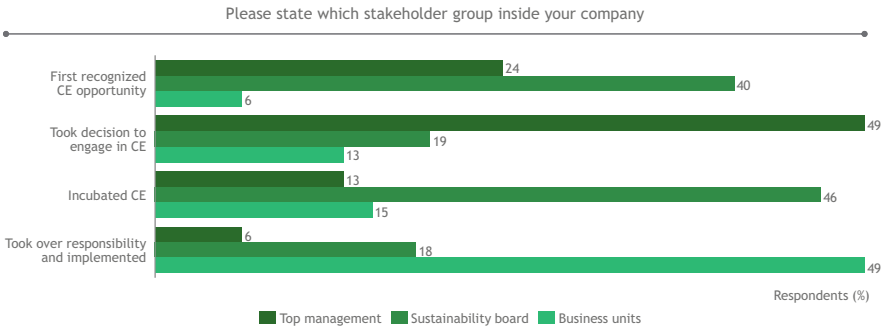

Fig. 3.11 Role of internal stakeholder groups in CE implementation (WBCSD & BCG, 2018a)

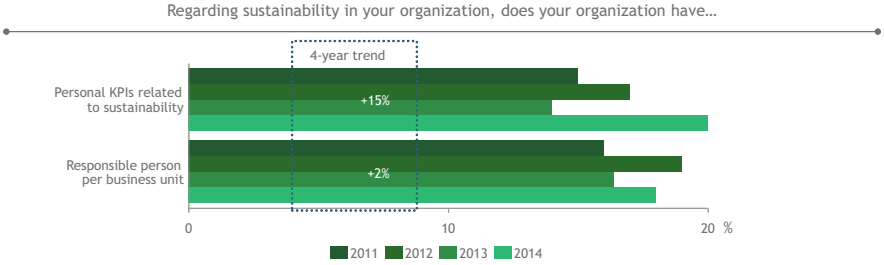

Fig. 3.12 Responsibilities and personal KPIs increasing over time (MIT & BCG, 2016)

3.5.1 Chemical Sector

A company that is considered a strong leader in sustainability in the chemicals space is Solvay. The global Belgium-based chemical company has managed to define the "Solvay Way" and established not only clear ambitions and goals but was also capable of transferring sustainable thinking into daily responsibilities. Solvay measures all activities within its Sustainable Portfolio Management tool to make informed decisions about its societal impact. Solvay generates almost half of its revenues from sustainable products and works to remove environmentally questionable products from its portfolio. Solvay has developed clear competitive advantages from selling innovative products valued by their customers. "The circular economy has the potential to change the way we create value and the relations with our customers and other partners—for the better. Thinking circular strengthens our innovation capabilities to further develop more sustainable solutions that unlock Solvay's business growth while doing good for the planet," Solvay CEO Jean-Pierre Clamadieu stated (WBCSD & BCG, 2018a, p. 8).

3.5.2 Fashion Industry

The fashion and apparel industry is not necessarily an industry that comes immediately to one's mind when considering sustainability. At present, the world is consuming about 62 million tons of apparel and footwear products—with expectations to exceed 100 million tons per year in 2030 with current accelerated growth rates. While the textile industry is already breaching many planetary boundaries in terms of land use, emissions, and, specifically, the use of chemicals, there is also no scalable solution for reusing or recycling challenges. Most products either directly end up in landfills or are shipped to emerging markets, destroying local economies and eventually ending up in oceans or landfills.

However, even in this industry a mindset shift is slowly but surely starting to happen as the "Pulse of the Fashion Industry" report from 2017 shows. Planetary boundaries, growth expectations, increased constraints, and mitigation options are described in detail (GFA & BCG, 2017). Some players in this industry have already acted and are building their business models around these, most prominently Patagonia and Vaude. But also more niche brands, such as Filippa K, have built a unique competitive edge through sustainability offerings.

As introduced earlier in this chapter, the industry was stunned when C&A, a large mass-market fashion retailer, announced its first "fully sustainable T-shirt," C2C certified. The T-shirt was produced within the existing value chain at mass-market price competitive costs, yet fully sustainable. The T-shirt allowed C&A to address new customer segments, becoming one of the best-selling products. "The journey towards circularity is a change that we should make for future generations. It is a journey that requires strong collaboration within and across industries. We as C&A can be a leader and that's our clear ambition. But we cannot do it on our own," said Alain Caparros, CEO of C&A (WBCSD & BCG, 2018a, p. 26).

3.5.3 Industry Pay-As-You-Go-Services

There is a marked increase in sharing models in some industries, such as entertainment platforms or mobility. Large global companies are starting to disrupt their business models toward a sharing economy as well. Looking at Philips Lighting, there is a clear trend toward selling services away from selling products. Targeting B2B customers, Philips Lighting offers lighting as a service (LAAS) as a pay-as-you-go utility model. "Philips Lighting retains ownership of the lighting fixtures that it leases to customers, who pay an agreed-upon service fee up front for the light itself. Because it still owns its products, the company can reuse the fixtures rather than having to make new ones—and expend more raw materials—every year. It is also motivated to design fixtures that retain maximum value for subsequent reuse or recycling" (WBCSD & BCG, 2018b, p. 34).

"People are interested in our performance, not our products," said Frank van der Vloed, general manager of Philips Lighting Benelux. He goes on to state: "Now that Philips Lighting maintains ownership of the product, we can provide the service to customers at a lower price. These systems have a substantial residual value at the end of their lifetime. When you will be responsible for the performance and maintenance of the products, and you know that you will get your product back at the end upfront, you look differently towards the product design" (WBCSD & BCG, 2018b, p. 34).

Also Michelin, the French tire manufacturer, is approaching its own business model disruption proactively by offering tires as a service. B2B customers such as trucking and airline companies are offered to be charged by the kilometer, weight per kilometer, or number of landings rather than for the tires themselves. Michelin takes care of every aspect of the tire including selection, mounting, maintenance, assistance, and recycling. Through improved tire pressure management, preventive maintenance and reduced vehicle downtime, both the customers and the environment profit. And Michelin gains a competitive advantage by offering a new service to customers (WBCSD & BCG, 2018a).

These examples demonstrate how strategic leadership uses sustainability principles to develop new business models that are valuable to customers, to a company's growth, and to the environment, all at the same time. It takes an innovative mindset to be willing to disrupt one's own business model, and future leaders need to be prepared for this.

3.5.4 Banking

As if in reaction to the statement of BlackRock's CEO referred to earlier in this chapter, there are many investors also creating growth and enhancing company value through innovative thought leadership and combining sustainability with business practices.

An example of this can be found in the India-based Yes Bank that has positioned itself as the leader in responsible banking. Yes Bank, the fifth-largest private-sector bank in India, is pioneering by creating partnerships with development banks to issue green currency bonds (so-called masala bonds) in order to finance the necessary capital for green energy projects in India. Yes Bank issued the first green bond in 2015, and it was oversubscribed twice, providing India with a new way of financing its urgently needed projects for expanding its green energy supply—financing the installation of several GW of production capacity per year. Green bonds usually receive a pricing benefit making them attractive for all parties (WBCSD & BCG, 2018b).

3.6 Conclusion

As transparency about responsible and irresponsible business behaviors is increasing, consumers are becoming more informed, competitors are upping their game, and even investors are becoming increasingly aware of sustainable business practices. Future leaders and managers need to start rethinking how they conduct strategic management.

Including sustainability in your strategic considerations is no longer a "nice-to-have," nor is it a side topic—it has become a necessity—not only from a risk-management but also from an opportunity perspective. Eventually, transitioning from value chains to value cycles in which all stakeholders (including our planet) will profit is only a matter of time. Social and environmental impact of business behavior will become part of the overall value delivery expected of business leaders.

There is still a long way to go until we no longer talk about ESG or sustainability anymore, but we will have those concepts anchored as core strategic considerations. Future business leaders need to prepare now to manage these increasingly complex and multifaceted aspects successfully.

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Chapter 4
Why Porter Is Not Enough: Economic Foundations of Sustainable Strategic Management

Jean Garner Stead and W. Edward Stead

4.1 Introduction

Henry Mintzberg (2014, 2017) continues to challenge our discipline to move toward the pull of the practice of management, which requires strategic managers to understand the complexity of the current business environment and not to view management in terms of compartmentalized packages. In other words, strategic managers need the ability to combine multiple sources of information in order to make good strategic decisions and therefore, they need models that accurately represent the current business environment and the practice of strategic management. The traditional models of strategic management represent what Alfred North Whitehead (1929) calls misplaced concreteness, mistaking abstract models for an accurate representation of reality. The 1980s Porterian (1980, 1985) models of industry and value chain analyses are the cornerstones of the current strategic management paradigm and have been invaluable in the development of the field. However, they no longer represent the current business environment, thus providing examples of mistaking abstract models for accurate representations of reality. This chapter summarizes the reality of the current business environment and the pull of the practice of management along with the neoclassical economic assumptions underlying the current strategic management paradigm. Given the co-evolutionary nature of the development of strategic management theory (Stead & Stead, 2010), a co-evolutionary shift from the fundamental assumptions of strategic management to a new paradigm of sustainable strategic management is proposed. Sustainable strategic management and its open-system models are a more accurate representation of current reality, thereby reducing the effects of misplaced concreteness (Whitehead, 1929) in the minds of both students and managers.

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4.2 Co-evolution and the Pull of the Practice of Strategic Management

Co-evolution provides a theoretical context for the examination of strategic management as it relates to the practice of strategic management and the current business environment (Stead & Stead, 2013). Co-evolution, with its roots in the biological and geological sciences (Ehrlich & Raven, 1964; Lovelock, 1988), refers to the concept that entities evolve in concert with one another. Over the decades co-evolutionary theory has emerged as a popular organizational science framework where it is generally viewed as an umbrella theory that can tie together popular organizational theories (Lewin, Long, & Carroll, 1999; Porter, 2006; Volberda & Lewin, 2003). Co-evolution reflects changes that are typically specific, reciprocal, adaptive, boundary spanning and lead to permanent changes in the entities involved (Porter, 2006). Strategic management theory development is co-evolutionary in nature where the theory coevolves in concert with the practice of management (Stead & Stead, 2010).

This process of reciprocal adaptation indicates that we are the next stage of coevolution of the field of strategic management, where sustainability has become a competitive force and open structures and processes have emerged to capture the collective learning of stakeholders. Forty-two years ago, the Strategic Management Society (SMS) held its landmark Pittsburg conference where the fundamental assumptions of the field of business policy and planning were questioned and the new strategic management paradigm was proposed. At the time, business policy and planning referred to the internal integration of the functional levels of the firm with a goal of resource maximization. As the environment changed and the scope of the field broadened, the strategic management paradigm slowly emerged (Gnyawali, 2017; Hofer & Schendel, 1978). Even as the practice of strategic management reflected the new strategic management paradigm, academicians were slow to change. According to Hofer and Schendel (1978: xi), "To date, this extension in scope has not been reflected in texts in the field." The issues currently faced by the strategic management community are similar to those of the late 1970s (Gnyawali, 2017), where the textbooks do not reflect the current practice of strategic management. The practice of strategic management is pulling current strategic management theory to coevolve to the open-system paradigm of SSM, where the neo-classical, economic assumptions underlying the paradigm are being questioned and changed. In this section, the current context in which corporations now practice strategic management is summarized along with some of the reciprocally adaptive strategic management structures and processes which have emerged in concert with the changing business environment.

4.2.1 Sustainability and the Circular Economy

The increasing demand of stakeholders for more sustainable business practices has had a major impact on how strategic management is practiced. As Meyer zum Felde

demonstrates in his previous chapter, sustainability is now an important item on the strategic agendas of CEOs.[1] The longitudinal data over an 8 year period (2009–2017) on corporate sustainability from the *MIT Sloan Management Review*, in partnership with The Boston Consulting Group (BCG), confirm that the emergence of sustainability is a strategic shift that has taken place in the context of organizational environments, even though unevenly distributed across industries and geographies. Overall, global executives demonstrate a much higher commitment to sustainability than they did in 1987 when the Bruntland Commission first proposed the concept of sustainable development (Kiron et al., 2017). Their surveys of global managers found that sustainability is becoming a competitive necessity for organizations, that firms have changed their business models to incorporate sustainability and that they are now collaborating with suppliers, NGOs, governments, industry alliances, and competitors in innovative, sustainability projects (Haanaes et al., 2011; Kiron et al. 2014; Kiron, Kruschwitz, Haanaes, & Velken, 2012; Kiron, Kruschwitz, Reeves, & Goh, 2013). In their 2016 survey they found a growing interest in sustainability among mainstream investors who are increasingly using sustainability-related criteria in making their investment decisions. The data demonstrate a performance gap between investor demands for more trustworthy environmental, social and governance (ESG) criteria before making investment decisions and strategic managers ability to deliver more sustainable business performance (Busch, Bauer, & Orlitzky, 2016; Unruh et al., 2016). The totality of this longitudinal research makes clear that strategic managers are operating at the intersection of economy, society, and ecology where stakeholders are increasingly demanding that organizations create not only economic value, but also ecological and social value as well.

A joint report by the World Council on Sustainable Development (WBCSD) and the Boston Consulting Group (2018) on the circular economy also demonstrates that corporate leaders are increasingly viewing the economic, ecological, and societal value of strategies which re-use and recycle resources. This open-system, cradle-to-cradle (McDonough & Braungart, 2002) approach challenges the traditional, economic model of the economy as a closed system, and envisions a new model that mimics nature and is regenerative by design. Like nature, the vision of a circular economy is one of no waste and of total materials recycling. Of the 78 global managers interviewed and surveyed, 97% believe that the circular economy concept drives innovation and makes their company more efficient and competitive, while 96% said that it was important for the firm's long-run success. The data reveal that 51% of managers state that circular economy strategies have already added to corporate profits, where their customers are the most influential, external stakeholder group in the organization's environment (WBCSD & BCG, 2018). The circular economy approach provides a pathway for organizations to engage in more sustainable business practices, thus responding to increased stakeholder demands for sustainability.

[1]For more information see Chap. 3.

4.2.2 The Anthropocene

Geologists now believe that humankind has had such a significant impact on the environment of the planet that they have declared a distinct, entirely new geological epoch called the Anthropocene, where abrupt global environmental change is caused by human activity transgressing one or more planetary boundaries (Rockström et al., 2009). In geology, the Earth's official timeline is delineated by epochs. The Anthoprocene replaces the current epoch, the Holocene, which began 12,000 years ago at the end of the last ice age. Although the Anthropocene epoch has not yet been officially declared, scientists believe that the stratigraphic data provide evidence that the Anthropocene is clearly distinguishable from the Holocene epoch. The Anthropocene stands alone stratigraphically as a new epoch beginning sometime in the mid-twentieth century (World Economic Forum, 2016). Rockström et al. (2009) and Steffen et al. (2015) have identified nine planetary boundaries that if transgressed will trigger discontinuous, abrupt environmental change within planetary systems, threatening human survival. These authors define unacceptable, environmental change by its relationship to the risks humanity faces in the transition of the planet from the Holocene to the Anthropocene. These boundaries are interdependent and coevolve with one another.

The planetary boundaries' concept proposes a new approach to global sustainability by scientifically defining the planetary boundaries within which humanity can safely operate in the Anthropocene. The goal is to provide quantitative, scientific measures of the planetary boundaries of climate change, ocean acidification, stratospheric ozone, biogeochemical nitrogen and phosphorus cycles, freshwater use, land system change, change in biosphere integrity, introduction of novel entities, and atmospheric aerosol loading. Research indicates four of the nine planetary boundaries have already been crossed: climate change, loss of biosphere integrity, land-system change, and altered biogeochemical cycles of phosphorus and nitrogen (Steffen et al., 2015). Two of these, climate change and biosphere integrity, are core boundaries, where, according to scientists, altering either has the potential to drive Earth's planetary system into a new state (Rockström et al., 2009; Steffen et al., 2015). As Lovelock (1988) notes, the Earth and its organisms coevolve over time in a self-regulating, complex, planetary system where humans, although the dominant species, are nonetheless mere organisms reliant on the Earth to provide life-supporting systems. The planet's self-regulating mechanisms, its planetary boundaries, could easily create an environment that no longer supports human life. These are the coevolving, systemic issues facing humankind in the epoch of the Anthropocene.[2]

[2]See also Chap. 1.

4.2.3 Open-System Structures

In practice, open-system structures and practices are becoming increasingly important for strategic managers' ability to adapt their firms to the current business context. The business ecosystem structure has become pervasive in strategic management due to the interdependences across firms and their activities (Adler, 2017). The competitive landscape has experienced a profound shift, where ecosystem structures with multi-sector, multi-stakeholder relationships reflect the competitive model of co-opetition, (Branderburger & Nalebuff, 1996). Co-opetition is an open-system model that is characterized as a network of key players who cooperate and compete with one another in order to create maximum profitability for the network. Competition is not between individual firms, but is between communities of firms sharing complementary products and/or services, similar processes and capabilities, and a shared vision. Cooperation within the ecosystem extends beyond suppliers and customers to include all the participants in the community, including the relevant stakeholders such as NGOs, trade associations, governments, etc. Multi-sector, multi-stakeholder relationships are characteristic of the business ecosystem structure. The collaborative, competitive nature of co-opetition creates a highly competitive environment in which potential competitors may arise from traditionally non-competitive sectors. Competition and collaboration exist within and between business ecosystems (Moore, 1993, 1996, 2006).

The business ecosystem structure allows strategic managers to explore new market space at the interface of the economic, ecological, and social sectors of the external environment and to identify more opportunities through collective strategies in industries increasingly moving toward co-opetition. Business ecosystems formulate and implement strategies to compete and to cooperate in a typical predator/prey relationship of coevolution (Iansiti & Levien, 2004a, 2004b).

Apple, Alphabet, Amazon, and Facebook, among others, all effectively compete utilizing the business ecosystem structure, reflecting the pull of the practice of strategic management.

In practice, the global automobile industry is coevolving from a static, oligopolistic industry structure with a high concentration ratio within fixed industry boundaries to a fragmented industry without borders. IBM forecasts that by 2025 there will be a new industry structure characterized by openness, inclusiveness, and without borders between the firm, its consumers and complementary industries. Seventy-five percent of the automobile executives interviewed expect that by 2025 non-traditional industry participants will play an active role in co-creating and innovating in the emerging automotive ecosystem (IBM Institute for Business Value, 2015).

4.2.4 Open Strategy and Open Innovation

The concepts of open strategy and open innovation are also now popular strategic management practices that provide the benefits of openness as a means of creating

value at the interface with the firm's traditional economic boundaries and the natural and social environments (Appleyard & Chesbrough, 2017; Bogers, Chesbrough, & Moedas, 2018). Open innovation and open strategy reflect the increased openness of corporate strategic management processes that recognize the importance of incorporating multiple stakeholders from the economic, social, and ecological environments in the innovation and strategic planning processes. Open strategy and innovation take such forms as crowdsourcing, inter-organizational strategizing, and shared business ecosystem structures (Stieger, Matzler, Chatterjee, & Ladstätter-Fussenegger, 2012). The current trend of more open strategic management processes has two basic dimensions: (1) greater inclusiveness of both internal and external stakeholders in the process and (2) greater internal and external transparency in both process and outcomes (Whittington, Cailluet, & Yakis-Douglas, 2011).

Open innovation and open strategy reflect the coevolution of strategic management practices toward a more open-system, economic perspective. Do the traditional strategic management frameworks and models, embedded within the assumptions of neoclassical economics, provide strategic managers with an accurate view of reality where value capture for the firm happens at the interface of the economy, society, and the ecosystem? Does traditional industry analysis (Porter, 1980) depict the complexities of co-opetition? Is Porter enough to respond to the pull of the practice of strategic management toward more openness where collective, collaborative strategies with all their complexities and reciprocal interdependencies are creating value? In the next section, the influence of the neoclassical, macroeconomic assumption of a closed economic system on the current strategic management paradigm is examined.

4.3 Neoclassical Economics and the Strategic Management Paradigm

The strategic management paradigm is implicitly rooted in the assumptions of the neoclassical economic paradigm, in particularly in the economics of industrial organizations, where the issues from the natural and social environments are considered as nonmarket externalities. By assuming that the economy is a closed system, neoclassical economics assumes away the social and natural environments.

4.3.1 The Neoclassical Macroeconomic Assumptions

In general, neoclassical economics assumes (1) that unlimited economic growth on a finite sphere is possible, (2) that natural capital is an almost perfect substitute for man-made capital, thus resources are viewed as virtually unlimited, and (3) that the radical self-interests of the "economic man" are the best way to allocate resources (Daly & Farley, 2011). Opportunities and challenges at the intersection of society

and ecosystem are considered mere externalities that must be internalized within the closed economy. These are the fundamental economic assumptions underlying the strategic management paradigm.

As more and more strategic issues emerged at the interface between the firm and its natural and social environments, neoclassical economic theory coevolved to environmental economics, where the economy is still assumed to be a closed system, but the theory does recognize the value of non-market goods that are external to the closed system economy. Micro-market mechanisms, such as cap and trade and pollution quotas, are used to internalize the environmental costs of doing business, which in the past have been considered external to the economic system (Costanza, 1989).

These micro-market mechanisms are indeed an improvement and a stage in the coevolution of economic theory, but these do not go far enough in internalizing environmental costs into the economic system. Given that in reality the economy is a coevolving subsystem of the ecosystem, the logical conclusion is that the global economy has an optimal size beyond which the negative biophysical consequences of growth begin to outweigh the positive consequences. Unfortunately, the concept of optimal size is not a part of neoclassical macroeconomic theory. Whereas microeconomic theory teaches that organizations should strive to maintain an optimal size beyond which their marginal costs will be greater than their marginal revenues, the idea of optimal size is somehow lost in the shift to macroeconomic theories of the total economy. Neoclassical macroeconomics assumes that the benefits of growth will outweigh the costs of growth regardless of how big the economy gets. The concepts of optimal scale and diminishing marginal utility are virtually ignored in neoclassical macroeconomics. However, these micro-market mechanisms used in environmental economics are subject to macro-controls based on the planet's ecological limits or carrying capacity (Costanza, 1989; Daly & Farley, 2011).

4.3.2 The Influence of Neoclassical Economics on the Strategic Management Paradigm

The Porterian Five Forces Model (1980) and Value Chain Model (1985) are popular abstract models of the strategic management paradigm and provide a convenient way to identify actions that could enhance a firm's competitive position within a closed economic system. These models have enhanced our understanding of strategic management and the expansion of these concepts by other scholars has furthered the development of the field of strategic management. However, today the pull of the practice of management and the changing business context require the questioning of the fundamental assumptions of the strategic management paradigm, just as the founding members of SMS did forty-two years ago when they questioned the fundamental assumptions of the business policy and planning paradigm.

Porter's (1980) Five Forces and Value Chain (1985) models, couched within the neoclassical economic paradigm, continue to dominate thinking in current strategic management education (Barney & Hesterly, 2015; Dess, Lumpkin, & Eisner, 2014; Hitt, Ireland, & Hoskisson, 2017; Rothaermel, 2017; Thompson, Peteraf, Gamble, & Strickland, 2018). The Five Forces Model (1980) portrays a static perspective of "what is" within a closed-system economy and well-defined industry borders, as demonstrated by Fig. 4.1. The model suggests that strategic managers scan the product market segments in which they compete for opportunities and threats without much regard for context. The structure of the industry in traditional industry analysis determines the rules for competing, which directly influence the economic performance and conduct of the firm. Strategic managers' primary focus in this case is on increasing market share within well-defined industry boundaries, and the

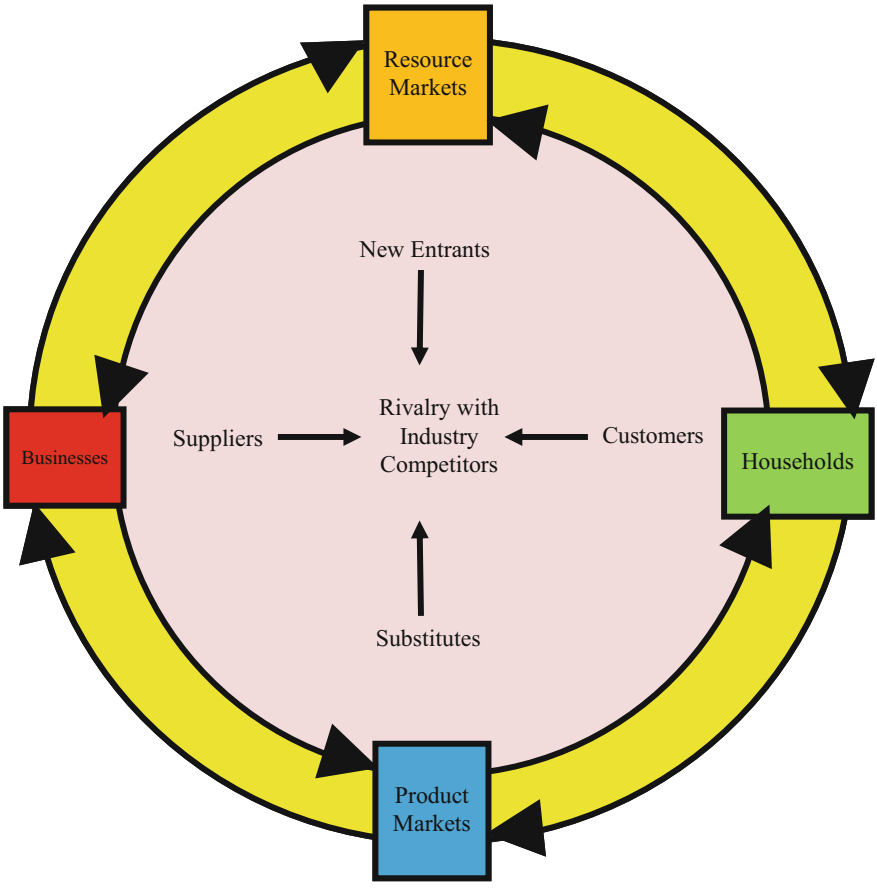

Fig. 4.1 Traditional industry analysis. Source: Adapted from Michael E. Porter's Five Forces model, Michael E. Porter. 1980. *Competitive Strategy*. New York, Free Press. This model appears in Jean Garner Stead and W. Edward Stead. 2014. *Sustainable Strategic Management*. London, Routledge

competition is defined as those firms that directly compete in individual product and/or service categories (Moore, 1996).

Within the Five Forces Model (Porter, 1980), cooperative relationships are typically limited to those with direct suppliers and customers. This narrow perspective of stakeholders excludes stakeholders such as social entrepreneurs, NGOs, and networks, which are necessary for social value creation (Drayton & Budinich, 2010). The capabilities to create value are viewed as residing in a single firm, and organizational performance is primarily measured in terms of how well the individual firm is managed with respect to its economic sustainability (Moore, 1996). Thus, within Porter's (1980) model of industry analysis, strategic managers will often rest their decisions on familiar mental models, such as the closed-economy, that allow them to adapt to change within well-defined industry boundaries. This process often leaves managers with narrow, static pictures of current and future reality. These static pictures restrict managers' ability to readily recognize the opportunities and challenges at the interface with the firm's social and natural environments, limiting both social and ecological value creation.

Porterian Value Chain Analysis (1985) extends the Five Forces concept (1980) by linking it to the value chain of a firm where advantageous competitive positions can be found across the value-creating activities of the firm within a closed economic system, as demonstrated in Fig. 4.2.

Using this model to assess and analyze resources and to determine core competencies is, however, an outdated approach to value creation since it ignores the societal and ecological context in which business operates. Porter and Kramer (2011) agree that the traditional value chain provides too narrow a focus on short-term financial performance while ignoring broader societal needs that are critical for long-term success. Therefore, they have developed an expanded view of value creation that includes the greater society. Their expanded view of the value chain is based on the principle of shared value, "which involves creating economic value in a way that also creates value for society by addressing its needs and challenges" (Porter & Kramer, 2011: 64). The creating shared value (CSV) concept is a stage of coevolution in strategic management theory similar to environmental economics in economic theory. And, the CSV concept, like environmental economics, is based on the neoclassical macroeconomic assumption of the economy as a closed system, and therefore social and ecological issues are seen as mere externalities of the closed economy. Dyllick and Muff (2015) also view CSV as the first stage in moving toward true business sustainability, dubbing it refined shareholder value management or Business Sustainability 1.0.

According to Porter and Kramer (2011), capitalism provides win-win opportunities for the firm to address a social issue while capturing economic value. Early on Dyllick and Hockerts (2002) termed this win-win strategy as socio-efficiency, where profitability and social performance are intricately linked. The CSV concept is corporate-centric, where the corporation perceives itself as the center of the stakeholder network, rather than the stakeholder of the problem. Within this framework, addressing social issues generates positive economic benefits such as reduced costs or increased reputational capital. Mintzberg (2015) views these win-win strategies as fanciful and says it is naïve to believe that these strategies will create the kind of

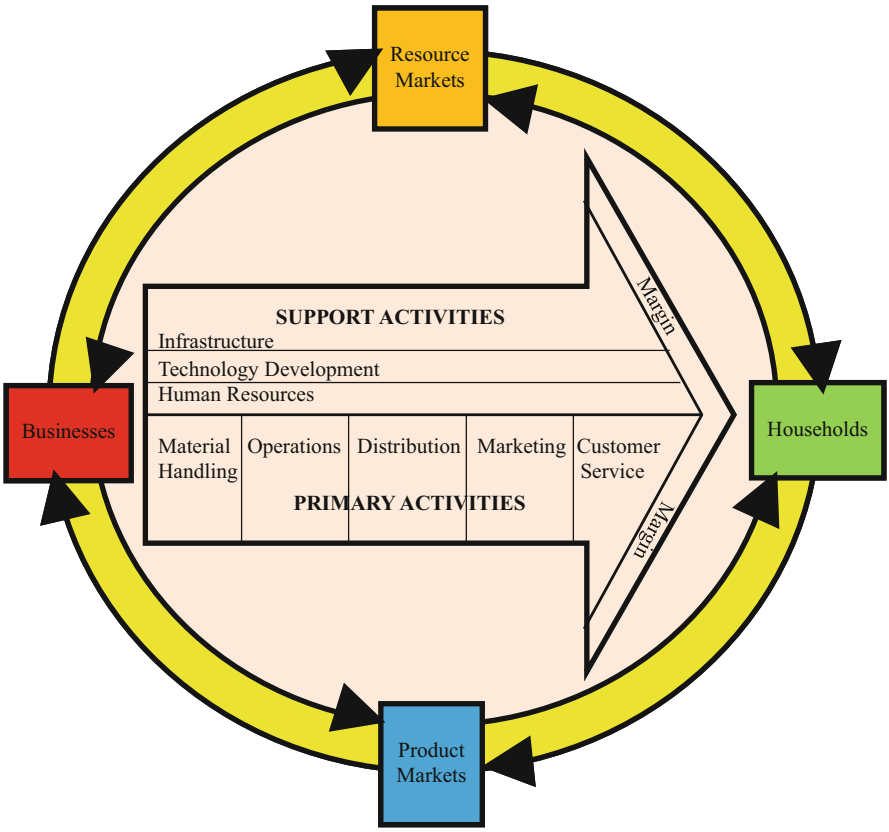

Fig. 4.2 Closed system value chain analysis. Source: Adapted from Michael E. Porter's Value Chain model, Michael E. Porter. 1985. *Competitive Advantage.* New York, Free Press. This model appears in Jean Garner Stead and W. Edward Stead. 2014. *Sustainable Strategic Management.* London, Routledge

change needed to deal with society's current, systemic challenges. The CSV concept is merely an extension of traditional value chain analysis in which firms differentiate themselves from competitors via socio-efficiency. In other words, the CSV concept does not manifest industry-wide solutions and multi-stakeholder initiatives to address systemic social problems (Crane, Palazzo, Spence, & Matten, 2014; Dyllick & Muff, 2015).

The CSV concept assumes capitalism is magic, creating value out of nothing (Elkington, 2012). The primary activities of the firm do not account for either the value of natural capital which has evolved over millions of years, or the costs of wastes after consumption. By ignoring the entropy law, the second law of thermodynamics, Porter and Kramer's (2011) CSV concept clearly reflects the neoclassical, macroeconomic assumption of a closed-system economy. In addition, the support activities are not generally structured to support an open-system planning model

required in open innovation, open strategy, and the business ecosystem structure. Hence, the CSV concept is an incremental step, rather than a transformational one, in a co-evolutionary journey toward sustainable strategic management.

Over a decade ago, Grant (2007: 23) concluded that the "collective strategic management perspective must become very long run" and develop new constructs and modes of analyses in order to address the ecological tipping points facing society. In the next section, the macroeconomic, neoclassical assumption of a closed economic system in which the current strategic management paradigm is grounded is questioned and a new set of assumptions and constructs based on the assumptions of ecological economics is presented. The assumption of an open system economy views the firm as a coevolving subsystem of the economy, society, and ecosystem, thereby better depicting the current reality of the practice of management and the current business environment. Although Porter's earlier strategy models (1980, 1985), as well as the CSV extension, have been invaluable in the development of the field of strategic management, it is now time for a fundamental, transformational change from the closed-system, strategic management paradigm to the open-system paradigm of sustainable strategic management (SSM). This shift will reduce the fallacy of misplaced concreteness (Whitehead, 1929), where the Porterian models of strategic management are mistaken for representing the current business environment and the practice of strategic management.

4.4 Ecological Economics: Foundation Principles for Twenty-First Century Strategic Management

Strategic management, the practice of management and the business environment coevolve in concert with one another (Grant, 2007). The assumptions of ecological economics provide new ways of seeing the firm as a coevolving subsystem of the economy, society and ecosystem. The assumptions of ecological economics provide a more accurate picture of reality than the neoclassical paradigm's view of economy as a closed system. In this section, the basic tenets of ecological economics will be examined.

4.4.1 The Economy Is Entropic

Whereas environmental economics is based on relative scarcity, ecological economics is based on absolute scarcity imposed on the economy by the second law of thermodynamics, the entropy law (Daly, 1977; Georgescu-Roegen, 1971). Although the energy of the universe is constant, the entropy law says that there is a qualitative change every time energy is transformed from one state to another; some of its available energy to do work is lost. When energy is no longer available to do work it

becomes a waste product. Further, entropy is irreversible and associated with the forward movement of time; things always get older, never younger (Ehrlich, Ehrlich, & Holdren, 1977).

Georgescu-Roegen (1971) contends that since the entropy law is a natural law that clearly defines the physical limits of economic activity, it should form the foundation upon which economic theories are based. He says that the only way to account for the true value of natural resources, the intrinsic value of life, and the actual cost of pollution and overpopulation is to base economic theories on the entropy law. The macroeconomic assumption that economic activity is not subject to the entropy law leads directly to the fallacious assumption that unlimited economic expansion is possible. The neoclassical economic abstraction of the economy represented by a closed circular flow of exchange value represents a classic example of misplaced concreteness (Daly, 1987). The carrying capacity of the planet is virtually ignored in neoclassical economics and the overshoot in carrying capacity is at the heart of the ecological challenges faced by humankind (Wackernagel et al., 2002).

4.4.2 Ecological Economics

Ecological economics has emerged as the next co-evolutionary stage in economic theory, requiring a shift in the economic paradigm to an open-system view of the economy (Costanza, 1989; Daly, 1977; Georgescu-Roegen, 1971). Based on the theories of his mentor, Georgescu-Rogen, Herman Daly (1977) proposes an economic model called a steady-state economy that, unlike the closed-economy, accounts for the flow of matter and energy through the economy. By adding throughput to his model, he opens the closed-system economy to the natural environment and bases the steady-state economy on the assumption that the entropy law imposes absolute limits on the capacity of the economy. Daly (1977: 199) says, "To deny the relevance of the entropy law to economics is to deny the relevance of the differences between a lump of coal and a pile of ashes." Thus, ecological economics recognizes that the carrying capacity of the planet imposes limits on economic activity.

Essentially, ecological economics is based on: (1) a dynamic, holistic, co-evolutionary view of the world as coevolving subsystems of economy and society on a finite sphere; (2) multi-scale time frames that recognize both the short-term dimensions of daily economic decisions and the long-term co-evolutionary dimensions of nature's processes; (3) the recognition that humans are a part of nature; (4) a macroeconomic goal of sustainability (sustainable scale) and appropriate microeconomic goals to support this; (5) a belief that technology is important but not a panacea for achieving sustainability; and (6) a belief that solutions to ecological problems must transcend traditional disciplinary boundaries (Costanza, Daly, & Bartholomew, 1991).

The theories and models based on neoclassical economic assumptions are not adequate to inform strategic managers and students on how to respond to today's grand challenges such as climate change and income inequality. The theoretical

Table 4.1 Comparison between the strategic management paradigm and the sustainable strategic management paradigm

Strategic management	SSM
Based on neoclassical economics	*Based on ecological economics*
• Economy is a closed system • Unlimited economic growth is possible • Unlimited resources where man-made capital and natural capital are assumed to be near perfect substitutes • Linear throughput of matter and energy through economy; no recycling • Economic man assumption – individual is self-contained, value neutral • Radical self-interest as core value	• Economy is an open, coevolving subsystem of the economy, society and ecosystem • Unlimited economic growth is not possible on a finite sphere • Resources are limited by the Entropy Law • Planetary boundaries • Circular economy • Individual exists within the context of others • Sustainability as core value
Models	*Models*
• Static view of "what is" • Adaptive learning • Well defined industry boundaries without much consideration of context • Competition is directly between competitors/products within defined segments • Traditional fragmented or consolidated industry structures • Cooperation is limited to direct suppliers and customers • Performance based on economic value creation • Planning processes of formulation and implementation are separate • Incremental change • Porter's Five Forces, VCA, CSV models	• Coevolutionary view of "what can be" • Generative learning • Industry boundaries are blurred and a matter of choice; rewriting of industry rules • Coopetition—competition between networks of firms that are coevolving, symbiotic, and self-reinforcing • Ecosystem industry structure • Multi-stakeholder, multi-sector partnerships • Performance is based on triple-bottom line (economic, social, and ecological) value creation • Planning processes are open and represent the collective wisdom of the firm • Transformational change • Open strategy and open innovation

models of Porter (1980, 1985) and Porter and Kramer (2011) do not accurately depict the reality of today's business environment. Only by re-conceptualizing traditional, closed system theories and models in which the current strategic management paradigm is embedded can we provide strategic managers and students with frameworks to explore the opportunity space at the interface of economy, ecology, and society. The theories of ecological economics provide this basic, conceptual framework in which the next co-evolutionary stage of strategic management is grounded. The Table 4.1 compares the strategic management and SSM paradigm.

4.5 Sustainable Strategic Management: The Pull of Practice

Sustainable strategic management with ecological economics as its theoretical framework represents transformational change in the current strategic management paradigm, rather than the incrementalism of Porter and Kramer's (2011) CSV

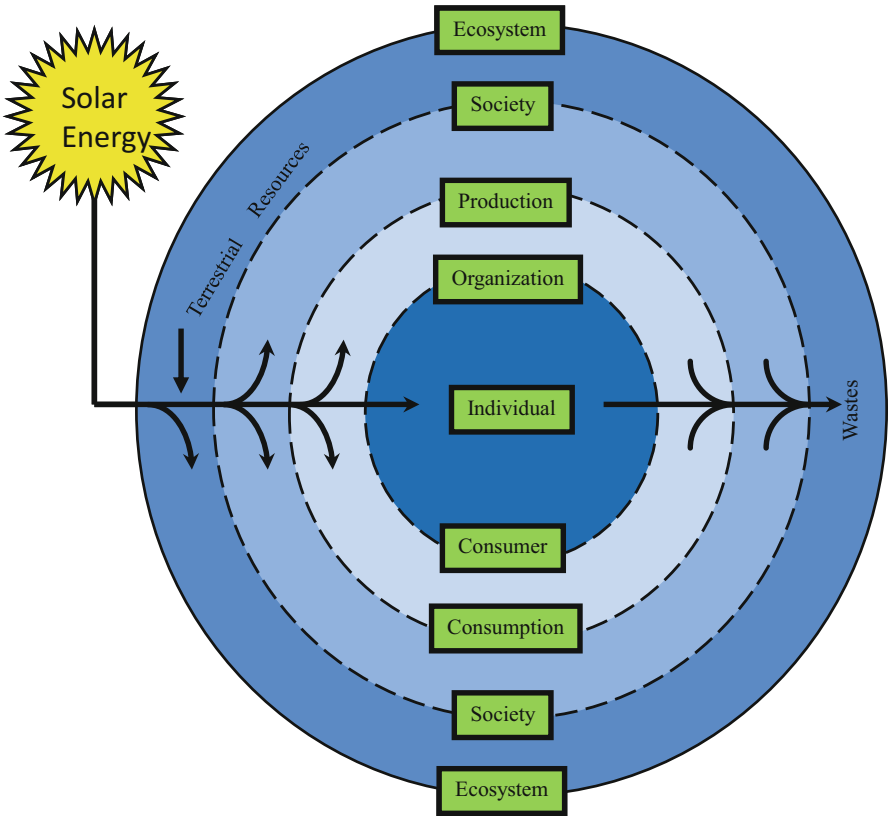

Fig. 4.3 Open living system economy. This model appears in Jean Garner Stead and W. Edward Stead. 2014. *Sustainable Strategic Management*. London, Routledge

concept. Strategic management students and practitioners need new models and constructs that better reflect the current realities of the practice of strategic management. An open-system model based on Daly's (1977) steady-state economy, where the firm is viewed as a coevolving subsystem of economy, society, and ecosystem governed by the entropy law, is proposed in Fig. 4.3. It provides strategic managers with a new paradigm that reduces the misplaced concreteness (Whitehead, 1929) demonstrated by the closed-system models of the strategic management paradigm.

This open-system, theoretical framework allows strategic managers to focus on interrelationships and dynamic processes of change rather than linear cause and effects of traditional industry analysis, enabling them to look beyond industry borders and to generate not only economic value, but also ecological and social value. Sustainable strategic management expands strategic managers' ability to shape their organizations' future by encouraging strategic managers to question the underlying assumptions on which the firm's strategy is formulated and to ask, "What can be?" (Stead & Stead, 2014). Sustainable strategic management represents

truly sustainable business, what Dyllick and Muff (2015) call Sustainability 3.0. This open-system model represents a new way of viewing the firm and its external environment.

Techniques such life cycle analysis (Esty & Winston, 2008) and footprint analysis (Laszlo, 2008) have emerged to assist strategic managers in gathering data and understanding the value creation from the ecological and social sectors of the firm's external environment. Life cycle analysis allows firms to expand the scope of traditional value chain analysis to include the value of ecosystem services and natural capital, where footprint analysis expands the analysis to include social value-added data. A cradle-to-cradle (McDonough & Braungart, 2002) footprint analysis goes beyond the limited economic scope of value chain analysis to include ecological and social value creation in order to determine the true impact of the organization's footprint (Laszlo, 2008). Figure 4.4 is proposed as an open-system

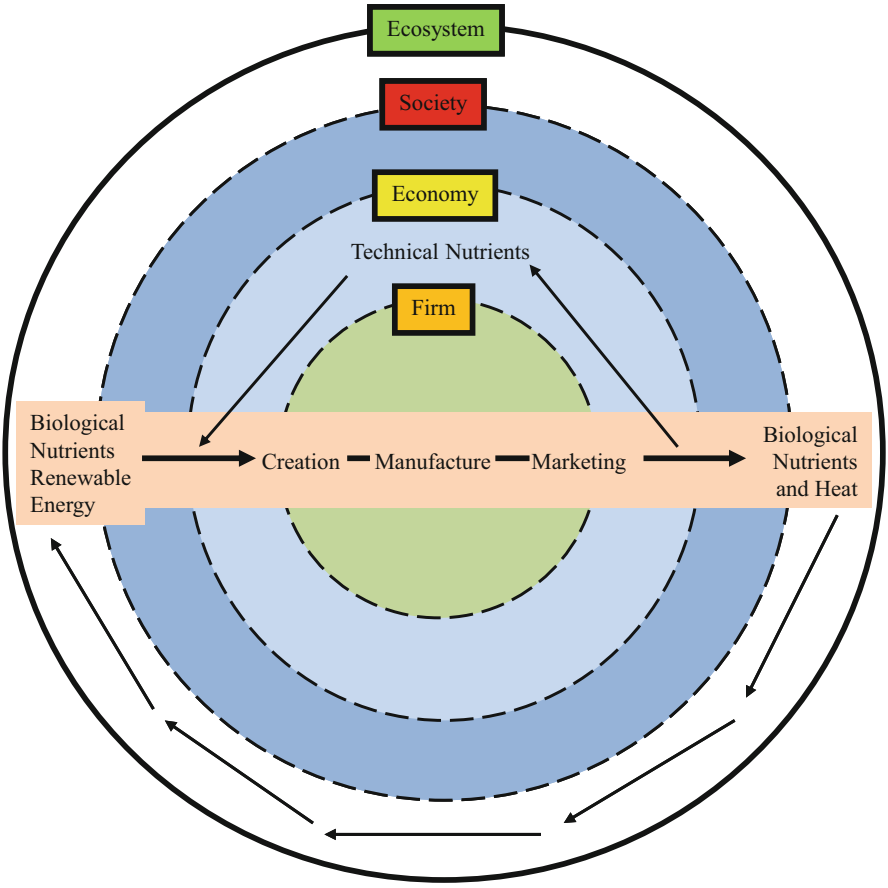

Fig. 4.4 Open system value chain. This model appears in Jean Garner Stead and W. Edward Stead. 2014. *Sustainable Strategic Management*. London, Routledge

view of the value creating process where triple-bottom line (Elkington, 1997) data assist strategic managers in creating value for the expanded view of the firm's stakeholders (Stead & Stead, 2010, 2014).

Figure 4.4 is a more accurate representation of the twenty-first century value creation process, where not only economic value, but also ecological and social value can be captured. SSM moves beyond socio and eco-efficiency to eco and socio-effectiveness (Dyllick & Hockerts, 2002). Sustainable strategic management represents a truly sustainable enterprise (Dyllick & Muff, 2015), where strategic managers are better able to use corporate resources to address the systemic social and ecological challenges of our time. The open-system models of sustainable strategic management provide strategic managers with a better depiction of current reality thereby reducing the misplaced concreteness (Whitehead, 1929) of the Porterian models of the strategic management paradigm.

4.6 Conclusions

In sum, the Porterian view of the industry and value chain are examples of the fallacy of misplaced concreteness (Whitehead, 1929) and are not now realistic enough to capture the value creation from the firm's interface with the social and natural environments. In other words, they do not reflect the pull of the practice of strategic management nor the current business context. Porter's models (1980, 1985) are the cornerstone of the strategic management paradigm and are grounded within the neoclassical, economic paradigm of a closed economic system. Even the CSV concept (Porter & Kramer, 2011) is not enough to guide strategic managers' decision-making processes, because it is merely an incremental extension of the traditional value chain, representing the win-win strategies of social differentiation and socio-efficiency (Dyllick & Hockerts, 2002).

Sustainable strategic management has coevolved in concert with the practice of strategic management and represents the next co-evolutionary stage of strategic management. Just as in 1977 when the founders of the SMS questioned the assumptions of business policy and planning and proposed the strategic management paradigm, today scholars and practitioners alike are questioning the underlying economic assumptions of the strategic management paradigm. Not until the neoclassical, macroeconomic assumption of the closed-system economy is questioned and changed can strategic management coevolve to sustainable strategic management, where ecological economics provides the theoretical construct for its models. Sustainable strategic management represents a more accurate view of the context in which business is practiced and provides a conceptual framework to those strategic managers interested in moving their firm toward a truly sustainable enterprise.

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Chapter 5
Sustainable Strategizing: Extending Competitive Advantages to Viability Advantage

Timo Santalainen

5.1 Introduction: Erosion of Competitive Advantages

Results lie outside the organization. This sustainable wisdom of Peter Drucker stands. That is why gaining the best possible understanding of "the outside" is an essential demand for strategists in all organizations, not only in business. The development of competitive advantage and customer value is not possible without deep understanding of customer needs, competitive forces, and other factors that are constantly shaping the value landscape. The inconvenient truth is that gaining insight in the external environment is an ever changing challenge, which calls for powerful strategic thinking.

The acronym VUCA (**V**olatile, **U**ncertain, **C**omplex, and **A**mbiguous) captures essential elements of external environment of contemporary organizations (Hicks & Townsend, 2002; Johansen, 2007). ***Volatility*** refers to situations where change is frequent and unpredictable. While the root causes of volatility are often understood or can be understood, the frequency and unpredictability of duration create problems for strategists. Examples of volatility are many. Crude oil prices have been very volatile in recent years, changing their trajectories and behaviour in response to geo-political developments in the Middle East, for instance. The same applies with stock prices and even more with the amazing volatility of the recent value of Bitcoin.

Uncertainty refers to lack of knowledge regarding what will happen, the range of events that could materialize, and their potential impact. Let's just consider the impact of ISIS, complications caused by Brexit on both sides of the Channel, or the independence movement in Catalonia and other areas in Europe. Similarly, the rise of populist movements in many countries has accelerated forces of anti-globalization. Uncertainty is also highlighted in the challenges posed to the investments of

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companies like BP, Shell, ExxonMobil, and Siemens in Russia following Russia's annexation of the Crimean peninsula and the EU sanctions that followed. All this necessitates shifting organizational resources to gain a better understanding of the drivers affecting uncertainty.

C*omplexity* is generated by interconnections, often convoluted, across different elements of a system. This creates an emergent whole that behaves differently from the elements that constitute the system. For example, consider the challenges posed to US health care decision makers following the passage of the Affordable Health Care Act (known as Obama Care), followed by intensive efforts of the Trump Administration to demolish the system. Similar shake-ups have taken place in other countries, Finland's so called "SOTE" (Social and Health Care Renewal) being another example. The diversity of players—the government, insurance companies, pharmaceutical companies, doctors, allied health professional among others—and their actions impinging on each other in often unpredictable ways makes strategizing extremely difficult in this complex situation.

A*mbiguity* refers to lack of knowledge regarding the basic rules of the game and cause-effect relationships. As public policies and newer technologies reduce entry barriers they facilitate entry of newcomers creating considerable ambiguity for the established players. Amazon, Chinese Alibaba, Google, Facebook, Twitter among multiple others have been real game-changers in customer behaviour in many industries including retailing and financial services. Increasing impact of social media, artificial intelligence, robots with digitalization almost everywhere create radically different contexts for strategists to cope with. Existing competitive advantages of incumbents erode.

For decades organizational leaders used to make major strategic choices annually, normally following detailed templates, which were staged by an "annual strategy clock." Martin discusses, in a somewhat exaggerated fashion, "the big lie of strategic planning" (Martin, 2014a, 2014b). He argues that many practicing managers create plans that are characterized by detailed financial analysis and pro-forma statements in which investments and costs are emphasized. While these numbers create a sense of comfort, the assumptions underlying the numbers are rarely examined critically, lest they create uncertainty in the minds of the decisions makers. We cannot manage numbers. The factors behind numbers must be explored and managed.

"Too good" management systems result in competitive disadvantages rather than advantages. As a major purpose of organizational systems and processes is to protect continuity, many firms and public organizations still follow an annual strategy clock to pace their internal strategy processes. Exaggerating a bit, if the annual strategy clock sets a window, say from the 1st of March till May 15th, for analysing the environment and creating the plan, this is followed religiously. When this window of relatively open mind closes, the plan is fixed, and goals, objectives, and budgets are developed. These are then cascaded through the organization. Strategic thrusts and actions are developed with the aim of achieving these goals and objectives. Focus now shifts to execution.

While all this sounds very rational and logical its episodic nature creates major problems in VUCA environments. As strategists focus on evolving environmental

issues primarily during the open window period, what happens when reality refuses to follow the scenario upon which the strategy was crafted? "Black swans" (Taleb, 2007) do not respond to any pre-planned schedules. As things which may be critical for the organization's viability, do not always happen during the planning window when decision makers pay heed to environmental developments, clock-based planning processes rarely permit re-evaluation of directionality till there is a crisis.

Consequently, the very existence of sustainable competitive advantage in VUCA-environment has been severely questioned both by strategy practitioners and researchers. D'Aveni, Dagnino, and Smith argue that as environments become more turbulent and hypercompetitive, managers must abandon the thought of generating consistent financial returns and sustaining competitive advantage. They assert that it is better for strategists to conceive of strategy in terms of dynamic manoeuvring to generate a series of *temporary advantages* (D'Aveni, Dagnino, & Smith, 2010).

Echoing D'Aveni's view, Gunther McGrath asserts that many strategists have locked themselves into a worldview where successful strategies are grounded in sustainable competitive advantage, and that view is inappropriate in an increasingly hypercompetitive world. Instead, she advocates that strategic managers start thinking in terms of *transient advantage*s (Gunther McGrath, 2013). She goes on to state that transient advantage can best be developed by focusing on customer experiences and solutions, building strong networks, and making sure that the strategy initiative portfolio is filled with early stage innovations.

With advantages becoming transient or temporary, managing transitions from one competitive advantage to the next is seen as the key to long term viability. Whilst this sounds great in theory, it is difficult to execute in practice. One firm that appears to have adopted this approach and executed it quite well is Google. Google is unafraid of generating a host of initiatives (Android platform, Google Maps, Nexus tablet, for example), ramping up those which seem to work (Android platform and Google Maps, for example), eliminating projects with limited potential (Orkut Google+, for example), and generating newer initiatives such as Chromecast, a way to display content from multiple devices on a TV screen.

A VUCA-environment hides a myriad of golden opportunities for seers and doers who can grasp most promising opportunities early by launching strategic initiatives. Readiness to make major strategic choices not only annually or quarterly, but on a daily basis is needed. Identifying and grasping opportunities that are hidden in "known knowns" and "known unknowns"—referring to Donald Rumsfeld's famous quote (Rumsfeld, 2011)—should drive innovative strategic action.

The strategic landscape is foggy. Many risks loom around. Foreseen risks can normally be managed, but—still quoting Rumsfeld—"unknown unknowns" are the most dangerous part of VUCA. Crises happen when what is thought to be safe surprises.

VUCA drives *short-termism*. Short- versus long-term tension with worries about short-termism has been on the rise at least during the last 50 years. Investor behaviour and "Please the Wall Street"-effects, which drive toward quaterly action, have been taken seriously by business practitioners. In addition to impatient capital markets many other things such as better observability of short-term results,

economic crises (e.g. 2008–2010), action-oriented western culture and managerial practice, even temptation for personal rewards, boost short-termism. Short-termism without longer-term strategic thinking leads to ramification and restless "cowboy management" without a clear strategic direction. Even constant search of transient competitive advantages can lead to short-termism.

Time-orientation is also a factor of national and organizational cultures. Short-termism is regarded as a typical western cultural attribute while Confucian heritage cultural context, Confucian dynamism,[1] is regarded as long-term orientation (Hofstede & Bond, 1988: 5–21). Chinese Jack Ma, the Founder of Alibaba, raised healthy attention of Western delegates in 2017 World Economic Forum's Davos Meeting telling that Asian entrepreneurs like himself may envision their business having time-span of 100 years or more. Culture is among the primary levers of organizational viability. It is far more powerful than any formal management system. Culture is tacit social order of an organization or network. It expresses goals and objectives through values and beliefs and guides action through shared assumptions and norms (Groysberg, Lee, Price, & Cheng, 2018: 44–52).

In conclusion, it seems to be evident that human nature backed by environmental pressures leads to short-termism and hence shorter life-spans of competitive advantages. Still, there is clear research and empirical evidence that long-term orientation creates more value for organizations than short-termism. Flammers and Bansal gave causal evidence that imposing long-term incentives on executives in the form of long-term executive compensation improves business performance. Firms that adopted shareholder resolutions on long-term compensation experienced a significant increase in their stock price. Stock price increase foreshadowed an increase in operating profits that materialized after 2 years. Major reasons for better long-term performance included more investments in R&D and stakeholder engagement, especially pertaining to employees and the natural environment (Flammers & Bansal, 2017).

The McKinsey Research took a deeper perspective on economic impact of short-termism. The study examined 5-year performance of some 600 firms exhibiting five habits of short-termism: investing relatively little, cutting costs to boost margins, initiating lots of buy-backs, booking sales before customer payments, and hitting quarterly profit forecasts. The result was that 5-year earnings of long-term companies had cumulatively grown 36% more on average than those of other firms. Economic profits had grown 81% more (Barton et al., 2017).

Long-term oriented companies delivered several other benefits to stakeholders. Shareholders got economic gain, long-term focus firms hired more employees to fuel their growth and society gained more tax money.

[1]Hofstede's seminal work on national cultures implied four dimensions for comparing cultural attributes. Being concerned about potential Western bias in Hofstede's (1980) instrument Hofstede and Bond analysed Chinese culture. They found one unique cultural dimension which called Confucian dynamism, although Hofstede later called it "long-term orientation." This national culture dimension describes the extent to which individuals within the culture focus on the short-term and immediate consequences versus take a long-term focus.

It was evident that long-term investments lead to short-term gains, too. But long run matters only, if organizations survive all the short runs. Long- versus short-term paradox makes us ponder whether the idea of *logical incrementalism* presented by Quinn almost 40 years ago could offer at least a partial solution to strategizing challenges in VUCA-environments (Quinn, 1980). Quinn was worried of the increasingly costly bureaucracy around formal planning systems. He had also noticed that most important strategic decisions seem to be made outside the formal planning structure (which is often paced by the bureaucratic annual strategy clock).

Logical incrementalism is a management philosophy which states that strategies do not come into existence based on a one time major decision but rather through smaller decisions that are evaluated periodically. These smaller decisions are not made randomly but logically through experimentation and learning. This means that incrementalism is not muddling, given that it is done by strategists who are insightful strategic thinkers. Consequently, one can argue that this mode of strategizing might well work if there is a longer-term vision guiding the overall direction of organizational subsystems or network partners to move by smaller steps.

Long-termism fuels sustainability and viability of organizations, networks, and societies in many ways. Here not only economic criteria count but things such as overall social responsibility, investments in sustainability issues, R&D-investments, investments in personnel development, and strategic thinking should be taken into consideration in search of deeper elements of sustained competitive advantage of organizations. In this way competitive advantage starts to stretch towards *viability advantage*.

5.2 Sustainability of Organizations and Networks: Towards Viability Advantage

As competitive advantages are becoming temporary and transient, organizations—and increasingly networks and partnerships—must find new ways of developing and up-keeping their longer-term viability amidst wicked challenges to be confronted in VUCA-environments. Doing more and better "business-as-usual" is not enough. In non-VUCA environments organizations have the luxury of being able to develop strategic plans and execute these with reasonable certainty since assumptions underlying these plans are relatively stable as also the overall context, competition, and underlying technologies.

Thus successful strategic frames of the past may become blinders. Rumelt asserts that in coping with VUCA an organization's biggest challenge may be its own inertia and entropy (Rumelt, 2011). Inertia traps have their roots in routines, the manner in which things have "always" been done and must continue to be done. *Active inertia* develops when energy is directed more towards internal issues and sensitivity to the external environment diminishes. Active inertia stiffens strategy processes into time-consuming, tightly scheduled "form-filling" exercises. Forms and structures rather

than strategic thinking and insight drive strategy. As a result competitive advantage erodes.

While existing strategies offer shorter- and shorter-term competitive advantages, long-term viability is at stake. It becomes essential to build strategic capabilities and harness innovation to develop higher value strategies that will create a platform for greater future value and sustainability. In short, VUCA demands that strategists un-learn, even abandon structured, time paced strategy processes and work on generating strategies and business/operation models on a fairly continuous basis (Baliga & Santalainen, 2016).

Viability advantage should be the hard core of high value strategies. Viability, the ability to live and capacity to be sustained (www.dictionary.com/browse/viability), is a broader concept than competitive advantage. The focus of competitive advantage is generating more economic value than competitors not only in terms of effectiveness but through distinctive positioning. From a competitive advantage perspective, strategic managers need to pay particular attention to customers and competitors in the context of a particular industry. Operational efficiency, strong execution power is also necessary for competiveness.

External and internal effectiveness are not sufficient pre-conditions for viability. Viability does not necessarily mean growth in volume. Growth happens through innovation and renewal, too. From the viability perspective strategists have to go beyond the industry, be able to detect weak signals in the value landscape, and assess their potential impact in long-term viability of their organization. Dynamic resources and competencies of both internal and external partner networks play a key role in developing viability. As industry rules evolve, or are actively changed sources of viability can more and more often be found beyond industry boundaries.

Being sensitive to these developments that impact viability are becoming of far greater importance than being focused on competitive advantage. Viability ensures organization survival and growth over a longer period. It is possible to overcome competitive disadvantages through strategic turnarounds or transformational efforts, but overcoming viability disadvantages may be very difficult if not impossible.

What are the key elements of viability advantage? Core building blocks of viability advantage are made up of four major levels of managerial work (Baliga & Santalainen, 2016; Tainio, Räsänen, & Santalainen, 1989):

1. *Operative management*, which refers to operational efficiency and strong execution power.
2. *Business management* that aims at understanding customer needs and competitors' strategies hence generating better value for customers through positioning differently.
3. *Strategic management*, which contributes viability by developing resources and competencies so that they become dynamic capabilities.
4. *Institutional management*, which aims at adopting fast to changes in institutional settings such as industry rules and regulations, and at best, active impacting in creation of rules that strengthen viability.

Building blocks of viability advantage are illustrated in Fig. 5.1.

Figure 5.1 elaborates that competitive advantage and viability advantage not only overlap but they complement each other, even though intense search of short-term competitive advantages may conflict with long-term viability. Finding an optimal balance between competitive advantage and viability is one of the most demanding challenges of sustainable strategizing.

The top part of the pyramid, i.e. business management and operative management form the core of competitive advantage developed through smart competitive positioning and sensitivity in responding to current and future customer needs.

Viability advantage is primarily made up of strategic management by developing *dynamic capabilities*, i.e. a robust platform of resources and competences (Teece, 2007). Dynamic capabilities are a key driving force needed for orchestrating an organization's internal and external resources and competencies, especially unique resources and core competencies. Resources and competencies form the most important linkage between competitive advantage and longer-term viability of organizations. In today's networked societies strategists must develop viability by being open to constant reconfiguration of dynamic capabilities as demanded by the specific strategy and business model being executed. Thus dynamic capabilities can well be defined as "the capacity of an organization to purposefully create, extend or modify its resource base" (Helfat, 2007).

Institutional management is a unique building block of viability advantage. It promotes sustainability of organizations and networks. Institutional environment means those political, social, and organizational basic rules that have major impact

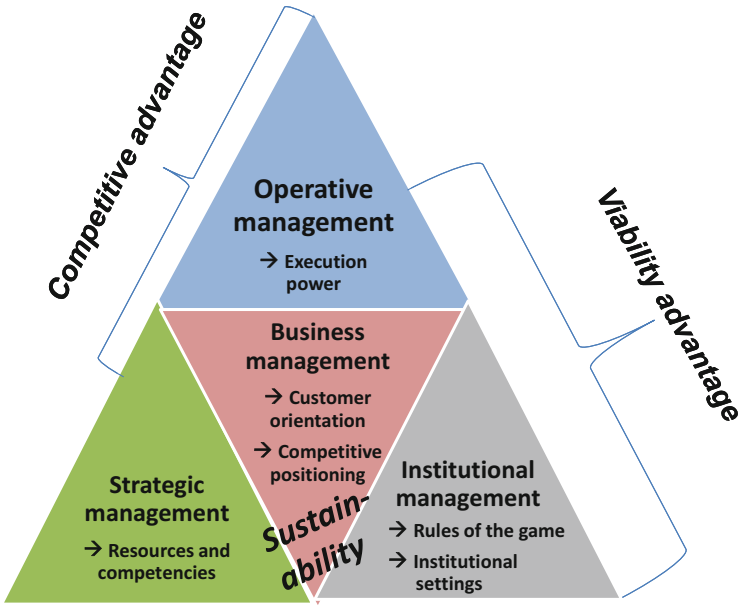

Fig. 5.1 Elements of viability advantage (Baliga & Santalainen, 2016: 217, adapted)

on societies and organizations. These rules show how institutional environments differ from each other. Institutional arrangements can have deep positive—or negative—impact on the viability of firms, other organizations, and societies (Bucheli & Kim, 2015).

Institutional management promotes viability similarly to long-termism offering hard-to-copy elements for survival and growth. Martin even speaks of *institutional advantage* defining it as an organization's capability to exploit its distinctive resources and activities in interactions with the institutional environment so that then value generated exceeds that of competitors or other players (Martin, 2014a, 2014b: 55–69). Thus institutional advantage is a key reinforcing element of viability advantage.

The growing *sustainability movement*, viz. living within the limits, understanding the interconnections among economy, society, and environment and the need for equitable distribution of resources and opportunities, is having a major impact in trade-offs between short-term competitive advantage and search for long-term viability of the institutional environment of organizations. The findings from the MIT Sloan Management Review and the Boston Consulting Group survey of 1800 respondents across several industries and countries indicated that the economic dimensions of sustainability—impact on competitiveness, market pressure, growth potential, and brand building—are of major concern for business executives. Energy efficiency, pollution, waste management, and climate change were ranked high as environmental issues while employee well-being, community health, customer health, and economic sustainability of local communities were cited as key social concerns (Kiron, Kruschwitz, Haanaes, & Fuisz-Kehrbach, 2013).[2]

Given that there still is a gap between intentions with respect to sustainability and consumer behavior, a key issue for corporations going forward is the degree to which sustainability concerns should be addressed in crafting strategy and its potential impact on firms' financial performance. The Sustainability Accounting Standards Board (SASB) examined how five main areas of sustainability—environment, social, human capital, leadership, and business model innovation—influenced financial performance. The study concluded that financial performance improved with sustainability performance only if conventional Business-as-Usual approaches were discarded in favor of new products, processes and business models (Eccles & Serafeim, 2013). Sustainability generated added-value only when executives saw sustainability as an opportunity rather than an obligation, e.g. "greening" rather than "pollution prevention."

For other than business organizations viability advantage is particularly important as the basic mission of many of these organizations is to safeguard sustainability and long-term viability of society. Viability takes on more relevance than competitive advantage. Not-for-profit organizations have also to be concerned about competitive advantage as they compete with other not-for-profits with respect to attracting resources. At any given point in their existence, they have to be perceived as

[2]For more information see Chap. 3.

being relevant in terms of their ideology, values, and objectives. Of course not-for-profit organizations compete more and more with for-profits as is the case in health care and in wider wellness businesses.

Alongside governments, public, non-governmental, sports, and art organizations are also beginning to face and address sustainability issues. However, the more divergent political, social, ideological, and cultural orientations and values in such organizations make addressing these issues even more challenging.

The development of viability advantage calls for more "relaxed" thinking on how internal structures and processes should look like. Organizational processes have to shift from siloed and vertical to horizontal with preference given not to those who possess positional power but those that possess the expertise. Increasingly such expertise is not available internally. Organizational leaders have to be willing to open strategizing processes in order to make use of the innovative and execution power of extended organizational network or ecosystem (Hax, 2010).

Competitive advantage and viability is maintained by creating and sustaining ecosystems that enable agile strategy and business model change as the focal organization does not have to spend substantial resources to build necessary capabilities in house. Extended enterprises and ecosystems also facilitate probing and experimentation as costs of failure are spread through the system and hopefully do not overwhelm any one member. Those, who excel in developing extended organizations and ecosystems with these attributes, create viability advantage.

5.3 Making Viability Advantage Real: Open Strategizing

Striving towards viability in VUCA-environments of networked societies must be different from crafting competitive strategies and advantages by the help of time-paced planning templates. *Open strategizing* is a promising emergent mode of strategy work pursuing creation of viability advantage.

Popularity of open innovation (Lichtenthaler, 2011) encourages believing in the applicability of the open-concept for strategizing, too. Despite scattered experimentation in public and high-tech organizations, practitioners especially in business firms have been cautious in opening their strategy processes. Even though contemporary organizations operate in a networked environment where transparency is appreciated and needed, the core content of strategy seems to be one of the best kept secrets. Traditional analyses and customer surveys appear to be the only approaches to involve a wider set of external and internal stakeholders in strategy making.

Voices for opening organizational boundaries, internally and externally, are by no means new. Hamel called for creating an open market place for ideas and talent and opening up the strategy process for people across the organization (Hamel, 2000). He also suggested that managers let organizational boundaries be fluid in order to permit skills and resources to be creatively and endlessly recombined.

More fluid organizational boundaries have also opened space for wider values such as sustainability. For organizational leaders this has meant that they have started acknowledging, however reluctantly, that their overall approach of thinking about strategy and competitive advantage has to change to maintain organizational viability. Senior leaders of progressive corporations and public institutions have become intrigued with the potential of adapting open innovation approaches for tackling strategy challenges.

Pressure for opening up the strategizing processes is twofold. First it arises from "problem push," i.e. rigid organizational boundaries coupled with the excessive fear of revealing company secrets, or lack of networking skills make collaboration efforts with stakeholders difficult. Internally, silos and partial optimization stemming from short-term results accountability of organizational units suppresses horizontal collaboration. Problem push makes organizations blinded and inward-oriented. An "opportunity pull," instead, encourages search for greater innovation impact and execution power through inclusion of external and internal network resources. Proliferation of innovation ecosystems, increasing use of social media and intranet in innovation projects make this increasingly feasible (Santalainen & Baliga, 2014).

Whittington et al. define open strategy as "more transparent and inclusive strategy-making, both internally with organizational members and externally with key outside stakeholders" (Whittington, Cailluet, & Yakis-Douglas, 2011). Transparency and inclusion are regarded as critical to open strategy. This often necessitates breaking down internal organizational silos and including external stakeholders including ecosystem members. Such incorporation also facilitates innovation and execution.

Recently concepts of open strategy and open strategizing have been developed further both by researchers and strategy practitioners (Hautz, Seidl, & Whittington, 2016). Successful implanting open strategizing in an organization requires a deliberate decision to make aspects of strategy more transparent. Transparency is necessary but insufficient since open strategizing becomes a reality only when individuals within the organization and potential members of the partner network or wider ecosystem become actively involved in the strategizing process.

When principles of open strategizing are applied, the power of external network partners—the *strategizing ecosystem*—can prove to be a major source of substantive ideas (Baliga & Santalainen, 2016: 152–153). Eliciting ideas from external stakeholders creates a dialogue, which can produce important insights for crafting and executing strategic initiatives. For open strategizing to work, leaders driving the process have to ensure that external participants and their organizations also receive benefits from their participation. Failure to do so leads to disengagement and a breakdown of the strategizing process. Identification of strategic themes and initiatives in collaboration with external ecosystem partners create potential for value creation and hence developing viability advantage.

Capturing value by launching and ramping-up strategic projects calls for exploitation and configuration of internal strategic resources. Most organizations have a huge unexploited potential because of barriers between organizational units (Barnett, 2017). There is lots of talk that organizations operate in silos, vertical cleavages

running up and down the hierarchy that separate functions from each other. In addition, tall structures also create "slabs" between levels which isolate people who work at different levels from each other. Slabs within silos tend to create closed communities. When these slabs thicken they create "islands" (Mintzberg, 2009: 169–171).

Consequently, focusing on increasing internal openness to broaden participation is needed badly. Piloting open strategizing in two Finnish expert organizations lead to the creation of the concept "*silo solvent*" (Salminen, Santalainen, & Äkräs, 2013). Silo solvents comprise cross-unit activities such as cross-unit seminars, joint cross unit/function projects focusing on strategies, innovation, growth, and the like, in which participants are encouraged to spar with one another. Informal sparring in daily situations is valuable as well. Such activities enable staff members to obtain an appreciation of the broader organizational context and help in building a network of contacts which can be accessed at appropriate times to get things accomplished during execution. Senior leaders can increase the effectiveness of silo solvents by getting actively involved in the process, signalling their strong commitment through open forums, mentoring cross-unit projects, and facilitating appropriate personnel movement in order to prevent talented personnel from being hoarded by their home units.

Organization's internal capability base, especially core competencies and unique resources (Johnson, Whittington, & Scholes, 2011: 84–89), form the major powerhouse running open strategizing process. Silo solvents are major vehicles for creating dynamism and energizing not only internal but also external capabilities.

Crafting the contents in open strategizing must be based on the "selection" of a preferred future. This can be made by scenario generation, to be concretized into a vision, strategic intent, and even into concrete strategic objectives. In a VUCA environment deliberate strategies must be supplemented, or replaced by strategic initiatives.

For open strategizing to work the conventional strategy crafting and execution patterns have to be broken. Environmental pressures do not permit the conventional, linear, sequential approach. Even running business-as-usual is a rocky road which is by no means straightforward. Still most contemporary organizations including expert, professional service, public service, and non-profit organizations continuously adopt a "manufacturing" type mode where strategizing is normally governed by an annual strategy clock. Linkage between "strategy world" (at off-site locations) and real work is weak. This provides limited flexibility for adaptation as circumstances change. As a result competitive advantages erode.

Adopting a continuous open strategizing process could provide the flexibility needed in VUCA environments. Strategic leaders have to think in terms of crafting and executing strategic initiatives simultaneously with the boundary between the crafting and execution disappearing. Even the most dynamic deliberate strategies aimed at running business-as-usual are not enough for maintaining competitive advantages (CA) and viability in a VUCA environment. Viability advantage (VA) can only be developed so that deliberate strategies—maintained by time-paced strategic planning—are supplemented, or even replaced by strategic initiatives and development projects on a rather continuous basis. Figure 5.2 illustrates this.

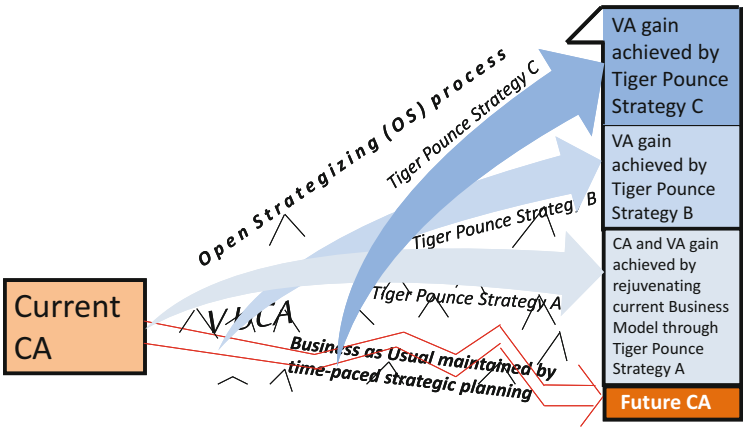

Fig. 5.2 Viability advantages generated by tiger pounce strategies (Santalainen, 2006: 157, adapted)

When principles of open strategizing are applied, the network power of external strategizing ecosystem members can prove to be a major source of substantive ideas. Open strategizing is invaluable in this regard given that there is a multitude of eyes and ears scanning for opportunities and ideas from varied domains. The dynamism of VUCA creates many opportunities for developing long-term viability. The next challenge is to recognize which ones are truly golden and craft strategies to strengthen viability advantage. Occasionally opportunities emerge that are substantial and have the potential to cause serious disruption to existing industries and firms. Recognizing these opportunities from weak signals is a key challenge.

Strategic initiatives or projects that complement systematic strategy efforts can be called *tiger pounce strategies* as illustrated in Fig. 5.2 (Santalainen, 2006: 156–159). Incremental strategizing aims at strengthening the vigor of the current position and competitive advantage. Tiger pounce strategies aim at creating viability advantage organically or in partnership with external value networks. Innovations that result in radical innovations are most often manifested in the customer interface as a breakthrough offering or a new business model.

Business/operation model is a conceptual configuration that articulates the logic and details the manner in which a business creates and delivers value to its customers. Creating a business model requires strategists to have insight into customers, particularly in terms of what customers value or wish to get accomplished, and into the behavior of revenues and costs, the resources, capabilities, competencies, and activities necessary to deliver value, and mechanisms to capture value (Teece, 2010: 172–194). A viable business model creates compelling value propositions for customers, has an advantageous profit model, permits generation of multiple revenue streams with only marginal increases in costs, permitting substantial or equitable value capture (Gitora & Netessine, 2014).

A customer solution perspective or a system's lock-in perspective can best be created by involving external partners to provide value-generating solutions. Open

strategizing leads the way towards wider, often unexplored avenues for developing business models that strengthen viability advantage. Rather than committing to an in-house strategy and business model in advance the purpose of open strategizing is to probe and experiment, often with network/ecosystem partners, a series of real options (Baliga & Santalainen, 2016: 119–125). The creation of *network/ecosystem-based business models* can disrupt existing ones substantially, or even lead to the creation of new industries.

Most strategic managers look at their business and competition in product terms rather than *in terms of function* (Olivia & Kallenberg, 2003). Moving away from product based thinking helps identify and respond to potential threats to strategies and business models more effectively. Let's consider firms competing in civil aviation. The conventional concept of business would suggest that airlines compete against other airlines by providing passenger and freight capacity. Though, the specific strategies and business models adopted vary, the players involved identify themselves as being in the airline business transporting passengers and freight. If we consider the passenger part as being the core business, and we conceptualize the business in functional terms as "connecting people," it becomes apparent that video-conferencing systems are competitors in the business travel market and Skype for individual travellers.

Metamorphosis of Philips is another excellent showcase how unlearning old ways of doing business and adapting radically novel business models can create viability advantage for the future. By selling its slow-growth television unit and spinning off the lighting business Philips created space for investing heavily in R&D to focus on meeting the "world's unmet needs." Strategic intent of Philips is to be a leader in health care technology. Huge growth of revenues and profits demonstrate that a mighty tiger pounce has happened. Aiming at creation of health care solutions that do not exist yet is an ultimate and compelling vision for an almost 130-year old industrial conglomerate.

Viability advantage can also be developed by shifting the concept of business from selling products to creating *platforms that enable interactions*. Uber's ride sharing and Airbnb's home sharing platforms exemplify this approach. Value creation has to change from linear, unidirectional to networked, and value capture has to shift from focal-firm centric to a more distributed. Embracing such an approach requires organizations and their leaders to give up control and move toward a coordination role.

Another approach to crafting viable business models is to think in terms of *creative analogues*, i.e. adopt or adapt business models that have been successful in one arena to another arena. For instance hospitality services could learn from rental car companies regarding renting a portfolio of hotel rooms for a certain number of hours rather than on the basis of fixed check in and check out times.

A relatively new trend in the crafting of business models is that of *crowd-sourcing based business models* owing to the proliferation of social media (Kohler, 2015: 63–84). Such an approach requires organizations to rethink the way business is done. In crowd-based business models firms reach out to users to create value. Danish firm Lego has been one of the early movers in this arena. It is easy to note that crowd-sourcing business models would represent a natural evolution from adopting

open strategizing approaches. Key point to note is that entities involved in helping create value have expectations of sharing value, too. Any attempt by the organization embarking on crowd-sourcing based business model innovation to appropriate all the value generated would result in its inability to initiate crowd-sourcing business model innovation in the future. Hence, appropriate mechanisms have to be created to ensure equitable (real and perceived) value distribution.

Crowd-sourcing based business models are particularly suited to dealing with VUCA as intra-organization generated business models have difficulty in keeping up with increased intensity of competition, changing customer demands and expectations, and declining product and strategy life cycles. It helps improve the quality of the value proposition thus generating viability advantage—given that potential users have been intimately involved in its creation.

As VUCA intensifies, organizational leaders should focus on creating multiple options and business models. They also need to maintain a broad portfolio of resources, capabilities and competencies to permit timely deployment of a particular option, i.e. strategic initiative or business model. While this might have a negative impact on organizational efficiency in short term, it does increase flexibility and viability in the long run. Both strategic leaders and other stakeholders have to acknowledge that VUCA environments demand such fluidity in the allocation of resources, capabilities and competencies. Fluidity is advanced if managers acknowledge that given their limited insight into how the environment would evolve, it is more critical to maintain a degree of openness than execute plans relentlessly.

An intense focus on execution and short term competitiveness may lead to declining viability in the long run. In order to take advantage of transient short term opportunities it is important that the internal value network also be relatively fluid, i.e. there is cross-functional communication and collaboration and a culture of self-organization around specific opportunities. Ability to involve external ecosystem participants seamlessly in this could have huge payoffs in ability to exploit opportunities by the help of open strategizing practices.

5.4 Viability Mindset: The Power of Strategic Thinking

While many factors account for enduring organizational performance and viability, good organizational leaders can create tremendous value, *management advantage*, for their stakeholders, while poor ones can easily destroy the same. The impact of leaders is greater than the vast majority of the other factors, as leader decisions and actions are more within their control. Probably the most important element that strategic leaders can control is their openness to change and a constant questioning of their mental modes, as this paves the way for potentially radical changes in strategies and business models demanded by VUCA. The power of strategic thinking counts.

Consequently, we can argue that viability advantage stems from management advantage. Reflection is a key vehicle for fostering viability mindset. A strategic thinker can create and focus on things and issues which lie beyond the conventional

only if (s)he can reflect. Past experience does not teach by itself, but reflecting on the experience does. That is why it is critical that leaders and professionals take time to reflect on their relative successes and failures. Reflection means "being." Reflective being helps in getting a deeper understanding and insight in past and current issues and thus generates innovative ideas for the future. Constructive reflection energizes accumulation and thus execution power for "strategic doing." All this ensures the long-term viability of organizations—and strategists themselves.

Reflection means searching, wondering, analyzing, making synthesis, combining things in novel ways, and a conscious mental effort to think (and think and think again). Reflection helps in combining internalized knowledge with new phenomena and issues needed for new ideas and approaches. Reflection helps prioritize tasks for strategic actions and ensures that key issues are not ignored, as is often the case in the rush to do things. Indeed, the ability to reflect has become one of the key competences managers and leaders need to possess in search of viability advantage.

Given that powerful strategic thinking contributes to a viability mindset the question is what strategic thinking actually means. Strategic thinking is seeing (Mintzberg, 1991). Development of conventional competitive strategy and competitive advantage is based on seeing behind (e.g. past success factors), seeing below (e.g. understanding current business logic), seeing beside (e.g. what competitors are doing), and seeing ahead (e.g. crafting or updating a strategic plan).

Creating viability advantage puts demand for even better seeing. Strategists must see from above (e.g. evolution and revolution of industry structures), and they must see beyond the imaginable future (e.g. crafting unforeseen business models).

Powerful strategic thinkers are able to create a theory, future success model, of their organizations. *Theory of an organization* should provide a deep understanding on synergies between opportunities offered in the future (VUCA) environment and dynamic capabilities of the organization and its external ecosystem. Zenger specifies this by arguing that a viable organizational theory implies three "sights." A foresight clarifies beliefs and expectations regarding industry's evolution, predicts future customer tastes or consumer demand, foresees the development of relevant technologies, and forecasts the competitive actions of rivals. Second, an effective theory also offers organization-specific insight of the organization's existing assets and activities. It identifies those that are rare, distinctive, and valuable. Third, a well-crafted theory implies cross-sight on complementarities that the organization is able to assemble or pursue by acquiring assets that can be combined with existing ones to create value (Zenger, 2013).

Viability advantage is geared around a theory of an organization, which should imply all three "sights" discussed above. Prominent examples are many. Apple has been sensitive to customer preferences and experience of users, it has been innovative in design thinking, and it has tuned and exploited its external ecosystem effectively. Finnair has created and executed its "Asia theory" in a superb mode making use of Northern polar route and Helsinki hub as a gateway between Asia and Europe.

Leading serial entrepreneurs work like scientists theorizing around new, un-invented business models. The power of Elon Musk's strategic thinking is

demonstrated by his mind-stretching creations such as PayPal, Tesla, SolarCity, and SpaceX, among others. Richard Branson is another business magnate, adventurer, and innovator, constantly loaded by novel business ideas that include almost any imaginable business on earth—and space. He founded the Virgin Group, which today controls more than 400 companies. Says Branson: "I don't have systematic business plans, nor do I ask accountants whether I can make a lot of money with this or that idea. I have back-of-the-envelope ideas of what I want to do—and make sure that my idea is superior to anybody else's out there" (Vandermey, 2017).

How to keep the vitality (and viability) of Day-One inside a large organization? Amazon is an excellent model of a big company that has retained the dynamism of a start-up. The Founder and CEO Jeff Bezos makes it clear that vitality and viability mindsets must be constantly nourished. This important message is reinforced by a recent study of Boston Consulting Group, which shows that vital American companies like Amazon, Tesla, Facebook, and Netflix possess a unique capacity to explore new options, renew their strategies and grow sustainably. They understand that continuing business-as-usual, i.e. preserving past (competitive) advantages and position is not sufficient to thrive in today's dynamic business environment. Only vital organizations will survive (Reeves, 2017: 26–27). In those companies viability mindset overtakes short-termism.

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Chapter 6
Integrated Management for Capital Markets and Strategy: The Challenges of "Value" Versus "Values" Sustainability Investment, Smart Beta, and Their Consequences for Corporate Leadership

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6.1 Introduction

While discussion regarding sustainability strategy has largely focused on the integration of financial and non-financial data, a silent revolution in the financial asset management markets has been occurring. New techniques are emerging, such as smart beta analysis, that enable far-reaching recommendations on risks associated with a company's strategies and leadership. As sustainability becomes part of mainstream asset management, corporations must re-examine their approach to strategic and organisational change in order to engage with an increasingly active and demanding investor community. At the same time, they must adopt an integrated management approach as they negotiate the cascade of new sustainability strategies. External analysis of performance levers and internal performance management processes have to align to ensure that ESG (environmental, social, governance) reporting is not simply a communication exercise, but an integral part of target-setting and monitoring that is anchored to leadership responsibilities through the company.

To navigate these changes, companies must develop and align two integrated process loops (see Fig. 6.1). First, the information requirements of rating and ranking organisations, as well as the asset managers themselves, must be addressed. As increasingly sophisticated techniques are used to isolate specific ESG risk or opportunity factors, the demands placed on companies to steer, manage, and align information flows will increase. This will require a more active process than the current one-way information flow, which only satisfies rating and ranking data requirements, in order to

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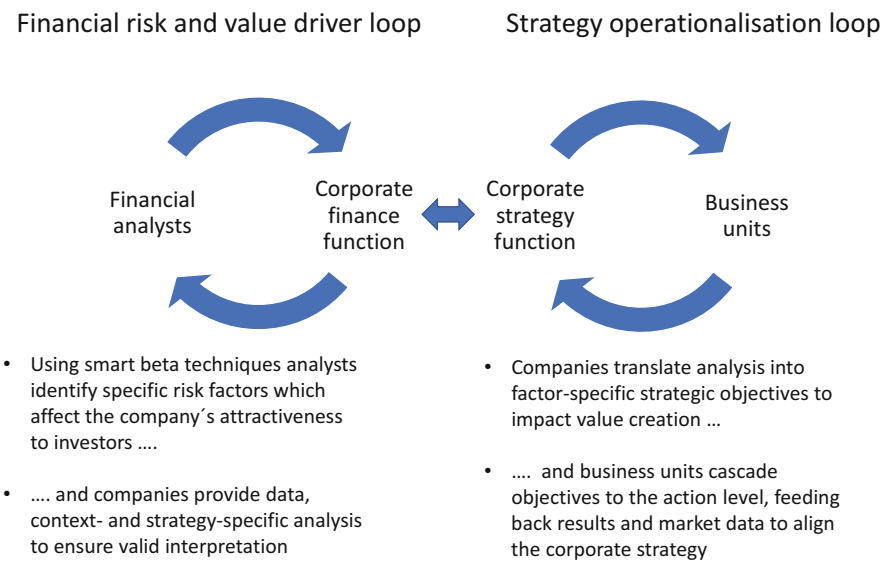

Fig. 6.1 Double loop model

engage capital market actors in a dynamic dialogue on material factors and company objectives and actions. Second, an equally important and challenging process loop will integrate external and internal financial, strategic, and sustainability objectives in a common, operational framework. This will facilitate multiple objectives throughout the organisation, driving alignment, focus on objectives, and robust reporting and feedback to highlight enterprise-wide value creation.

The first section of this chapter addresses developments in the capital markets and the consequences for corporate management.

6.2 New Developments in Sustainable Investment

Demand for sustainable investments[1] has been building, largely driven by institutional investors (Kasemir, Süess, & Zehnder, 2001), and has led to the development of an ever-increasing number of instruments and products that cover almost all geographies, sectors, and investment strategies (Laville, 2017). Over time, these classes of investment have proven to be largely comparable in terms of risk and

[1]Sustainable investments are defined here broadly as socially responsible investments that take account of environmental, social, and governance issues (ESG), recognizing however that the term has been widely interpreted in the literature. For further discussion, see for example, the Equator Principles for a set of criteria applied by banks for investment due diligence purposes, or for a narrower definition of sustainable investment, Impact Investment, which demands clear targets for ESG project impacts.

return and in some cases outperform (Clark, Feiner, & Viehs, 2015). In addition to offering an opportunity for effective portfolio diversification, they allow investors to address three aspects of sustainability: the implementation of sustainable business objectives and processes; external sustainability compliance requirements and internal policies for sustainability; and improving their own risk/return profile (Zanker, 2017). The result is that companies are now faced with increasingly complex communication and management challenges regarding investor relations.

Managers recognise that legislative pressure regarding new regulations is increasing, and additional shareholder-driven topics are emerging, such as compulsory voting by shareholders on executive compensation. Additionally, stakeholder pressure is evolving, both from NGOs addressing environmental or social concerns and institutional investors looking at governance and responsible management practices such as compensation (Laville, 2017). This continually changing situation raises the question of how businesses should best address these issues in order to balance environmental, social, and governance (ESG) behaviour with commercial and investment performance.

6.3 ESG and Financial Investment

Managers are now confronted with investors who are using ESG data to analyse and make recommendations on stock selection. As this impacts both share price and volatility, understanding how ESG factors influence performance—economic company performance, cost of capital for companies, and stock performance—is vital. To understand the degree to which ESG factors have an economic impact, a short review of developments in financial theory is helpful, drawing on robust academic studies rather than commercially biased investment advisor recommendations.

Financial theory (e.g., Elton, Gruber, Brown, & Goetzmann, 2009), whether rooted in classical finance or more modern factor models (e.g., Fama-French three factor[2]), assumes that returns on financial assets are driven only by non-diversifiable financial risk. Expected returns are thus driven by factor exposure, and models are developed to find the optimal level of diversification of a portfolio for a given expected return. This presents investors with a paradox concerning sustainability: namely, that excluding certain asset segments for purely ethical or ESG-related arguments would theoretically deliver a sub-optimal portfolio that takes higher risks than necessary for the desired return level. To justify the inclusion of ESG factors in investment decisions from a theoretical standpoint, identifying circumstances where this factor information would be beneficial and could potentially *reduce* risk is necessary.

The first argument for ESG investment addresses the governance issues associated with the *agent-principal* problem. In the context of investment, this problem

[2]The Fama–French three-factor model is a model designed by Eugene Fama and Kenneth French to describe stock returns, encompassing (1) market risk, (2) the outperformance of small versus big companies, and (3) the outperformance of high book/market versus small book/market companies (Fama & French, 1992). However, the size and book/market ratio themselves are not in the model. For this reason, there is academic debate about the meaning of the last two factors.

states that investors (principals) provide capital for companies (agents) who act on their behalf (Golec, 1992). From the perspective of the principal, good governance would ensure that the agent acts in their interest rather than his own. Thus, agency can be viewed as a cost that financial markets must efficiently price into investment decisions. Good governance would then be associated with higher return expectations, and empirical evidence exists to support this conclusion (Bauer, Guenster, & Otten, 2004; Cremers & Nair, 2005).

Raising environmental and social standards within a company might be expected to incur higher costs, and if not associated with an additional revenue stream, lower profitability, and lower return on capital. Additionally, if externalities are zero, raising the cost of compliance on social issues and thus reducing profitability might appear to negatively affect social benefits, since, for example, less tax on profit might accrue. However, if externalities will be transferred back to the originating company through stakeholder pressure, legislation, or litigation, these risks must be priced accurately. If markets fail to include these factors, then inclusion by investors may lead to superior return expectations. Certain studies correlate environmental performance with superior stock performance (Derwall, Gunster, Bauer, & Koedijk, 2004; Dowell, Hart, & Yeung, 2000), though the scale of climate change and its possible impact on investor decision-making and government policy may go far beyond current empirical examples.

Reputational concerns are the most frequently applied company-level levers for including social factors as drivers of business performance. Though organisations are complex systems, not simple input-output mechanisms, empirical evidence suggests correlations between customer and employee satisfaction and stock performance. And again, if financial markets fail to correctly price the impact of these factors, then the supposed costs of a company's social policies might generate superior returns (Edmans, 2011; Edmans, Li, & Zhang, 2014).

Another important topic to address is the impact of overall ESG scores and stock prices, as funds incorporating only ESG stocks are easily benchmarked against peer groups. Khan, Serafeim, and Yoon (2015) argue that this may be addressed by assessing only material ESG topics when developing aggregate scores for individual companies. They believe that by adopting a common accounting standard such as SASB[3] for materiality within a given industry they will achieve a greater degree of robustness. In the second part of this chapter, we argue that an external assessment of ESG factors needs to be matched with corresponding internal policies to ensure alignment and implementation. Strong empirical evidence will illustrate that good policies and practices on material ESG topics are associated with outperforming other ESG companies.

Additionally, Amel-Zadeh and Serafeim (2017) note in an empirical survey that senior investment professionals from so-called "mainstream (non-sustainable investment) funds", also consider ESG topics in investment decisions as they consider it financially material to investment performance, using the data to assess risk rather than a company's competitive positioning.

[3]See Chap. 13 for more information on the SASB standard and a comparison to the GRI standard.

It is also important to note that factors extend beyond the investment policies of commercial organisations. As legislation and regulation evolves, accounting standards will integrate and interpret these requirements in their recommendations, continuing a tendency for international or supranational institutions to negotiate or legislate for sustainability policies which will impact commercial organisations. For example, in May 2018 the European Commission presented a package of follow-up measures for its financing sustainable growth action plan, including proposals aimed at establishing a unified EU classification system of sustainable economic activities ("taxonomy"), improving disclosure requirements on how institutional investors integrate environmental, social, and governance (ESG) factors in their risk processes, and creating a new category of benchmarks to help investors compare the carbon footprint of their investments.[4] China has recently strengthened its anti-pollution policies in the light of targets being significantly exceeded, and has introduced a 3-year plan aimed at achieving 80% "pollution-free" days by 2020. In the past, China has demonstrated that along with targets, the authorities have ordered certain industries, for example cement or steel plants, to reduce or cease production, if certain trigger points are exceeded. For commercial activities, this raises the question of whether this motivates individual firms to invest in pollution reduction, if they can also be penalized for the behaviour of their competitors, who fail to invest.

Further research (Nagy, Kassam, & Lee, 2015), albeit from a commercial source, examined a so-called ESG-tilted global equity portfolio measured against a comparable global benchmark. It distinguished multiple factors known to drive performance, such as size and value of the company as well as ESG factors, providing a means of empirically measuring performance on individual factors. The paper argued that while high ESG performance was associated with other company characteristics, certain sustainability practices also contributed to superior returns. Statman (2000), however, failed to establish superior performance of ESG funds compared with conventional funds. This may be related to conventional funds using stock-picking fundamentals behaviour that may partially mirror ESG funds, or that the US-based funds examined were using less sophisticated ESG techniques, such as exclusion based on previous events or elimination of "sin" stocks (e.g., tobacco or firearms). Managers should note that techniques now exist to identify and isolate specific factors related to ESG issues, enabling a more sophisticated assessment of ESG policies within the firm and an evolution of ESG reporting from a communication exercise to a broader management responsibility.

Lastly, practitioners should be aware of recent research that claims outperformance of ESG stocks, including Clark et al. (2015), though to what degree remains a subject of debate.

In summary, as Zanker (2017) and Schulz (2017) note, significant academic evidence supports that ESG factors influence returns of financial assets. Implementing ESG factors into management practice is associated with positive returns, but also with possible negative effects, such as economic costs, if actions fail to address sources of

[4]Retrieved July 18, 2018, from ec.europa.eu/info/publications/180524-proposal-sustainable-finance_en

risk. A plausible scenario is that as further cycles of regulation occur and the volume and variety of ESG assets increases, the focus of management attention will shift to better and more transparent information flow between companies and investment bankers and raters, and to ensuring integrated and aligned management practices within companies for robust delivery of strategy related to ESG topics. Both investors and companies could face significant economic risks with a poor ESG performance, but sound, well-implemented policies can be expected to benefit both.

6.4 The Emergence of "Smart Beta" and Factor Investing

Faced with the choice between actively creating a portfolio of investment elements (based on the assumption that stock prices do not always reflect all available information) or passively re-creating a portfolio that reflects the structure of a given index of shares (building on the assumption that all market information is already embedded in the prices), investment professionals have long sought a method that combines the benefits of both strategies (Kula, Raab, & Stahn, 2017).

This approach, commonly labelled "smart beta" investment, strives to obtain alpha (the excess return of the fund relative to the return of the benchmark index) to lower risk or increase diversification at a cost lower than traditional active management but marginally higher than straight index investing. In this sense, smart beta is simply the integration of the efficient-market hypothesis (passive) and value investing strategies (active). The goal of smart beta is to define a set of investment strategies that offer alternatives to traditional index definition practice. To do so, smart beta techniques identify and isolate specific investment information factors or create transparency concerning market inefficiency in a reproducible and transparent fashion. This approach reflects the increasing need among investment professionals to identify specific factors that enable more complex and direct decisions concerning portfolio construction and risk, and to model the impact of diversification. The increased popularity of smart beta is linked to a desire for portfolio risk management and diversification along factor dimensions, in addition to improving risk-adjusted returns versus benchmark indices. Thus, smart beta can be considered a further development of the foundations of Modern Portfolio Theory (Markowitz, 1952). However, as will be demonstrated, it generates a more profound impact in investors' decision-making involving ESG topics. Managers should note that this is related to the increase in transparency of factor investing (including ESG factors) and the speed with which the popularity of the technique has made financial products dramatically more accessible and applicable. Without developing a method to allow ESG issues to enter the mainstream of financial investment, the mathematical techniques that isolate specific factors in portfolio decisions provide the basis to do so. And as the impact of ESG issues becomes ever more important, the application of the technique will become a de facto standard.

To understand the consequences, exploring the details further is necessary. To live up to their definition, operational smart beta strategies would need to both passively imitate indices, while integrating alternative weighting schemes such as

volatility, liquidity, quality, value, size, and momentum. In doing so, smart beta strategies are constructed in the identical fashion to typical index strategies, with set and transparent index rules. They differ from standard indices, such as the S&P 500, FTSE 100, and others, in the way they address factors within the market that offer opportunities for higher performance. We note however that the alternative weighting schemes are transparent and theoretically reproducible in principle, meaning that all information is freely available and that assumptions and models are open to scrutiny (e.g., Kahn & Lemmon, 2016).

Since smart beta can be applied to a multitude of investment possibilities, there is no unique method to create a corresponding investment strategy, as goals for investors can vary based on their needs. However, the more complex underlying methods become, the greater the need for investment professionals to create an underlying argument for value creation. This argument must be economically intuitive to the buyer, and comprehensible and actionable for corporate management, who must now address analysts' conclusions or risk the consequences from the financial markets. Thus, equity smart beta may redress inefficiencies inherent in market-capitalization-weighted benchmarks. In other words, these financial products address mispricing created by other investors who have ignored particular classes of risk, such as ESG-related factors, in the search for short-term performance. As their arguments regarding failure to consider specific risks reaches the financial analysis mainstream, then addressing ESG reporting as a communication issue alone will fail to recognise the profound changes that are taking place. A recent survey of the asset class by a commercial source (FTSE Russell, 2017) showed that more than half of the survey sample had introduced smart beta techniques to complement existing passive strategies, rising from 37% the previous year. And it is not surprising that many of these smart beta strategies include ESG factors in their analysis.

In summary, it can be concluded that smart beta investment practice is growing significantly, and that the advantages to investors relate to the ability to isolate specific factors, the transparency of the approach, and, as a prerequisite, the availability of the market information to reproduce or simulate the results. The consequences for management, as previously noted, are twofold. First, they need to understand and manage data flow to investment analysts, raters, and rankers, which embrace both regulatory and technological developments (for example XBRL reporting mark-ups). Second, to ensure that the external perceptions of their organisation reflect internal realities, corporate management teams should align external communications with internal management practices. This is addressed in the second section of this chapter.

6.5 Be Prepared: The Impact on External Corporate Reporting

Since smart beta analysis focuses on specific factors when assessing the risk of a given investment, examining the current flow of information from corporations to investors is appropriate. While these information flows are country-specific with

clearly defined reporting requirements, the reality is that investors find themselves juggling multiple external reports that are required by regulatory authorities—reports that do not necessarily provide a unified and integrated view.

Financial reporting focuses investor attention on material aspects of corporate performance. But recent developments related to non-financial information raise the question of how coherent these information flows have become. Analysis by Gardner (2018) sampled major US companies and compared public financial reports (e.g., 10-K)[5] and sustainability report materiality topics. The research reviewed the material risk factors that these organisations communicated for 2017 via the two types of reports. In the case of the 10-K reports, material risks were discussed in a sub-section of the introductory assessment of business performance. These business-related risks were compared to the external sustainability reporting materiality factors communicated by the same company. Although companies used different frameworks, materiality encompassed the perspectives of both shareholders and stakeholders and took a long-term view of value creation rather than focusing on short-term profit maximisation. In the process of value creation, assuming that ESG factors will influence profitability is reasonable, and that assumption and causal relationship should be made transparent.

The analysis hypothesized that the risk factors disclosed in financial reporting would intersect with factors identified as being material in the corresponding sustainability reporting for the identical period. The research sample selected ten major corporations in the United States covering a broad variety of industry sectors, including technology, telecommunications, retail, heavy industry, and life sciences. Financial reporting identified a range of 15–20 risk factors per company, while sustainability reporting identified 8–35 different risk factors. This reflected the different ESG frameworks or approaches applied, although the sample generally showed a higher number of risk factors than seen in financial reporting. From an investor perspective, based on an interpretation of the efficient-market hypothesis, we might reasonably expect a high correlation between those risk factors listed in financial reports and those communicated in sustainability reporting.

However, for the period chosen, the factors found in both reports for the same company varied between 0 and 4, with the majority reporting only two common factors between both reports. Assuming the validity of both financial reporting and the sustainability materiality analysis, this raises the question of why such divergence occurs. As previously discussed, the application of smart beta techniques has resulted in an integration of ESG issues with other factors, leading to the emergence of a single perspective for investors that combines financial, business, and ESG data. It is therefore ironic, and should give managers pause for thought, that the overlap between issues described as material in publicly communicated financial reports and sustainability material issues is so modest.

[5] A Form 10-K is an annual report required by the U.S. Securities and Exchange Commission (SEC) that gives a comprehensive summary of a company's financial performance.

6.6 The Problems of Assessment of Sustainability Data

Diverging data within the same company illustrates the challenges facing the organisations that assess and judge sustainability data. Practitioners should be aware that although a limited number of agencies dominate the ratings industry in the area of sustainability (e.g., MSCI ESG, Thomson Reuters, Sustainalytics, or RepRisk, as listed on edp.com)[6], the data is processed and analysed by numerous specialised companies, each with its own strategies, methods, and standards. These companies are hired by corporations that are confronted with a lack of information on how to assess their own organisations. As noted previously, to use data efficiently for smart beta analysis by both external analysts and corporate data sources, accessibility, and transparency is crucial to identify potential areas for out-performance. In other words, for companies to understand and act on the perception of risk by ratings agencies, they must be able to reproduce and operationalize the conclusions drawn.

It is ironic that the rating and ranking agencies that complain of the lack of transparency in corporate reporting often lack transparency themselves. This is partially related to the commercial nature of their business and the demand for confidentiality of intellectual property, but it is also due to the failure of regulatory authorities to set adequate standards for alignment of data and reporting requirements. This should not be read as a criticism of the analytical process of the agencies per se; two institutions analysing the same data pool and making divergent recommendations as a result of their underlying assumptions, strategies, and tactical decision-making is legitimate. However, the increasing number of ESG ranking and rating agencies, combined with the demand for ESG-related financial products, has already led to a wide variety of organisations offering assessment of ESG-related risk based on their own, often confidential methodologies—which further contributes to the opaque nature of summary performance information. For smart beta techniques to be fully comprehensible to both investors and corporations, having both data and methods readily available and results reproducible would be optimal in order to test the underlying economic logic. As this is increasingly no longer the case, problems emerge for corporations. As Bailey (2017, nb.com)[7] remarks in an overview of the current situation, they have yet to see a rating agency fully disclose the methods used for ESG assessments and criticise the failure to address seriously the needs of investors. This chapter argues that this is only half the narrative. Without clarity of methods and conclusions, there is no closed loop between agencies and corporations, with all the consequences that this implies for effective management.

As Eccles and Stroehle (2018) note in their discussion of the migration of ESG performance metrics from a "value" to "values" investment paradigm, as both demand and supply for information about companies' sustainability performance continue to grow, investors complain that the ESG data universe is getting too complex and confusing. Evidence even shows that rating agencies and data vendors

[6]Retrieved June 19, 2018, from edp.com/en/sustainability/economic-dimension/sustainability-indexes/esg-rating-agencies

[7]Retrieved June 19, 2018, from nb.com/pages/public/global/insights/rating-the-raters-on-esg.aspx

display very little agreement on how to construct and use ESG measures. They argue that consumers of analysis and companies who supply data should be aware of the positioning, norms, and values of raters and rankers. This chapter asks that while some rating agencies remain true to their ethical investment origins, there is a marked trend toward establishing more sophisticated analytical techniques than pure ethical scoring models, thus reinforcing the evolution to a "values" approach, as sustainable investment enters the mainstream.

Managers however should be aware of the methods used by rating agencies regardless of their approaches, and should note their possible shortcomings. Assessments of ESG risk rely on the willingness of corporations to share their data, generally beyond regulatory requirements. The burden on companies is growing, driven by the multitude of methods, including questionnaires, online surveys, and qualitative interviews, used by ratings and ranking organisations and, increasingly, financial institutions. The emerging problems with this approach are threefold. First, ensuring that communication to external investors and their representatives remains consistent, while also reflecting dynamic developments within the business environment and within the company, is challenging. It is reasonable to expect that fulfilling this fiduciary duty will become increasingly demanding. Second, there is the issue of the completeness and validity of data gathered, scoring models applied, and conclusions drawn. This covers aspects both mechanistic (for example, how agencies deal with missing data in their assessments) to systematic (for example, the transparency that they offer concerning the identification of key levers within their risk models). Last, the increasing interest of the investor community in the integration of financial and ESG data in stock assessment and portfolio models places managerial responsibility on the corporation to design, implement, and monitor a performance management system for strategic and operational target-setting and control that aligns and integrates financial and non-financial data. Should this be ignored, the company risks reputational damage if negative ESG-related events occur and faces strategy delivery challenges if it fails to reflect a balanced risk assessment in its internal target setting and monitoring processes.

6.7 Combining Smart Beta and Sustainability Investment Methods

Although they share underlying analytical challenges, smart beta and sustainability reporting have emerged as separate approaches with their own literature, technology, and methods. However, developments suggest that areas of consolidation are attainable. After 15 years of the asset management industry offering products that are targeted toward ethical ESG motivation factors, more recent approaches combine commitment to ESG with more sophisticated smart beta techniques, as the aforementioned FTSE Russell 2017 report confirms. Combining parameters of sustainability exposure with corresponding risk premia by factor exposure represents an integration of "values" with "value" investing. Nevertheless, the primary motivation

of the providers (Zanker, 2017) is typically avoidance of long-term risk rather than any ethical grounding, although this does not prevent buyers from selecting the product for ethical reasons. The FTSE Russell report argues that although the product class originally focused on the retail market (individuals choosing this asset class for ethical reasons), the increasing awareness of the economic drivers associated with sustainability, as well as the reality and growing risks for legacy companies involved in industries transitioning to the green economy, have driven the focus of ESG smart beta toward the institutional market.

For practitioners, understanding how ESG factors integrate with smart beta techniques is critical. To that purpose, a straightforward example of a typical integration methodology is appropriate. The example chosen, taken from a Deloitte publication (2017), is explicit in its description of method, and its authors have no conflicts of interest related to the provision of financial products. It presents one possible approach to incorporating ESG selection criteria based on values or beliefs with the factor identification techniques offered by smart beta, making portfolio construction simpler and the setting of priorities more direct.

A three-part approach is taken: First, controversy screening is used to eliminate industries that are viewed as unacceptable to an ESG-related selection; second, within industry peer groups the composite ESG-scores are calculated and the bottom 30% eliminated; last, the smart beta allocation techniques are applied to select stock to match the desired portfolio profile. This approach is worth examining in more detail. The argument is made that ESG data can be used to filter and exclude unsuitable companies from the potential investment universe prior to the commencement of any smart beta–driven financial analysis. The elimination of particular potential investments, or the development of portfolios around customer-specific criteria, is not unusual; indeed, it represents the purpose of the analytical toolset. The stated aim is to identify organisations within a market segment that present the same risk and factor exposure. The key assumption is that the information available allows for consistent and accurate assessment. As was previously noted, the available data provided by ratings and ranking agencies is often incomplete or summary in nature, and thus does not always fulfil these requirements.

The example described here uses performance data from 2009 to 2016 from US companies selected with the exclusion criteria described above, and representing a range of industries. The timescale chosen is based on the availability of ESG data, but it should be noted that this period coincides with the most profound economic crisis since the Great Depression. This may reasonably be expected to have an impact on investment required to maintain or expand ESG-relevant activities.

It is useful to examine the consequences of industry exclusion, as the analysis makes service industries inherently more attractive than manufacturing. The authors are concerned that this elimination of entire industries might deprive the investment pool of sectors or segments that are essential to maintaining the economic validity of the overall construction. Maintaining industries within the pool, despite overall ESG concerns, maintains the comprehensiveness of the pool and keeps options for market segments, risks, and diversification intact. However, it questions the degree to which ethical guidance can be adhered to and increases the risk of inconsistent compromise solutions.

The authors try to address this industry exclusion dilemma through a screening process for individual firms. Those industries that remain in the sample are subject to what is termed "controversy screening," which excludes companies associated with severe and averred contestable behaviour and opts for firms with proof of responsible management. This approach, while frequently applied, appears not without its own difficulties. First, the contestable behaviour must be based on publicly available information and require value judgement regarding whether it represents a level of severity to warrant exclusion. Second, it assumes that averred contestable behaviour is a reason for exclusion rather than an opportunity to improve management as a result of public controversy. Perhaps equally troubling, it assumes that a lack of publicly known negative incidents indicates optimal governance. Practitioners may draw their own conclusions as to the robustness of the techniques but they need to be aware of the approaches being used that may affect both their industry and their own company.

The approach taken attempts to address this criticism and uses the blunt instrument of removing the bottom 30% of each peer group. The argument is made that an aggregate score of all ESG criteria is sufficient to eliminate those companies that present a long-term risk. This has the advantage of ensuring that all selected market segments remain present, but only at the cost of an assumption concerning the inherent ESG characteristics of individual sectors. Thus, the remaining members of the pool are by definition not those with the most superior ESG scores. For example, the financial sector would lose half of its weight were the approach to eliminate individual companies regardless of sector. In doing so, the approach inevitably underweights possible structural risk and management behavioural profiles of certain industries. As the paper notes, one approach might be to exclude a greater number of specific industries from investment portfolios, as certain industries have different structural ESG scores, but this possibility is excluded for the arguments cited above. The authors then draw on further analysis which argues that the two-step approach has not changed the exposure to risk factors (Fama-French). They note that highest ESG scores are associated with low volatility, though they argue that the results are not a proxy for a volatility filter. Instead they suggest that it is simply a result of a bias toward larger companies.

The paper summarily describes a number of different smart beta analyses, with and without ESG scoring, and notes that these results confirm that the technique can provide similar improvements with the same risk profile to an ESG investor.

A careful practitioner reading of this study would note that the most interesting part of their analysis is that smart beta investment techniques may be better suited to address very specific sustainability objectives (for example, carbon-related industry-specific challenges) rather than applying the catch-all of ESG aggregate scores if they want to identify opportunities that combine ethical investment with financial out-performance. For managers, identifying these factors, whether related to changing legislation or technological developments, would result in a "smarter" and future-oriented strategic approach to integrating specific ESG factors into mainstream business planning and monitoring.

In conclusion, this section has argued that companies must develop and align two integrated process loops, the first of which addresses the information requirements of

rating and ranking organisations and the asset managers themselves. As techniques for isolating specific risk or opportunity factors, including ESG topics, become increasingly sophisticated, the demands placed on companies to steer, manage, and align information flows will increase. This, as has been discussed, will require a more active process than the current largely one-way information flow, which satisfies rating and ranking data requirements instead of engaging capital market actors in a dynamic dialogue on material factors and company objectives and actions.

This chapter now turns to the second, equally important and challenging process loop, which focuses on integrating external and internal financial, strategic, and sustainability objectives in a common, operational framework. The goal of this second process loop is to facilitate alignment, clear focus on corporate and business unit–level initiatives to achieve objectives, and a robust, timely series of reporting and feedback processes to reflect the dynamics of value creation in the enterprise.

6.8 From the Investor to the Corporation Perspective: The Impact and Challenge of Integrated Reporting

To mirror how financial investment markets address risk factors associated with ESG issues, this chapter now turns to the reaction of companies and the accounting profession to both increased economic volatility and increasing demands from stakeholders concerning governance, social, and environmental issues. Within this context, the reporting of annual performance has been the subject of sometimes aggressive debate (Adams & Simnett, 2011), and the traditional reporting model has been criticised from both a shareholder and stakeholder perspective, arguing that it fails to adequately assess risk and future performance prospects (Flower, 2014). As was noted in the comparison of typical financial filings (e.g., 10-K) and sustainability reports, improvements can be made to both the comprehensiveness and the level of consistency of corporate reporting, including those aspects that allow for scrutiny of long-term viability and sustainability—information that can potentially impact business performance.

These developments emerged within the context of business reporting toward the end of the twentieth century. Elkington (1997) is credited with launching the debate on alternative non-financial reporting frameworks with his "triple bottom line (TBL) framework," incorporating profit, people, and planet. Yet he was criticised for failing to provide a robust framework that integrated alternate perspectives and allowed for more action-driven implementation (Owen, 2013).

De Villiers, Rinaldi, and Unerman (2014) and others have argued that current stand-alone reports, financial and non-financial, suffer from increasing process and content complexity, failure to make dependencies transparent, lack of focus on strategic levers, and apparent contradictions when information is presented without consistent links to business strategy, past performance, or future potential and risks. These criticisms were addressed by the International Integrated Reporting Committee [renamed as the International Integrated Reporting Council (IIRC) in 2012], formed

in August 2010 under the patronage of the Prince of Wales' Accounting for Sustainability (A4S) Project and the Global Reporting Initiative (GRI) to create a globally accepted framework for "accounting for sustainability" (see Eccles & Krzus, 2010, 2015, for a full discussion of origins, aims, and development).[8]

The Framework released by IIRC is based on two assumptions: first, that companies do not exist simply to reward shareholders for the risks they take, but also take their stakeholders into account to ensure their continuing legitimacy; and second, that the process of value creation in a company draws on a spectrum of so-called capitals that must be considered and reported upon. The IR Framework categorizes these tangible and intangible capitals according to types—namely financial, manufactured, intellectual, human, social and relationship, and natural capitals—while noting that a company does not need to adhere to the IIRC's categories of capitals and can report on their most relevant ones.

The IIRC recognises that a central element of the IR Framework is the business model, defining it as "an organization's system of transforming inputs through its business activities into outputs and outcomes that aim to fulfil the organization's strategic purposes and create value over the short, medium and long term" (IIRC, 2013). According to the IIRC, the description of a company's business model provides investors and other stakeholders with insights into how different capitals are used and contribute to value creation. While the business model is at the centre of value creation, the choice of capital elements and the transformation of capital to output for shareholders, stakeholders, and broader society is schematic in the IIRC's guidance. In other words, little guidance is provided for how to construct such a model, and there are no requirements for what it should include. It remains the responsibility of the reporting company to design and develop its own model and thus deliver "integration" into its application of the IR framework.

Integration, and by implication "integrated management," is the central concept of IR and is defined by the IIRC as "the active consideration by an organisation of the relationships between its various operating and functional units and the capitals that the organisation uses and affects" (IIRC, 2013). The IIRC argues that the value of this integration is breaking down internal silos across all organisational functions, which in turn should enhance the quality of the information made available to the board for an effective decision-making process. As Bernardi (2016) summarises, the greatest value of the approach is found in the process of Integrated Reporting within a company, not simply within the report itself.

Practice has demonstrated three major points of criticism that can be levelled at the current status of Integrated Reporting. The first area addresses the apparent decline in relevance of social and environmental issues within the framework. Milne and Gray (2013), for example, argue that IR "is exclusively investor focused and it has virtually nothing—and certainly nothing substantive—to say about either accountability or sustainability," The growing popularity of the approach and the willingness of external stakeholders to engage with IR, however, indicates the

[8]For an overview of non-financial reporting initiatives see Chap. 13.

increasingly mainstream nature of the discourse around financial and non-financial objectives and indicators.

Not all participants involved in developing the original IR Discussion Paper and Framework have continued to support the initiative. For example, Elkington (2009) was critical of IR from the outset, outlining how "some companies have experimented with integrated reports" and created "Frankenstein's Monsters" instead of "better information across the triple bottom line agenda, supplied to management in an integrated, user-friendly way," However, similar criticisms could be made of the triple bottom line regarding its usefulness for implementing operational business decisions, if based on highly aggregated information.

The second area of criticism has begun to emerge but has not yet been addressed adequately in academic literature or in practice. It concerns the alignment between external analysts of ESG performance, who increasingly combine their results with financial analysis, and the process of corporate reporting. Despite the efforts of the IIRC to standardise accounting terminology and provide guidance, work remains to improve the practical analytical work of analysts and fund managers who are integrating ESG scoring and smart beta techniques. The development of multiple and conflicting terms, methods, and opaque recommendations by capital market actors should also be addressed. While deriving different conclusions from a common data pool is legitimate, managers should be aware that analysts and, more importantly, corporations have a fiduciary responsibility to ensure transparency and a management responsibility to integrate and align material financial and non-financial performance drivers and indicators. The irony is that fund managers criticise insufficient corporate transparency regarding performance data, while claiming that the methods and workings of their own analysis represent commercially sensitive "intellectual property," which cannot be shared.

The last area of criticism focuses on the process by which the report is developed—specifically, the challenge of identifying material topics (echoing the findings concerning the use of smart beta and ESG scoring models) and the lack of integration with and impact on existing internal planning and performance monitoring processes. With the increasing use of ESG data by the financial markets, this second point is particularly significant, if an Integrated Reporting framework is intended to integrate into the management processes that drive value creation within the organisation. In other words, the topics that are relevant to the ESG performance and the value-creation process for the company should be managed comprehensively and robustly to ensure optimal long-term performance.

6.9 Integrated Management: Operationalizing Sustainable Strategy

If managers accept that ESG is increasingly a part of the mainstream of financial risk analysis by external investors, the next step is to move from an integrated but externally focused communication of value creation to investors and stakeholders

(currently the status of Integrated Reporting) to an alignment of external and internal financial and non-financial objectives and performance measures. This can be termed "Integrated Management"—as opposed to Integrated Reporting—to draw attention to the necessity of making financial and non-financial *reporting* an integral part of robust *management processes* that include planning, forecasting, and monitoring. These serve to instill value creation objectives throughout the organisation, reflecting both the specificities of business unit and functional strategies, and the need to align with corporate instruments of leadership and management control.

Ferreira and Otley (2009) remind us that strategy design, delivery, and management control, which they term performance management, is a multi-disciplinary concept. It combines business policy, accounting, leadership theory, and behavioural change to develop frameworks for understanding and influencing multiple performance dimensions and incorporate the perspectives of those within and outside the organisation. In a break with linear approaches, it absorbs aspects of systems thinking including taking a dynamic rather than a static view, thinking in models, recognizing feedback loops, and incorporating behavioural aspects of monitoring and influencing performance. Though multiple approaches to model representation have been taken (e.g., Gomez & Probst, 1995), it is possible to argue that the work of Kaplan and Norton (1996) represents the most recognised and practical adaptation of cause-and-effect systems thinking in a strategic context. Much of the practical use of the approach was driven by the recognition that delivery rather than design of strategy was the major stumbling block for many organisations, as confirmed more recently by the work of Vargas (2017) and Sull, Homkes, and Sull (2015), among others.

The multi-dimensional nature of ESG and financial objectives and reporting fits the context described above for performance management. However, despite the IIRC Integrated Reporting focus on the process of value creation through "six capitals," little is said about the interactions and dependencies that exist between relevant topics within the capitals. Further, concentrating on a reduced set of topics that are "material" risks without explicit reference to value drivers and strategic context obscures the dynamics of the business model. The emerging list of material topics, which result from a mixed stakeholder and business-driven selection process, risks being deprived of any underlying strategic logic and understanding of broader cause-and-effect relationships. The process may then unintentionally create fragments of sustainable strategy rather than a comprehensive and implementable framework with the potential to improve the delivery process rather than simply distract from it.

Practitioners will recognise that material topics are generally structured around two axes, namely stakeholder and business relevance. They may also observe that stakeholder topics are commonly identified through interviews or questionnaires, where the choice of framework can influence stakeholder selection, choice of consultation method (structured vs. open), response rate, and breadth of data. Experienced managers will note the comparative lack of industry-specific data used for material topic identification and the limited number of comparisons or benchmarking exercises with relevant market segment participants. Additionally,

they will observe the inconsistency in approach between firms within the same industry regarding their focus on either the narrow boundaries of the legal entity or a broader view of the entire value chain (including suppliers and resellers) if these are under the indirect influence of the reporting company.

Internal business topics may then be defined by a project team charged with the development of the report without full management consultation. Practitioner project experience has also suggested that in many cases prior analysis, consultation of strategy documents, and development of strategic scenarios do not occur, and distinction between business unit strategies and integration of the views of external analysts is rarely undertaken. This last point is particularly telling given the analytical advances that investment professionals have developed with regard to smart beta and the isolation of specific ESG factors. Instead the process is defined through semi-structured interviews or written input from a limited circle of representatives. As is the case with stakeholder topic identification, little formal attempt is made to understand dependencies between individual topics.

Practitioners will note further that the process of establishing the materiality of topics, principally using the two-axis approach noted above, may resemble an internal negotiation to produce an acceptable result and meet the demands of external communication. Addressing the concerns and developing the foundation for alignment with internal management processes requires a robust and structured approach.

First, project experience suggests the need to actively model sustainable strategy using the framework selected to ensure completeness and consistency, and act as a basis for operationalization throughout the organisation. The illustration below uses a "sustainable strategy map" (see Fig. 6.2) based on the Integrated Reporting framework to distinguish between capitals and clearly communicate their dependencies. Further, it develops summaries per topic of current status and future objectives to better integrate existing data and obtain a coherent internal overview. This approach, which draws on the work of Kaplan and Norton (1996), aims for comprehensiveness at an appropriate level of aggregation, rather than the exclusion of certain topics associated with classic materiality representations.

Second, managers in complex, multi-business organisations are often asked to distinguish between corporate strategy topics and those relevant at the business-unit level and align the corresponding strategic themes (Wunder, 2016). Material topics, indeed business unit-specific objectives, may differ from corporate goals, and a successful operationalisation of sustainable strategy requires the involvement of unit management and a demonstration of how corporate management will contribute to value creation. Practitioners will note the importance of business units' contributions to successful sustainability strategy, but more profoundly, the necessity of aligning those different levels with an Integrated Management approach to strategizing and monitoring implementation. Through this alignment process, which may occur through emergent BU initiatives, feedback loops are essential to providing input to reassessing corporate strategy needs.

The challenge of cascading strategy through an organisation will be familiar to practitioners who have worked in a corporate setting. The "parenting advantage" (Goold, Campbell, & Alexander, 1994) of corporate management in a multi-business

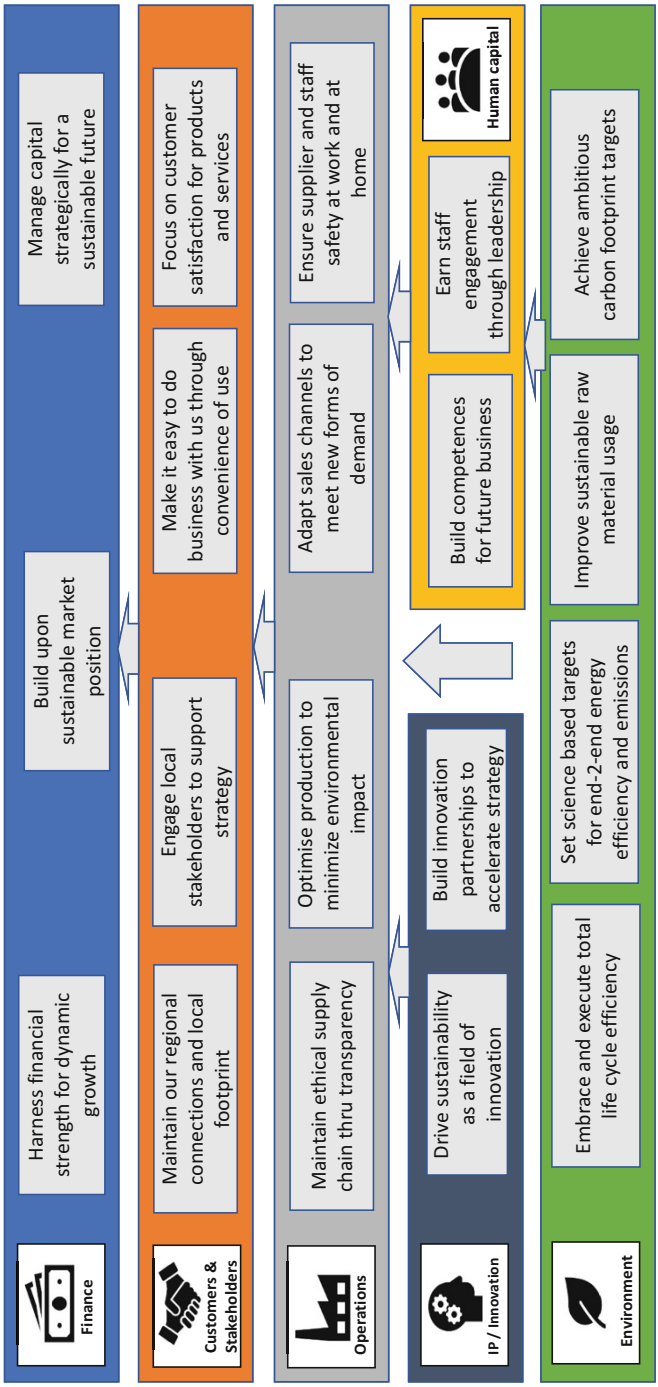

Fig. 6.2 Sustainable strategy map

organisation (i.e., the value-added by headquarters) generally has two aspects, strategic and operational, and both of these perspectives raise questions about the contribution and leadership that Integrated Management will deliver. Should headquarters define the content and focus of the chosen framework, imposing its financial and non-financial structure of objectives and performance indicators, or should it be a process and tool-set provider, leaving the questions of content to business units? This depends on both the strategic logic of the company (for example, a set of businesses focused on different parts of a value chain) and the leadership style that headquarters endeavours to apply (for example, centralised or decentralised). The closer the corporate group resembles a conglomerate, the more likely that initiatives to harmonize objectives will be successful if they focus on areas where headquarters creates synergy or where common values concerning environmental impact are required to protect corporate reputation.

Third, if the organisation is to avoid the syndrome of creating "another animal for the zoo" (Mountfield, 2009) by introducing external ESG performance indicators, then guidelines for setting integrated measurable objectives and a set of common performance indicators will be invaluable for aligning target-setting and leadership behaviour with an integrated view of strategy. As the full set of performance indicators and targets cannot be delegated en bloc to lower levels of the organisation, alignment with responsibility, influence, and existing recognition and incentive structures is required (see Fig. 6.3). Möller, Wirnsperger, and Gackstatter (2015) argue for setting targets at team level and delegating the authority to adapt measures and actions to the lowest possible hierarchy in the organisation.

The degree to which these targets and indicators are standardised across the corporation or differ between business units reflects how well frameworks have been harmonized and integrated. However, the degrees of strategic freedom that are available to different levels of the organisation should be clear, following the maxim that a manager requires the authority to act before he or she can be held accountable for outcomes.

Fourth, corporate management can support the implementation process by ensuring resource availability for the initiatives required for target achievement, distinguishing between those that require corporate-level support and those driven by business unit-level strategy. Practitioner experience has demonstrated that a small number of corporate initiatives cascaded through the organisation can be a robust first step for driving Integrated Management into the company.

Practitioners have noted the value of harmonizing norms within an organisation by driving a limited number of relevant cross business-unit initiatives. Companies have chosen, for example, to raise awareness for material ESG topics through corporate-wide initiatives, financed by headquarters, as a practical and reasonably fast approach to building a foundation of awareness. This then sets the stage for integrating topics into a broader value-creation framework and rolling out objective-setting and performance management processes throughout the organisation.

Lastly, organisations must recognise that an integrated approach to strategy requires changes to both performance management and leadership behaviour (Mountfield, 2008). Leaders of Integrated Management initiatives have demonstrated

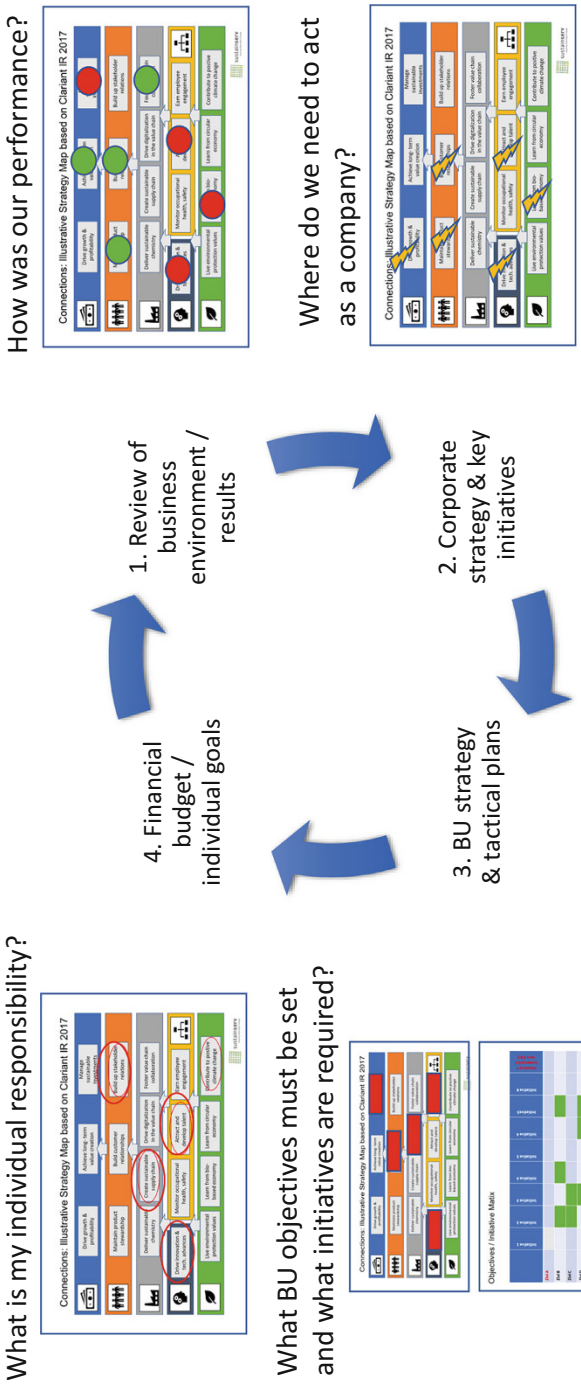

Fig. 6.3 Integrated management process

that while a well-constructed, clearly argued framework may be comparatively simple to communicate to investors, the process is experienced differently within the corporation. Changes to performance management and measurement impact not only value creation, but also the values and culture of the organisation. Introducing Integrated Management is a multi-cycle, phased approach moving from an external Integrated Reporting stage, through initial internal activities designed to harmonize internal and external measures, to a process and leadership model that aligns external communication with an internal commitment to making sustainable strategy everybody's job.

6.10 Conclusions: A Call for Action

As sustainability becomes part of mainstream financial and business practice, corporations must re-examine their approach to leading strategic and organisational change. To engage with an increasingly active and demanding investor community, organisations must ensure that the cascade of sustainable strategy into their organisation reflects the demands of integrated management.

First, in the absence of comprehensive and binding regulatory standards for integrated non-financial and financial reporting and in the face of increasing demands from external financial institutions, corporations must move from a reactive to an active footing. Using techniques such as Smart Beta or factor investing to identify material ESG factors, companies can align analysis performed by rating agencies with internal management processes to drive strategy delivery. This will require a deeper understanding of the needs and demands of data collectors, but also a greater openness and dialogue on their methods, analytics, and conclusions. By building or expanding the competencies required, corporations will gain a better understanding of the risk drivers tracked by rating agencies and will improve their own communication. Expanding the sharing of information will also heighten the responsibility to ensure that the processes for gathering and reviewing data are consistent and dynamic. This will place increasing demands on the often ad hoc data collection exercises currently in place for annual reporting of non-financial data, and will require further professionalisation of the communication and information feedback loops between corporations and external collectors and users of non-financial and financial information.

Second, there is an equal responsibility to further integrate external and internal reporting and performance management in order to provide a multi-dimensional perspective on objectives, performance measures, and initiatives to better implement strategy. Here again, there is a need to align the use of techniques such as Smart Beta for the identification of material risks with the issues developed in the corporate and business unit strategies. Corporate confusion and underperformance are the inevitable results, if management fails to align external and internal reporting or creates artificial barriers between financial and non-financial objectives and performance measures, rather than delivering integrated management of the strategic and

operational target-setting and monitoring processes. This approach requires not only changes to processes and systems, but leadership from corporate management that is responsive to challenges in the external environment and agile in delivering strategy throughout the organisation.

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Part II
New Business Concepts for Sustainable Strategizing

Chapter 7
Sustainable Business Models: Rethinking Value and Impact

Krzysztof Dembek and Jodi York

7.1 Introduction: The Call for Sustainable Business Models

Investors, customers, and other stakeholders increasingly require companies to manage their impact and apply sustainable practices. To date, many firms have sought to establish a "business case for sustainability" (Schaltegger & Burritt, 2015) by demonstrating how simultaneously pursuing shareholder value and societal contribution will deliver immediate advantages for the firm. Other companies embrace societal contribution as a key element of their overall purpose and pursue strategies to create long-term positive ecological and social impact instead of seeking a short-term business case. Sustainable strategizing that enables this is increasingly important for ensuring a company's viability.[1] Indeed, embracing sustainability may create various short-term and long-term economic benefits, such as reduced cost, lower risk, improved reputation or brand value, better attraction and retention of talent, additional revenues, and better strategic positioning.

Conventional business models are too narrowly focused on maintaining a near-term competitive edge to address increasing pressures from investors and other stakeholders. Replacing these with sustainable business models (SBMs) can contribute to solving social and ecological problems while driving economic performance of a company (Lüdeke-Freund, 2010). Sustainable business model innovation can help

[1]For the concept of sustainable strategizing and viability advantage see Chaps. 1 and 5.

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managers craft a strategic response to sustainability issues and deliver the long-term benefits sustainability has to offer by "re-conceptualizing the purpose of the firm and the value creating logic, and rethinking perceptions of value" (Bocken, Short, Rana, & Evans, 2014: 43). Companies can use this approach to systematically integrate sustainability considerations in their strategizing process and continuously adapt their business strategies to changing environments and stakeholder expectations.

The purpose of this chapter is to present sustainable business models as a potential means of strategizing that addresses the urgent challenges businesses and society are facing today and position businesses to thrive in the future. To do this, the next section explains and compares the concepts of *value* and *impact*. The subsequent section presents the differences between conventional and sustainable business models. This is followed by the illustrative case and a brief discussion of advantages and challenges of building sustainable business models.

7.2 Value and Impact: Core Principles of Sustainable Business Models

The foundation for business modeling in general and sustainable business models in particular is a comprehensive understanding of the two concepts: *value* and *impact*. The term value is frequently used in the context of strategy with no elaboration of its multi-faceted nature or how it relates to impact. A deeper exploration of both of these concepts is essential to understand and effectively utilize sustainable business models.

7.2.1 Business Model and Value: Individual, Systemic, and Time Aspects

Discussions of business models often feature a firm-centered and economic perspective on value, defining it narrowly in terms of company profits and customer needs satisfaction. This aligns with a popular approach rooted in the work of Adam Smith that distinguishes between exchange value (a monetary amount paid at the time of transaction) and use value (the quality of a product/service as perceived by customers in relation to their needs) (Lepak, Smith, & Taylor, 2007). This approach has several limitations:

- It considers value creation for customers, and disregards value outcomes for other stakeholder groups,
- It concentrates on exchange value only, and
- It focuses on value creation and fails to incorporate value destruction.

Sustainable business models are underpinned by a broader perspective on value that differs from conventional business models in three key ways. They specifically incorporate:

- Stakeholders beyond customers to include communities, non-profit organizations, natural environment, and other groups including future generations,
- Diverse forms of value beyond firm profits and customer value, and
- Value destruction as well as value creation (Bocken, Short, Rana, & Evans, 2013; Bocken et al., 2014; Boons & Lüdeke-Freund, 2013; Boons, Montalvo, Quist, & Wagner, 2013; Dahan, Doh, Oetzel, & Yaziji, 2010; Mair & Schoen, 2007).

Implementing this broader value perspective requires a nuanced understanding of value as an individually subjective rather than universal concept—as argued by William Smart (1926: 16), the "centre of value is within us." This subjectivity of value underpins the stakeholder-based approach to value developed by Harrison and Wicks (2013), who similarly defined value as a function of stakeholder *utility*. Utility is a concept broader than value—everything that is valued has utility but not all utility is valued. Instead, utility needs to be in some way limited for value to emerge (Smart, 1926).

The difference between value and utility comes into sharp focus when considering the example of a person's relationship with water. Water is indispensible for human life and thus has a great utility and an entire array of different uses (drinking, cleaning, recreation, production, etc.). Despite this, when water is abundant, it is rarely valued. People living in a city value the availability of water supply rather than each cup of water. When scarce—for instance when the Cape Town water supply was recently so low that water was restricted to 50 L per day per person (Narrandes 2018)—each cup is suddenly valued differently.

In the above example utility comes from the good itself, i.e. water. Harrison and Wicks (2013) identify several sources of utility, namely:

- Tangible benefits of goods and services, as in the water example above,
- Intangible benefits of organizational justice (e.g. trust and fair treatment),
- Intangible benefits of affiliation with organizations and others who "exhibit behaviors that are consistent with things" a person values (e.g. brand attachment, and being a member of a particular social group), and
- Perceived opportunity costs and relationships (e.g. that stakeholders may get from the relationship with a specific company compared other companies that serve similar purpose) (Harrison & Wicks, 2013: 103–108).

To better understand the subjective nature of value as function of utility, it is important to consider the factors that influence how an individual perceives value. These value determinants can be categorized into three main groups: *individual factors*, *systemic factors, and time factors* that influence both individual and systemic factors. These layers are embedded in one another as illustrated in Fig. 7.1. We now explain each of the layers.

At *individual layer*, there are a number of factors that determine one's perception of value. Those below are important examples rather than an exhaustive list.

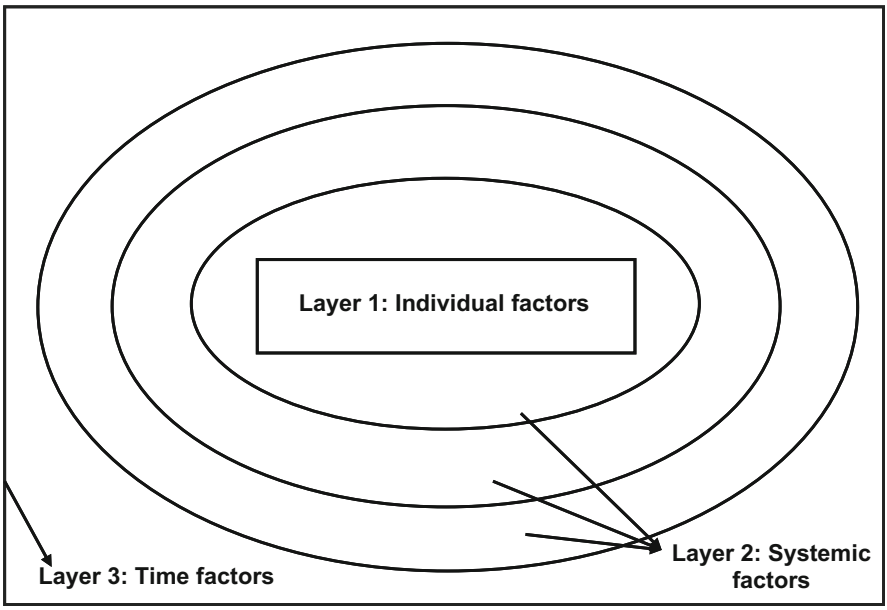

Fig. 7.1 Three layers of value

- **Consciousness/recognition**: A person needs to be aware and recognize that something (e.g. a product or service) will provide them with the desired utility. For example, people need to recognize that a car can fulfill their desire for mobility.
- **Biological factors and experience**: Biological factors and life experience shape how a person sees the world. For example, a person relying on a wheelchair may value a vehicle's accessibility more highly than others.
- **Skills and knowledge**: A person's internal knowledge base and level of skills shape how they value an item. For example, the value of a car depends strongly on the ability to drive.
- **Ability to access**: A person must be able to access the source of utility in order to obtain value. For example, a car will be of no value if a person cannot buy it, lease it or rent it.
- **Circumstances**: A person's external circumstances and expectations of the current and future changes in situation shape their perceptions of value (Brown, 1984). For example, having a large family may result in valuing large cars with space for seven people with baggage.
- **Relationships**: Research has shown that an individual's social setting significantly influences their perception of value (Brown, 1984). For example, a luxury car is valued as a status symbol in some social settings, but not in others.

A person's internal (cognitive) factors interact with external factors at the *systemic level* as well as *time factors*. *Systemic* factors are the socio-political, ecological, and economic factors that influence the individual value understanding.

- **Socio-political**: Prevailing social norms and culture shape relationships, personal values (i.e. what is important, not different forms of value), and beliefs, many of which are translated into law. For example, large cars are perceived differently in the USA and in Europe; also women may value cars quite differently in Saudi Arabia after legal changes in 2017 made it possible for them to drive.
- **Ecological**: Because all human activity happens within and depends on the natural environment, ecological factors—especially resource availability and climate factors—set boundaries, enabling and limiting criteria for value (whether these are recognized by valuing individuals or not). For example, a car is not useful for crossing a lake. Additionally, the value and utility of combustion engine cars depends entirely on on-going access to finite oil resources. Value determinants are often interconnected, so the recognition of environmental limitations can lead to socio-cultural changes. For instance, people are not allowed to drive into certain German city centres with certain diesel engines, which limits destruction of value in the form of urban air quality.
- **Economic**: Perception of value is shaped by local economic strength, availability and level of integration of technology, varying infrastructure conditions, etc. which varies between countries and regions. For example, road infrastructure impacts the utility and value of cars—Germany's network of freeways allows for high-speed travel, while Malta's roads are mostly narrow and low speed.

After bringing the *individual factors* and the *systemic factors* together, it is clear that a person's perception of value is constrained and limited through the parent condition of the natural environment, the economic situation, and the social conditions.

Finally, third layer—time. Perception of value cannot be fully understood without considering *time*. Time is a crucial and often omitted element that not only affects how both the individual aspects and the systematic factors are seen but can actually completely alter valuation. In other words time is a lens that gives a particular value picture; change the lens and the picture changes.

Time affects the situation and conditions (both individual and systemic) in which a person lives. Hence, what a person perceives as value today may not be of value tomorrow. For example, the value elements perceived in a car may change over the lifetime of that person (e.g. convertible sports car earlier and family van later in life). Another very important aspect of time is the timeframe or time horizon applied when valuing. For example, imagine a 30 year-old who has their entire life in front of them, and the timeframe this person may apply for decisions about what is of value. The value perceptions and decisions will change dramatically if the person is diagnosed with a terminal disease and knows they only have 12 months left to live.

In sum, to understand value we need to consider all its layers: individual, systemic, and time as a whole rather than in isolation. Aspects at each layer are interconnected within and between the layers affecting one another continuously.

For example, consider the changes in value perception as a result of having a child. This event changes the individual factors of value perception (e.g. more space is needed) and the relationships a person maintains with others (now that they have different time available, tasks, interests, etc.); as a result new skills will be needed and new services and products will be recognized as valuable. On systemic level new economic infrastructure will be valued (e.g. schools), and environmental factors may be considered differently (e.g. healthy environment for the child to grow). Finally, the timeframe of a person may change completely affecting not only the ways in which the person thinks about value but how the person acts, wanting to leave a livable world for the child. Only when we consider the impact of this one event at *all* the levels can we understand the changes in that person's perception of value.

Understanding value as a function of utility as perceived subjectively by a person is relevant for business models in general and for sustainable business models in particular for several reasons. First, sustainable business models aim to create value for numerous stakeholder groups and thus need to understand the perception of value among these groups. Second, business decisions are ultimately made not by organizations, but by individuals who have their own perception of value and their own relationships. These individuals will have their decision-making timeframe shaped by both their personal perspective and the amount of time they can or plan to stay in the company (or be involved in a business model). Imagine how much a company may change after a new CEO appointment, and how much a country may change as a result of electing a new president. Finally, the differing timeframes considered in conventional and sustainable business models tend to affect the value outcomes. Conventional business models tend to focus on short-term timeframes, trying to deliver yearly and quarterly profits. Decisions taken in this timeframe (e.g. relying on cheaper fossil fuel based energy) may provide value now but destroy it in the future (e.g. company costs of dealing with climate change).

7.2.2 Linking and Comparing Value and Impact

Value is not the only key element in business models. All business models and all organizations create an impact, whether or not they acknowledge and manage impact. Conventional business models tend not to consider impacts, whereas sustainable business models do. To link sustainability with a business model, it is crucial to understand the relation between value and impact. Value and impact are compared in Table 7.1 and explained below.

Impact describes a change of state or situation. Although impact is often used in everyday language to describe influence or change of an individual's situation, what is of particular interest in business models is impact on systems. Depending on the type of systems changed, impact can be social, economic, or environmental. For example, Facebook may have changed a way in which a person spends commuting time, but what really counts is that it has impacted systems of communication by connecting over one billion people on the planet.

Table 7.1 Impact vs. Value

Impact	Value
Change of state or situation	Utility that has merit in the eyes of the stakeholder to satisfy specific needs/wants; it emerges when utility is limited or constrained
Can be positive or negative; intended and unintended	Can be created and destroyed
Usually systemic, but often used at different levels (e.g. community, family)	Individual
Objective and often independent from stakeholder perspective	Subjective and dependent on a stakeholder's perspective
Different types—social, economic, environmental	Different types—general (e.g. monetary), specific (e.g. satisfying a particular need like thirst)—social (e.g. just and equal treatment), economic (e.g. safe income), environmental (e.g. clean air to breathe)
Long-term	Depends on the timeframe of stakeholder and changes with the time perspective
Does not require monetization	Often can be monetized
Needs to be created	Needs to be created, captured and sustained

Unlike value, impact is objective and does not depend on individual utility. The social connectedness created by Facebook is an objective fact that can be measured, for example by the number of people registered, or the number of connections among them. This connectedness then can be used to create or destroy value. For example, it can be used to bring disaster relief for victims of an earthquake but it can also be used to destroy a person's reputation, or to influence election results.

Whereas value has a positive connotation in terms of utility, impact can be negative or positive. This often relates to the health of a system. For example, the use of internal combustion cars impacts the environment in a negative way contributing to climate change and decreasing the health of planet ecosystems.

Positive and negative impacts can be both intended and unintended. Social media founders did not intend to contribute to a decrease of social trust in communication media by circulating factually incorrect news. This is an example of an unintended negative impact.

Because of the systemic and objective nature of impact, it is usually not monetized. Impacts are simply created and usually need to be converted into value (by additional activities) in order to be monetized and for the resulting value captured by particular stakeholders. In the example of connectedness created by Facebook, one way that impact is converted into value is through the activity of app developers creating specific utility on the basis of this connectedness. Value from this utility can then be monetized and captured.

Finally, time is a crucial factor in understanding impact. Important systemic impacts take a long time to emerge making it difficult to foresee the impact of activities in the business models. For example, the impact of using untrue information on social media has been profound, but that took years to become apparent. Hence, it is necessary to always apply a long-term view to assessment and analysis of impact.

Time is also particularly important when analyzing the interplay between value and impact. For example, driving big powerful cars can create value for drivers today. Doing so however, also impacts ecological systems and is likely to destroy value for people (the drivers or others) in the future through air-pollution-related diseases, and costs of climate change (both monetary and non-monetary—wars, natural disasters, migrations).

Summarizing, every business model will create impact over time. It is the executives' responsibility and a good risk management practice to try to foresee, monitor and manage this impact. Sustainable business models are tools that can help them in this task. Further, as shown above, impact may destroy value or be converted into value, as in the example of app developers using connectivity created by Facebook.

7.3 Sustainable Business Models Versus Conventional Business Models

Many definitions of business model can be found in the literature and in company practice. For example Magretta (2002: 86) defined business models broadly as the "stories that explain how enterprises work," while Zott and Amit (2010: 219) provided a much narrower definition of models as "depicting the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities."

Leaving the question of suitability of different definitions to the on-going academic debate, Casadesus-Masanell and Ricart (2010) provided a useful way of clarifying what a business model is using the analogy of a car. Business models, like cars, are built of different components and have different logics of operation, "conventional engines operate quite differently from hybrids, and standard transmissions from automatics" (Casadesus-Masanell & Ricart, 2010: 197). According to Casadesus-Masanell and Ricart (2010) the car itself represents the business model while the design and building of it represents strategy. Based on this analogy, a business model can be considered as a "refinement of strategy on a business level" (Wunder, 2016: 222).

In general, business models consist of three main pillars: value proposition, value creation and delivery, and value capture, as can be seen in common business model frameworks (e.g. Abdelkafi, Makhotin, & Posselt, 2013; Osterwalder & Pigneur, 2010; Richardson, 2008).

These three pillars are common to both conventional and sustainable business models. Sustainable business models (SBMs) provide a new lens with which to see these pillars and address the shortcomings of conventional business models. SBMs are business models explicitly designed to create value in different forms for multiple stakeholders, and that contribute to the sustainable development of the company and society by extending conventional business models view focused on customer value and profits (Bocken et al., 2013; Lüdeke-Freund, 2010). SBMs keep

Table 7.2 Conventional vs. sustainable business models

Basic pillars	Conventional business models	Sustainable business models
Value proposition	Which value do we offer to which customer segments?	Which value do we offer to customers and *other stakeholders? What impacts do we want to create?*
Value creation and delivery	How do we create and deliver value (e.g., key processes, key resources/partnerships, channels)? Typically based on one value creation logic	How do we create and deliver value in the *different forms required and the intended impact?* *How do we prevent value destruction and unintended negative impact?* Often incorporating multiple connected value creation logics
Value capture/ value sustenance	How do we make money based on the customer value we create and deliver (e.g., cost structure, revenue mechanisms)? Tries to maximize short-term profits	How do we ensure that *we and our stakeholders can benefit from the value we create and deliver over a long period of time?* *Treats profits as part of broad value equation*

evolving and unlike conventional business models, consider explicitly both value and impact in their design. The differences between conventional and sustainable business models (in each of the three elements) are presented in Table 7.2 and explained below.

7.3.1 Value Proposition

Value proposition in conventional business models defines what ***customer value*** the company offers to which ***customer segment*** (e.g. through products or services). The design of a value proposition is underpinned by a deep understanding of what a customer values and how. The value proposition needs to be recognized and acknowledged as valuable or desirable by customers to attract their attention, and it needs to deliver benefits better or differently than the company's competitors.

Sustainable business models extend the value proposition beyond customers, and include other stakeholder groups, and the natural environment. Focusing on systems, like those of the natural environment, sustainable business models also extend the value proposition component by considering impact. This can include fostering positive and intended impact, while monitoring and minimizing impacts that are negative or unintended. SBMs also extend the value proposition of conventional business models by considering value destruction that certain stakeholders may suffer alongside value creation for other stakeholders. Value propositions in SBMs may be based on addressing specific problems, addressing the needs of particular stakeholders, or inclusion of underprivileged groups. As established in the previous section, value is subjective and should be assessed from each stakeholder group's perspective. It is also important to assess how likely the stakeholder's perception of value is to change over time.

7.3.2 Value Creation and Delivery

Value creation and delivery happens through the key processes and activities (e.g. operations, quality control, supply chain management, innovation management, etc.), and key resources or partnerships (value creation only) as well as the channels and customer relationships (value delivery only).

Key processes and activities for **value creation** can be organized in three ways, i.e. *value chain*, *value shop*, and *value network* (Stabell & Fjeldstad, 1998). Each of these three ways has different specific sets of activities and is underpinned by different value creation logic.

Value chain is probably the most widely known of the three. The logic of value chain consists of transforming inputs into higher-value products. For example, car manufacturing transforms metals, plastics and other materials (inputs) into specific parts that are then assembled into a car (product), using primary (e.g. logistics, operations, marketing) and supporting (e.g. human resource management, procurement) activities.

Value shop is based on the logic of problem solving. A common example of a value shop is a medical practice, in which a doctor creates value by identifying a problem, finding different solution options, choosing the most suitable solution, implementing it and evaluating its results. These activities may be repeated in iterations until the problem is solved (e.g. when the first treatment option does not work).

Value network is based on the logic of linking different participants of a network among each other (Stabell & Fjeldstad, 1998). A simple example of value network is a bank that creates value by linking those who have money with those who wish to borrow money. Key activities involved in value creation in a network are network promotion and contract management, service provisioning, and infrastructure operation.

Key resources and partnerships describe which tangible (e.g. equipment, technologies) and intangible (e.g. knowledge, patents) resources are necessary to create the proposed value and whether these resources are provided internally or externally through partners.

For **value delivery**, a company has to define the ***channels*** through which it intends to deliver value to its targeted customer segments. This includes sales and distribution channels for products or services as well as communication activities (e.g. conveying a certain lifestyle through celebrity endorsement in commercials). Another element of value delivery is the way a company manages its ***customer relationships***, which refers to the desired customer loyalty and retention mechanisms.

SBMs extend the value creation and delivery concept as a result of the fact that each stakeholder group may need different ways to create value and different channels or relationships to deliver it. SBMs feature multiple value propositions for multiple stakeholders. Further, as mentioned above, the value proposition of an SBM also includes impact. Value and impact can be created and delivered anywhere in the system of activities that make the SBM, not just in a product or service.

For example, La Fageda (www.fageda.com), a Spanish dairy company, creates value for employees and impact for society in the production process by providing jobs to people with mental disabilities (while being one of the top brands in the region by market share). This also creates value for taxpayers and the government, as well as positively impacting society by changing the view of people with disability from those who have to be maintained to productive members of society. By virtue of their focus on impact and value creation for multiple stakeholders, SBMs tend to be more complicated than conventional business models and include multiple value creation logics that may be structured in many ways (Dembek, York, & Singh, 2018). La Fageda's business model (mentioned above) includes a typical value chain (as it produces dairy goods) as well as a value shop to deal with the special needs and challenges of the employees (e.g. adjustments to the organization of work time and place). The way in which the different value logics are connected is important and may be a source of effectiveness and competitive advantage (as shown in the example of Cascade Engineering below—see Sect. 7.4).

Designing SBM value creation and delivery requires asking questions that may be unfamiliar in conventional business models, such as:

- How can the intended impact be created?
- How can value destruction and any negative impact be anticipated and prevented?

Answering these questions may also require including impact measurement and management systems. While establishing these systems involves up-front attention and resources, impact measurement and management systems often create many advantages such as cost saving, and better risk management.

7.3.3 Value Capture

In conventional business models value capture defines how the company makes money from the created customer value, which is influenced by the cost structure as well as the desired revenue streams and pricing. In other words, how it generates ***revenue and profits*** (Richardson, 2008). Sustainable business models have added other, including non-financial, forms of value and included benefits for society and the environment (Bocken et al., 2014).

A business model has a positive impact on the socio-ecological systems in which a company is embedded only when the company and its stakeholders can continue to benefit over a **long period of time** from the value and impact created. This step moves the focus **from value capture to value sustenance**. If the long-term perspective is missing, the business model is unlikely to move towards sustainability.

The customer value proposition is often intentionally time-limited within conventional business models, purposefully shortening the period in which a customer can benefit from the value created and delivered in order to create additional revenue streams and **capture** more (financial) value for a company in short term. A company making a shaver, for example, might discontinue the blades required for an older

model to encourage the customer to purchase a new model, despite the ongoing functionality of the customers' old shavers. Another example is frequent release of new consumer electronics that are technically incompatible with the old equipment like power cords or earphone plugs. An extreme example of shortening the time in which customers can capture value to enhance financial value capture for the company is "planned obsolescence" in which industrial products are designed with an artificially limited use time to drive sales growth through increased repeat purchases (Bulow, 1986). These time-related strategic maneuverings are typically not visible in conventional business model frameworks, which do not explicitly include time as a dimension in the logic of the frameworks. However, when moving to sustainable business models, time becomes an essential element on the path to sustainability. Instead of designing the value proposition in a way that drives short-term profits (i.e. value capture) of the company, sustainable business models need to target "sustaining" value.

It is also possible to attach income streams to **sustaining** customer value. For example, Patagonia maximizes the time through which customers can benefit from the value delivery of its clothing by offering a repair and reuse services to customers. This multifaceted "Worn Wear" program is a strong pillar in Patagonia's sustainability approach through which it can reduce negative environmental impact (Patagonia, 2018). Vaude follows a similar approach and also puts special emphasis on longevity when designing their outdoor products and managing customer relationships.[2] Interface has similarly extended the lifecycle of carpet tiles through re-use in its ReEntry program, which was a strategic priority toward Mission Zero.[3] In each case, **sustaining value** is beneficial in the long-run from both a customer and company perspective as satisfied and loyal customers offset short-term profits not captured. Moreover, by contributing to longer product lifetimes and usage periods, these systemic and purpose-driven strategies are also beneficial for society. This means fewer replacement cycles, fewer production cycles, less waste and, ultimately, reduced ecological footprint (Raworth, 2017). The plastics manufacturing case below provides further examples of value sustenance (rather than capture) from the perspective of other stakeholder groups, namely employees.

7.4 Sustainable Business Models: Cascade Engineering

Cascade Engineering (www.cascadeng.com) is a family-owned manufacturer of engineered plastics systems and components, with a core competency in large-scale plastic injection molding. It is a global company with over 1600 employees and 15 facilities. Cascade's nine strategic business units serve diverse markets,

[2] See Chap. 16.

[3] See Chap. 15.

including automotive, commercial truck and bus, solid waste and recycling, office furniture, and material handling.

Cascade's business models explicitly consider value in a range of forms for diverse stakeholder groups. Cascade includes in its focus both value and intended impact created (e.g. zero waste to landfill). The company also directly strategizes how to avoid value destruction (e.g. operating an inclusive and actively anti-racist work environment). Cascade has a long history of measuring and communicating the stakeholder value created through its operations, which it leverages for reputational benefit, employee satisfaction, and preferred employer status in a tight labor market.

Structurally, the value creation logic of their primary business model is that of a value chain, transforming lower-value inputs to higher value outputs. Each manufacturing business unit has a business model based on one or several value chains. Cascade connects these value chains to share innovation across a range of industries and market segments. This means, for example, that customers in their truck and bus component business benefit directly from ongoing research and development in their office furniture business.

In addition to value chains, Cascade uses value shops in its business models. One example of such value shop (connected to value chain) is the one focused on reducing environmental impact while meeting customer needs, which drives their innovation process. For example, integrating durable Radio Frequency Identification RFID tags into their carts (e.g. residential recycling carts) reduces loss and maximizes product life, improving value to customers.

Through this value shop Cascade has decoupled growth in sales from growth in emission and energy use. Despite a 71% growth in turnover between 2007 and 2017,[4] Cascade's CO_2 emissions have declined by 2%. During the same period, their energy productivity (expressed as the ratio of turnover to kilowatt hours of electricity) improved by 17%.[5] Between 2007 and 2017, the volume of recycled resin incorporated in manufacturing increased by 253%. Cascade also achieved zero waste to landfill goal in its main facilities in Grand Rapids in every year since 2011 (other locations are working toward this goal).

Another example of value shop is one dedicated to supporting the ongoing wellbeing of their employees (including those from the welfare-to-career and returning citizen programs).

Cascade operates two flagship employment programs: a welfare-to-career program, and a "returning citizens" program that supports those returning from incarceration as they transition to work with their company. For these employees Cascade offers the value of stable employment and reconnection with society, or as some employees describe it "a second chance." This value is created and delivered by incorporating these new employees into the company and providing them a welcoming and inclusive environment, as well as the necessary training. Value shop is needed here to address the specific and different challenges faced by this group of

[4]Nominal dollars, not adjusted for inflation.

[5]Cascade Engineering (2017) TBL Report, calculations by authors.

employees. It also delivered mechanisms through which Cascade ensures these employees can benefit from their second chance in the long term (value sustenance). For example, problems like vehicular failure, family illness or lack of childcare initially caused high levels of absenteeism. The involvement of an on-site social worker from the Michigan Department of Human Services to support and assist the employees in these programs through the transition to long term employment has been a critical value sustenance mechanism.

This approach also allows Cascade to sustain value for itself, by strengthening organizational culture, and ensuring a very loyal, hardworking, and dedicated workforce that supports the company in times of crisis (e.g. during the last financial crisis employees voluntarily proposed reduction of their payment to help the company get through the difficult period). Cascade can access a wider hiring pool than its competitors in a tight for skilled labor market. Sustaining and benefiting from this value depends on employee performance and retention.

The above are not the only benefits Cascade obtains from adopting the SBM approach. Example of other benefits include:

- Linking the value creation mechanisms (chains and shops) fosters innovation. As a result, for example, increasing the proportion of plastic has led to light-weighting vehicle parts, increasing the usable life of pallets and maximizing acoustic performance with the lowest possible mass, all of which provide cost savings to the operations of Cascade's clients.
- Their Xtreme RFID business stemmed from a customer request to improve customer experience and reduce cart stock loss; after significant R&D they now give clients across a range of industries the ability to tag, monitor, and analyze assets regardless of environment which provides the customer additional value.
- Cascade Cart's Pink Cart program (pink curbside recycling bins that come with a $5 donation to the American Cancer Society) was created by Cascade Cart Solutions' Vice President, Jo-Anne Perkins following her mother's journey with breast cancer. This has been very successful commercially as well as reputationally—Cascade has sold 140,000 Pink Carts across North America and over $665,000 in funds raised and donated (Cascade Cart Solutions, 2018).

7.5 Key Advantages and Challenges of SBMs

The case presented shows some of the advantages of designing and implementing sustainable business models. Talent attraction and retention, and enhanced innovation capacity are examples of common benefits of sustainable business models, but there are many more. Sustainable business models are better connected to the

systems in which they operate because they take a broader view of its environment. That means they are more attuned to the limitations of social and natural systems around them, and as such engender more trust from society. This often makes sustainable business models robust and resilient and flexible in face of changes. Further, sustainable business models tend to have multiple value creation mechanisms tailored to the local situation and connected in a unique way. Because this is difficult for competitors to copy, sustainable business models can improve competitiveness of companies that utilize this approach. In other words, sustainable business models are just a smarter way of doing business.

Designing and implementing sustainable business models is not an easy task. Their multidimensional nature makes the development of SBMs complex and challenging for strategy practitioners. It requires systems thinking capabilities and openness to new mental perspectives needed to break through the traditional perception of trade-offs between economic and socio-ecological goals. In particular, two common managerial mindsets throw up stumbling blocks on this path in the form of tensions to be managed when building SBMs. First is the presumption of a trade-off between ethics (morality) and economics (profits); moving past this requires embracing the possibility of economic, social, and environmental value as positive symbiosis that can be integrated through entrepreneurial methods. The second is the tension between the current short-term-focused economic systems and a long-term focus of sustenance: increasing short-term profitability is desirable, but not at the cost of a firm's resilience and ability to sustain the value it creates in the long-term.

Sustainable business models, however, are worth the effort because they help to make every aspect of the company contribute to its long-term viability. There are sufficient recent examples of large companies collapsing under the pressure of a VUCA (volatility, uncertainty, complexity, ambiguity) environment because their foundations were weak. Furthermore, as mentioned earlier, a sustainable business model should have built-in mechanisms to monitor and more importantly manage impacts. When a company is aware of the impact it creates with its business, it can not only react to them but strategically manage them. Having the ability to anticipate and manage impact (rather than react to surprises) is key to more effective risk management. Proactively managing impact empowers a company not only to avoid problems, but to prevent them all together and contribute to making the world a better place.

7.6 Conclusion and Outlook

The purpose of this chapter was to present sustainable business models as a potential method for strategizing that addresses growing challenges faced by businesses today and position them for thriving in the future. To do this, factors of value and its relationship to utility were defined and compared with the concept of impact. Conventional and sustainable business models were compared, showing how they differ in their scope of value, recording the impact of activities, and approach to

value creation and value capture (value sustenance in case of SBM) mechanisms. The example of Cascade Engineering was used to demonstrate some of the advantages and challenges of building sustainable business models.

As shown in this chapter, building SBMs requires going beyond the classical shareholder/customer-centric perspectives to focus on the value added for multiple relevant stakeholders that are affected by business activities. This means understanding value through perspectives of the different stakeholders, being aware of the differing timeframes used by them (including the company), and being aware of how that value perception might shift over time are important elements when designing business models and sustainable business models in particular. In creating value, SBMs make use of multiple value creation mechanisms, often combining typical value chains with value shops and value networks. Value capture becomes value sustenance in SBMs and provides not only profitability but also what is required to ensure that the company and its stakeholders benefit from the value offered over long time.

Designing SBMs is a complex strategic management task, which needs a clear focus on all facets of sustainability-oriented behavior. It may be an intimidating task for managers. If well designed and implemented, SBMs provide a range of important advantages and a much more resilient and robust business. Depending on the customer value proposition, this can still help a company to gain competitive advantage in the short-run but, more importantly, has the potential to ultimately lead to a viability advantage for the business.[6]

This does not mean we should stop pushing for the best. Aspiring for the best is how progress is achieved. There is no doubt a new way of doing business is needed and coming. There are a variety of new business concepts and tools available to design, review and change business models (both conventional and sustainable). In recent years, sustainable business model frameworks have been developed such as Flourishing Business Canvas (Upward, 2013; Upward & Jones, 2016),[7] Triple Layer Business Model Canvas (Joyce & Paquin, 2016),[8] Value Mapping Tool (Bocken et al., 2013), or Business Innovation Kit in combination with Sustainability Innovation Pack (Breuer, 2013; Breuer & Lüdeke-Freund, 2016). Applying them should provide a much more comprehensive perspective on the business model being designed and implemented with regard to the concepts of value and impact discussed in this chapter.[9]

[6]For extending competitive advantage to viability advantage see Chap. 5.

[7]See Chap. 8 for more information about this method and its application.

[8]See Chap. 9 for more information about this method and its application.

[9]Instead of looking at a business model as a set of elements as described in many frameworks, business models can also be viewed as activity systems. The process of mapping activities involves a deep dive into the content of the activities and how the different activities are related to each. This is especially useful for analyzing how business models work, i.e. for uncovering the underlying logic and main mechanisms for value creation (Dembek, Singh, & Neville, 2016; Zott & Amit, 2010).

It is important to highlight that companies employing sustainable business models are not necessarily sustainable, nor are the activities within the business model. Sustainability can only be determined in relation to the capacities of the systems maintaining the activities. If the systems are able to regenerate and maintain a greater footprint of a business model it will be sustainable. If however the systems lack capacity, even a tiny footprint will not be sustainable. Hence, the sustainability of an organization or a business model may change over time without them modifying anything in their behavior. As a result, saying whether an organization is sustainable may not be possible and actually is not the point but whether an organization is contributing to sustainability of the systems in which it is embedded through positive impact is crucial with regard to its viability.

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Chapter 8
Strategy Design for Flourishing: A Robust Method

Antony Upward and Stephen N. Davies

8.1 Introducing the Flourishing Imperative

The Flourishing Enterprise Strategy Design Method is a robust procedure that helps leaders craft effective enterprise strategies in our increasingly Volatile, Uncertain, Complex, and Ambiguous world (VUCA). Informed by the latest science and practice, it enables leaders to create a strategic path for enterprises and their stakeholders to improve their performance financially, socially ***and*** environmentally.[1] The method provides leaders with a systematic approach to designing intentional strategy (Mintzberg & Waters, 1985) aligned with the Flourishing Imperative (Box 8.1). As a result, firms can prepare for and thrive in our increasingly complex world.

The method is for leaders, managers, and entrepreneurs focused on business strategy, business architecture, and enterprise designers interested in adopting a powerful orientation towards the future, up to and including contributing to realizing the benefits of the Flourishing Imperative.

[1]The method as described here is intended for use by established organizations. For the application of the method to ideation, early and later stage start-up, applying lean start-up and customer development techniques to iteratively search for a viable business model for flourishing, see the Lean for Flourishing Startups Method www.Lean4Flourishing.biz (Hogeboom, 2015, 2019).

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Box 8.1 The Flourishing Imperative

The Flourishing Imperative is best summarized as: "sustaining the possibility for human and other life to flourish on our planet for [seven generations and beyond]" (see footnote 2) (Ehrenfeld, 2000, p. 36; for more on the Flourishing Imperative see Cooperrider, 2017; Laslo et al., 2014; Ehrenfeld & Hoffman, 2013).

This aspirational goal for humanity is a summary of all the advice, practice and research for effective leadership in our VUCA world: collaborate authentically, constantly learning and acting together to co-achieve goals to realize a shared values-based aspirational purpose far beyond self-interest.

Not only is this the best approach for each of us, all of us, and all other life to have the possibility for flourishing, it is also the best "inner why" for any organization and all its stakeholders. This is an idea made popular in Simon Sinek's TED talks and book: "people don't buy what you do; they buy why you do it" (Sinek, 2009, p. 41).

The Flourishing Imperative is the best "inner why" an enterprise can adopt because it creates multiple positive "whys" relevant to all stakeholders, not just customers. This increases an enterprise's attractiveness to all its stakeholders. In turn attractiveness drives multiple positive feedback loops for higher levels of social, environmental *and* financial performance, leading to improved outcomes for everyone and everything in our increasingly VUCA world.

The aspirational goal of the Flourishing Imperative (Box 8.1) is to "sustain the possibility that human and other life will flourish on this planet for [seven generations and beyond]"[2] (Ehrenfeld, 2000, p. 36). Our organizations have a critical role in helping us meet our individual and collective needs, including realizing the highest level of human potential: flourishing (Keyes & Haidt, 2003). To realize the benefits of the Flourishing Imperative for all an enterprise's stakeholders requires leaders, managers, and entrepreneurs to proactively and systematically engage with the unprecedented and growing levels of VUCA. The challenge for leaders, managers and entrepreneurs is ***how***.

The Flourishing Enterprise Strategy Design Method enables an enterprise's stakeholders—including its leaders—to design for those benefits of the Flourishing Imperative they determine are feasible now, with a view to realizing all the benefits in the future. Should the stakeholders' values and world-views not be aligned with the science-based Flourishing Imperative, the Method provides a structured approach for them to realize their selected definition of success. The method achieves all this by guiding all stakeholders through the co-exploration and co-design of the critical

[2]The original quote is "forever," updated based on personal conversation with Dr. John Ehrenfeld in October 2017: North American indigenous peoples believe that all decisions should be taken with a view to how our seventh generation descendants would view the outcomes in their time of each decision we make today.

integrating driver of any successful enterprise: its business model (Elkington & Upward, 2016; Kurucz, Colbert, Lüdeke-Freund, Upward, & Willard, 2016).

8.2 Flourishing Enterprise Strategy Design Method

This chapter will introduce and explore the elements of the Flourishing Enterprise Strategy Design Method and tool that support and enable its effective use. It provides an overview of the method at its current stage of development, based on an overall approach proven over the past 25 years. The authors expect the method to evolve further, and for users of the method to adapt it to their circumstances and needs, sharing their experiences to allow enhancement and improvement.

This chapter is organized following Fig. 8.1:

- ***Business modelling***—six tasks to create useful models of the enterprise—describing present conditions or designs for the future;
- ***Strategy Design Process***—four steps, ABCD, applied iteratively, co-create enterprise strategy, using business modelling;
- ***Prioritizing***—four questions used to select the best solutions for the near future;
- ***Foundations***—two underpinnings of the method: the Principles of the Flourishing Imperative, and the Flourishing Business Canvas tool to enable useful business models to be created;

A two-part case study provides a practical example of the method in use. The chapter concludes with a discussion of the benefits, challenges and limitations of using the method and tool.

8.2.1 Business Modelling

Business modelling is the heart of the method. It is undertaken collaboratively by an enterprise's stakeholders to create shared understandings of existing business models, and to design future improved ones.

A business model describes how a business defines and achieves success over time—the story and the numbers (Magretta, 2002; Upward & Jones, 2016). It articulates who engages with the organization; what the organization does now and in the future; how, where and with what does the organization operate; and how the organization defines and measures its success (Upward & Jones, 2016). Like all modelling, business modelling aims to create a useful partial description of something of concern to the modeller—i.e. a model is a map, not the landscape. Like all models, business models have the advantages of being faster and less costly to build than actual operating enterprises; this enables cost-effective learning by the modellers through rapid sketching, iterative prototyping, and simulation. Business

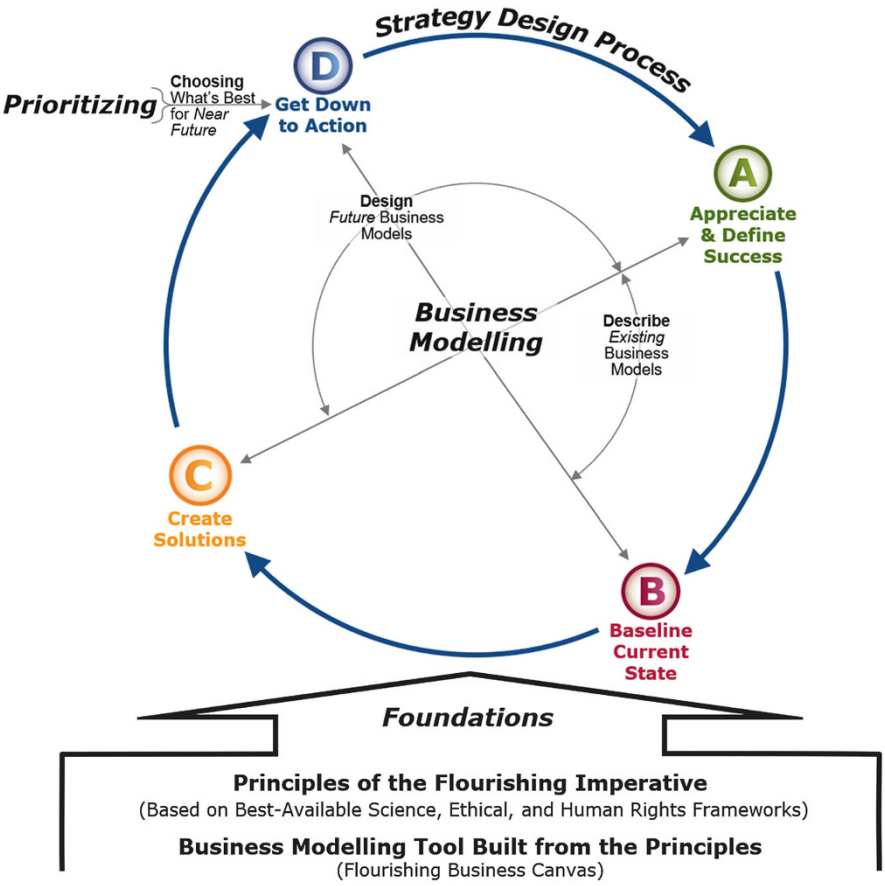

Fig. 8.1 The flourishing enterprise strategy design method

models also have the same limitations as any other model, any model is inherently incomplete compared to a "real" business.[3]

Business modelling starts with internal stakeholders, such as leaders, managers, and other employees undertaking the modeling tasks. As experience with business modelling grows, to reach the methods full potential for risk mitigation and opportunity identification, it becomes beneficial to increasingly include customers, suppliers, investors, communities, NGOs, and government (Hart & Sharma, 2004; Langenwalter, 2007).

[3]For a comprehensive exploration of the benefits and advantages of business modelling using business modelling tools, and iterative design approaches to strategy development compared to earlier analytical approaches see Hanshaw and Osterwalder (2015), Kiron, Kruschwitz, Reeves, and Goh (2013), Lindgardt, Reeves, Stalk, and Deimler (2009), Martin (2009) and Teece (2010).

Research and practice[4] has shown that there are six tasks required to create a useful business model of an enterprise socially, environmentally, and financially. Often these tasks must also be undertaken iteratively to create shared understanding among stakeholders. Each iteration might start with sketching many business model ideas before choosing one, a few, or parts of many, in which to invest in deeper exploration and elaboration. This exploration can include prototyping and/or simulation. These same tasks can be used to create a model that describes the past or current business; a near future, next business; or a far future, inspiring vision business.

The six tasks are as follows:

1. ***Determine the Stakeholders***: Who is involved—who will the enterprise impact—socially, environmentally and economically? And, what are these stakeholders' fundamental needs, whose fulfillment relates to the purpose of the enterprise?
2. ***Establish Governance***: Not all stakeholders have equal amounts of power. Establish with each stakeholder a clear understanding of their terms of engagement: their individual governance rights. This ensures everyone knows which stakeholders have power to make which decisions about all the elements of the enterprise's business model, as each stakeholder is likely to have different governance rights.
3. ***Set the Goals***: Use the agreed governance arrangements to set the goals for the enterprise. The stakeholders with the governance rights to do so will determine how enterprise success is defined socially, environmentally, and financially. Stakeholders should be encouraged to explicitly consider their values and their needs, and then use this self-knowledge to inform their preferred organizational goals. In light of experience over multiple iterations of the method it is normal for stakeholders' values to change, and as individual and shared learning occurs.
4. ***Develop the Value Co-Creations and Value Co-Destructions***: Value co-creations and co-destructions describe the enterprise's positive and negative value propositions. These describe why stakeholders choose to engage, or avoid engaging with the enterprise. Value co-creations and co-destructions are based on the idea that value is generated and destroyed in the relationships between an enterprise and its stakeholders over time.[5] Value co-creations and co-destructions are informed by the enterprise's goals. They are statements of what the enterprise does now and in the future to co-create value with its stakeholders—enabling

[4]See Upward and Jones (2016) and the work of the 1475+ global members of the Strongly Sustainable Business Model (SSBM) Group global community of innovation practice. The SSBMGroup is a knowledge mobilization initiative of the Ontario College of Art and Design University's Strategic Innovation Lab. Background at slab.ocadu.ca/group/strongly-sustainable-business-model-group-ssbmg; learn more at wiki.SSBMG.com/home/streams, join at forum.SSBMG.com

[5]This is known as "service dominant logic" (Echeverri & Skålén, 2011; Vargo, Maglio, & Akaka, 2008). Compare this to the earlier "product dominant logic" used as the theory behind Value Propositions in earlier business modelling tools (Osterwalder & Pigneur, 2009).

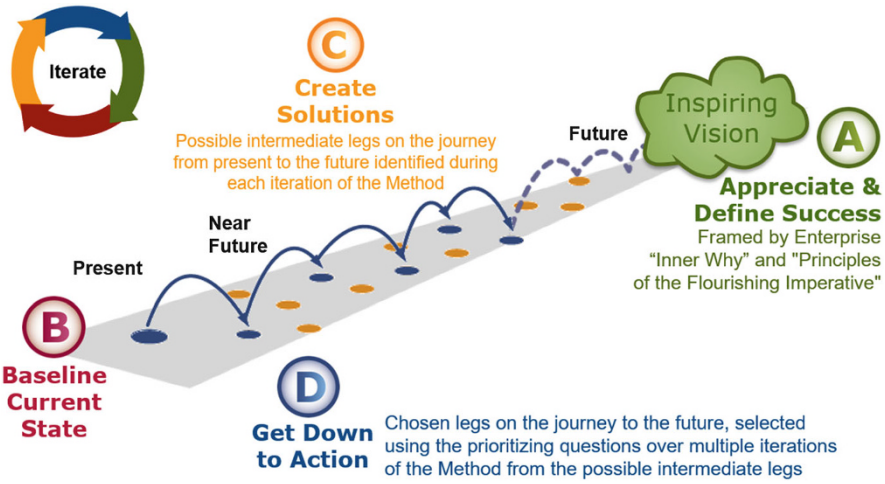

Fig. 8.2 Flourishing enterprise strategy design method—showing multiple iterations of the ABCD overall process as they unfold over time (Figure adapted from The Natural Step and recent practice naturalstep.ca/abcd)

them to satisfy their needs—and/or co-destroy value with its stakeholders–harming their ability to satisfy their needs.

5. ***Determine the Processes***: How, where, and with what will the enterprise's value propositions be realized, including partnerships, resources (tangible and intangible), and activities. Consider the full range of processes, including social, environmental, and financial elements.
6. ***Agree on the Measures***: Consider how the social, environmental, and economic performance of the enterprise will be measured in order to know whether or not its goals are being met.

8.2.2 Strategy Design Process: ABCD

To be useful, business modelling needs to be undertaken in a structured manner. This is provided by the four ABCD steps of the method (Fig. 8.2). The value and necessity of these steps are based on more than a quarter century of research and practice undertaken around the world in many contexts (Broman & Robèrt, 2017; Cooperrider & Srivastva, 1987; Robèrt, 2002). Undertaking business modelling within the context provided at each of these steps provides stakeholders with multiple complementary views of current or proposed future business models.

These steps and associated practices are based on the backcasting approach (Dreborg, 1996; Robinson, 2003). The distinguishing characteristic of backcasting is its *initial* focus on identifying a scientifically feasible *and* normatively defined

desired future, a future that explicitly and dramatically improves on current situations.[6] This is then *followed by*, and *within* the desired future context, an exploration of the conditions required for this desired future to be realized. Compare this to forecasting, and much scenario planning: these approaches explore likely, scientifically feasible and socially plausible futures, and pathways to those futures, but these futures are usually extrapolated from the past, and they are imagined *without* explicit concern for those futures' *desirability*. Unlike the backcasting approach used here, these other planning techniques do not explicitly focus on improving situations or the realization of normative goals, such as the possibility for flourishing, that stakeholders increasingly explicitly care about. These differences from other planning techniques, uniquely, in our understanding, recommends backcasting for science-based strategy development towards ideal goals (Ackoff, 1971).

As with all iterative design methods, insights are gained by completing a cycle of all the steps, and learning from the total experience of what then unfolds in the real world.

The four steps of the overall process shown in Figs. 8.1 and 8.2 are as follows:

A. ***Appreciate and Define Success***: *Co-create the necessary shared understandings to be used throughout the remaining steps and for subsequent iterations of the method*.

This work is vital since the future will be increasingly different from the past; conditions will be ever more VUCA, and the result of people's individual and collective past behaviours will be felt ever more strongly. As a result, dramatic new socially, environmentally and financially material risks and opportunities will appear (de Boer et al., 2012). Further, people's values are different and will change, so acceptable "satisfiers" of their needs are different between cultures, and will change over time (Max-Neef, Elizalde, & Hopenhayn, 1991, p. 16).

Appreciate Principles and Implications for Definitions of Enterprise Success

It is critical that stakeholders first take the time to co-develop a shared appreciation of their current values and worldviews, *and* how these relate to the implications of the science-based principles of the Flourishing Imperative. For example, stakeholders need to understand the implications of these principles on their definitions of success—for themselves, their families, businesses[7], communities, nation, and humanity. For whom and what do they love and care? What legacy of stewardship for each other, all other life, and the planet do they want to leave for the seventh generation and beyond? (Kinkead, 1999) This future consciousness is a shared sensibility that must be developed intentionally.

[6]We use the inclusive terminology of improving situations and conditions, inspired by Appreciative Inquiry, rather than the more typical deficit-based thinking terminology of problem finding and problem solving. This increases the likelihood for stakeholders to co-create designs with fewer unintended consequences (Cooperrider & Srivastva, 1987).

[7]See slides and video of this talk "What is a Successful ~~Sustainable~~ Business?" (Upward, 2017).

Appreciate Leaders

Next, to create a practical appreciation for the implications for business strategy, stakeholders examine the current business models of other enterprises whose stakeholders are improving their competitiveness by taking advantage of the Principles of the Flourishing Imperative. Stakeholders use the Flourishing Business Canvas to explore together exemplary existing businesses. This also enables stakeholders to gain experience with the tool and the six business modelling tasks. Stakeholders may also wish to study a growing collection of case studies,[8] as well as co-constructing models of inspiring businesses they find most relevant.

Develop an Inspiring Vision

Once stakeholders have a shared appreciation of the current and future conditions, and others' responses to those conditions, they then define a long-term inspiring vision of success for their enterprise—one that is desirable based on the stakeholder's values and feasible based on the science of the principles.

The inspiring vision includes, based on the governance rights of each stakeholder, a shared/agreed upon understanding of the "inner why" or purpose of their enterprise (Sinek, 2009).[9] As these discussions of "What is a successful enterprise?" (see footnote 7) unfold, they must be based on the principles, but ***not*** from the perspective of negative constraints on creativity imposed by forecasts.

To be most useful, the inspiring vision needs to be far enough into the future that people intuitively understand that everything in the past and present can and likely will be different, i.e. forecasting based on the past isn't useful to achieving a desired future that is significantly different from the past. To help stakeholders develop and maintain their future orientation, using the principles to *enable* their inherent unlimited creativity for future sustainable viability, the backcasting approach recommends the inspiring vision be at least 10, and better 20–30 years in the future (Barton, Manyika, & Williamson, 2017).

Develop the Business Model of the Inspiring Vision

Lastly in Step A, to make a shared, inspiring vision at an appropriate level of detail, the stakeholders again use the six business modelling tasks and the canvas to co-design an Inspiring Vision business model. This articulates *how* in the future, day-to-day, they imagine their enterprise will operate to realize their definition of success. This business model includes all the key social, environmental, and financial elements that enable all the organization's long-term future goals to be fully realized at that point in time. It shows, enabled by the constraints of the principles, how their enterprise will be viable in the future that the stakeholders desire.

[8] See growing list of published case studies www.flourishingbusiness.org/case-studies

[9] We recommend using tools like Sinek's "Golden Circle" to explore the "why (vision), how (mission), and what (strategy)."

B. ***Baseline Current State:*** *Compare Current business model to Inspiring Vision business model.*

Describe Current Business Model

To baseline their understanding of their current state, stakeholders first describe the social, environmental, and financial aspects of the enterprise's Current business model. This is the business model that describes how the enterprise creates its outcomes in the current conditions. To co-create a description of their Current business model, stakeholders use the six tasks and the canvas.

Co-developing a description of their Current business model helps stakeholders build a shared understanding of their enterprise's current situation and identify quick wins. Implementing such quick wins helps to generate successes early in the change journey, enabling a collective will to continue with the journey together.

Compare to Principles

To complete their baseline of their current situation, the stakeholders undertake a comparative analysis of their Current and Inspiring Vision business models. The objective of this exercise is to appreciate what elements of the Current business model support or may detract from the achievement of the Inspiring Vision. Stakeholders ask themselves: How well does the current design of the business comply with the principles? Which elements of the Current business model might be used to increase compliance or decrease non-compliance? What role do the environmental, social, and financial systems, of which our enterprise is a part, constrain or enable compliance with the principles? And, in what ways do we need, and in what ways is it feasible, for these systems to change in order to achieve our Inspiring Vision business model in the future?

C. ***Creative Solutions:*** *Generate possible solutions that will be required at any point in the journey from the Current to the Inspiring Vision business model*

Co-Create Possible Solutions

There are always many ways to achieve any imagined future outcome. Step B generates insight to areas of the current business model where there is the most significant need and opportunities for change and innovation. During Step C, as each of these opportunities are qualified and explored, the enterprise can establish an Innovation Agenda for the business capabilities that will be most strategic for the achievement of the enterprises definition of success.

At the start of Step C, stakeholders will have recognized that to move towards their Inspiring Vision business model, a large number of innovation solutions may be required at different points on the journey in many different domains: stakeholder values, worldviews, relationships, and behaviour; law, regulation, policy, and community standards; environmental, social, market, and economic systems; resource, service, and infrastructure availability and affordability; knowledge, technology, product, service, and process design; and more. Solutions will be needed to close gaps, mitigate risks, and realize new opportunities.

During Step C stakeholders use systemic techniques known to maximize their co-creativity, e.g. brainstorming, Syntegration (Beer, 1994), and Strategic Dialogic Design (Jones, Christakis, & Flanagan, 2007), along with techniques for exploring alternative pathways to futures, e.g. Three Horizons (Hodgson & Midgley, 2014; Sharpe, 2013).

Sketch Possible Future Business Models

Stakeholders use the six tasks and canvas to simulate alternative business models, considering social, environmental, and financial factors. These business model sketches, or prototypes, integrate various imagined solutions to describe alternative business models, viable at different legs of the journey from the present, via alternative pathways, to their inspiring vision (See Fig. 8.1, Broman & Robèrt, 2017). The business models that are imagined to be the most viable in the near future, typically 6–36 months in the future, are candidates for exploration during Step D.

D. ***Get Down-to-Action:*** *Choose, test, improve, then plan and implement the Next business model for the enterprise.*

This step selects and realizes in practice, and at full-scale, a business model design that is "good enough"—recognising that in our increasingly VUCA world attempts at "optimization" are not feasible (Ackoff, 1981; Rittel & Webber, 1973).

Select Best Next Business Model

The Next business model is selected to be sufficiently viable in the near term—6 to 36 months. It creates various streams of social, environmental, and financial benefits compared to the current business model, moving the enterprise meaningfully towards its inspiring vision. It must do this while "satisficing" (Ashby, 1958; Simon, 1956) as many of the stakeholder's relevant needs as possible—including improved organizational viability in the near future along with increasing compliance, as far as possible, to the principles. The satisficing approach explicitly recognizes that an optimized "best" strategy cannot exist given the tension between multiple stakeholders needs—needs that will frequently be divergent.

To ensure the Next business model is sufficiently viable, stakeholders analyze the candidate Next business models identified in Step C using the four Prioritizing Questions—described below. Stakeholders then use this analysis to make an informed choice between options, or they select the most satisfactory elements from several candidates. The selected model is then refined and implemented. The refinement process can take a "lean" approach [i.e. iterative learning: lowest investment for greatest increase in confidence in achieving desired outcomes, inspired by Blank (2013) and Ries (2011); and described in Hogeboom (2015, 2019)] or via a "strategy rehearsal and enacting" process (Dyson, Bryant, Morecroft, & O'Brien, 2007).

Stakeholders use the six tasks and canvas to capture the refined elements of the Next business model design, having sufficiently validated the design through the testing process.

Implement Target Next Business Model

At this point in Step D, the stakeholders have a sufficient level of confidence in their Next business model design, they agree that the benefits of implementing their Next business model design reasonably outweigh risks. Stakeholder then consider how they will implement the changes to their current operation so it shifts from the Current to the Next business model design.

Typically, this will consist of a program of projects to realize the changes in the operational business and hence initiate the flow of identified benefits (Dyson et al., 2007). The multiple inter-related projects each require definition, costing, cost-benefit justification, resourcing, launch, monitoring, reporting, celebration, and wind-down.

Management can use strategic program management methods, such as REFOCUS on Sustainability,[10] to prioritize, manage, monitor, and report to the stakeholders the status of the projects required to implement the changes and realize the benefits.

The Importance of Iteration

After one complete iteration of the ABCD steps the organization will have accomplished one leg of its journey towards its inspiring vision of the future, as shown in Fig. 8.2. The stakeholders will now have new experiences and hence gain new insights from undertaking the whole method, realizing in practice its intended strategy: the streams of social, environmental, and economic benefits from the operation of its Next business model. This is when stakeholders must consider starting a second iteration of the method, starting the second leg of their journey.

Recall that the inspiring vision of the future is "ideal"—it will never be realized in practice, as the future is unknowable. The role of the inspiring vision is to act as a guiding star for designing viable business models in the near future, and possible journey pathways that intentionally move the enterprise towards that ideal. The ideal itself evolves over time as the stakeholders learn new lessons from each iteration.

With each iteration the stakeholders' inspiring vision will *always* get further in the future as compared to their original starting point, and the future will *always* be 10–30 years away compared to their *current* situation. The inspiring vision evolves as the stakeholders' knowledge and experiences, and our collective understanding of what is desirable, and what is scientifically feasible, changes as the journey unfolds.

[10]REFOCUS on Sustainability—a program management and capability building method for sustainability inspired enterprise transformation towards realizing the Flourishing Imperative. It is another of the projects of members of the Strongly Sustainable Business Model Group: www.refocussustainability.com

8.2.3 *Prioritizing Questions*

The four prioritizing questions help stakeholders make better decisions about the Next business model candidates to satisfice the stakeholders' diverse needs. Stakeholders ask for each candidate Next business model:

1. Does it align with our shared values and inspiring vision?
2. Does it move our enterprise decisively towards the inspiring vision set by those with the governance rights to do so?
3. Does it provide a flexible platform, opening up possibilities in the future for the subsequent legs of the journey toward the inspiring vision?
4. Does it provide a sufficient level of viability for the enterprise to survive so it can iterate towards the inspiring vision over time?

To be clear, viability means that the level of return on the social, environmental, and financial investments required to realize the Next business model and the associated benefit streams in practice, will generate sufficient social, environmental, and financial surpluses for the enterprise to survive and iterate towards its inspiring vision over time. For example, if a Next business model requires too high an investment for too little return, because the market isn't ready for a more environmentally friendly product or service, this business model is well beyond the Viability Frontier—the enterprise will go out of business in the near future, as costs exceed revenues.

The initial discovery of the Viability Frontier in any given iteration of the method happens early in Step D, as the Next business model is selected. However, stakeholders typically wish to gather information to develop a deeper understanding of their current Viability Frontier's relationship with their Next business. Typically, the Lean approach (testing and validation) gathers this information (Blank, 2013; Hogeboom, 2015, 2019; Ries, 2011).

8.2.4 *Foundations to Realize the Benefits of the Flourishing Imperative*

The last components of the method are its two foundations, shown at the bottom of Fig. 8.1: the Principles of the Flourishing Imperative and the Flourishing Business Canvas.

8.2.4.1 Knowledge: Principles of the Flourishing Imperative

Comparing an enterprise's performance against science-based principles enables stakeholders to reliably respond, in practice, to a single question: is the enterprise

truly sustainable in its current state, and if not, are the proposed Inspiring Vision and Next business model designs an improvement?[11]

To most powerfully orient the enterprise towards the future that science is already telling us is possible and likely, while contributing to a desirable future for all, the stakeholders should ensure that their chosen definition of enterprise success is informed by the Principles of the Flourishing Imperative—to the maximum degree that their values and worldview allow.

The principles that must be followed to design a financially viable enterprise are well known and taught in every business school and entrepreneurial program. However, the principles required to realize social, environmental, ***and*** financial viability, aka "tri-profitability" (Upward & Jones, 2016), are not yet well known.

Box 8.2 Case Study: Part I (Inspired by Langenwalter, 2007)

The leaders of a 60-year-old, medium sized manufacturing company in a smaller town knew they faced a huge challenge. Compared to new competition from abroad, their labor costs were higher, and they were in danger losing business to these lower cost competitors. Further, global markets were creating price volatility on key raw materials, and environmental damage created by their industry in the past was driving the local regulator to ever tighter and more costly regulations. At the same time, employee morale and engagement was falling; several large orders were lost, not on price, but on the fit of their current product to changing customer requirements.

The conventional choice, one demanded by their bank, and suggested by several board members, was to outsource manufacturing to a lower labor cost region, and invest some of the savings in an intense program of product innovation, all while increasing profit in the near term.

But the newly minted CEO, the granddaughter of the founder, had deep roots in her community. She knew the impact that job losses would have on the people her family lived with everyday; people her family had known and prospered with for three generations. And these were not just any jobs, but some of the few well-paying jobs left in her community; jobs that over time had raised-up the overall wellbeing of her community.

But what was the alternative? She knew she was facing the results of our increasingly VUCA world—price increases and volatility, new regulations, changes in customer preference, and more—but her conventional advisors,

(continued)

[11]Given the long history of business leveraging science for practical benefit and to mitigate risk, today it appears very uncommon for business people (or business scholars) to be interested in this question. Indeed, to the authors' knowledge, the question "how we would know a truly sustainable business if we saw one (based on the best available science, ethical and human rights)?" was first asked at the launch of the pre-cursor project to the Future-Fit Business Benchmark in Toronto in 2012 (First author was present when Dr. Bob Willard posed this question at this event).

Box 8.2 (continued)
and indeed her business school training, were silent. Her values told her outsourcing was not the answer; she wanted the goal for the company to include its continued contribution to the genuine wellbeing of her community—her home.

By chance, she heard about the significant innovations new start-ups were generating from business modelling with groups of managers and trusted advisors (Blank, 2013; Hanshaw & Osterwalder, 2015; Hogeboom, 2015; Ries, 2011). Perhaps looking at each of the problems the firm was facing in isolation was the problem? She wondered if looking at the whole picture, using the integrated view provided by business modelling, could be more useful?

She did her research and hired a facilitator experienced with the Flourishing Enterprise Strategy Design Method. After taking time to understand the context, the facilitator tailored the method to fit the situation. The facilitator then started to apply the method by working with a hand-picked group of managers and trusted advisors from across the company (internal stakeholders). The facilitator and CEO determined it was best to start close at home, so they began by modelling the existing business (Start of Step B). Over four weeks, and three 2-day workshops, the group developed and validated its first ever shared, end-to-end understanding of the company.

To her delight, the group's work exceeded the CEO's expectations. First, senior leadership and sales and marketing departments gained a powerful new way to tell their existing story to prospective customers and other stakeholders. This story more powerfully explained their current differentiators and value propositions than their existing marketing materials. This alone helped people see the organization in a new way—reminding them of their past successes and innovations.

Next, the team identified a number of easily implementable ideas, "low hanging fruit" or "quick wins," that would lower costs and improve their product while providing good in-year return on investment. These ideas had previously not been brought to the attention of senior leadership, as the insights came from people from multiple, previously siloed departments who were able to develop a shared understanding of the wider situation the company was facing. Multiple observations about their current situation made in individual departments were synthesized for the first time to co-create new solutions.

While the CEO knew the company needed a new inspiring vision for their long-term success, she also knew it was urgent to gain the benefits from implementing quick wins. Guided by her facilitator, she diverted the majority of her new cross-functional team to focus on creating short term success by implementing the changes and realizing the benefits they had identified. She knew that this would increase morale, through a powerful and new type of shared learning experience across the whole company. In turn, this would

(continued)

Box 8.2 (continued)
drive a deeper understanding of their wider predicament and build the confidence that together, they could successfully make changes to overcome these challenges. Meanwhile, the remaining team members were asked to learn more about the Flourishing Enterprise Strategy Design Method and its foundation, and then propose some more significant next steps.
(Continued in Box 8.5)

The Principles of the Flourishing Imperative have emerged from a wide range of practice and research, and are based on the best available science, ethical, and human rights frameworks (Broman & Robèrt, 2017; Neumayer, 2013; UN General Assembly, 2015; Upward & Jones, 2016). The principles provide a *generic* definition of ecological and social sustainability, synthesized over the past 30 years in research and practice from relevant trans-disciplinary, systems-based science. This definition is then used as a boundary condition, a "frame" or an "enabling constraint," when imagining desirable futures at any point in the future (Box 8.3).

However, to be most useful to stakeholders as they design their enterprise strategy, it is helpful to have an organizational view of the generic principles. The Future-Fit Business Benchmark© (Future-Fit Business Benchmark©, 2018) provides an *organizational* benchmarking system built from these eight generic criteria.[12] Compare this to more common approaches to organizational benchmarking, where firms compare performance and practices against *each-other* (Kendall & Willard, 2017; Kurucz et al., 2016).[13]

Comparing their enterprise's performance against these science-based key fitness indicators and associated benchmarks enables stakeholders to reliably respond to questions such as: is the organization fit enough to survive and thrive in an increasingly uncertain future driven by ever increasing levels of VUCA? And, if their enterprise is not currently future fit[14] and is detracting from the possibility for flourishing, what is the absolute gap to be closed based on the best available science, ethical and human rights frameworks?

In each step of the method, the principles help stakeholders:

1. Understand whether and how others' business models are applying the science, ethical and human rights frameworks of the principles, and co-create their own organizational definition of success, designing an Inspiring Vision business model that envisions, constrained by the principles, the possibility for flourishing—organizationally and beyond

[12]See also Chap. 17.

[13]For more information see www.FutureFitBusiness.org. Includes details of leading enterprises adopting this benchmark, the 23 indicators and associated science-based future fitness benchmarks for "break-even" enterprise performance, an additional 20 "positive-pursuit" benchmarks that "remove obstacles to people's wellbeing, reverse the effects of environmental degradation, or to help other organizations or individuals to improve their own future-fitness."

[14]There are currently no future fit, no truly sustainable companies in existence, based on the Principles of the Flourishing Imperative.

2. Understand the gaps between their enterprise's current business model and the principles
3. Understand if and to what degree imagined solutions and candidate Next business models are compliant with the principles, and
4. Ensure their Next business model realizes as much of their inspiring vision as possible as quickly as possible, albeit constrained by current market, financial, social, or environmental conditions necessary for near-future viability.

Box 8.3 Generic Principles of the Flourishing Imperative

The generic principles provide a trans-disciplinary, systems sciences-based generic definition of social and ecological sustainability, applicable to *any* scale—individual, household, organization, community, biome, nation, and planet.

The generic principles are expressed as eight "exclusion criteria for redesign," (Broman & Robèrt, 2017, p. 23), iteratively developed and tested worldwide by a global network of academic, business, and non-governmental organizations, including The Natural Step, over the past 25 years[15]:

"In a sustainable society, nature is not subject to systematically increasing:

1. Concentrations of substances extracted from the Earth's crust
2. Concentrations of substances produced by society, and
3. Degradation by physical means

. . . And people are not subject to structural obstacles to

4. Health
5. Influence
6. Competence
7. Impartiality, and
8. Meaning-making" (Broman & Robèrt, 2017, p. 23)

Depending on the stakeholders' worldviews, informed by their values,[16] other views on the principles may prove to be more attractive and relevant at some points in their journey—or simply provide a complementary view.[17]

[15]See also Chap. 17.

[16]In the authors' experience, as stakeholders' learning journeys unfold they come to apply "the five transformational commitments" and similar ideas of stewardship to their life goals (Doppelt, 2012).

[17]Stakeholders may wish to refer to several other perspectives on the principles developed and tested over the past decades:

- Benefit Corporation "B-Impact Assessment" used by over 50,000 organizations world-wide (B Lab, 2008, 2016)

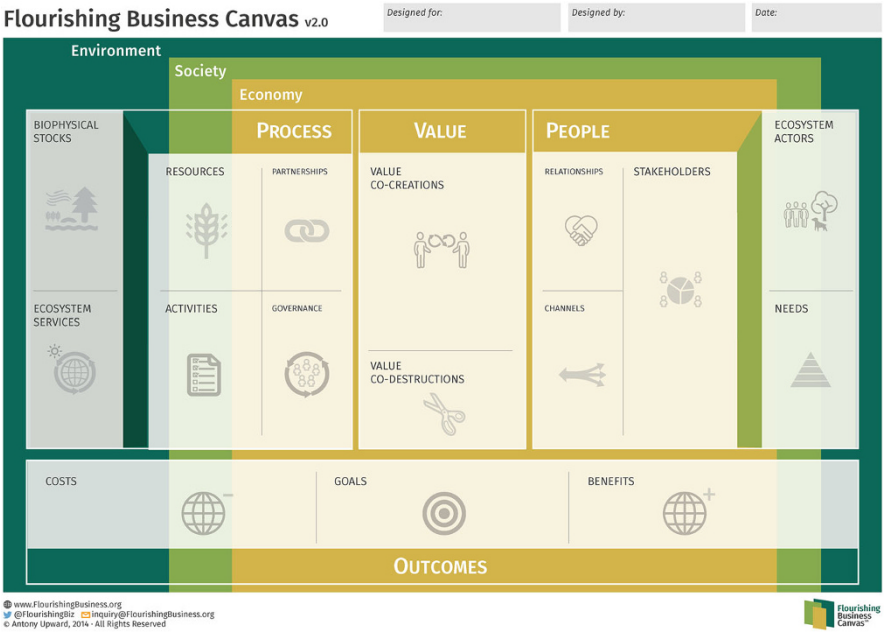

Fig. 8.3 The flourishing business canvas, v2.0 © Antony Upward/Edward James Consulting Ltd., 2014. All rights reserved. www.FlourishingBusiness.org. Used with permission

8.2.4.2 Tool: The Flourishing Business Canvas—Introduction

The Flourishing Business Canvas (Fig. 8.3) fully embeds the principles of the Flourishing Imperative (Elkington & Upward, 2016; Hoveskog, Halila, Mattsson, Upward, & Karlsson, 2017; Kurucz et al., 2016). At present, this canvas is the only tool known to be fully aligned with the principles whilst remaining fully compatible with an earlier, widely used, but financially-oriented, business modelling tool (Osterwalder & Pigneur, 2009). The research and practice behind the tool is introduced in Box 8.4.

Using the Flourishing Business Canvas (Fig. 8.3) prompts stakeholders to consider what are the necessary and sufficient social, environmental, ***and*** financial business

- "Co-operative Principles" proposed at the very beginning of the co-operative movement in 1844 and recently updated for the 250 million people world-wide who are employed by co-operatives (International Co-operative Alliance, 1995)
- The Local Economy Framework, aka "Localist Principles," adopted by more than 30,000 members of the North American based BALLE (Business Alliance for Local Living Economies, 2016)
- The UK based Transition Town's ideas (Hopkins, 2008, 2011)
- The PROmoting Business Excellence benchmark for Sustainability Excellence (PROBE Network, 2005)
- Various standards and certification systems of the International Living Future Institute (2015).

model factors, identified by the same science that defines the principles. This enables them to co-describe and co-create business models anywhere on a spectrum from entirely ignoring the principles, to full compliance with them. This process is inspired by the way the frame around a painter's canvas constrains, but simultaneously enables, their unlimited creativity, providing the context for their creative process.

As shown in Fig. 8.3, there are sixteen nouns in the language used by the Flourishing Business Canvas, visually expressed as the translucent "question blocks" on the canvas, e.g. Needs, Channels, Activities, and Costs. These questions are framed within the three contexts of all businesses (Environment, Society and the Economy), and grouped into four perspectives (Outcomes/why, People/who, Value/what, and Process/how and where). The Flourishing Business Canvas and the questions are fully introduced in Elkington and Upward (2016, pp. 131–136).[18]

Responding to these sixteen questions is necessary *and* sufficient to describe or design *all* the elements of *any* business model for any enterprise—past, present, or future, irrespective of the organization's defined goal; from maximizing short term financial profitability, to sustaining the possibility for flourishing, i.e. fully compliant with the principles. As a result, the canvas provides a single consistent way for stakeholders to capture the output of *all* their business modelling work at each of the four steps of the method.

Box 8.4 The Research and Practice Behind the Flourishing Business Canvas

The Flourishing Business Canvas, the key component of the Flourishing Enterprise Innovation Toolkit, is the most recent result of an ongoing program of action research and practice conducted by members of the Strongly Sustainable Business Model Group.[4]

The Flourishing Business Canvas is in active use by over 170 First Explorers licensees from a variety of educational, professional training, consulting, and entrepreneurial settings.[19] The Toolkit team is currently co-creating introductory handbook to using the Canvas with the First Explorers.

Three years of systemic design research defined the language expressed through the canvas (Upward & Jones, 2016). This new language is a significant extension to an earlier profit-focused business modelling language (Osterwalder, 2004). The Flourishing Business Canvas was inspired by, but not derived from Osterwalder and Pigneur's Business Model Canvas (2009), a well known design tool powered by this earlier language.

[18]To aid the reader in understanding the Flourishing Business Canvas, this manuscript is available via www.academia.edu/23769906/

[19]The license is free, and includes an extended version of the Flourishing Enterprise Strategy Design Method introduced here. In return, the First Explorer provides meaningful feedback on their experience using the Toolkit. See www.flourishingbusiness.org/the-toolkit-flourishing-business-canvas/first-explorers-program/. Ultimately the Flourishing Business Canvas will be made widely available under a creative commons license (CC-BY-SA).

Fig. 8.4 Building a shared understanding of an existing business model © OCAD University Strategic Innovation Lab, 2015. All Rights Reserved. Used with Permission

The stakeholders respond to the questions to describe current or imagined future business models by placing sticky notes on the collaborative visual Flourishing Business Canvas, as shown in Fig. 8.4. The questions are accessible prompts to the stakeholders to consider what they collectively understand. The questions help to make the complex and sophisticated knowledge of the principles intuitive and more easily accessible during the six tasks of business modelling.

In summary, the Flourishing Business Canvas enables stakeholders to effectively, efficiently, reliably, and collaboratively undertake business modelling. It allows them to describe and design business models based on their chosen definition of enterprise success informed by their values and their understanding of the principles—from maximizing short-term financial profitability, to sustaining the possibility for flourishing for all for seven generations and beyond. This is made possible by the combination of the knowledge systematically embedded in the canvas, and the structured visual approach it enables.

Box 8.5 Case Study: Part II

Confidence at the medium sized manufacturing company was growing (introduced in Box 8.2). The recent quick-win improvements, identified by exploring their current business model, were panning-out. And the remainder of the recently formed cross-functional business modelling were now sharing some provocative and inspiring next steps with the leadership team.

Following the team's original work to describe the company's current business model, the facilitator had suggested comparing that business model against the principles for the Flourishing Imperative, using the Future-Fit Business Benchmark (latter part of Step B). While limited in resources, the

(continued)

Box 8.5 (continued)
team undertook a first high-level pass. The company did not currently collect much of the data the benchmark required. But even so, the gap between the organization's current outcomes and "Future-Fitness" appeared to be significant. At the same time, the facilitator suggested building an appreciation for leaders in their industry and more broadly (part of Step A). So the team started looking for inspirational examples. The facilitator suggested starting by looking for certified Benefit Corporations, some companies that were known to be applying the principles, and co-operatives.

A picture was starting to emerge that a small number of enterprises appeared to be adopting business models that not only allowed them to survive as levels of VUCA increased, but thrive despite it. And they appeared to be doing so by ignoring some of the conventional business school advice, which recommended things like outsourcing jobs, dealing with suppliers on a pure cost basis, or assuming all environmental regulation was pure cost.[20]

The CEO and her senior leadership team wanted to see if these ideas could be made to work for their company. This prompted much discussion internally, and, at the suggestion of the facilitator, with some key external stakeholders (the bank, the mayor, two key customers, and a key supplier). This culminated in a 3-day off-premise Inspiring Vision workshop involving the business modelling team, senior leadership, and the external stakeholders (continuing Steps A and B of the method).

The workshop opened by reviewing the current business model, updated to reflect the recent quick-win improvements, and the initial comparison to the Future-Fit Business Benchmark. The workshop then explored the business model stories of some companies the business modelling team had found to be particularly inspiring. Helped by the facilitator, they brainstormed, explicitly informed by their values, which of the benefits of the Flourishing Imperative they thought they should try to realize. This led them to work together to identify values that they shared, and that they felt should inform the future definition of success for the company. All this prompted many questions, and a wide range of opinions, about if and how the principles for the Flourishing Imperative might apply to their enterprise.

Time had been set aside in the agenda to allow for side-bar discussions between the stakeholders—many of whom did not know each other. Through these conversations, the participants started to realize that the challenges being faced by the manufacturing company were related to those being faced by their

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[20]For an introduction to the financial business case for following the Principles of the Flourishing Imperative see Willard (2012). This book along with the companion website www.sustainabilityadvantage.com gives worked examples and a free to download Sustainability ROI Workbook to quantify the increased profit potential of following the Principles.

Box 8.5 (continued)
major customers and suppliers. From this, some ideas for improvements started to emerge that would require new levels of inter-enterprise sharing and collaboration.

Over the remaining time at the workshop, they started to explore what an Inspiring Vision business model for their enterprise could be—its goals based on their new definition of success, and all the other elements of a future business model. In this first iteration through the method, where the whole process was new, the facilitator suggested keeping the first inspiring vision in a nearer-term future: 3–5 years. But nonetheless, the ideas, opportunities, and benefits came thick and fast in the open, and co-creative space created by the facilitator's careful application of the method. As expected by the facilitator, this presaged Step C of the Method—creating solutions!

Following the Inspiring Vision workshop, time was planned explicitly to allow for creating solutions (Step C). For example, key ideas emerged during the workshop for significant manufacturing cost savings through the use of different raw materials, coupled with more environmentally friendly processes and energy sources. In turn, these ideas led the stakeholders to realize that the product changes these innovations require could, if done in a certain way, create new value for the customers, and a differentiator from their cost-based competitors. Some of this new value came from the changes to the product, but, to the surprise of some, much came from how the revised product was to be manufactured and distributed (i.e. the business model design), and why the company had chosen this path (i.e. the "inner why").

Next, continuing Step C, the original cross functional business modelling team was re-convened, and the facilitator guided them through the sketching of three possible alternative Next business models that could start to realize their new inspiring vision—each with a target date for full implementation in 12–18 months. As they proceeded to start Step D, they applied the prioritizing questions to help them determine which of the Next business models could be the best one for implementation—which was closest to their Viability Frontier.

Space doesn't permit a further recounting of this case study—the implementation of the selected Next business model (latter part of Step D). However, it is worth observing that this company is now starting their second iteration of the method. The benefits of their initial quick-wins, as well as the larger benefits from the implementation of the first iteration, are starting to be realized (after much testing and implementation work). The internal team, including the CEO, are highly engaged, energized and excited—for themselves, their enterprise, their families, and their town—and the external stakeholders are inspired, too. While the impacts of VUCA are still being felt, this remains their underlying reality, confidence is building that sufficient economic viability can be maintained while creating social and environmental benefits for all—a good working definition of flourishing in the present.

8.3 Benefits and Challenges of Using the Method and Tool

8.3.1 Benefits

Overall the benefits of using the method and canvas, as illustrated in the case study, are that stakeholders co-create an aligned understanding of their situation and strategic direction:

(i) Co-discovering the vital but often hidden interconnections among our organizations and the world, leading to powerful reframing of enterprise success oriented towards the future that is possible, likely and desirable
(ii) Co-discovering the individual and mutual value of aspiring to realize the benefits of the Flourishing Imperative. This enables more of the stakeholders' diverse needs to be satisficed within the agreed definition of enterprise success over time
(iii) Co-creating value that satisfies the stakeholders' needs in ways that do the least amount of harm to those same stakeholders, their communities, and the natural environment
(iv) Co-developing a more complete view of the risks, resulting in fewer unintended consequences over time—economically, socially, and environmentally.

These benefits arise through the stakeholders' capturing their collective understanding of existing and future business models in a structured way using the steps of the method and the tool. And, in turn, these shared co-created understandings enable stakeholders to make commitments to collaborate on a range of vital strategy design and realization activities:

(i) Diagnosis to identify gaps, risks and opportunities based on the principles
(ii) Co-discovery of key assumptions behind each business model: Inspiring Vision, Current and Next
(iii) Co-identification of tests to validate/confirm or invalidate/disconfirm business model designs
(iv) Co-definition of improved business models based on the analysis of test results
(v) Co-creation of projects to implement the operational changes required to implement the Next business models and realize its benefits.

8.3.2 Challenges and Limitations

In practice a number of challenges and limitation have emerged:

First: The Flourishing Business Canvas has a basic unit of analysis of a business model of a single enterprise. In practical situations, the unit of analysis may need to scale to the value-network level. This limitation can be addressed in practice, but the description is beyond the scope of this chapter.

Second: The method says nothing to address the power relations that underpin the current ownership and governance rights that organize and dominate in existing business models. A cultural critique of the method would expose this vulnerability: a new working theory of macro social, environmental, and economic systems change is a future research focus.

Third: The method presents a challenge to strategists directly: typical strategic planning timeframes look 3–5 years into the future, whereas this method advocates creation of an Inspiring Vision business model that is some 20–30 years in the future. The futurity of this kind of strategy work is a genuine challenge as it requires significant imaginative capacity, and the development of "future consciousness" (Curry & Hodgson, 2008). Also, the iterative method calls for the design and deployment of multiple Next business models with reference to the Inspiring Vision business model over time. Maintaining that creative tension over extended periods of time has yet to be practically proven, and will stretch many organizations beyond their historical creative capacity. For leading work on practical techniques for building such "Learning Organization" capabilities see Laslo et al. (2014).

Fourth: There is likely to be a value conflict between the Next and Inspiring Vision business models. This is a predicament unaddressed by the method, but points to the need for the stakeholders to develop the capacity to contain a significant creative tension. If they are unable to do so, then a form of existential angst could pervade the organization's stakeholders and could cause a crisis in purpose and direction.

8.4 Conclusion

Earlier business modelling tools and business strategy design methods based on them are already helping the leaders of start-ups, businesses, and other enterprises worldwide increase the likelihood of being successful in financial terms. But since these business model tools implicitly prioritize financial profit making, they don't take account of the risks and opportunities arising from the increasing scope and scale of the financial, social, and environmental "externalities": they don't take account of the increasing material realities of trying to create and grow "going-concerns" in our increasingly VUCA world.

Over time, as the stakeholders iteratively undertake the ABCD steps, they learn together, co-creating the possibility to realize the benefits of the Flourishing Imperative—for themselves, their enterprise, and beyond. Such authentic ongoing, multi-stakeholder collaboration for innovation enables organizations to explore and implement business models that meet the definition of success chosen by their stakeholders—even as that definition changes over time, as the stakeholders and the enterprise learn together.

For each of us, and indeed for all life, to have a possibility to flourish depends on our ability to quickly innovate our strategies to better respond to our new and changed circumstances—our increasingly VUCA world. This is particularly true,

as we enter fully into the challenges and risks of the Anthropocene era (Crutzen, 2002),[21] where these circumstances are largely shaped by the unintended consequences of our own individual and collective behavior. Human enterprises are central in generating these circumstances, and in creating the strategic innovations required to take definitive, highly-leveraged actions to sustain the possibility for the flourishing of human and other life on this planet for seven generations and beyond. In return, enterprises that design strategies to strive to realize the Flourishing Imperative will be seen as successful, and will be rewarded with viability and resilience. The Flourishing Enterprise Strategy Design Method provides leaders and their enterprises a clear, science-based approach to co-creating strategy for this new breed of fit-for-the-future enterprises.

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[21] See also Chap. 1.

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Chapter 9
Designing More Sustainable Business Models, Services, and Products: How Design Foresight Outcomes Can Guide Organizational Sustainability of SME Manufacturers

Alexandre Joyce

9.1 Relevance of Design Tools, Design Process, and Design Outcomes

"It's the journey, not the destination" goes the old saying. Although this might hold true for certain practices such as continuous improvement (Bessant & Caffyn, 1997) or business plans (Mullins & Komisar, 2010) or even sustainability (Geels, Hekkert, & Jacobsson, 2008), there is too little thought put towards the destination when it comes to imagining a more sustainable future for organizations. This means that small and medium-sized enterprises (SMEs) don't cultivate a competence in foresight to envision future products, services, or business models (Branzei & Vertinsky, 2006; Major, Asch, & Cordey-Hayes, 2001). Seldom do SMEs have the internal capacity or knowledge to partake in a foresight design effort like some larger multinationals (Stonehouse & Pemberton, 2002). It simply isn't part of their founder's agenda or innovation practices to generate a long-term vision (Wang, Walker, & Redmond, 2007) nor to guide that vision towards being more sustainable (Will, 2008). The goal of this chapter is to lay the foundations for the emerging practice of consciously applying a design approach to the creation of business models for sustainability.

The genesis of the concept of a sustainable business model (SBM) can be traced back to Stubbs and Cocklin's (2008) seminal article. To define a sustainable business model, the authors described six principles such as (1) an economic, environmental, and social purpose, (2) a triple bottom line measurement of performance, (3) considering the needs of stakeholders, (4) considering nature as a stakeholder, (5) sustainability champions, and (6) systems thinking. These six principles will be used to evaluate design outcomes to make sure they arrive at sustainable business models.

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What is missing to develop sustainable business models is a design approach which requires three distinct facets: design tools, a design process, and design outcomes. The triple layered business model canvas (see Fig. 9.1) was developed as a design tool for sustainable business models (Joyce & Paquin, 2016). It was devised by starting off with the structure of the business model canvas by Osterwalder and Pigneur (2010) and then creating an environmental layer following a life-cycle approach and finally a social layer following a stakeholder approach. The result is a design tool that enables horizontal coherence within each layer and a new vertical coherence across each layer. The applied design process followed a dual design approach of co-creation and design thinking. A vision for more sustainable organizations was generated by striking a balance between the engagement of co-creation, which leads to more pertinence, and the guiding ideals of the design thinking process (Joyce, 2017).

In this chapter the focus is on the third of the three facets to a design approach to sustainable business models: the design outcomes. Moreover, there is a gap in research as there has not yet been any light shed on the importance of imagining the ends or outcomes to arrive at more sustainable business models. Based on a literature review on foresight, advanced design, and design outcomes, there is potential in exploring both the influence of design outcomes as a whole and in the hierarchy levels between products, services, and business models. Two questions will be elaborated on: First, how can design outcomes serve a design approach to sustainable business models for SMEs? To do so, concepts of what sustainable business models of five manufacturing SMEs could look like in the future in a foresight design workshop are imagined. Three types of design outcomes are shared in terms of more sustainable business models, services, and products. Second, how can these three different levels of design outcomes relate to the different levels of thinking in an organization? At the end, the concepts of business models, services, and products are aligned to their respective levels of organizational decisions that are strategic, tactical and operational. This is illustrated in a pyramid that can be used as guide for SMEs when approaching sustainability by starting at the strategic business model level.

This chapter is structured following Gregor and Hevner's (2013) publication outline for design science to emphasize the knowledge that can be extracted from the three design outcomes provided for each five cases. The following section is the literature review where research is situated, at the intersection of foresight and advanced design, and it is defined what design outcomes and design levels are supposed to mean. The method section depicts the applied action research approach and research protocol. Then the design outcomes are exposed as artifacts. They come from five organization's cases for which more sustainable business models, services and products have been conceptualized. Then the concepts are evaluated according to the principles of sustainable business models and in terms of the design outcome characteristics they embody. In the discussion the two research questions will be answered and the findings synthesized. The chapter will conclude with an outline of the contribution and future research.

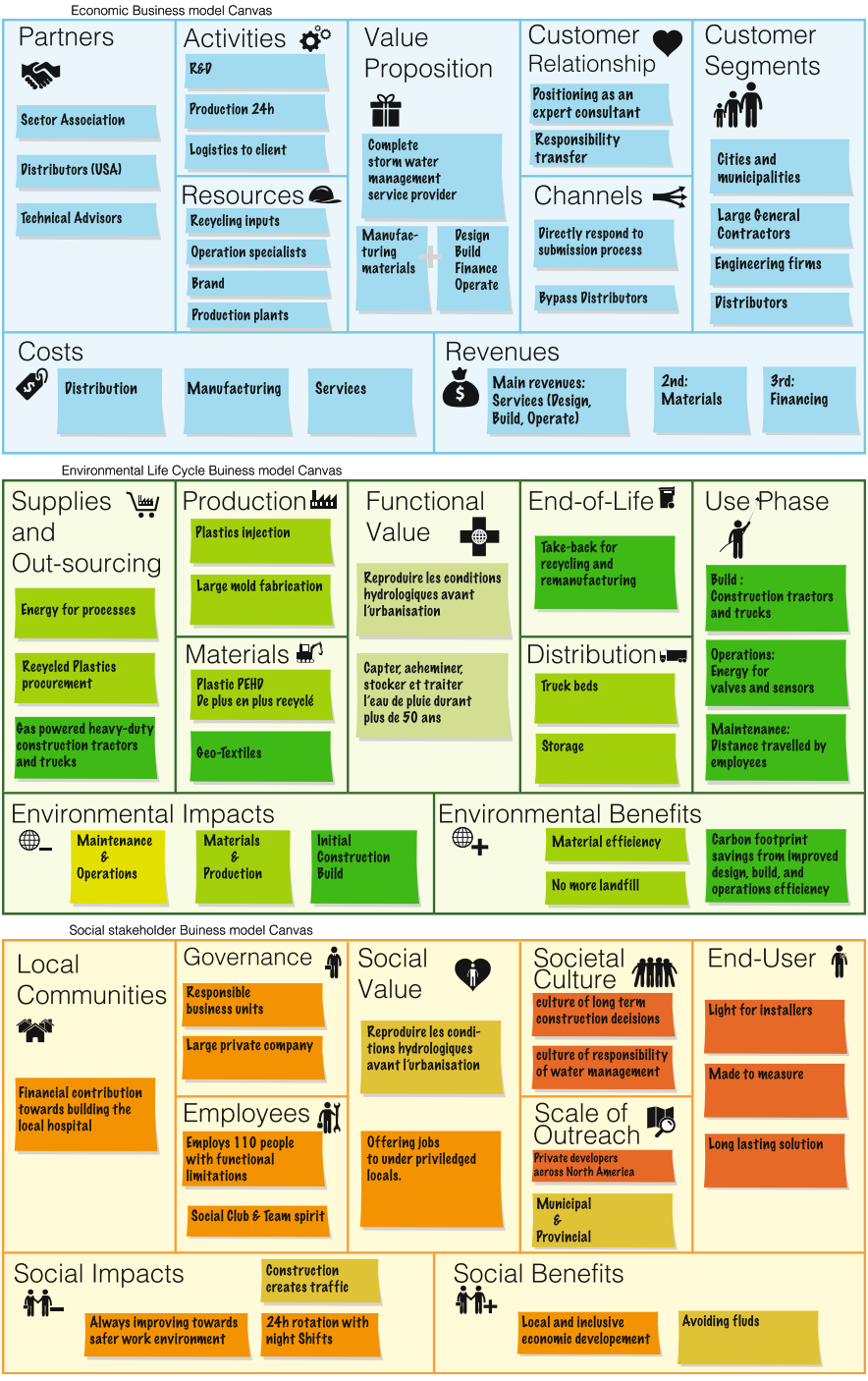


Fig. 9.1 The triple layered business model canvas design tool applied for Rainpipe's business model concept

9.2 Imagining the Future with Foresight and Design

Foresight and design share the objective of imagining the future. Foresight is "a process of developing a range of views of possible ways in which the future could develop, and understanding these sufficiently well to be able to decide what decisions could be taken today to create the best possible tomorrow" (Horton, 1999, p. 5). The design activity in its broadest sense has been defined as moving from current states to preferred states (Simon, 1969). Together, they can be employed for social or commercial purposes, preparing people, and organizations for change. In a report by the international council of industrial design (ICSID, 2001), the authors claim that design can increase the impact of foresight. They argue that by adding design's capacity to visually expose concepts, foresight results in a more compelling vision.

Vergragt and Brown (2007) express a vision as "heuristic device to map a 'possibility space,' [. . .] that can orient and structure actions and behaviours [. . .] and inspire societal actors to investigate and test alternatives from technology to behavior to culture and institutions" (p. 1109). They continue to discuss a vision as defining objectives both functional and non-functional (i.e. emotional). When researching the use of vision for radical innovation Lin and Luh (2009) cite the early research of Tepper (1996) who stated that vision "could help to allocate resources, to condense information, to jump across the boundaries of segmented scientific disciplines, and to assess technology and radical innovations" (p. 191). Another reason for a vision activity is that it supports organizational learning as it plays a role of a strong integrator (Bratianu, Jianu, & Vasilache, 2010). Futhermore, Lynna and Akgünb (2001) report that vision can be positively related to product success.

Gabrielli and Zoels demonstrate empirically how design research methods can strengthen foresight and innovation with scenarios that enhance scenarios of the future with the visual, spatial, and experimental (2003). In addition, the International Council of Societies of Industrial Design (ICSID) report states the benefits of foresight in design by contributing to develop thinking around environmental sustainability. Moreover, Bezold (2010) explains how foresight activities create a safe space for exploring challenging situations and he goes so far as to calling upon foresight scenarios to err on the side of boldness to get the most value out of them. Similarly, Andriopoulos and Gotsi call upon foresight as a practice for "perpetual probing and learning in high-change environments" but they bear witness that research is scarce on the processes by which organizations practice foresight and mobilize its results (2006). This coincides with ICSID who conclude their scoping report by acknowledging that there is further opportunity to make "explicit use of foresight research in design projects."

Advanced design methods can be considered as foresight design practice (Celi, 2014). Advanced design is widely used in industry to visualize possible future products and their scenarios of use. In other words, advanced design serves to bridge the gap between the field of research and its application in reality. Celaschi, Celi, and García (2011) write that in advanced design, the "dichotomy of product and

purpose is often resolved" (p. 9). This is done by projecting products into a future scenario where an intent will be coherent. They cite examples of washing machines that use enzymes to clean or household appliances that recycle water. Nonetheless, concept cars are probably the most recognizable design outcome of advanced design by manufacturers. The authors do acknowledge that advanced design practice is moving its focus from physical functional products to more intangible dimensions of meaning and value. This expansion beyond materiality towards society and organizations is also extensively covered in a report on advanced design methods. Next, this theme will be further explored from a design research perspective by studying design outcomes and their various levels.

9.3 Design Outcomes

As mentioned earlier, a third characteristic of a design approach is proposed which relates to the results of the use of tools in a conscious process. The term design outcomes was defined by Kruger and Cross (2006) as the "qualitative aspects of the resulting design concepts produced by the designers" (p. 529). Their research suggests that the difference between a design process and its outcomes is the consequence of the application of strategic knowledge. In other words, different design processes lead to different outcomes. Design outcomes integrate a vision of the future while at the same time enabling future iterations. Design outcomes, such as concept sketches (see Fig. 9.2), embody knowledge and can even be used to track

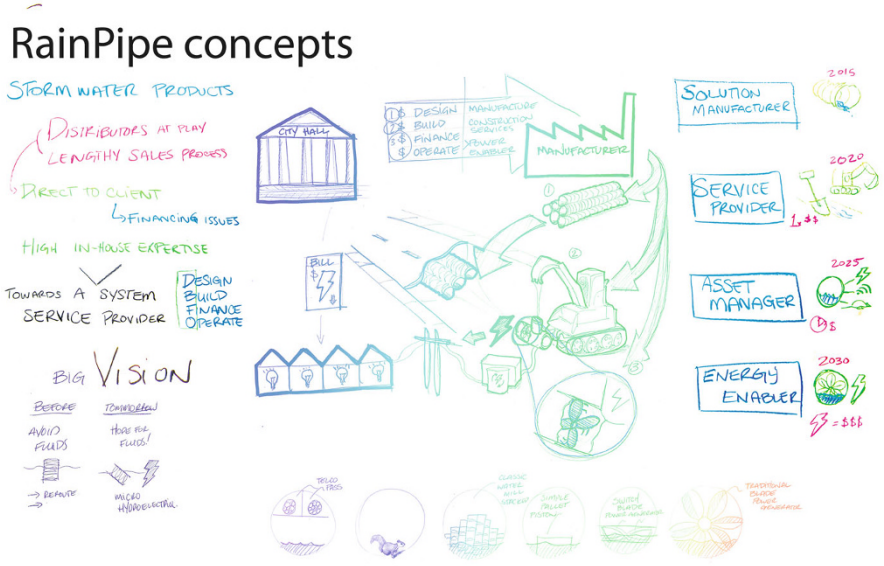


Fig. 9.2 Example of design outcome sketches for Rainpipe

the progress of ideas (Rodgers, Green, & McGown, 2000). Design outcomes of strategic foresight work at influencing mindsets as well as pointing towards technical potential (Vecchiato & Roveda, 2010; Vergragt & Brown, 2007). Therefore, the results of a design activity, or better stated the design outcomes, should be considered as part of a design approach because they are the stepping stones towards preferred states. Furthermore, design outcomes remain within the order of scale of the effort put into it. For example design outcomes aren't necessarily a final result such as a product in retail, an efficient service or a competitive business model. There are levels of design outcomes that will be explored in the following section.

9.3.1 Levels of Design Outcomes

By expanding on the different actions of design as well as on the different outcomes, Buchanan (1998) demonstrated how design can influence organizations. He describes his matrix as an interpretative lens for investigating the "*shifting debate about design in the contemporary world*" (Buchanan, 1998: 13). He creates four levels called "*orders of design*." First is *communication* which creates signs and words, second *construction* which creates things or products, third *strategic planning* which creates interaction such as services and fourth *systemic integration* which creates thoughts such as systems like business models. Buchanan then intersects these orders with design abilities, which are *inventing*, *judging*, *deciding*, and *evaluating*. Therefore with this contemporary understanding of potential outcomes of design, organizations can move past the tangible outcome of product design to understand broader outcomes in terms of business models and organizations themselves. In summary, Buchanan's matrix illustrates the widening outreach of design into other fields such as management. For the purposes of our research we dive deeper into the latter three levels of outcomes: products (things), services (actions), and business models (thoughts).

9.3.1.1 Products

A product is defined as anything that can be offered to an individual, group of people or organization for use, attention, acquisition, or consumption to satisfy a need or a want (Kotler & Armstrong, 2010). There are many means of evaluating a product. For example Kruger and Cross (2006) reduce the variables to creativity, aesthetics, technical aspects, ergonomics, and business aspects. For this research we devise outcomes in the form of advanced product concepts. Our product concepts move beyond a current product approach towards a new product vision that describes an intent devised to answer future needs. Because our emphasis is on business models, we are interested in product concepts as a potential offer, or value proposition, in response to future needs.

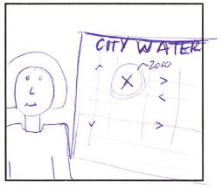
9.3.1.2 Services

According to Hill (1977) a service is "a change in the condition of a person, or a good belonging to some economic entity, brought about as the result of the activity of some other economic entity, with the approval of the first person or economic entity." Near the end of the 1980s, the distinction between products and services was made clear with four distinctions: intangibility, perishability, simultaneity, and heterogeneity (Zeithaml, Berry, & Parasuraman, 1988). In their book about service design thinking, Stickdorn and Schneider (2012) describe a service as composed of five elements: actors, touchpoints, offer, needs, and experiences. As a product includes offers and needs and business models include actors, the understanding of service design outcome in this chapter will focus on touchpoints and experiences. Described in greater detail by Polaine, Løvlie, and Reason (2013) an actor is anyone who takes part of the service relationship such as the customer, the paying client, the end-user, the provider, the salesperson, and so on. A touchpoint is the moment in time and space when a client interacts with a service. They illustrate seven common touchpoints: people, mobile, web, print, marketing, products, and other services. For experiences, the authors detail four types that can be designed in a service offering. First is a user experience that applies to interactions with any type of technology or interface. Second is a customer experience that takes place when interacting with brands most often in a retail context. Third is a service provider experience is similar to a business to business context where the actor is in a chain of relationships sometimes facing an external client or even an internal client. Fourth, the human experience is based on an emotional and personal connexion. An example of a design outcome is provided in Fig. 9.3.

9.3.1.3 Business Models

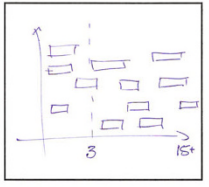
Business models can be defined as "articulating the logic, data, and other evidence that support the value proposition for the customer, and the viable structure revenues and costs for the enterprise delivering that value" (Teece, 2010: 178). Similarly, Osterwalder and Pigneur (2010) describe how a business model is a way to create, deliver and capture value. Their structured nine box canvas has widely spread as means to communicate business model concepts. It is composed of customer value proposition, segments, customer relationships, channels, key resources, key activities, partners, costs, and revenues. Subsequent research (Joyce & Paquin, 2016), built upon the original business model canvas that measured only economic performance by adding an environmental and a social layer, which lead to creating a triple layered business model canvas (see Fig. 9.1). By using this tool in the described case study, more sustainable business model concepts could be realized that create, deliver, and capture a triple top line approach to value (McDonough & Braungart, 2002).

Service Scenario
RainPipe



Michelle has been working for the city as an engineer for the past 10 years. She's in charge of updating the city's entire rain water infrastructure.

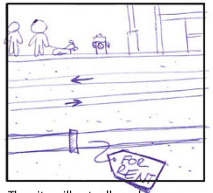
Ideally, it could be done in 3 years to reduce the impacts on commercial avenues and on commuting traffic.



But her budget is so tight that she has to piece out the project over the next 15 years.

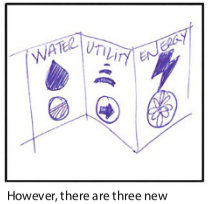
That's until she met with Jean who works for Rainpipe . It has been a one stop shop selling products to solve all rain water management needs since the 1990s.

But today, Rainpipe does much more. In fact, Jean is proposing to Michelle a new way to finance her project.

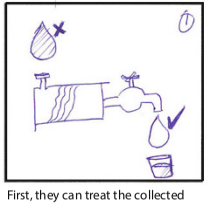


The city will actually make money by leasing out the space under some streets and sidewalks.

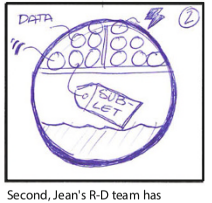
As always, Rainpipe is responsible for designing, building, and operating the rain water collection system.



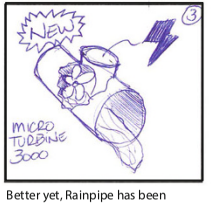
However, there are three new services from Rainpipe .



First, they can treat the collected rain water and sell it back to the city as potable water.



Second, Jean's R-D team has developed some pipes that can safely pass fiber optic wires or energy cables so that Rainpipe can sub-let some space to telecoms and energy utilities for a reoccurring



Better yet, Rainpipe has been working with partners on micro-turbines to produce energy from the water flowing in the system. Soleno then sells the energy to local utiliies.

Thanks to Rainpipe's new business model, Michelle can help the city make money with its urban infrastructures and reduce cost answering social needs for clean water and renewable energy.

Fig. 9.3 Service scenario outcome at Rainpipe

9.4 Case Studies for Sustainable Business Modeling

It is difficult to study a posteriori the influence of a design approach on the transformation of a business model for sustainability. In the following case studies, a research protocol to actively participate in successive workshops composed of planning, interaction, creation, and analysis of the results was devised, which is considered as action research (O'Brien, 2001). A problem was acknowledged in that SMEs don't partake in foresight design to elaborate a vision of a sustainable future and attempted to resolve by developing a design approach. The research protocol consisted in preparing and facilitating multiple workshops with a consistent design approach. Swann (2002) discussed the similarities in an action research method and a design approach in that they both lead to new knowledge. Both are mutually reinforcing as in the case of action research the end goal is of a scientific abstraction whereas the design approach leads to a practical synthesis.

Voros's (2003) foresight process was applied which comports inputs, analysis, interpretation, prospection, and outputs (Fig. 9.4). The inputs came from workshops with manufacturers when determining their existing business model. The manufacturers were clients of the Institut de développement de produits (IDP) based in Montréal which is a non-profit organization whose mission is to teach manufacturers how to improve their innovation practices. In all, 13 different manufacturing companies, mostly SMEs, were represented by 17 research and development professionals who participated in the full day workshops. Five participant organizations were chosen that demonstrated the most interest in research. The participating SME's business models were analyzed and potential sustainability opportunities interpreted. In light of the analysis and interpretation of their current situation, a prospection phase was entered by undertaking a design project to imagine concepts of more sustainable business models. This was followed up by brainstorming coherent service scenarios and then a product design. For each case, three types of outcomes were illustrated visually: product designs, service scenarios, and business models concepts (Fig. 9.1). The resulting outcomes are presented in the following section that describes them as artifacts.

9.4.1 Artifact Description

The design outcomes of the action research are presented in five cases (see Table 9.1). The participating organizations' names have been changed in order to preserve the participants' preference for corporate anonymity. Each case presents five distinct elements. First, the basic profile of the organization is exposed with quantitative data from external sources such as the number of employees and general qualitative markers from the researcher's perspective such as sustainability maturity. Second, a short description of their current business model is provided. Third, the main elements of the business model concepts resulting from the foresight design

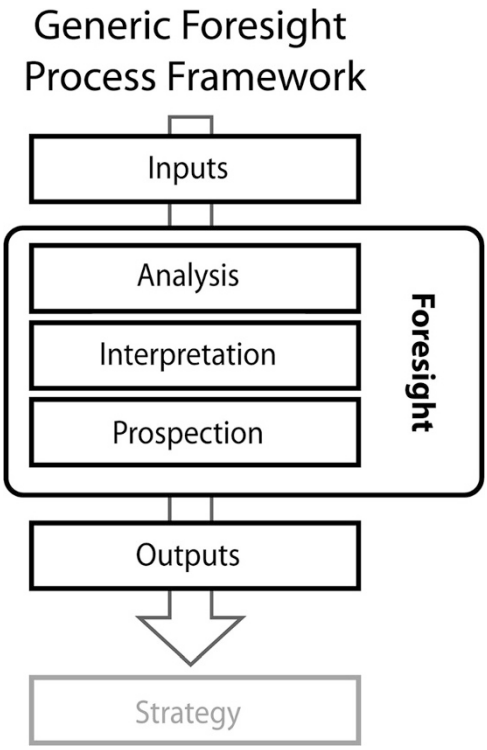


Fig. 9.4 Generic foresight process framework. Reproduced from Voros (2003)

projects are shared. Fourth, the service scenario that conveys the business model from the perspective of the client is synthesized. Fifth, the potential innovation avenues from new product designs are characterized.

9.4.2 Case Evaluation

After these three design outcomes have been created, it will be shown that these outcomes yield sustainable business models. Stubbs and Cocklin (2008) described the characteristics of what makes business models sustainable. They cite the works of Wicks (1996, p. 104) to describe the effect of sustainability on a firm's business model as playing "*an integral role in shaping the mission or driving force of the firm and its decision making.*" They do research the idea of a sustainable business model but they remain very broad in a potential application in practice. They refer to a combination of features, conditions, processes, and/or narratives. Nevertheless, Stubbs and Cocklin did address the problems with the "neoclassical economic worldview" of organizations by establishing a few principles of a sustainable business model. Table 9.2 refers to the six principles they laid out to validate if the concepts match their criteria. It must be advised that this definition was not intended

Table 9.1 The concepts of more sustainable business models, services, and products for five manufacturing organizations

	Foresight inputs		Design outcomes		
	Profile	Current business model	Business model concept	Service scenario	Product concept
Rainpipe 1978 170 empl. B2B	Rainpipe is an innovative but smaller player in the rainwater management industry selling plastic pipes. Their sustainability practices are underdevelopment.	Answering public work tenders with a variety of products that answer all storm water management needs such as collecting, conveying, treating, and storing.	Selling energy produced locally within rain water management contracts.	The service is built with the city client in a face to face service provider experience.	Taking advantage of floods to generate energy from water flow with micro-turbines integrated in pipes.
Offurniture 1983 850 empl. B2B	Offurniture sells commercial furniture. The local division acts like an independent SME with advanced innovation and sustainability practices.	Selling a complete furniture solution to large organizations across North America who wish to personalize or customize their workspaces.	Providing the end-user employee a choice of office furniture products leased in a service contract with employer.	Web-based customer experience allows for personal selection.	Custom options needs such as active use, technology management, or mobility within the spaces.
PaperLam 1992 75 empl. B2B	PaperLam laminates paper into packaging to serve the papermill industry. They are sustainability leaders and advanced in innovation practices.	Selling specialty packaging solutions to protect large paper rolls during transport. They are diversifying towards food industry applications.	Providing access to a logistics database for customers to track consumption history through packaging.	Real-time application for data management and business to business contact.	Packaging products made of smart fibers that embody data in material composition.
ProBeauty 1949 175 empl. B2C	ProBeauty is a small player in the makeup and skin care industry. Their innovation maturity is intermediate and their sustainability practices are novice.	Selling beauty products and creams at a lower price than industry giants. They market the added value of all their products being hypoallergenic.	Product customization and membership for long term relationship.	Personal beauty advisor creates a human experience outside of a retail environment or online user experience ships product directly to home.	Create your own product formulation with exploration kit.

(continued)

Table 9.1 (continued)

	Foresight inputs		Design outcomes		
	Profile	Current business model	Business model concept	Service scenario	Product concept
Mavericks 2004 265 empl. B2C and B2B	Mavericks created a division to manufacture bath and showers. They are advanced in innovation, but novice in sustainability.	Selling bathtubs with exclusive differentiations to multiple clients such as big box stores and specialty retailers as well as commercial and institutional contracts.	Towards net zero water consumption and optimal energy efficiency in leasing a complete system built with partners.	Product offers feedback of consumption efficiency to improve human experience.	Bath product now part of a larger system for all washing needs outside of kitchen.

Table 9.2 Evaluation of design outcomes with the 6 principles of sustainable business models (SBM) by Stubbs and Cocklin's (2008)

	A SBM draws on economic, environmental, and social aspects of sustainability in defining an organization's purpose.	A SBM uses a triple bottom line approach in measuring performance.	A SBM considers the needs of all stakeholders rather than giving priority to shareholders' expectations.	A SBM treats nature as a stakeholder and promotes environmental stewardship.	Sustainability leaders, or champions, drive the cultural and structural changes necessary to implement sustainability.	An SBM encompasses the systems perspective as well as the firm-level perspective.
Rainpipe	The purpose of the organization is to reproduce hydrological systems before urbanization by managing rain water for the next 50 years.	Services rendered, carbon footprint savings, material efficiency, local economic development.	Offering jobs to locals and disabled people.	The end goal of water management is to avoid floods in urban areas.	The in-house engineers build relationship with the city workers to change the current model.	By moving from the sale of a product to enabling energy production while managing rainwater.
Offurniture	The purpose of the organization is to offer ownership-free refurbished work environments for highly mobile workforces.	Performance is measured in revenues from reoccurring fees, that avoids landfill through material efficiency, and a positive workplace atmosphere built on individual choice.	Offering a choice to end-user employees to cater to their specific needs.	Reducing the overall carbon footprint with improved material efficiency in a circular model.	The website structures a new relationship between the company and the client, however, there is little mention of who will drive this change internally.	By shifting the responsibility of choosing furniture from employer to employee and client SMEs can better manage organizational changes.
PaperLam	The purpose of the organization shifts to providing access to a database of product logistics and consumption rates.	Performance comes from financially encouraging quicker material reuse cycles thanks to a modular take-back program.	Improving the awareness of the supply-chain and potentially providing additional income for unemployed.	Packaging fibre materials recycled and recyclable while improving the transported product's lifetime.	B2B accounts representatives engage clients in a real-time website and application.	Helping clients improve material use and logistics with feedback on consumption flows.

(continued)

Table 9.2 (continued)

	A SBM draws on economic, environmental, and social aspects of sustainability in defining an organization's purpose.	A SBM uses a triple bottom line approach in measuring performance.	A SBM considers the needs of all stakeholders rather than giving priority to shareholders' expectations.	A SBM treats nature as a stakeholder and promotes environmental stewardship.	Sustainability leaders, or champions, drive the cultural and structural changes necessary to implement sustainability.	An SBM encompasses the systems perspective as well as the firm-level perspective.
ProBeauty	Organization thrives from allowing customers to personalize their formulation with a longer term membership.	Performance is measure in terms of material efficiency and carbon savings but more importantly in answering customers personal needs with customizable products.	Because every skin is different, this model allows for the client to create her own formula.	Testing formulations could create initial waste but seeks to optimize material efficiency in the end with a refill program.	A beauty agent plays a role in educating groups of consumers towards a better formulation for their skin type.	The end goal of this model is to ensure a better relationship between the products and the user's needs in a longer term perspective.
Mavericks	The purpose of the organization grows to providing an autonomous water management solution for a bath/laundry room.	Performance is measured in reduced consumption of water and energy as well as market adaptation.	Stakeholders are now shareholders as the organization takes on the form of a coop investing profits to further improve global efficiency.	First of all, the system would allow for net zero water consumption as well as energy efficiency through synergies.	End-users are stimulated with feedback levels and financial incites to improve their consumption rates.	By working with local manufacturing partners, the organization changes the scope of the system to a more encompassing solution.

as a normative tool, however it is the best means found to validate a business model as working towards sustainability.

The second evaluation was undertaken to demonstrate the use of the design outcomes. The deep field of research that focuses on sketching was leveraged as it is a common example of a design outcome (Figure 9.2 provides an example of foresight sketch). Goel (1995) clearly demonstrates how sketches, by virtue of being ambiguous, vague, and imprecise, play an important role in creative problem solving. He distinguishes two types of transformation that arise from drawing sketches. Vertical transformation happens when one idea is refined and further detailed. Lateral transformation happens when one idea leads to another at the same level. In architectural design (Do, Gross, Neiman, & Zimring, 2000), sketching can serve six functions: "generating concepts, externalizing and visualizing problems, facilitating problem solving and creative effort, facilitating perception and translation of ideas, representing real world artefacts that can be manipulated and reasoned with, and revising and refining ideas." This was not chosen as a framework to evaluate the design outcomes because these characteristics speak to the activity of sketching and not the end result.

Sketches serve as a communication medium both for the designer himself (Schön, 1983) and when exchanging with others. When studied in the field of cognitive psychology, design sketches enable working memory, imagery reinterpretation, and mental synthesis (Purcell & Gero, 1998). The evaluation framework for these case studies was built in line with their three characteristics of memory, reinterpretation, and synthesis which, however, were reinterpreted to qualify foresight design outcomes as evolutive, open-ended, and integrative. Evolutive means that design outcomes are expected not to be static but to contain within themselves an ongoing transformation. Building upon the memory of successive states, the design outcomes can demonstrate a learning curve and growth. The open-ended characteristic of design outcomes relates to the capacity of exposing multiple futures and thus reinterpretation. Open-ended means that design outcomes can allow for unresolved questions and can lay out potential avenues for further exploration. Inversely, design outcomes can also embody the integration of multiple ideas into a more synthetic concept. This characteristic allows for the convergence of thought into a tangible representation that can better be communicated and built upon. The evaluation of how each case study demonstrates evolutive, open-ended, and integrative foresight design outcomes can be seen in Table 9.3.

9.5 Linking Design Outcomes to Strategic, Tactical, and Operational Decisions

At the outset of this chapter, two founding questions were established. The first question is how can design outcomes serve a design approach to sustainable business models for SMEs? By identifying characteristics of design outcomes it was

Table 9.3 Three characteristics of design outcomes present in our sustainable business model concepts

	Evolutive	Open-ended	Integrative
Rainpipe	Products demonstrate the evolution from manufacturer to provider to enabler back to producer.	Service scenario outlines three potential offers: water management, real estate, and energy production.	Business model includes the social benefits for the local community.
Offurniture	Service scenario links with existing products in a catalogue to transform the current business towards all leased products.	Product concept shares three potential collections based on active use, technology management and mobility within the spaces.	Service scenario tells the story of three actors (employer, programmer, administration) whose different needs are considered in a single business model.
PaperLam	Business model evolves from a new industry in 2015 to a new capacity in 2018 and then a new purpose in 2024.	Product concept exposes six ways to make smart fibres.	Service scenario explains novel take-back system and data application.
ProBeauty	Product concept describes an exploration kit to allow for a personalized formulation.	Service scenario describes two types of experiences based on different customer relationships and channels.	Business model describes two potential customer segments with same product offering.
Maverick	Service scenario demonstrates two potential uses of the system in closed loop or smart flow.	Business model proposes a coop structure which is a far reaching avenue for a private manufacturer.	Product concept calls for integration of adjacent functions (hot water tank, shower, washer, dryer, water purifier) into one coherent space and system.

demonstrated that design outcomes can influence the design of more sustainable business models in three ways: as an evolution from learning, as open-ended solutions towards multiple futures and as an integrative unit that serves as an ideal.

One of the roles of design outcomes is to serve as a foundation for further iterations and development. In a manufacturing setting, a sketch details ideas that are improved upon in a future prototype, which in turn serves as a learning tool to plan out a larger production. Beyond learning from failure, the design process supports and frames the different iteration efforts as a means towards success or satisfaction (Simon, 1987). In business, the learning organization is an ongoing subject of interest in management (Senge, 1997). Johne (1996) writes about how managers seek to "avoid mistakes with new products rather than using them as a means for exploiting market potentials" (p. 177). The novelty is that by infusing in design outcomes with a sense of evolution, the capacity of the organization to learn and mature is foreshadowed. When proposing Rainpipe to move from a product manufacturer to a service provider to an asset manager to an energy provider in just

15 years, the progressive steps towards an audacious goal are broken down. This related to "backcasting" where a future vision is translated into strategies and actions aimed at bridging the present with the future states (Dreborg, 1996).[1]

The second characteristic of design outcomes in the described foresight concepts are open-ended solutions. By acknowledging that some problems can't be readily solved and offering multiple solution avenues, the design outcomes build an open view of potential futures. A technological example is provided in the Paperlam's case where six potential ways for the fibers of cardboard to contain data are suggested (i.e. air capture, carbon dating, layers, weaving patterns, ink, and Ultraviolet signatures). The Probeauty service scenario details two different experiences, alone at home or with friends and an advisor, with different customer relationships and channels. Open-ended outcomes can be used as a stimulus or a trigger for a next generation. According to Sarkar and Chakrabarti (2008) these triggers can enhance the creativity of designers by significantly influencing the number and quality of the resulting representations and contents. Open-ended solution might generate more iterations. Although iteration is essential in a design process, Ballard (2000) distinguishes positive from negative iteration as the one that creates value. The open-ended design concepts created in the form of business models, services, and products are positive in that they don't push for a single solution and provide multiple avenues for further refinement.

When Martin (2009) wrote of a designer's cognitive ability of integrative thinking, he was imploring business leaders to synthesize new ideas from two initially opposable concepts. One can demonstrate integrative thinking by seeing the larger system and the relationships that occur. In terms of design outcomes, integrative concepts synthesize potentially opposite views or ideas. Perhaps the most compelling evidence of integration comes from the Offurniture's service scenario that relates the experience of an employer who needs to manage assets and growth, a programmer that seeks to work either alone or with others during certain project phases and finally a manager who seeks comfort while needing her office furniture to be mobile because her space is used for events. The benefit of the design outcome is that it holds all of these threads into a coherent story that can be easily shared and understood. Moreover, the integrative function of design outcomes serves as an ideal to support a discussion about the future. It creates a reference that can be used to evaluate how far away these ideas are from the current organizational positioning and mindset. For example, some workshop participants felt that the researchers' ideas were not 15 years away but more than 30 years into the future. This kind of anecdotal reaction does convey a sense of the mindset change that accompanies foresight design.

The second research question to be addressed is how can design outcomes relate to organizational thinking. First design outcomes are investigated as a whole concept and second as three different levels, namely business models, services, and products.

[1]For the concept and application of "backcasting" from sustainability principles see also Chaps. 8 and 17.

As a whole concept, the foresight design outcomes presented in this chapter provide what Collins and Porras called an envisioned future (1996). This envisioned future is a strategic tool composed of both a 10–30 year audacious goal and a vivid descriptions what it would be like to achieve this goal. The design concepts formulated in the presented company cases formulated multiple types of ideals which can become benchmarks of attaining future goals. The envisioned concepts have become a directing force for the organization by focusing attention and "grabbing people in the gut." It is important to state that whether the design outcomes are followed in detail to competition is not relevant. Like a concept car, the design outcomes have the objective to open minds, focus attention and inspire change.

Second, three levels of design outcomes—business models, services, and products—were generated from Buchanan's orders of design and related to organizational levels. The idea of hierarchy in Anthony's pyramid (1965) when elaborating a structural framework for management control can be retraced. He depicted strategic planning happening at the highest level of management, tactical, or managerial decisions in the middle and frequent operational decisions at the bottom. The same approach was then reproduced by Gorry and Morton (1971) for information systems with the addition that the information for decisions go from structured to unstructured at all three levels. Inversely, Redman (1998) researched how poor data quality influences all three levels of management. To show how pervasive the strategic, tactical, and operational framework has become one can point the field of logistics where the works of Schmidt and Wilhelm (2000) who have thoroughly reviewed past literature to discuss quantitative modelling issues or Gunasekaran, Patel, and McGaughey (2004) who have used the frameworks to measure the performance of suppliers. These three levels of strategic, tactical, and operational are similar to that of Sinek's (2009) popular marketing approach called the golden circle. He discusses how organizations should begin their communications with the purpose or the "why" in order to engage with their audience emotionally. Then comes the "how" which speaks to the means and actions to be taken. Lastly, the "what" addresses the basic characteristics or the functional results.

Aligning the different levels of the organization to the three levels of design outcome leads to the three leveled pyramid shown in Fig. 9.5. This diagram represents an understanding of the role that the different design outcomes can play when designing more sustainable business models. All five cases presented align to these three levels of design outcomes with the three levels of management decisions. For example, the business model of Rainpipe describes the purpose of the business as reproducing the hydrological environment before urbanization which sets a strategic vision of the future. Next, Rainpipe's service scenario is more attuned to describing the tactics by which the organization will interact with city engineers to fulfill this vision. Finally, the Rainpipe product that generates energy while managing rain water lays out future operations from new functions. Another example of alignment can be shown using Offurniture's case and Sinek's "why," "how," "what" model. The business model identifies a radical shift in strategy from selling products to large companies who are smaller in number to leasing out to an ever growing market of small businesses. The online service scenario changes the tactics of how

Fig. 9.5 Three levels of design outcomes for organizational decisions

Offurniture interacts with its customers. And at the functional "what" level, the furniture changes the approach to ergonomics from seeking comfort in static positions to accommodate new products that enable active work.

When it comes to designing sustainable business models, similar benefits can be expected through sketching in design outcomes which have been determined as expressing evolutive, open-ended and integrative characteristics. Moreover, there are levels beneath strategic business models such as tactical services and functional products that can help envision an organization's future in terms of sustainability.

9.6 Conclusion

The original angle of this chapter was to study sustainable business models through a design approach. The focus was on outcomes as part of a design approach in which three levels of design outcomes in business models, services, and products were specified. The work also serves as an example of Buchanan's fourth order of design when dealing with organizations. Furthermore, a practical way to evaluate how the proposed design concepts respond to the six principles of sustainable business models outlined by Stubbs and Cocklin (2008) was demonstrated. Moreover, it was shown how all three of the foresight design outcomes can be considered as evolutive, open-ended, and integrative. Finally, a simple framework was proposed that aligns business models, services, and products to their respective management levels in a pyramid that can guide organizations and SMEs towards adopting sustainability.

To undertake a sustainability journey, SMEs can envision a destination at many levels of thinking thanks to varied design outcomes. Instead of "it's the journey not the destination," a new saying is proposed: "Part of the sustainability journey is designing a destination."

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Chapter 10
The Inequality-Aware Organization

Suhaib Riaz

10.1 A Time to Engage with Inequality

Business organizations are today embedded in economic, social, and political environments that are increasingly defined by the issue of inequality. Reports from scholars (World Inequality Report, 2018), non-profit organizations (Oxfam, 2017), and management consulting companies (Bain & Company, 2018; McKinsey and Company, 2016) alike highlight that in recent decades economic (income and wealth) inequality in most countries has been on the rise and is now at historically high levels. Given these developments, companies need to be aware of their *economic inequality footprint*, how their organizational strategies impact it, and why reducing it is a strategic imperative today.

Business strategy has always had linkages to broad ideas of inequality, with a focus on topics such as inequality of power and resources. This has been implicit in mainstream frameworks that focus on the analysis of an organization's power over buyers or suppliers, its competitive advantage over rivals based on unequal resource and capability configurations, etc. However, these frameworks have not provided us with the means to understand the direct relationship between business organizations and economic inequality. Further, emerging academic research in management and related disciplines on inequality has also not yet developed frameworks or tools that can provide guidance to business strategists on the issue of inequality.

This chapter provides a set of tools on the topic of inequality that help place this issue in context for business organizations. First a comprehensive map of the various "loci of inequality" (Riaz, 2015) that relate to business organizations is drawn. Building on this, a matrix is developed that shows the impact of these loci of inequality on legitimacy, trust, and growth—three points of impact for business organizations. Finally, it will be shown how the levers of information, strategy

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formulation, and strategy execution need to be used to engage with this matrix and reduce the *economic inequality footprint* of business organizations.

Overall, the ideas in this chapter provide a structured way of understanding and engaging with the issue of inequality. This is needed in order to chart a new course of leadership in business organizations towards building an "Inequality-Aware Organization" i.e. an organization that understands its interaction with inequality, the challenges of inequality, and engages with relevant stakeholders to overcome these challenges. This very difficult but necessary task requires the attention of not just top executives but employees, consumers, investors, regulators, and the larger communities and societies within which business organizations are embedded.

10.2 The "Where?" and "So What?" of Inequality

To build an awareness of inequality as it relates to organizations and their strategies, we need to first understand: Where does inequality come about with respect to the business organization and its activities? To answer this question, we need to analytically separate out the various locations or spaces within and around the business organization where inequality is generated and maintained. We can call these "loci of inequality" (Riaz, 2015). Once we understand the "Where?" in this manner, we can then move to the "So What?" i.e. the major challenges that inequality engenders from a business organization's perspective.

10.2.1 Identifying the Loci of Inequality

Stakeholders of business organizations need to understand "where" inequality is generated and maintained by considering three major loci of inequality (1) organizational loci, (2) inter-organizational loci, and (3) macro loci. Understanding these loci is the crucial first step in recognizing the *inequality footprint* of the organization, and thereby moving towards becoming an *inequality-aware organization*. A map of these loci is shown in Fig. 10.1 and key salient points of support from research and relevant examples are briefly outlined below to describe the nature and importance of each locus.[1]

[1]Note that while this chapter focuses on economic inequality in general, an extensive body of research demonstrates that this problem is most urgent and deep for those in already marginalized demographic groups based on their gender, race, ethnicity, etc.

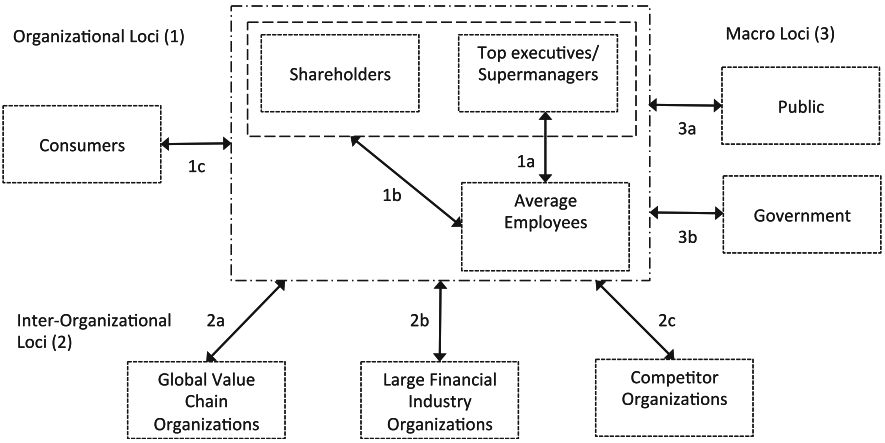

Fig. 10.1 A map of the loci of inequality of the business organization

10.2.1.1 Organizational Loci

The first and most obvious loci may be considered the organizational loci 1a and 1b in Fig. 10.1 that refer to employees, top executives, and shareholders. Locus 1a refers to inequality between top executives and average employees. Recent evidence on this has pointed to the changing nature of the "employee relationship" in organizations, which now involves stagnation or reduction in compensation, benefits, and security for the average employees (Bidwell, Briscoe, Fernandez-Mateo, & Sterling, 2013; Cobb, 2016). Piketty highlights this as a major source of inequality in current contexts and labels the highest end of top executives who command the most power and compensation (and in fact, power to set their own compensation) as "supermanagers" (Piketty, 2014). Growing attention to this loci can be gauged from the fact that the Dodd-Frank Act passed in US in the wake of the global financial crisis of 2007–2008 mandates public companies to disclose their pay ratio (compensation ratio of the top executive and median employee) to the public. The numbers are revealing. For example, the toymaker Mattel's CEO made 4987 times more than the median employee. Yum! Brands—the owner of KFC and Pizza Hut—had CEO compensation 1358 times more than the median employee (Stewart, 2018). Similarly, McDonalds' pay ratio in the restaurant industry was reported as 3101; the retail industry was particularly problematic with ratios often exceeding 1000, with Gap Inc. reporting a ratio of 2900 (author's data and analysis from project in progress).

Locus 1b adds another angle to this by considering that shareholders and top executives (the latter's compensation also includes considerable amounts through shares and stock options) have together gained at the expense of the average employee, thereby exacerbating inequality between these two groups (Lin & Tomaskovic-Devey, 2013). Evidence indicates that share buybacks (Lazonick, 2014) and carefully timed stock price increases close to the divestment of equity owned by top executives (Edmans, 2018) increase gains for those at the top but

reduce long-term investments that could have also benefited average employees, thus increasing inequality along this locus. Even though shareholders and top executives may also have tensions at times such as the recent attempts by shareholders to have a "say on pay" of top executives, but overall it is 1b that is of larger interest in current times, and as such, here shareholders and top executives may be considered in one box versus average employees in another box.

While inequality is generated along locus 1b between shareholders/top executives and the average employees, an argument may be made that this may be offset through the wider dispersion of shares among employees (and more generally, the public). However, data show that ownership patterns of stocks (along with mutual funds) are highly skewed: For example, in the US just 1% of the population owns 35%, 9% own 46%, and the remaining bottom own only 19% (Clarke, 2017; Wolff, 2012). In other words, the gains from shares are likely to accrue mostly to those at the top and not to average employees, pointing to the continued importance of locus 1b.

A third locus that we can consider broadly to be part of organizational loci relates to the consumers of products and services provided by the organization. At its core, this relates to organizational power over consumers which may translate into lower levels of value distributed to consumers vis-à-vis other organizational stakeholders (particularly shareholders and top executives as explained earlier). In certain cases, this may take on outrageous proportions such as the business moves in the biotech industry that involved increasing prices of essential pharmaceuticals in the U.S. market by many times, e.g. by buying up old drugs such as Daraprim whose price was raised from $13.50 to $750 per pill (Crow, 2017). Similarly, a new investigation highlights that large manufacturers of saline water (an essential medical product) may have contributed to and taken advantage of a shortage of the product to increase their profits (Crow, 2018). Beyond the healthcare industry, such issues have also plagued others such as the financial and investment industry. Mercer consulting, part of Marsh and McLennan, recently acknowledged that a rebalance in the exchange between its clients and asset managers is needed to put an end to exploitative earning fees that asset managers have charged in the past regardless of performance delivered to clients (Flood, 2018). Overall, such vivid examples point to an underlying locus between consumers and organizations where an exploitation of power may lead to increased economic inequality problems.

10.2.1.2 Inter-Organizational Loci

Inequality may also be generated in the transactions and interactions between business organizations of various types. These are generally taken for granted in today's business world but need an increased scrutiny from the perspective of understanding inequality.

The first locus here may be considered a broad extension of 1a (top executives—employees) beyond the specific business organization, recognizing that in current times work is organized across countries in global value chains or global production networks (locus 2a). As vertical integration within corporations has reduced,

confining our understanding to inequality issues within a company such as Nike or Apple and ignoring its wider network of suppliers is insufficient (see for example, Merchant, 2017). A similar problem exists for internet giants such as Amazon (Kim, 2017). Wide disparities exist in working conditions and compensation across such networks due to the inherent power and hegemony of the dominant organizations (Levy, 2008). Further, because this inter-organizational and cross-national organizing of work now also overlaps with occupational and professional clustering of similar types of work into one organization (for example, high-level design work is clustered in one organization in a developed country versus low-skill data entry work is clustered in another organization in a developing country), the inequalities across organizations on this locus are getting more aggravated with time.

The rise of *financialization*, which may be understood as an increase in the power of the financial industry along with the associated dominance of financial markets and financial transactions (Davis, 2009; Van der Zwan, 2014), points to another loci of inequality. At the inter-organizational level this may be thought of as the power inequalities between large financial industry firms and non-financial firms. Financialization pressures increase short-termism, prioritize shareholder value, and increase dependence on debt; in turn, all these result in a "downsize-and-distribute spiral" that rewards shareholders and top executives while punishing average employees (Lin, 2016: 972). Financial pressures may therefore be seen as a broader and more general aspect of the organizational locus 1b (shareholders/top executives—employees) discussed earlier. By one estimate, these financialization pressures may be responsible for more than half of income lost by average employees in non-finance organizations (Lin & Tomaskovic-Devey, 2013), while the financial sector on the whole and particularly its elite employees have made gains in income and wealth (Mukunda, 2014; Tomaskovic-Devey & Lin, 2011). One estimate puts these transfers to the financial sector from 1980 to the 2008 financial crisis at between $5.8 and 6.6 trillion in the US economy (Tomaskovic-Devey & Lin, 2011). Locus 2b, represented as the power inequalities between a non-finance business organization and large finance organizations (which represent the pressures of financialization) is therefore an important inter-organizational locus of inequality.

The final inter-organizational locus concerns what has traditionally been a core part of strategy, i.e., the differences between competitor organizations that may involve differences in resources, performance and so on. However, from an inequality-awareness perspective, the differences along this locus are also those related to economic inequality. As the HBR has noted, "a larger part of the growth in inequality between individuals" can be attributed to the differences across competitor organizations (Frick, 2016: 1). Because organizations increasingly differ greatly in terms of their performance such as profitability and productivity, in turn this is reflected in the different compensations of employees across organizations, thus constituting a locus of economic inequality.

10.2.1.3 Macro Loci

The third major set of loci may be considered at the interaction of the organization with the public and the government as macro entities. On the issue of inequality, the public may be thought of as a self-defined stakeholder of the business organization. Issues where the public interest may be in conflict with the business organization are important in this regard. Inequality of power would mean that the organization may capture an unacceptable amount of economic benefits while giving back little to the community or society, thus translating into economic inequality along locus 3a. Recall here that the share ownership is highly skewed towards those at the top in an economy, particularly including organizational elites; further, the distribution of business equity as an asset is even more skewed (Clarke, 2017; Wolff, 2012). As such, gains to shareholders or business equity owners from the value captured by the organization do not necessarily translate to increases in the income or wealth of the public in general. In fact, given the skewed nature of their distribution, such gains may drive a further wedge between the public and business organizations through increasing inequality along locus 3a (organization—public).

Finally, the power relationship between business organizations and government (locus 3b), and its potential abuse may implicate businesses in increasing economic inequality. Here, abuse of opportunities for lobbying and political donations is particularly pertinent (Barley, 2007) but tacit influence through networks, claims of authority based on expertise, and interchanging roles of individuals between business organizations and government bodies may add to this problem (e.g. Levitin, 2014; Riaz, Buchanan, & Ruebottom, 2016). In this regard, it may be helpful to think of locus 3b as highlighting the role of regulatory institutions in economic inequality (Amis, Munir, & Mair, 2017). From an inequality-awareness perspective, this interaction between political power and economic power can lead to long-term institutional dysfunction such that economic inequalities in society continue to be aggravated (Stiglitz, 2012). Such power relationships between the private sector, public sector, and civil society have also been referred to as a problem of societal imbalance (Mintzberg, 2015).

10.2.2 The LTG Matrix: Impact of Loci of Inequality on Legitimacy, Trust, and Growth

Once the *inequality footprint* of the business organization is understood via its loci of inequality, stakeholders of the organization, particularly executives, can start to build awareness of how inequality impacts their organization by asking three questions.

- First: does a locus of inequality bring my organization's role in the economy or society into question in a fundamental manner? That signals a legitimacy challenge to my organization.

		Legitimacy	Trust	Growth
Loci of Inequality	Loci 1: Organizational			
	1a. Top executives ↔ Average employees			
	1b. Shareholders (plus Top executives) ↔ Avg. Employees			
	1c. Consumers ↔ Organization			
	Loci 2: Inter-Organizational			
	2a. Organization ↔ Global Value Chain Orgs (esp. Avg. Employees)			
	2b. Organization ↔ Large Financial Industry Orgs			
	2c. Organization ↔ Competitor Orgs			
	Loci 3: Macro			
	3a. Organization ↔ Public			
	3b. Organization ↔ Government			

Fig. 10.2 The LTG matrix: The impact of loci of inequality on the business organization

- Second: does a locus of inequality engender a lack of trust among parties that need to work together, including employees within the organization and across its global value chain or global production network?
- Third: does a locus of inequality constrain growth for my organization in its current and future market spaces?

Each business organization can ask these questions and fill out a matrix of the kind shown in Fig. 10.2. Understanding the mechanisms of how loci of inequality can impact any of the Legitimacy, Trust and Growth outcomes can help understand the challenges involved and provide opportunities for resolving or preempting them through corrective actions. This comprises the crucial next step for building the *inequality-aware organization*. While there could be differences in the mechanisms and their primary impacts based on context and specific nature of business (which each organization can discover through brainstorming and information gathering sessions), the LTG matrix provides a starting point by showing potential areas of impact through pattern-filled cells. Business organizations may refine and modify these cells according to their specific circumstances to prioritize based on their most important areas of concerns.

10.2.2.1 Legitimacy

Legitimacy can be thought of as the silent license to operate that society at large bestows on a business organization, considering it to be an acceptable part of the economy and society. A situation of high legitimacy would be when hardly any fundamental questions are raised about the roles of a business organization and its impact on society. Low legitimacy is when the roles of a business organization come under increased scrutiny and fundamental questions arise about whether such organizations should exist in their present forms. Prominent examples of legitimacy challenges that emerged in recent times would include the scrutiny of large financial sector organizations during and immediately after the global financial crisis (Riaz, 2009) and increasing scrutiny of large pharmaceutical companies and their role in society in the context of price gauging of essential drugs. Recent questions from the public and regulators around the role of a new organization like Uber in some locations and subsequent constraints on its operations, and about Facebook's handling of data—particularly how it has allowed private data to be used by its partner companies (see for example Confessore, Kang, & Frenken, 2018)—are also examples of rising legitimacy threats.

From an inequality-awareness perspective, executives and strategy practitioners need to understand how key loci of inequality described in Fig. 10.1 may create legitimacy challenges for their business organizations. In the LTG matrix of Fig. 10.2, these challenges are depicted by the pattern-filled cells in the column marked Legitimacy. As shown, high inequality between top executive compensation (including stock options and bonuses) and average (or median) employees (locus 1a) can become a source of questions about whether the organization indeed benefits society at large or is simply a vehicle for elites to expand their economic dominance. These questions go to the root of whether the organization has a positive role in the society and economy. The relationship between shareholders and the organization, particularly the average or median employees (locus 1b), raises a similar concern when the power difference between these two parties reaches a point where the value captured by the organization is distributed in a highly unequal way with a focus on benefitting shareholders (who are mostly from the higher ends of the income/wealth distribution in an economy) while squeezing average employees. A new extreme version of this is the relabeling of what were once employees as self-employed "contractors." Under the rhetoric of flexibility and opportunity, such individuals face increased insecurity and lower earnings (Fleming, 2017). An MIT study points out that the median earnings of drivers who work for the ride-hailing service Uber (and close competitor Lyft) are around $3.37 per hour in the U.S., with 74% drivers earning less than the minimum wage (Zoepf, Stella, Adu, & Gonzalo, 2018). Such inequality increasing models call the legitimacy of the organization into question; it is no surprise that in some locations around the world Uber was banned, has been put on probation (e.g. London, U.K.) or is under threat of bans.

An extension of this may be made in some cases along locus 2a (global value chain organizations—focal company) when global value chains involve the

exploitation of lower income employees in developing country locations to such an extent that legitimacy concerns are triggered for the organization. There may however be wide variation in how such concerns are perceived in a developing country versus in an advanced economy where typically the dominant organizations of such GVCs are headquartered.

A similar concern arises for an organization when its relationship with consumers is such that an unjustifiable inequality is generated between the value consumers receive and the value that the organization (or more precisely its governing elite including shareholders and top executives) retain from a transaction (locus 1c). The example mentioned earlier of manifold rise in prices—often hundreds of times higher in the space of a few months—of essential medical drugs raises questions of legitimacy for the pharmaceutical and health industry more broadly because such organizations are seen to reward shareholders and top executives while adding little value to consumers (NYT, 2017). A similar critique applies to the unequal power relations within which "bottom of the pyramid" business strategies are often embedded, such that the focus is on powerful MNCs selling to the poor without attention to solving the complex problems of poverty (Arora & Romijn, 2012; Karnani, 2007).

Beyond these organizational loci, inequality in the extreme between competitor organizations (locus 2c) in terms of employee income or investor returns can become congruent with monopolies and oligopolies. While competition with other organizations remains central to strategy and would not normally be a concern per se, the lack of such competition, i.e., extreme inequalities among competitor organizations where the "winner takes all" and pulls away from the rest pose a problem. Evidence suggests that less than 0.25% of all publicly listed companies account for about 50% of market capitalization, reflecting that competition in many industries is far from a normal distribution (Taleb, Goldstein, & Spitznagel, 2009). A McKinsey report reveals that several high margin sectors "are developing a winner-take-all dynamic, with a wide gap between the most profitable companies and everyone else" (Dobbs et al., 2015: 8). The Economist also points out that concentration in two-thirds of the US economy's around 900 industries has increased since 1997, mentioning simultaneously that a major investor like Warren Buffett prefers companies protected from competitors by "moats." It is no surprise that extreme inequalities of this kind in market power lead to fundamental questions and generate legitimacy challenges, in line with which "two-thirds of Americans believe the economy is rigged in favor of vested interests" (The Economist, 2016). These reports and increasing concerns point to serious legitimacy challenges that may be triggered as power becomes too concentrated in a (few) business organization(s).

A broader set of legitimacy challenges may arise when, in line with the loci mentioned above, an overall perception is developed in society that a business organization (or at least its governing elites) stand to gain while squeezing economic benefits of the public at large (locus 3a). While the earlier loci mentioned here (1a, 1b, 1c, 2a, 2c) may contribute to this and lead to a cumulative problem, the specific takeover of public services by private organizations may be a more direct manifestation of this problem. Health, education, and public spaces may be relevant cases in point, where the business dominance of these sectors may be seen as impeding the

flow of necessary support services to the public at large. The Occupy Wall Street protests of 2011 were essentially an argument for how the cumulative effect of the strategies followed by business organizations was to provide elites (the 1%) with the continued means to dominate the economic lives of the overall public (the 99%). As such, this locus of inequality can generate problems of corporate legitimacy (Shrivastava & Ivanova, 2015).

In a similar manner, power inequalities between business organizations and government (locus 3b) may result in challenges to corporate legitimacy. This is evident in cases where such inequality leads to abuse of political power through collusion such that the interests of society are made subservient to business. An extreme case in point is the recent exposure and downfall of the Guptas in South Africa, whose power over the country's political leadership enabled them to collect gains for their businesses at the cost of wider society. Unsurprisingly, this ultimately resulted in a loss of legitimacy not just for the Gupta-affiliated businesses whose brand was reported to have "turned toxic" but also for businesses associated with them such as Bell Pottinger and KPMG (BBC, 2017).

All these legitimacy challenges that arise from inequality need to be of interest to strategists because they raise questions about the core business model of the organization, threaten organizational reputation, and thus constrain its access to resources from various parties. Ultimately, such challenges may also threaten long-term organizational survival.

10.2.2.2 Trust

Trust here refers to the relationships between people or various parties where there is a belief that one is not in an exploitative relation and that the other party is not taking advantage of one; there is a general reassurance that the interests of different groups are not in conflict with each other and instead are aligned towards some common shared gains for all. Under such trust, people can share tacit information with each other, share ideas knowing their ideas will be acknowledged and collaboratively worked upon for mutual benefit, and develop creative and innovative solutions together. The opposite of this situation is a fear of the other party, a feeling that the interests of the other party do not converge with one's own and in fact may be in conflict, and that a powerful party may be taking advantage of those who lack power. Trust therefore becomes particularly important on those loci where people or parties need to work together, i.e., 1a, 1b and 2a. In 1a, high inequality within the organization between average employees and top executives can engender trust problems, and once such an environment develops it can spread across the entire organization and become part of its culture. Similarly, in 1b as average employees perceive elite shareholders and top executives to be running the organization in only their own interests, trust between the employees and the organization as such—represented by the organization's governing elites—may be lost. Further, extending this as before, because work is now organized both within an organization and across

its global value chain, such trust issues become important across all such parties in the global chain or network (2a).

In all these three cases, when the social glue of trust is lacking, there would be a need for more scrutiny and oversight of one party by another, and in fact the need to have more people devoted precisely to monitor others. The net result of this would be an increase in what are called monitoring costs (Jayadev & Bowles, 2006). In other words, resources that could have been devoted to productive uses would have to be diverted to monitoring; even with such monitoring, the real potential of people to work together and generate creative and innovative solutions would be foiled. Recent evidence shows that financial insecurities among average employees that are associated with high inequality constrain their cognitive capacity and negatively impact work performance (Meuris & Leana, 2018). A 2-year study by Google on its own employees led Paul Santagata, Head of Industry at Google, to state that "there's no team without trust." The study found that "psychological safety," i.e., a situation of trust in which people can take moderate risks, speak without fear, and be creative, is the one essential aspect for high-performing teams (Delizonna, 2017). Given such evidence, it is no surprise that contexts of high inequality result in reduced risk-taking (such as among middle-class US employees) and thereby impede innovation (Jacobs, 2016).

Overall, the impact of inequality on trust is crucial for strategy because several key organizational capabilities are based in essence on aggregated human effort, such as absorptive capacity, innovation, or organizational learning. For all of these, broader engagement of all employees across the organization and its network is essential.[2]

10.2.2.3 Growth

In the LTG matrix, in some cases the "first-level" impact in any one column (L, T, G) is also likely to trigger a "second-level" impact in another column (L, T, G). This is particularly relevant for Growth, because the challenges of legitimacy and trust will, in the ultimate consideration, contribute to impeding organizational growth. However, it is also possible to consider some more direct links to growth as shown by the pattern-filled cells in the growth column of Fig. 10.2.

The power inequalities between shareholders (plus top executives) and average employees (1b) and the general aspect of this regarding the financialization pressures represented by large financial organizations (2b) lead to a preference for non-strategic short-term decisions that provide immediate benefits to shareholders and top executives who own shares/stock options. Evidence suggests that this preference comes at the cost of long-term investments in the real economy, such as through new research and development or building other organizational assets (Lazonick, 2014). This should be a major concern to any business leader or strategist as we know that

[2]See also Chap. 16

corporate short-termism is restricting business success (e.g. Barton & Wiseman, 2015). More general evidence in this regard suggests that financialization pressures in a particular sector reduce growth in that sector; average employees are among those who bear the costs of this reduced production while equity holders (who may be both shareholders or top executives) are among those who gain (Tomaskovic-Devey, Lin, & Meyers, 2015). In other words, while the organization's governing elites may find ways to gain from such short-termism, the long-term growth of the organization is impeded (Mintzberg, 2007).

A further angle of impact on growth may be understood by considering locus 3a in the situation where the organization (more accurately, its governing elite), collectively along with other organizations, have gained at the expense of other stakeholders to the point that the economic benefits reaching the public have decreased substantially. Contrary to the perception that long-term growth trickles down from the elite in an economy, such growth "emerges from the middle out" when there is a feedback loop between the middle class consumers and business organizations (Liu & Hanauer, 2016). High inequality that squeezes the middle class disrupts this feedback loop, leading to reduced aggregate demand and therefore lower growth (Reich, 2016). Importantly, technological innovations per se may only increase supply but not help growth; because demand depends upon income, and high inequality constrains the middle class income, the result of high inequality is constrained growth (Bain & Company, 2018). When lower income of the non-elite public is substituted by debt, this debt-based demand provides only temporary growth which grinds to a halt at the end of a credit boom (Rajan, 2012); similarly, though savings of elites grow due to high inequality and may contribute to capital investment booms, these do not solve the problem and ultimately the lack of demand from the middle and lower economic groups stops growth (Bain & Company, 2018).

In sum, from a strategy perspective in which the long-term growth and success of an organization is key, loci of inequality that impact demand will ultimately have major negative consequences for the organization. Strategists therefore need to pay increasing attention to the growth impacts of such loci of inequality.

10.3 Engaging with Inequality Through Levers of Information, Formulation, and Execution

An inequality-awareness perspective means abandoning old mindsets that have tended to push inequality related issues to the background, and giving new attention to inequality as a core strategy issue to craft a long-term and multi-stakeholder[3] orientation in organizations. Given the traditional lack of attention to inequality and the lack of commonly used frameworks or tools in this regard, this is likely to be a very challenging endeavor for most business organizations at present. Taking on

[3] See Chap. 11 and Chap. 12 for the importance of multi-stakeholder collaboration.

leadership in this space is essential to set the ball rolling, and organizations with serious commitment towards the issue can provide leadership in practices and develop standards for others to adopt. Comments are provided here on three levers that a business organization can use in its endeavor to become an *inequality-aware organization*: the levers of information, formulation, and execution.

The "Information" lever refers to the transparency of inequality related data for relevant stakeholders. It is perhaps the most difficult first step. Business organizations today often believe that ignoring or hiding the loci identified above is the appropriate strategy. For example, many organizations (specifically top executives and PR departments) prepared detailed but unconvincing arguments for why disclosing the pay ratio in the organizations (locus 1a) as mandated by the Dodd-Frank Act in the U.S. would lead to inefficiencies and costs (Riaz, 2017). In doing this, they have taken the short-term view and ignored the changing expectations of various stakeholders with respect to inequality and also the impact along the LTG matrix as described in this chapter. Similarly, several multinationals squeeze suppliers in their global production networks to the point of crises, such as witnessed in the Rana Plaza disaster in Bangladesh; many believe that the best course of action is to hide the extreme inequalities in their networks such as the low paid and dangerous employment of children (Merchant, 2017). Once again, they are bound in this by thinking that is a few decades too old, and do not recognize that across all stakeholders there is a new awareness of inequality. Real leadership in this respect means tackling the problem head-on and matching the awareness of stakeholders with a similar heightened awareness of inequality as a business organization. Instead of pushing the data on these loci of inequality to the background, bringing it to the forefront and engaging with relevant stakeholders will spur a whole lot of discussion and recognition of problems. This will also require developing new metrics for inequality along some loci identified in this piece. Business organizations can only start to fix what they begin to see in this regard.

Information using the loci of inequality detailed here will bring a new awareness across all levels in the organization and its network. Once such information is understood, it then needs to start interweaving with strategic decision-making, i.e. the second lever. This may happen explicitly but at other times implicitly. From a long-term perspective, strategy formulation—involving such core strategy issues such as the resources and capabilities of the firm, industry analysis, and global expansion strategy—needs to take place with the LTG inequality-impact matrix in mind. For example, an organization that builds its competitive advantage based on resources or capabilities that are severely implicated in increasing inequality may be, in the long run, setting itself up for a larger set of legitimacy, trust or growth challenges related to multiple stakeholders.

Executing on this issue, the third lever, means carrying out strategic decisions with a deep awareness of how they may play out on any of the loci of inequality. It means developing an on the ground approach that is close to the lived experiences of stakeholders on the loci of inequality, instead of "managing from the cloud" i.e. manipulating numbers from a high level position, which would only increase the power and economic distance between the organization's governing elites and

others. In particular, strategy execution needs to involve regularly seeking data on inequality—both quantitative patterns and qualitative experiences—that would feed back into the information lever. An important point here is that while the focus in this piece has been economic inequality, such inequality often overlaps with inequality in society along demographic lines such as gender, race, ethnicity, class, caste, etc. As such, deeper understanding of lived experiences of stakeholders would add to understanding these multiple layers of inequality.

A few committed organizations may take the initiative on collecting relevant information, making it available, and integrating it with formulation and execution. But given the need for re-establishing legitimacy and trust on the issue of inequality with various stakeholders, a broader solution would also involve engaging with third parties such as non-profit organizations, think tanks, or regulatory bodies, while ensuring there are no conflicts of interest. Moving forward, organizations may gain in this regard from the development of standardized processes and practices across their entire industry. Instead of individual organizations competing among themselves while a "race to the bottom" takes place on various loci of inequality, an industry-wide commitment will ensure long-term success through leveling the competitive playing field on this front while ensuring gains from legitimacy, trust, and growth to all organizations in the industry. Such an approach, through the collective action of leading organizations in this space, will chart out a more effective path towards reducing the *inequality footprint* of business organizations and building the *inequality-aware organizations* needed for the future.

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Part III
Stakeholder Engagement and Open Strategy

Chapter 11
Values-Based Stakeholder Management: Concepts and Methods

Henning Breuer and Florian Lüdeke-Freund

11.1 Introduction

Stakeholder management has been proposed as a foundation of strategic management (Freeman, 1984), and it is key to "sustainable strategizing for positive impact" (the subtitle of this volume). Stakeholders have acquired a pivotal role for management due to ongoing substantial changes in the corporate world, affecting the established strategic management frameworks, concepts, and methods. These fundamental changes and their impact on stakeholder management will be discussed in this chapter. Based on the difference between interests and values a values-based reframing of the stakeholder concept and corresponding management methods is suggested, such as the "values through conversation" approach (Freeman & Auster, 2015) and values-based innovation methods (Breuer & Lüdeke-Freund, 2017a). A discussion of recent publications at the intersection of stakeholder management, organisational values and sustainability-oriented strategic management is the foundation for an advanced concept of values-based stakeholder management as well as advancements of strategic management methods and practices.

The integrated management framework (Bleicher, 1994) provides a starting point for the following discussion. According to this framework, normative, and strategic management set the frame for operational management that steers a company's daily activities and decisions. The selection and application of, for example, marketing instruments (traditionally referred to as the four Ps of product, price, place, and promotion), but also HR concerns of job analysis, recruiting and administration, are

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mainly dealt with by operational management (therefore, also termed instrumental management). Strategic management aims to develop and improve the resources, capabilities, and roadmaps that are necessary to survive and succeed in the market, i.e. to gain competitive advantages over competing rivals. Finally, normative management deals with the overarching values, identity, and aspirations of an organisation (Bleicher, 1994). These are formulated and shared as organisational visions, missions and purpose statements, and codified as organisational norms, principles and strategies for their realization.

This chapter will focus on the strategic and normative levels of stakeholder management and discuss the implications of two shifts for a values-based view of stakeholder management: First, the shift from strategic planning with a focus on shareholder value to strategic management and stakeholder integration as foundation for strategic decision making and, second, the distinction between interests (as a widespread conceptual foundation of stakeholder management) and values.

Applying a stakeholder approach to strategic management, and reframing it from a values-based point of view, may have important effects: It increases the chances that not only short-lived attitudes and interests, or the "best deal" in bilateral negotiations, determine the course of strategic decisions, but a long-term orientation in normative and strategic management. This is facilitated by new business models that cater to what people really care about. To support a values-based approach to stakeholder management, new conceptual distinctions, and methodical implications are presented in this chapter. Three forms of stakeholder management are proposed (defensive, integrative, overarching). It is discussed how to clarify and develop stakeholder values (e.g. by means of ongoing "values conversations"; Freeman & Auster, 2015) and exemplified how to reframe and adapt methods of stakeholder analysis and management (e.g. as an element of values-based business modelling; Breuer & Lüdeke-Freund, 2017a).

11.2 Milestones from the Discourse on Stakeholder Interests

Since the 1960s, and lasting until today, corporate governance scholars and practitioners have controversially discussed the primacy of shareholder versus stakeholder interests, i.e. whether the interests of shareholders should direct and ultimately justify management decisions and corporate actions, or whether organisational objectives should be derived from diverse stakeholder interests. When the term stakeholder was introduced at the Stanford Research Institute in 1963, it referred to anyone having a stake in corporate actions, respectively "those groups without whose support the organization would cease to exist" (Freeman & Reed, 1983: 88). The initial listing of these groups included employees, customers, suppliers, lenders and society in addition to holders of stock. Freeman and Reed (1983: 91) defined stakeholders in a wider sense including friendly and hostile groups affecting an

organisation: "Any identifiable group or individual who can affect the achievement of an organization's objectives or who is affected by the achievement of an organization's objectives. (Public interest groups, protest groups, government agencies, trade associations, competitors, unions, as well as employees, customer segments, shareowners, and others are stakeholders, in this sense)."

Early on stakeholder theory was criticised to collapse the notions of objective and responsibility of the organisation, and instead put economic interests first while assigning a "secondary modifying and constraining influence" to issues of social responsibility (Ansoff, 1965: 33–35). Practical advantages played into the hands of the shareholder view can be easily measured in financial terms, such as earnings per share or stock price, whereas stakeholder interests are much more difficult to grasp. Accordingly, it is also more difficult to institutionalize the representation of stakeholders in the corporate constitution and management bodies. Moreover, their financial investments provide shareholders with a more immediate lever to exert power than any other stakeholder group. Until today, primacy of shareholder value remains the dominant viewpoint for most practitioners and academic textbooks (following for instance Rappaport, 1986 who argues for shareholder value as the only reliable success measure of corporate strategy).

Others questioned the appropriateness of an approach treating stakeholders as secondary or external to strategic management and called for stakeholders taking an active role in management decisions, i.e. a move "from stakeholder influence to stakeholder participation" (Dill, 1975). Several formats such as stakeholder advisory boards and stakeholder audits have been introduced. In Germany, for example, several laws require the active participation of one stakeholder group, namely employees, on the board and works council.

Following a values-based view, the focus only on shareholder value is an one-dimensional form of "value(s)-based" management that defines financial value creation and distribution as the one and only purpose of business. Business anthropologist Karen Ho identified the notion of shareholder value, understood in terms of mission and only purpose of the corporation, as key to understanding investment banking culture on Wall Street and as a major driver behind the American financial crisis in 2001. Ho carried out field research on Wall Street over seventeen months from February 1998 to June 1999 among investment bankers working at major investment banks. Through interviews and observation, she found that the "notion of shareholder value . . . distills their [the investment bankers] values and serves as their ideal "model" of how corporations, including their own, should behave . . . Representing a host of values, shareholder value allows bankers to translate their particular values into a number, which acts as its own explanatory force. It is a discursive strategy used by powerful financial institutions who want to articulate their vision of the world and fight for their elite interests by utilizing and galvanizing a particular shareholder-value worldview to impose short-term financial and market-based decision making on corporations" (Ho, 2009: 180). The author claims that in spite of the attempt to maximise benefits for the owners, shareholder value does often not materialize but instead leads to stock-price volatility, decline, and crisis of productive and investment firms working under this regime. Investigating careers of investment bankers, she shows how the shareholder view eventually turns against its protagonists.

Several developments since the turn of the century have further strengthened the position of stakeholders in theoretical discussions and managerial considerations: The growing importance of value networks and business ecosystems, of business models in general and business models for sustainability in particular, and a normative turn in customer and labour markets.

11.2.1 Value Networks and Business Ecosystems

Based on industrial trends such as a dematerialization of products and services, increasing technological complexity and new forms of relationships between firms beyond straight competition, in the 1990s the notion of value chain was complemented by an understanding of value networks and business ecosystems embedding focal organisations (e.g. Christensen & Rosenbloom, 1995; Normann & Ramírez, 1993; Stabell & Fjeldstad, 1998). A value network is composed of relatively autonomous actors who manage their operations independently, but work together based on common, i.e. shared, principles and service level agreements (Lindgren, Taran, & Boer, 2010; Ritala & Huizingh, 2014).

Closely related, but independent of location and proximity of values network actors, and with an emphasis on competition and co-evolution is the idea of the business ecosystem as it was defined by Moore as: "An economic community supported by a foundation of interacting organizations and individuals—the organisms of the business world. The economic community produces goods and services of value to customers, who are themselves members of the ecosystem. The member organisms also include suppliers, lead producers, competitors, and other stakeholders. Over time, they co-evolve their capabilities and roles, and tend to align themselves with the directions set by one or more central companies. Those companies holding leadership roles may change over time, but the function of ecosystem leader is valued by the community because it enables members to move toward shared visions to align their investments, and to find mutually supportive roles" (Moore, 1996: 26). As business operations expand beyond the limits of focal firms (or, *single* firms), stakeholders leave the periphery of value creation processes and become constitutive elements of value creating networks and business ecosystems.

Instead of focusing on the company or industry, looking at the "value-creating system itself" (Peppard & Rylander, 2006: 131) and the co-evolution of stakeholders shifts attention from value-adding activities to the co-creation and re-invention of value. Customers and further stakeholders throughout the value network count as valuable contributors to interactive forms of value creation. Motivated by this shift in attention, earlier works in the field of strategic management mainly focused on the possibility to help "customers to understand that their role is not to *consume* value but to *create* it" (Normann & Ramírez, 1993: 67, original italics). More recent research extends this approach and aims to improve our understanding of how companies and their stakeholders can co-create the very meaning of business success in relation to sustainability considerations (Schaltegger, Hörisch, & Freeman, 2017).

11.2.2 Business Models and Sustainability-Orientation

An increasingly important approach of strategic stakeholder management emerged in the field of corporate sustainability, namely the development of so-called "business models for sustainability" (Boons & Lüdeke-Freund, 2013; Lüdeke-Freund & Dembek, 2017; Schaltegger, Hansen, & Lüdeke-Freund, 2016).[1] Business models, understood as a conceptual tool for strategic management and a means to systematically analyse, develop, and implement an organization's approach to value creation, offer a new and unifying view on strategic management issues and draw attention to different stakeholder groups. Stakeholders exert influence on business models (e.g. by providing or withdrawing crucial resources and capabilities), while they are themselves positively or negatively affected. Value created, ignored, and destroyed (Bocken, Short, Padmakshi Rana, & Evans, 2013; also see Bowman & Ambrosini, 2003) for different stakeholder groups needs to be taken into account, particularly when it comes to sustainability-oriented business models.

Stakeholder integration is one of the four guiding principles for the development of such business models (Breuer, Fichter, Lüdeke-Freund, & Tiemann, 2018), which are sustainability-orientation, extended value creation, systemic thinking, and stakeholder integration. Understanding and adapting to stakeholders' interests becomes a precondition for the successful implementation of sustainability-oriented business models, requiring social responsiveness and cultural competencies (Antoni-Komar, Lautermann, & Pfriem, 2010), especially since these interests are often not evident from the outset. Moreover, future stakeholder groups have to be considered in order to pursue sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987: 16).

Diverse actors need to collaborate if business pursues a sustainability-orientation (Breuer & Lüdeke-Freund, 2017b; Rohrbeck, Konnertz, & Knab, 2013). Whereas user-centered innovation research tends to focus on existing users and customers, non-users and stakeholders beyond the usual (most influential or powerful) subjects may contribute knowledge, motivations, and values that exceed already given usage situations. Accordingly Hart and Sharma (2004) argue for novel ways of taking responsibility and inclusion of "fringe stakeholders" (poor, weak, isolated or remote, non-legitimate, and non-human) in the search for solutions to social and environmental problems. The aforementioned notion of stakeholder integration (Breuer et al., 2018) must thus also include fringe stakeholders' interests to increase the likelihood of developing sustainability-oriented business models. Adding to this, the organization itself pursues legitimate interests, which are expressed for example in the expectation of improved "business case drivers" (Schaltegger, Lüdeke-Freund, & Hansen, 2012), such as reduced production costs, increased operational efficiency, or an advantage in product and service marketing. Obviously, the strategic management task of developing sustainability-oriented business models is about both identifying an organization's and its stakeholders' interests and aligning these. A values-based

[1] See Part II of this book.

instead of interest-focused view is seen as a promising approach to strategic stakeholder management.

11.2.3 From Strategic Planning to Stakeholder Management

A classic controversy in strategic management contrasts synoptic and incremental approaches to strategic management. Traditional strategic management textbooks and most practitioners still follow a rational planning model (in the tradition of Ansoff, 1965) and prescribe an idealized sequence of strategic management phases and tasks. Meanwhile empirical research (in the tradition of Mintzberg, 1978 and Quinn, 1980) found that organisational practice rarely rigidly follows predefined plans, and attempts to observe and describe empirically what really impacts strategic decision making.[2] Behavioural strategy (Lovallo & Sibony, 2010) has drawn attention to the situated interactions and path dependencies that lead to the formation and interpretation of strategies. Accepting both, the fact that people are subject to bounded rationality and the necessity of negotiations between coalitions of stakeholders leading to compromise, makes the traditional assumption of linear and rational decision making by "Homo Economicus" inappropriate.

The classical model of strategic planning predicts environmental trends (including potential interests of stakeholder segments that constrain operational and strategic options) and adapts strategic measures to exploit the diagnosed position of the firm. This model is replaced, or complemented by, a management approach that "actively plots a new direction for the firm and considers how the firm can affect the environment as well as how the environment may affect the firm" (Freeman & McVea, 2001: 11). Accordingly, in the realm of scenario management, normative scenarios spelling out organisational visions to strive for need to complement an environmental scanning of exploratory scenarios.

Recent frameworks of iterative development, lean management, and business modelling already account for the unreliable nature of plans and deal with dynamic complexity. However, most practical approaches also inherit the narrow focus on economic goals of the shareholder view and neglect the multitude of values that drive stakeholder motivation (Breuer & Lüdeke-Freund, 2017a), such as an orientation towards an ecologically and socially sustainable development of mankind. A values-based view on strategic stakeholder management and corresponding methods can help to differentiate between stakeholder interests as a matter of negotiation and values as notions of the desirable. An accordingly reframed approach to strategic stakeholder management allows accounting for the multitude of cultural, organisational and personal values that can inform normative management and ground personal motivations.

[2]See also Chap. 5.

11.2.4 A Normative Turn and Values Beyond Interests

While moving from a planning to a stakeholder perspective, different global trends and developments in the natural environment (e.g. increasing resource scarcity), societal awareness (e.g. health concerns related to companies' offerings), and legislation (e.g. laws supporting renewable energies) contribute to what could be termed a "normative turn" (Breuer & Lüdeke-Freund, 2017a). This normative turn results from, for example, aggregated changes in customers' and employees' expectations towards companies, and vice versa, which implies a reframing of management frameworks and methods based on a review and codification of values. This turn can also be perceived beyond general management in domains such as innovation management (Breuer & Lüdeke-Freund, 2017a) and stakeholder management (Freeman & Auster, 2015).

Sustainability reporting, publishing information about the economic, environmental, social, and governance performance of companies, which was introduced in the 1980s as a second line of reporting in addition to financial reports, serves as another example of a normative turn in a major management domain. Environmental reporting, a predecessor of modern sustainability reporting, was initially applied by chemical companies to improve their public image. In 2017, a few decades later, a directive by the European Union made sustainability reporting mandatory, which is a way of codifying societal expectations that result from changed values related to environmental, social and governance issues. "The new regulation makes it easier for stakeholders to stay informed on business activities and impacts of companies they engage with" (First Climate, 2018).

Sustainability labels are offensively used in marketing and advertising, responding to changing demands of customers seeking green and fair traded products and services (Peattie & Belz, 2010). Dematerialization and branding have further increased the willingness of customers and workforce to identify not only with a product or service but also with what a company stands for. Digitalisation and new means of communication empower stakeholders and challenge the definitional sovereignty of companies to define their own identity. Not only customers, clients, and employees may question what they are implicitly and explicitly supporting through their purchasing behaviour and their work, but also external interest groups, lobbies, and activists monitor what companies do and what results from their worldwide activities.

11.2.5 Revision of Key Characteristics of the Stakeholder Approach

The aforementioned conceptual and practical developments in the areas of value networks and business ecosystems, business models, and strategic planning together with the observation of an overarching normative turn point illustrate the cross-cutting importance of a stakeholder-oriented approach to strategic management.

Before moving on and proposing a values-based view on stakeholder management, the original assumptions of stakeholder management are summarized. Freeman and McVea (2001: 10–15) define seven distinguishing characteristics of their stakeholder approach which emphasizes "active management of the business environment, relationships, and the promotion of shared interests" (Freeman & McVea, 2001: 10). The stakeholder approach is

1. a single strategic framework that should enable managers to deal with environmental changes without having to adopt strategic frameworks or practices,
2. a strategic management process (rather than planning based on prediction and adaptation) actively giving direction to the firm while considering mutual influences between the firm and its environment,
3. concerned about "survival of the firm" (Freeman & McVea, 2001: 12) by directing a course and integrating and balancing multiple relationships and objectives, rather than optimizing output,
4. identifying and investing in relationships to ensure long-term success based on a shared "set of core values" (Freeman & McVea, 2001: 12) so that all stakeholders remain supportive even if individual stakeholders are negatively affected by individual decisions,
5. descriptive, building on facts and economic, political and moral analysis, and prescriptive (rather than empirical) recommending direction for the firm in a stakeholder environment where relationships are created and influenced,
6. focussed on understanding concrete "names and faces" (Freeman & McVea, 2001: 14) rather than general stakeholder roles, emerging from specific insights rather than descending from general theory, and
7. integrative with respect to different stakeholder perspectives and interests in order to facilitate strategic decision making and manage interests into the same direction.

Even though values are mentioned as a critical element for strategic management and as a requirement for enduring stakeholder cooperation (Freeman, 1984; Freeman & McVea, 2001), the classical stakeholder approach does not sufficiently and consistently differ between values, interests, and benefits. The differences blur, or are at least not made explicit, when the idea of managing business in the "interests of stakeholders" (Freeman & McVea, 2001: 29) or the creation of value (in the sense of benefits) for different stakeholders like employees, customers, suppliers, and financiers are proposed as key to the approach and as a precondition for any successful business. The final sections therefore focus on the implications of a values-based view on stakeholder analysis and management.

11.3 From Negotiation of Interests to Values-Based Management: Concepts and Methods

Even though Freeman and his co-authors have stressed the critical role of values and values-based management for strategic and stakeholder management (Freeman, 1984: 107; Freeman & Auster, 2015; Freeman & McVea, 2001), it has mainly been framed as a negotiation of potentially conflicting interests. Values-based stakeholder management includes, but also moves beyond, the negotiation of potentially conflicting interests. It focuses on values and their potential to engage stakeholders as a basic framing, and enriches established concepts and criteria such as benefits, interests, or attitudes. These related concepts and criteria have to be differentiated in order to prepare a discussion on implications of the values-based view on stakeholder management.

11.3.1 Basic Concepts: Values, Attitudes, and Interests

Following a pragmatist view, **values** can be understood as notions of the desirable and as fundamental criteria for individual and organisational decisions and evaluations (building on e.g. Agle and Caldwell, 1999; Breuer & Lüdeke-Freund, 2017a: 15; Schwartz, 2012). They are not only concerned with social relations and rules for interaction, but also with "what we care about" (Frankfurt, 1988: 80f) and with what is important to an agent. As "strong evaluation" (Taylor, 1989: 4) of second order desires (Frankfurt, 1988) they contribute to the identity of an individual or an organisation, and they are considered as relatively stable. Meanwhile values are not always evident to the beholder, but need to be explored individually, in social interaction and reflection of desirability with respect to scenarios, i.e. alternative paths of personal and environmental development. Although values are generally considered relatively stable, values of an individual (even during later stages in life, see Tokuhama-Espinosa, 2010) or an organisation may also change, for instance if radical changes in the environment occur or new insights put the established system of priorities into a new perspective.

Unlike attitudes and norms, values transcend specific situations and objects and guide attitudes and behaviour, even though "the impact of values in everyday decisions is rarely conscious" (Schwartz, 2012: 4). In contrast to values, **attitudes** are situated and object-specific (Hitlin & Piliavin, 2004). Depending on a specific context, an agent may have different attitudes towards an object while his or her underlying values and system of priorities remains stable.

Likewise, **interests** may change with regard to changing circumstances and developments. Interests may be marginal or slight and do not necessarily indicate a deep commitment. Interests are not always values-laden, but may simply depend for instance on a socio-economic position. What appears as a weakness qualifies interests as a means of political negotiation. Schwarting (2009) argues that political

conflicts of values need to be transformed into a scheme of interests and problems to become negotiable. Schwarting is following Luhmann's (2002: 218f) thesis that conflicts of interests are trivial, as they can be mediated through compromise, payments, threats, or use of violence. In contrast, she claims that religious, ethical, and identity conflicts about non-negotiable values cannot be politicized. It is difficult to grasp that values are considered opaque and unchangeable on the one hand, but can be "transformed" into negotiable interests. This chapter follows an alternative more pragmatist (Joas, 2000, 2001) and constructivist understanding of values as notions of the desirable that do change and may be developed, for instance through conversation and discourse. Nevertheless, the system theoretic thought of rendering values in more tangible ways is one approach to facilitate their exploration and conversation about them to (re)direct the course of an organization.

Regarding the differences between interests and values the following can be concluded: "*Interests may be negotiated, but values need to be developed*. Whereas interests can be negotiated or traded against one another (e.g. the willingness to forego private time with the family because of a new and better paid position within a company), values resist simple negotiation since what we care about defines to some extend who we are (e.g. when private time with the family relates to a fundamental value that is of highest importance for a person). In some cases values-based disputes among stakeholder groups might be resolved by appealing to overarching shared values; in other cases the divergence of values might not be solved but might at least be made explicit in order to accept the difference" (Breuer & Lüdeke-Freund, 2017a: 33).

Similar lines of reasoning regarding interests and values can be traced back to works like those of Khoshkish (1974) who showed how values provide direction to interests. The directive potential of values as shown in Fig. 11.1 resembles the task of strategic management to develop strategic directions and create new business opportunities facing turbulent changes in the environment. Khoshkish (1974, 1979: 72) describes the values system as a framework that justifies differing interests.

"Not only does the value system orient, adjust, and explain the place and domain of different interests, their title to different resources, and the conditions for the attainment of certain goals, but it is in itself the system of those standards . . . By

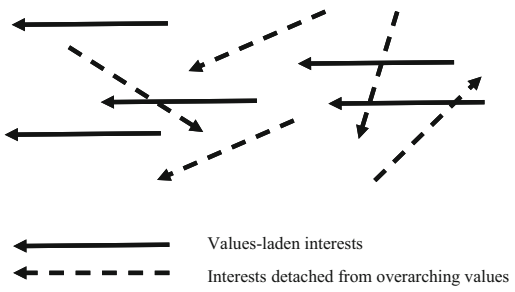

Fig. 11.1 Image adapted from Khoshkish, A. (1974, 1979: 71): Values providing direction to situated interests

converting the functional into the affectional, values justify interests and their discrepancies and attenuate their conflicts. (By the same token, conflicting values enhance interest conflicts.) Interests in general, and sometimes some of them in particular, promote values. Of course, not all interests are value-laden. The difference between values and interests resides in their intensity and the possibility of their attainment. Values are more intense and less negotiable. Interests compromise and negotiate on their way towards their ends."

From the viewpoint of evident economic interests it appears reasonable for companies to circumvent legislation in order to avoid taxation, or to push harmful technologies onto markets. Even emission tests with humans who agree to such tests based on their own financial interests seem to be justifiable, but in the end, such action is judged by stakeholder groups based on their values. Values need to drive any strategic decision-making that reaches beyond the day and its short-term profit. This is partly also reflected in Freeman's original framework: "Corporate survival depends in part on there being some "fit" between the values of the corporation and its managers, the expectations of stakeholders in the firm and the societal issues which will determine the ability of the firm to sell its products" (Freeman, 1984: 107).

Pragmatic managers may wonder if values are maybe too "soft" to be dealt with by strategists who have to deliver in the "hard" currency of financial success. Case studies exemplify the mutual impact of financial success and stakeholder values. While the case of the Tata Nano, a low-priced automobile for the Indian mass market, shows how missing values-based stakeholder integration can substantially contribute to financial losses and market failure, the IBM ValuesJam showcases how a global online conversation about organisational values can engage stakeholders in strategic management, strengthen corporate culture, and drive normative innovation and organisational renewal.

11.3.2 How Interests Fall Short: The Case of Tata Nano

Tata Group of Industries and its chairman Ratan Tata have been acknowledged for their values-based response to the 2008 terrorist attack on the Taj Mahal Palace Hotel (Freeman & Auster, 2015: 122f). A welfare trust and outreach centers for employees were established right after the disaster, mentors and substantial financial aids were granted to the families of victims. However, such responsibility, respect and support for stakeholders was not demonstrated in managing Tata Motors' prestige project to build the Tata Nano. The Tata Nano (case study of Breuer & Upadrasta, 2017) was once announced as the cheapest car in the world with the intention to provide an affordable and safe means of mobility to Indian "scooter families", i.e. families who depend on small, often unsafe motor cycles. In spite of successful engineering, the Nano created continuous and significant financial losses until its production in India was expired.

A review of Tata's documents (Chacko, Noronha, & Agrawal, 2010) suggests that the project was managed considering stakeholder interests, but ignorant of the

values that later turned into articulated, opposing interests, and even violent protests against the manufacturing plant. The case (Breuer & Upadrasta, 2017) demonstrates the necessity to manage product innovation, how to market new products, and strategic decisions about production sites. Substantial parts of the financial loss resulted from the ambitious initiative to provide affordable safety for the mobility needs of the less prosperous Indian population by building the cheapest car in the world. While there was some awareness to potentially conflicting stakeholder interests, the project suffered from the persistent ignorance about the values of customers and local populations at new production sites.

The factory was intended to spur regional development and to become "an advertisement for its [Tata Motors] competence and capabilities, its values and way of functioning" (Chacko et al., 2010: 75), but welcoming gestures from regional stakeholders came along with offense and violent protest from others. As one of the managers recalled, "we did not know what the real situation was inside the villages" (c.f. Chacko et al., 2010: 77). This can be interpreted as an indicator for a form of stakeholder management that did not reach beyond the evident, articulated interests, and therefore remained incapable to grasp what the local population actually cared about. Missing awareness of regional stakeholder values paved the way to the formation of an opposition and escalating violence in the fight against the new factory. In the end the fully built plant had to be taken down and reconstructed 2000 km away from the original location. Furthermore, not knowing what the target group cared about (for instance a prestige object rather than a "poor man's car", and casual encounter rather than upmarket showrooms as a point of sale) contributed to market failure.

The case of the Tata Nano (Breuer & Upadrasta, 2017) shows how different business model components such as production infrastructures and marketing strategies need to be aligned with stakeholder values and the overarching purpose of business activities, here, providing safe and affordable mobility to less privileged target groups. Values-based stakeholder management can contribute to creating value for the company, its customers and society, and likewise make the difference between success and failure of strategic management.

11.3.3 Exemplary Case of Inclusive Formats: IBM ValuesJam

The founder of IBM, Thomas Watson, declared three basic beliefs in 1914, namely "respect for the individual", the "best customer service" and the "pursuit of excellence". These basic beliefs are reported to have helped guide the company through years of substantial change and reinvention, and even severe crises. In 2003, IBM's CEO Samuel Palmisano initiated a project to review the company values and to derive measures for strategy and innovation. Acknowledging that a top-down decree of values would not work in a company of more than 300,000 employees in

170 countries, he decided for a bottom-up approach. IBM employees were asked to contribute to a "ValuesJam" on the corporate intranet. (The case is discussed in more detail in Breuer & Lüdeke-Freund, 2017a.)

Through surveys and focus groups with employees from different levels, functions, and locations three new values statements were formulated as basic input for the ValuesJam: "commitment to the customer", "excellence through innovation", and "integrity that earns trust". Online discussions ran for 72 hours and about 50,000 employees checked into the discussion and contributed more than 10,000 comments (Palmisano, 2004: 61). Resulting data was enriched with surveys before and after the jam. Postings were analyzed through a specially tailored tool—"The Jamalyzer"—and reading of all contribution transcripts by a small project team.

Emerging themes included critique on the silo mentality among business units. The statement regarding integrity and trust was considered as being too inwardly focused on the relation between managers and employees. New corporate values resulted:

- "Dedication to every client's success,
- Innovation that matters—for our company and the world,
- Trust and personal responsibility in all relationships."

In the following, gaps between current practices and the set of new values were identified. IBM learned some surprising lessons. One of the surprising results of the ValuesJam was the employees' awareness of the company's contributions to society at large, as David Yaun, at that time Vice President of IBMs communications programs, remarked: "We'd never considered how strongly people feel about IBM's role in shaping the modern world and their pride in the fact that our technology helped man get to the moon. . ." (Yaun, 2006).

The years to follow turned out to be some of the most successful in the history of the company. While it continued to change its business model towards services and consulting, it also continued to be the world leader in number of US patents, and became acknowledged as one of the worldwide leading brands. While several factors contributed to this success, including a global engagement in growth markets, Palmisano attributes part of this success to the ValuesJam: "Instead of galvanizing people through fear of failure, you have to galvanize them through hope and aspiration. You lay out the opportunity to become a great company again . . . And you hope people feel the same need, the urgency you do, to get there. Well, I think IBMers today do feel that urgency. Maybe the jam's greatest contribution was to make that fact unambiguously clear to all of us, very visibly, in public" (Palmisano, 2004).

The ValuesJam represents an approach to strategic stakeholder management that focuses on employees as a crucial group of internal stakeholders. Instead of seeing employees just as those who do their job with and for the company, they were asked to help in renewing IBM's corporate culture and normative foundations. It became apparent that "IBMers" are dedicated to their clients' success and the company's innovation performance and that these values are not only helping to integrate IBM's internal stakeholders, but that they also motivate a values-based shift in the way the company addresses the market and its customers, as Yaun (2016) confirmed: "It

allowed us to invest differently in the type of relationship we were going to have with the people who bought goods and services from us . . . This shift in mind set was really, really important."

11.4 Impact and Conclusions for Stakeholder Management

Stakeholder management implies a shift from shareholder benefits as primary objective of an organisation to the consideration of diverse stakeholder groups. This requires a situated analysis and an iterative approach to defining and carrying out appropriate measures to adequately integrate stakeholder considerations in management tasks and activities. The shift from negotiation of interests to values-based management suggests several implications and leads to shifts in classical and current debates in strategic management. New methods are required to adequately engage and integrate stakeholders in strategic decision making without compromising the operational abilities of companies, or even increasing their agility.

In this section the impact of these two shifts for strategic management is discussed. The first shift leads to the primacy of stakeholder management and the second to a values-based view on stakeholder management. Three forms of stakeholder management are distinguished (Sect. 11.4.1), followed by a discussion of how to clarify and develop stakeholder values (Sect. 11.4.2) and exemplified by how to reframe and adapt methods of analysis and management. Concluding remarks (Sect. 11.5) line out issues for future research and argue for a shift from focussing on short-lived attitudes and interests to long-term objectives.

11.4.1 Values-Based Stakeholder Management

The previous discussion made the case for a shift from treating stakeholder groups as a constraint to business operations and strategy in the corporate planning tradition, to actively engaging stakeholders as "complex and multifaceted individuals" (Freeman & McVea, 2001: 6) and carefully managing the various relationships to them. A corresponding difference distinguishes traditional, retrospective market research (e.g. based on surveys and focus groups) from future-oriented approaches, actively engaging customers, and non-customers in co-creative activities enabling a high level of interaction and learning (Steinhoff & Breuer, 2013). With respect to stakeholder theory, Hörisch, Freeman, and Schaltegger (2014) pick up a differentiation by Donaldson and Preston (1995) between a descriptive/empirical, instrumental, and normative focus of stakeholder research and theory. While some theorists examined empirically how companies are managed and how they identify relevant stakeholders, instrumental approaches examine the impact of stakeholder management on achieving given objectives (such as increasing revenues or capturing knowledge). Normative accounts reflect upon the inevitable ethical dimension in

managing stakeholder relations and stress the normative dimension in defining corporate objectives and purpose. Acknowledging the different research traditions Hörisch et al. (2014) argue for an integrative research approach that works with the inextricable links between the three lines of theorizing. A values-based approach to managing stakeholder relations can follow up on these differentiations, but focuses on the practices that an organisation applies to deal with stakeholder values.

For strategic management, Harrison and St. John (1997: 14) distinguish buffering from bridging activities. Buffering represents the traditional approach of creating barriers or buffers to reduce negative stakeholder impacts through measures such as traditional market research, public relations and advertising, and compliance with regulation. Bridging represents a proactive approach to form relationships, seek mutual benefits, and even shared values and reinforce mutual interdependence (also called stakeholder *engagement* rather than management, e.g. Andriof & Waddock, 2002).

Combining the approaches of buffering versus bridging with the three management levels of instrumental, strategic, and normative management (section 1) three practices of managing stakeholder relations in organisations can be distinguished: defensive (preparing against potential aversive developments and mitigating risks), integrative (actively involving stakeholder interests and values in strategic decisions), and overarching (collaborative development of future oriented values).

- **Defensive**: "Buffering" the negative effects of the relevant environments leads to defensive forms of stakeholder management with a focus on capturing and addressing stakeholder interests, mainly through means of market research and marketing instruments. Knowing the relevant interests in the business environment is essential to address customer concerns, to avoid proxy wars of NGOs criticizing questionable practices, to prepare for upcoming regulation or to mitigate protests from harmed individuals. Oftentimes third party professionals are hired in order to conduct research on defined customer and stakeholder segments, and to install instrumental measures to mitigate risks and fight external threats.
- **Integrative**: "Bridging" leads to strategic partnerships between a company and its stakeholders. Stakeholders, as individuals or representatives, are engaged across the whole range of strategic management decisions and are not limited to advertising, PR and marketing. They can also be involved in issues, for instance, of segmentation, innovation management, and organisational development. Since not everyone can be involved, one essential concern of this approach is to ensure the quality of stakeholder representatives and their contributions, assuring independent and qualified intermediaries. The challenge involves ensuring that intermediaries are knowledgeable, capable, and willing to speak up for the unheard stakeholders they represent. Stakeholder interests, but also more far-reaching values are considered to achieve strategic advantages and competitive differentiation (e.g. positioning a brand).
- **Overarching**: Normative management is set to ensure the survival of a firm by providing reliable orientation and direction in a dynamically changing environment. Values provide an overarching direction and situated relief from frustrations due to heterogeneous and potentially conflicting interests. Making sense of

the organisation and its environment and providing a cause for anyone involved, values-based stakeholder management is less of a complex processing of distributed stakeholder needs, interests, and values, but rather the process of developing shared values, articulating values-based directives (e.g. in the form of vision, mission, and purpose statements), and cultivating values as such. Reaching beyond currently diagnosed stakeholder interests and their mediation, values-based stakeholder management is about the collaborative formation of future-oriented values that direct the development of the company as well as what it stands for in the present and in a desirable state of the world that it engages for.

Even though values matter for each of these forms of stakeholder management, their impact and potential increases as we are moving from the instrumental to the strategic and finally the normative management level. As seen in the case of the Tata Nano, even for rather instrumental decisions, such as where and how to build a plant and how to market a new product, initially hidden values may turn into adverse interests that should be anticipated ex ante and during business development processes to avoid misled investments and negative stakeholder value impacts (Dreyer, Lüdeke-Freund, Hamann, & Faccer, 2017). For strategic decisions of business model development or brand positioning not only brand values are to be communicated, but, stakeholder values must be uncovered and integrated and its potentials for business model innovation must be considered. Finally, as part of society, seeking a contextual identity and a "sense of mission", actively engaging stakeholders and developing a normative foundation based on heterogeneous stakeholder values becomes indispensable. However, in each case stakeholder values may not be evident from the outset.

11.4.2 Clarification of Stakeholder Values

Values-based stakeholder management requires a review, clarification, and ongoing development of values of different stakeholder groups (Breuer & Lüdeke-Freund, 2017a; Freeman & Auster, 2015): Clarification of shared or divergent values, creative collaboration, and conversation become an equally important part of stakeholder management, as the negotiation of interests already is.

Values are not always evident to their beholders. Even on a personal level, serious efforts from in-depth reflection and introspection to professional coaching and inquiry may be required to understand what one actually cares about. From the viewpoint of a workgroup we may not only question in how far specific activities or projects support or prioritize associated values, but also in how far a shared understanding of these values has actually been established. Values can be explored through individual reflection on what one cares about, through collaborative efforts, as in the IBM ValuesJam described above, or even advanced empirical research methods (see Breuer & Lüdeke-Freund, 2017a: 187–191 on the ethnographic exploration of values). Methods to unveil customer preferences through social research,

futures research, and human-centred design may be re-purposed to focus on stakeholders and values.

Even if individual and organisational values are known and accepted upon, alignment between the two will remain temporarily. Companies strive to achieve such alignment or "value fit" through values-based recruiting of new staff, through internal marketing and incentive systems. To not just represent, but actively engage stakeholders in meaningful encounters, Freeman and Auster proposed a "Values through Conversation" approach (Auster & Freeman, 2013; Freeman & Auster, 2015). This approach emphasizes the process over the content of stated values, and suggests applying four types of "values conversations" as a basis for reflection and critical debate. First, introspection is used to question habitual routines, processes, norms, and paradigmatic assumptions. Benefits of such examinations of organizational values and purposes include "breakthrough insights, learning, avoiding reinventing the wheel, sharing best practices, and time for restoration and renewal" (Auster & Freeman, 2013: 42). Second, historical inquiry may uncover path dependencies including phenomena such as purpose or mission drift. Third, reviewing "connectedness values" (Auster & Freeman, 2013: 44f) directs attention to social relations, leadership styles, and processes among internal and external stakeholders. Finally, conversation on aspirational values focuses on how a greater good makes a positive difference to stakeholders and provides the living basis for vision, mission, and purpose statements that normative management is concerned with. Auster and Freeman (2013: 47; in reference to Wheeler & Sillanpää, 1997) highlight companies such as Whole Foods Markets and Johnson and Johnson as examples for companies that "incorporate broad value creation for multiple stakeholders on multiple levels including customers and employees, and shareholders and also expanding that stakeholder network to include the greater good—other living and non-living species, future generations, and the viability of the planet".

11.4.3 Integration of Stakeholder Values in Strategic Management Methods

Accounting for a multitude of actors and associated values that impact normative and strategic management requires a values-based reframing of strategic management methods. Different formats from simple workshops to regular retreats and continuous online formats are used to stir up and channel such conversations. Methods like values-based business modelling can help to translate values into the identification and utilization of new business opportunities.

Applying a values-based view each of four constitutive steps in a stakeholder management process is taken in a slightly different manner:

1. Any kind of stakeholder management needs to identify stakeholders, e.g. by mapping everyone who may contribute or could be affected. Values-based **identification** will include stakeholders pursuing the same values, purpose,

mission, or vision (for instance, pursuing sustainable individual mobility, sustainable energy providers will be identified as a potential strategic partner). The World Health Organisation became a partner for Indian Aravind's eye care hospitals who are not limiting themselves to the strategic aspiration to provide best-in-class eye-care, but follow their values-based mission of eradicating needless blindness. A company dedicated to pro-environmental values might ally with suppliers and partners following similar normative orientations, even if competitors within the same industry are part of such a coalition, like the sustainable apparel coalition (apparelcoalition.org).

2. To reduce complexity, stakeholders need to be **prioritized** with respect to their importance for a project or strategy. A typical approach is mapping stakeholders by attitude, distinguishing between allies, neutral stakeholders and opponents, or creating portfolios with respect to criteria such as influence, conflict potential, or positive and negative attitude towards a project. Values-based prioritization takes shared values into account, therefore reaching beyond the consideration of object-specific and context-dependant attitudes. An innovation project that is dedicated to enhance privacy in online encounters may prioritize its interpretation of such a value (see Breuer & Lüdeke-Freund, 2017a, 189f on different notions of privacy) against competing values of usability or accessibility. The attention of project protagonists will be drawn to actors or alliances (such as the online privacy alliance, www.privacyalliance.org) that share their striving for the same notions of what is desirable, even if those actors are outside their previously established frame of reference. An organisation conducting a ValuesJam will follow up the redefinition of its values by screening, engaging with and providing resources to those employees that are willing to put the new values set into practice. In the case of IBM "dedication to every client's success" (IBM, 2018) was an essential corporate value that resulted from the Jam, prioritizing long-term client relationships over transactional ways of dealing with customers. "It allowed us to invest differently in the type of relationship we were going to have with the people who bought goods and services from us" (Yaun, 2016; cf. Breuer & Lüdeke-Freund, 2017a: 82). A hundred million dollar "bet on trust" project was issued, enabling managers to flexibly address client requests through an annual budget of 5000 dollar.
3. **Analysis** of stakeholder goals to be addressed in a project or strategy will review and explore stakeholder values (as second-order desires) in addition to immediate goals, interests, needs, or desires. Business anthropological methods of contextual inquiry and participating observation may help to unveil stakeholder values in critical situations like the one described in the Tata Nano case above. Besides, attending to values in addition to interest enables building an effectual network of self-selected stakeholders (Sarasvathy, 2008) that commit to and engage for a new project or strategy.
4. **Observing** stakeholders and iteratively reviewing intermediate results of stakeholder analysis and engagement, values provide a reference for mid-term and long-term observation of the stakeholder ecosystem, values, and interests to be addressed. Managing impact and even unintended consequences becomes key.

Notions of the desirable impact strategic management decisions and the probability of their success as well as any form of stakeholder interaction. However, deliberately managing and engaging stakeholders based on their values is never all or nothing. Companies may experiment first with consulting stakeholder advisory boards before integrating their contributions as constitutive moments of strategic decision-making. During such experimentation, quantitative impacts will be hard to measure, but cultural sensitivity for how a company maintains and manages its purpose in spite of changing environments, might convince top management to further pursue values-based stakeholder management.

11.5 Conclusions

Moving towards values-based stakeholder management requires a double-shift in perspective. The first shift leads to the primacy of stakeholder management, i.e. an understanding of management as being concerned about *all* relevant stakeholder groups and the effects they have on a company's business activities, and vice versa. The second shift leads to a values-based view on stakeholder management. Values, other than situational attitudes or short-lived interests, represent the fundamental notions of the desirable of an organisation or individual and thus the most fundamental level on which companies can get into contact with their stakeholders. Values-based stakeholder management is about identifying and actively working with the values systems of a company, its members and all other stakeholders. Moving from interests, which is the typical notion applied in stakeholder management in theory and practice, to values requires a maybe radical but definitively worthwhile effort. A values-based approach to stakeholder management ensures that not only short-lived attitudes and interests, and the best deal that bilateral negotiators may get, determine the course of strategic decisions. Instead, it reinforces long-term orientations taking hold. It also increases the chances that business models become viable in the long run and cater to what we care about, including the future generations that inherit some of these values while they develop their own culture.

The shift to values-based stakeholder management builds on several conceptual distinctions and has some methodical implications. This chapter proposed three forms of stakeholder management (defensive, integrative, and overarching), discussed how to clarify and develop stakeholder values (e.g. by means of ongoing "values conversations"; Freeman & Auster, 2015) and exemplified that methods of stakeholder analysis and management must be reframed and adapted (e.g. as an element of values-based business modelling; Breuer & Lüdeke-Freund, 2017a). Altogether, these aspects provide a sketch of a new framework to stakeholder management from a values-based point of view.

While strategic managers might interpret the implications of this new framework (such as reframing existing methods) as a burden or additional effort without any gain, the values-based view accentuates the enabling potentials of values rather than restrictive or limiting implications. The case of IBM illustrates that identifying and

making transparent the values of an organization and its members does not only serve purposes of internal alignment, but can directly translate into new strategic approaches in terms of how a company sees and addresses its customers and pursues innovations that matter to both employees and customers. IBM's ValuesJam and the values conversations it motivated were thus motivating a shift in perspective on the company's most important stakeholders, its employees and customers, and were also stabilizing this very large and globally acting company while it was on a transition to become a service and consulting corporation.

This and further cases, as well as what we already learned about values-based innovation management (Breuer & Lüdeke-Freund, 2017a), illustrate that stakeholders are not inhibitors but facilitators of future-oriented corporate development. Values-based stakeholder management is a means to activate these facilitators for the sake of companies and society.

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Chapter 12
What Corporate Strategists Can Learn from International Multi-Stakeholder Collaboration: A Conceptual Architecture for Transformative Change

Petra Kuenkel

12.1 From Global Challenges to Strategic Opportunities

Many people consider it a historical date: September 25th 2015 saw an agreement of 195 member countries of the United Nations to adopt what is known as 17 "Sustainable Development Goals (SDGs)," a joint commitment to end poverty, ensure prosperity for all and protect the integrity of the planet (United Nations, 2014). It has become clear since then that implementing the new global "Agenda 2030" will require collaboration at scale between governments, corporations, and civil society (Kuenkel & Schaefer, 2013). The December 2015 climate summit in Paris invited hope that there is a growing global awareness carried forward by visionary, concerned, and committed people from companies, cities, research institutions, governments, and civil society organizations. When in 2017 the president of the United States stepped out of the Global Climate Agreement, the US saw an unprecedented act of published solidarity by American companies promising to keep up with the international agreements. The Sustainable Development Goals (SDGs), officially "Transforming Our World: The 2030 Agenda for Sustainable Development," provide a global framework for the world's actors to effect significant large system change. Created through broad intergovernmental agreement, resulting from extensive stakeholder consultative processes, the 17 SDGs with their 169 targets are aspirational, global, comprehensive, and highly interconnected (Le Blanc, 2015). These goals guide numerous sustainability initiatives at multiple levels. They focus on globally intractable issues such as complete eradication of poverty and hunger, good health, and wellbeing for all, gender equality, and reduced inequality, among other laudable and exceedingly difficult goals. Companies are increasingly part of these multi-stakeholder initiatives.

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But despite the rise in awareness and collective action, the current state of the world is far away from the envisaged sustainability. Researchers from the Stockholm Resilience Centre have suggested nine interdependent chemical and biological planetary boundaries, namely: climate change, ocean acidification, stratospheric ozone, biogeochemical nitrogen and phosphorus, global freshwater use, biological diversity, chemical pollution, and atmospheric aerosol loading (Rockström et al., 2009).[1] They reckon that humankind has already transgressed four of these boundaries and that the transgression of one may accelerate the transgression of others. In addition, territorial wars as well as civil wars are raging in many countries. Nations that began to transform into democracies after the Arab Spring have a long way to go to achieve the necessary societal and economic stability. Millions of people are migrating for a variety of reasons; for example, to find places of peace, or better economic prosperity, or as a result of the effects of climate change. In many countries, the gap between rich and poor is widening. Hence, aggravated sustainability challenges are increasingly not only affecting corporations, but they have also arrived at the desk of corporate strategists.

This chapter suggests that corporate strategists can learn from international multi-stakeholder sustainability initiatives about how to shift companies towards sustainable world-making and how to manage complex change around pressing sustainability challenges. Based on successful cases of international collaboration it introduces a radically new approach to strategy: the concept of *stewarding transformative change collectively*. The chapter looks at multi-stakeholder collaboration as an approach to navigating complex change in cross-institutional settings (Boisot & McKelvey, 2011) and extracts major insights from successful initiatives. It reflects on transformative design principles that made these initiatives successful and concludes that bringing collaborative human competencies back into strategy design and implementation must be at the forefront of sustainability-oriented strategic management. The chapter suggests redefining sustainability-oriented strategic management in the context of the Global Goals as the achievement of a dynamic vitality: for the company, the wellbeing of internal stakeholders, the financial viability of the company and the society. On this basis a conceptual architecture is introduced that functions as a meta-level guidance to improve existing strategic management frameworks. Using various examples from promising strategic shifts in companies, it illustrates how the simplicity—not simplification—of a new model can cut through complexity and successfully inform strategic management in a collaborative approach (Burke, Wilson, & Salas, 2005). The chapter concludes with an outlook on how transformative processes can accelerate sustainability transformations.

[1]For the "Planetary Boundaries" see also Chap. 1.

12.2 The Paradigm Shift: Businesses as Sustainable World-Makers

The need for strategically engaging with sustainability is increasingly accepted in the corporate world, as businesses recognize that without a major shift, unsustainable global trends will impact them over the next 20 years (Hayward et al., 2013; KPMG International, 2012). In a global survey of more than a thousand CEOs, 84% (HayGroup, 2011) were convinced that the corporate world could have a decisive positive impact on managing global sustainability challenges, if there was a strong **commitment to collaboration across sectors** and to collective efforts for transformation. Because the most pressing problems of the twenty-first century are all connected and interdependent, they cannot be interpreted or addressed in isolation. The major world challenges captured in the 17 Global Goals are systemic in nature and require the driving of collective impact across societal stakeholder groups (Hanleybrown, Kania, & Kramer, 2012), regardless of whether they relate to energy, climate, economic activities, sustainable value chains, financial systems, or food security. No single actor has all the solutions, but each actor may essentially contribute a parcel of knowledge, a puzzle piece that counts. Addressing sustainability challenges will inevitably lead to multiple actors needing to change behavior and action. This includes actors that are not under the influence of corporations, such as governments, citizens, or civil society organizations. Additionally, in order to find solutions for sustainability challenges one company alone, even if it is large and powerful, is often not influential enough to induce the changes necessary. Hence, **strategic frameworks that consider sustainability need to include issues, actors, and factors that are not only under the control of the company, yet need to be influenced in order to achieve the envisaged results**.

An interesting example that illustrates this challenge can be seen in the growing attempt of companies to introduce sustainable sourcing practices. The strategic challenges are obvious: for example, in the cocoa sector, as a result of enormous public pressure to abolish child labor and secure a living income for small cocoa farmers, many companies have embarked on strategies to increase the sourcing of sustainable cocoa. While this may initially have come across as a simple technical challenge of securing sustainably certified cocoa, the last five years have seen an enormous increase in the participation of companies in multi-stakeholder initiatives around sustainable cocoa production that go far beyond company-internal measures. In the Ivory Coast, the country from which more than 40% of the world's cocoa is sourced, not less than 23 initiatives have been started by corporations, with the largest volumes coming from corporations such as Mars, Mondelez, and Nestle.[2] More than 10 explicit multi-stakeholder initiatives aim to strengthen the livelihood

[2]Source of information: personal interview with a member of the German Initiative for Sustainable Cocoa (GISCO).

of farmers in the country.[3] In addition, many companies have joined multi-stakeholder platforms such as the German, Austrian, or Swiss sustainable cocoa forum. The adoption rate of voluntary sustainability standards like Rainforest Alliance, UtzKapeh, and Fairtrade (among others) has tremendously increased, but many actors complain that the root problems have not been solved. The vicious cycles between poverty, dependency, and a fragile state mount to a typical intractable challenge that companies cannot address solely within their company internal procedures. The competitive approach alone to securing procurement does not yield the necessary results—precompetitive cooperation between corporations becomes important in order to gain influences beyond the company's reach. A study conducted hints to the fact that a more holistic approach is needed that not only increases the negotiation power of farmers, but also helps cocoa-producing nations to collaborate in a pre-competitive way (Hütz-Adams, Huber, Knoke, Morazan, & Mürlebach, 2016). Similarly, in the coffee value chain, many companies not only embark on strategies that combine sustainable sourcing practices and improving the life of small coffee farmers, but join pre-competitive cooperation with other companies in complex multi-stakeholder platforms. The *Global Coffee Platform*, inaugurated in October 2016, is an inclusive multi-stakeholder platform with the goal of creating coherence among the sustainability activities of many diverse stakeholders from the public, the private, and the civil society sectors, and achieving a thriving and sustainable global coffee sector.[4] The platform commits to a bottom-up approach that supports actors from public and private sectors in coffee-producing countries to develop a common vision that addresses critical sustainability challenges in coffee production and brings national issues into a global agenda for sustainable coffee production. The ultimate aim is to improve the livelihoods of coffee farming communities around the world, and to keep the natural environment of coffee production areas intact. It is a suitable example of how a complex global challenge is addressed with multiple actors in a mix between local action and global reach. Both the cocoa initiatives and the coffee platform are examples of how to gradually build a strategic global and collaborative transformation system, by taking on one commodity and working towards the implementation of SDG 12 on sustainable production and consumption.

12.2.1 New Forms of Collaboration

Multi-stakeholder collaboration is a complex answer to complex challenges. It necessarily integrates many different perspectives on problem definition, means to resolution, and what constitutes success. This new form of collaboration will impact

[3]Source of information: personal interview with a member of the German Initiative for Sustainable Cocoa (GISCO).

[4]See: http://www.globalcoffeeplatform.org/about/our-history accessed on 1st July 2017.

the way companies operate in future. It will much likely influence their approaches to strategic management. No matter which framework companies use for their strategic management process, they will inevitably come across new expectations, notably those that insist that the role of businesses widens to include employees', societies', suppliers', and global wellbeing as much as stakeholder engagement or pre-competitive cooperation. Furthermore, the issue of purpose—the contribution of the corporate world to the Global Goals in the form of creating collective value (Donaldson & Walsh, 2015)—is likely to move on the strategic agenda of business sooner rather than later.

An article in the Harvard Business Review (Porter & Kramer, 2011) sparked an ongoing scholarly and practitioner discourse on shared value creation as a corporate strategy to create business value that at the same time furthers social value by collaborating with civil society organizations.[5] It is increasingly clear that such approaches go far beyond corporate philanthropic engagement and even Corporate Social Responsibility. This hints to a strategic understanding of addressing sustainability challenges with company specific measures as well as collaborative approaches with competitors or other societal stakeholders groups. Regardless of whether the task is creating responsible supply chains, developing innovative technology for climate adaptation, or coordinating better water resource management, multi-stakeholder collaborations not only create learning advantages for companies, but may also conserve time and costs. Hence, if more and more companies engage in collaborative sustainability initiatives in order to address issues of common concern, ranging from water scarcity challenges to sustainable supply chains, they do not do this as part of their corporate philanthropy: most often they strategically consider this the only way to sustain their business in the long run. There are many examples for such strategic moves: European coffee roasters and traders have long understood that, in order to stay in business, they need to be able to source sustainable coffee—hence their engagement in stakeholder initiatives. German chocolate manufactures are eager to contribute to an improvement of living conditions of cocoa farmers in West Africa, as only this will help them secure cocoa beans in the long-run. International beverage companies have a special interest to improve water resource management globally and locally, as they are dependent on well-managed water resources without social conflicts. International textile traders have been severely targeted by international campaigning NGOs; they have been made responsible for deteriorating working conditions in the Asian textile industry. Increasingly they not only engage in multi-stakeholder initiatives to improve the situation, but also add sustainable textiles to their product ranges.

The literature defines multi-stakeholder initiatives in many different ways using varied terminology. Such collaborations have been called multi-stakeholder partnerships, multi-stakeholder platforms, multi-stakeholder consultation, multi-stakeholder dialogues, and multi-stakeholder governance (Biermann, Man-san Chan, & Pattberg, 2007; Kuenkel, 2015, 2016; Lozano, 2007). The term multi-stakeholder

[5]For a critical discussion of the "Shared Value" concept see Chap. 4.

collaboration is the common ground behind these different terms. It can be defined as the attempt to solve problems collaboratively, or jointly drive change for the common good, across the boundaries of companies, societal sectors, and institutions. They can be long-term initiatives or short-term target-oriented partnerships, and take place within countries or in transnational arrangement. Multi-stakeholder collaboration is an emerging field of practice that is characterized by:

- Multiple actors, often with conflicting interests, who are not used to working together, and need to align around an issue of common concern. They need to identify joint improvement approaches (e.g. expanding the production and marketing of sustainably produced coffee, improving water resource management, protecting natural resources, building a sustainable societal health system, etc.), and implement them collaboratively or at least coherently. **They need to jointly advance collaborative interaction patterns that lead to tangible improvements**.
- A form of collaborative strategy and collective action, where effectiveness depends on engaging multiple actors, with different levels of power and access to resources, who—at times—have limited degrees of trust towards each other. **They need to build functional collaboration systems that enhance joined delivery and outcome orientation**.
- Multi-dimensional problems, which require solutions that are *complicated* (e.g. ensuring good practices in the production of the commodity); *complex* (e.g. requiring a testing and learning approach, emerging solutions, and innovation for scalability) and *chaotic* (e.g. subject to unforeseen market or political influences) (see also Snowden & Boone, 2007). **Multiple actors need to jointly steward transformative change in volatile environments while establishing a strong learning culture**.

Multi-stakeholder collaboration takes place in a non-hierarchical setting without discretionary power of stakeholders over each other. Power differences are common, however the utilization of power of one stakeholder group over other stakeholders inevitably leads to a termination of the collaboration, and subsequently not to an achievement of the goals. Bringing about change collectively in multi-stakeholder collaboration is a new skill to be acquired. It becomes the capacity of a collective of actors, composed of individuals representing different organizations or institutions, equipped with the collaborative capacity to steward transformative change that benefits society, the collaborating stakeholders, *and* the company. Multi-stakeholder collaboration initiatives can therefore be understood as laboratories for a new strategic concept: *stewarding transformative change collectively in multi-actor settings*. They demonstrate a new way of shifting societal systems and subsystems into improved functionality, and subsequently better sustainability. This new skill, the ability to steward complex change with a diversity of actors aligned around an overarching goal, is highly relevant for a radically new approach to strategic management. It mirrors the future of most companies as agile network of dynamic and self-driven actors that need to be engaged in strategic and transformative change.

12.2.2 The Fundamental Shifts Needed

If companies aspire to move sustainability centre stage and strategically integrate the engagement for the Global Goals into their core business strategies, they are confronted with an enormous strategic management challenge (Rondinelli & Berry, 2000) for a number of reasons. *First*, the 17 clearly interdependent highly complex goals with 169 targets are difficult to comprehend and even more difficult to operationalize. *Second*, linking business strategies with the goals questions the traditionally more narrow focus of strategic management on maintaining competitive advantage, continuous growth and optimization of resource utilization for clearly defined business performance. *Third*, for corporations that are still largely dominated by linear thinking, clear cause and effect relations, as well as performance enhancements in hierarchical settings, the internal and external collaborative stakeholder engagement required can seem rather complex, uncertain and difficult to manage. *Fourth*, goal achievement is dependent on so many factors and actors beyond a company's control that the measurement of progress is difficult.

Hence, the shift towards strategic management for sustainability and towards a corporate contribution to achieving the Global Goals must necessarily include the widening of frameworks and practices. Instead of focusing only on the firm's long-term business performance, corporate strategists need to look for an alignment between company and societal goals. This is an ambiguous task and involves considerable risks, because doing good for the (global) society must inevitably also lead to maintaining or enhancing the economic viability—or even more so, the *vitality*—of the company. The concept of a company's vitality is multi-faceted: it includes the wellbeing of employees, the suppliers and customers, while maintaining and advancing the financial viability. But it also extends to the company's contribution to societal and even global wellbeing. Conceptualizing the strategic integration of economic, environmental, and social performance beyond compliance into vitality contribution is a managerial learning journey with unpredictable outcomes. It adds to the complexity of managing change in volatile business environments the complexity of collaboration. But this is not about making strategic frameworks more complicated by adding additional factors to consider, it is about making a simple, yet at the same time fundamental shift in strategy by looking at the company as a contributor to sustainable world-making. It means to stay in business *and* become a partner of a sustainable future.

The fundamental shifts for strategic management include:

- Moving from *outperforming competitors only to seeking strategic alliance for positive impact:* The above examples have shown that many companies in the commodity sector, which aim at sustainable supply chains, begin to collaborate with competitors in a pre-competitive space. Another example is the pre-competitive collaboration between competing beverage companies to work towards integrated water resource management or river rehabilitation in countries where they are most active. Strategic alliances leverage positive impact on enabling conditions and government regulations that help improve the lives of

workers, small producers, communities, and citizens. They also ensure long-term supply of resources.
- Moving from *short-term company returns to seeking collective and societal value:* In the cocoa sector a number of companies have begun to work closely in projects with the government of Ivory Coast—the main cocoa producing country—and civil society organizations. This is not philanthropy, again, it is about ensuring that small farmers can stay in cocoa-production and companies get their long-term cocoa supply.
- Moving from *looking at sustainability as compliance issue to looking at the company's contribution to the global (as well as local) future*. For example, future-oriented mining companies look at their social and environmental impact not anymore as a mere compliance issue, but seek to embed their operations in a region's economic and social advancements.

In sustainability-oriented strategic management, **the business of business is no longer just doing business, but ensuring the long-term (global to local) conditions for being able to do business**. It is the call for companies to include their contribution to societal and global value creation into their core strategic processes. For this, the practice of cross-sector and multi-stakeholder collaboration is a brilliant learning arena as it often constitutes a way of addressing complex challenges or wicked problems (Batie, 2008; Conklin, 2006), and therefore has the potential to influence current practices in planning and strategic management. This chapter argues that a more profound shift may drive a breakthrough towards redefining the role of business as sustainable world-makers that take the future of humankind and the planet to heart. The following sections show how companies can draw on existing knowledge from successful multi-stakeholder sustainability initiatives, and how they can transfer these learnings for their new approach to sustainability-oriented strategic management.

12.3 Design Principles from Successful Multi-Stakeholder Collaboration Initiatives

At the core of most sustainability initiatives lies the collaboration between various societal stakeholders in order to shift an unhealthy, often dysfunctional pattern of human behavior into a more sustainable pattern of human interaction that finally benefits all as well as the environment. Such transformative change attempts are complex in nature. They require different types of interventions than those typically present in the strategic frameworks of companies. Often, change interventions emerge as "organic" process based on iterative learning that involves multiple pathways and practices. They are decidedly nonlinear and the "right way" to bring about the change envisaged is a matter of negotiation and dialogue. Given the complexity of the system of multiple actors and multiple efforts at multiple levels, it is clear that multiple different approaches need to complement each other. But the

collective actions of various different stakeholders can only merge into coherent patterns of action, when strategic interventions are carefully co-designed as part of an overall transformation in an iterative way. Multi-stakeholder sustainability initiatives cannot do without monitoring systems or performance indicators. But these are tools accompanying an otherwise agile process of actors learning to negotiate collaborative pathways into the future. The practice of multi-stakeholder collaboration challenges the assumption that change can be managed, planned, and monitored. It suggests that transformative change can only be stewarded by different actors collectively. They need to integrate multiple approaches and stay open to collective learning.

Multi-stakeholder sustainability initiatives need to find agile ways of dealing with their inherent complexity and accept the fact that the intractable challenges they aim to address (such as global value chains, sustainable water resource management, or climate mitigation) depend on many different solutions. Key stakeholders in sustainability initiatives need to navigate through internal and external conflicts, lingering mistrust, and severe differences in opinions. They need to develop strategies in multi-actor settings, across institutional boundaries, mind-sets, and world-views. Leading successful projects in multi-stakeholder settings requires a broad skill set in the area of dialogue and collaboration, engagement and collective intelligence. Another characteristic of such complex sustainability initiatives is that they thrive on network connectivity. For many companies the fact that they regularly meet with stakeholders from government or civil society organisations means that they are building networks into a world of impact that they would not normally have access to. Additionally, sustainability initiatives become successful when people begin to know each other as people, when they can harness the power of mutual support across institutions.

In a sequence of interviews with global change agents in sustainability initiative (Kuenkel, 2015), 80% responded to the question of "what made the multi-stakeholder collaboration process successful or fail": the personality and ability of certain actors. Hence, while impact is measured in technical facts and figures, the factors for collaborative success are attributed to personality traits. Strategic sustainability issues are technical, yet the agents of transformation are human. It is human competency that makes collaborative multi-stakeholder approaches impactful. This is evenly important for sustainable strategic management.

The identification of factors influencing the success of multi-stakeholder collaborations can inform the practice of strategic management. They can become a meta-guidance for stewarding transformative change towards sustainable business practice. Designed in the right way, they shift or rearrange existing societal settings and organizational boundaries (Lozano, 2007) into better functional interaction patterns that increase not only the vitality of the company, but also that of the society. The discourse on success factors is considered an important contribution to the role of multi-stakeholder collaboration in the context of sustainability (Beisheim, 2011; Brouwer & Woodhill, 2015; Kuenkel, Gerlach, & Frieg, 2011; Pattberg & Widerberg, 2014). However, they need to be anchored in a deeper understanding of the multiple levels of system dynamics in complex socio-ecological systems (Boisot & McKelvey, 2011). The conceptual discourse around how societal and global

change processes achieve collective impact shows how a more systemic perspective is helpful in analyzing multi-stakeholder sustainability (Hanleybrown et al., 2012). Derived from extensive practitioner exchange as well as literature review,[6] the following six design principles are reflecting the discourse on success factors and are evenly relevant for sustainable strategic management.

12.3.1 Design Principle 1: Generating Future Possibilities Through Co-designing Strategy

Successful multi-stakeholder initiatives tap into people's desire and competency to collectively shape the future despite different interests and world-views. While multi-stakeholder initiatives are most often started by a small group of visionary actors (Beisheim, 2011), they gradually, in a step-by-step process, engage more and more stakeholders (Kuenkel et al., 2011) who contribute to shaping the goal. Because there is—despite differences in power—most often no disciplinary hierarchy between collaborating stakeholders from different institutions, strategy formation is a multi-layered process that begins with a core group, but eventually needs to include all relevant stakeholders (Kuenkel et al., 2011). The core group's task is to create momentum, test the resonance for an overall coherent goal, and build a strategy process that relies on considerable and extensive consultation to generate agreed-upon action planning (Pattberg & Widerberg, 2014). People engage when they see the bigger picture, a win-win situation (Beisheim, 2011) or a shared value, and when they understand how they can contribute to positive change. Co-designing strategy is a prerequisite for successful implementation.

12.3.2 Design Principle 2: Engaging Stakeholders Towards Cooperative Delivery

Successful multi-stakeholder initiatives build cohesive collaboration systems around issues of common concern. They need to engage for meaningful change, but they also need to make the purpose and boundary of the collaboration system clear. Stakeholders need to feel that they are part of something larger, but also know where they belong. Relationships require attention throughout these initiatives (Tennyson, 2011). Approaches how to deal with conflict need to be agreed upon, not imposed (Beisheim, 2011; Brouwer & Woodhill, 2015). Process management skills such as transparency and reliability of sequences of strategy meetings as well as result

[6]The list of design principles have been derived from practice experience, extensive practitioner exchange, research interviews into success factors as well as analysis of the academic discourse on global multi-stakeholder collaboration initiative (Kuenkel, 2017; Kuenkel & Aitken, 2015).

documentation are as important as content expertise (Kuenkel et al., 2011; Pattberg & Widerberg, 2014). Reliable processes contribute to continuous building of trust in a context of diverging interests. Clarity on process planning, authentic participation, and high quality communication ensures ownership. Managing stakeholder engagement, building networks, and encouraging collective action at various levels of implementation ensure cooperative delivery of results.

12.3.3 Design Principle 3: Fostering Innovation with Agility and Adaptation

Successful multi-stakeholder initiatives tap into the human desire to create new pathways and find innovative solutions to issues of common concern. Most complex collaboration efforts take place around content issues, and bring together experts from different stakeholder groups. Knowledge, expertise, complementary resources (Beisheim, 2011), and information need to be provided in a way that helps stakeholders and partners to see the full picture (Pattberg & Widerberg, 2014). Joint and participatory learning (Brouwer & Woodhill, 2015) mechanisms allow evaluation of results to be rapidly integrated into the next process steps (Kania & Kramer, 2011). At the outset, most stakeholder collaboration efforts are concerned with problem solving rather than with innovation. But with good process designs and the integration of different expertise, they often shift towards innovative approaches. Implementation plans including monitoring mechanisms are important, but must be open enough to respond to emergent opportunities. This includes the identification of best practices, benchmark insights from similar initiatives as well support for innovative entrepreneurial activities regarding the issue of common concern. Attending to creative ways of co-designing innovative approaches encourages self-driven and self-organized, but goal-aligned collective action. It fosters agility and the capacity to adapt to changing circumstances more quickly and makes knowledge management dynamic.

12.3.4 Design Principle 4: Unleashing Humanity Through Focusing on Collective Value

Most multi-stakeholder sustainability initiatives emerge from an ethical imperative, such as fairer distribution of resources, access to resources, overcoming economic imbalances, or safeguarding the natural environment. They are built on a growing sense of responsibility for the future, and the creation of shared or collective value (Donaldson & Walsh, 2015; Kania & Kramer, 2011). They often get their credibility from a common purpose and a concern that transcends vested interests. Authentically dealing with differences helps actors access their humanity. It contributes to a

greater awareness of the interconnections among disparities and the interdependencies among actions. An appreciative approach in collaboration, a balance of power and influence, and a continuous effort towards mutual understanding contribute to achieving collective value.

12.3.5 Design Principle 5: Harvesting Collective Intelligence Through Dialogic Communication

Successful multi-stakeholder initiatives build new human interaction systems across the boundaries of societal sectors and institutions. They connect people who do not know each other and would not normally work together. Progress is not built on convincing others to only follow a predefined goal, strategy, or action plan, but rather the willingness to negotiate pathways into the future (Kuenkel et al., 2011). Plans and agreements are important as much as milestones and key performance indicators, but these tools become transformative guidance rather than non-negotiable facts. Accepting the openness to adaptation is often an arduous process, but becomes a fertile ground for collective intelligence. High-quality communication and well-structured dialogue clearly make a multi-stakeholder initiative more credible. Trust develops in accordance with the reliability with which recommendations, inputs or learnings from different stakeholders are taken into account (Brouwer & Woodhill, 2015; Pattberg & Widerberg, 2014). Ensuring structured dialogue, establishing collaborative forms of governance, and developing agreed-upon iterative learning mechanisms contribute to harvesting collective intelligence.

12.3.6 Design Principle 6: Creating Wholeness Through Attention to Contextual Impact

Successful multi-stakeholder initiatives focus on tangible outcomes without losing the attention to contextual impact (Brouwer & Woodhill, 2015; Kuenkel et al., 2011; Pattberg & Widerberg, 2014; Tennyson, 2011). Success is more likely when various activities are understood in relation to each other and the collaboration's contribution to a larger system of transformation is clear. This includes the observation of relevant trends as much as continuous context and situational analysis. As a result, some initiatives seek out what can be called complementary meta-collaboration. This describes the collaboration between different multi-stakeholder collaboration initiatives that may not have been planned together, but that follow similar or complementary impact strategies. Attention to a larger impact is a multi-layered occurrence and important throughout the collaboration initiative, from the initial phase of engaging stakeholders to the scaling of the results. Appropriate context management,

Fig. 12.1 The conceptual architecture for strategy formation. Source adapted from Kuenkel (2019)

capacity development, and a regularly reviewed focus on impact contribute to successful contextual impact.

These above elaborated design principles are derived from a retrospective analysis, and built on the experience that combining them makes collaborative strategic change for sustainability—in multi-stakeholder settings—achieve the envisaged impact. However, to make the principles work, one needs to acknowledge the complex and dynamic balance between them. Figure 12.1 shows how they become a conceptual architecture for strategy formation. The principles create a pattern of interacting practices that enhance strategic collaboration for change. This results in successful sustainability initiatives.

12.4 A Transformative Approach to Strategy Development

Today, the need for cross-sector, cross-company, and cross-institutional collaboration is most apparent in the sourcing of cocoa, coffee, palm oil, flowers or other agricultural commodities, and is rapidly extending to textile, minerals, and other supply chains. But it can evenly be found in climate change mitigation, natural resource management, city development or technological, and social innovation.

Multi-stakeholder collaboration initiatives can be seen as an exemplary and radically new way of achieving strategic change. These initiatives require a conceptualization of strategic leadership of a different kind, as the impact rests on the leadership capability of a collective of actors who need to implement change jointly across sectors and/or institutions with no or little centralized coordination (Senge, Hamilton, & Kania, 2015). The purpose of multi-stakeholder collaboration efforts is to gradually shift complex human interaction systems into increasing "vitality" in continuous negotiation between the interests of individuals and the interest of the whole. This learning arena is also applicable to company internal sustainability strategies. More and more companies organize internally as dynamic networks (Laloux, 2014; Robertson, 2015), in which collectives of managers and employees develop the ability to drive transformative change in complex adaptive systems (Bernstein & Linsky, 2016; Kauffman, 2016) with multiple internal and external stakeholders.

12.4.1 Sustainability Strategies as Transformation Systems

What sustainability-oriented strategic management can learn from multi-stakeholder initiatives is that it is time to bring human beings back to where they belong: into the centre of attention as transformation agents towards sustainability. The above list of design principles can point toward certain practices of how to enact this, if they are connected with each other and with the underlying human competencies that need to be invigorated to engage with sustainability. Hence, the *collaboration literacy* increasingly displayed by actors in sustainability initiatives can be seen a pathway to *transformation literacy*—the skill to *steward transformative change collectively* across the boundaries of institutions, nations, sectors, and cultures—or within a company across the territories of different departments.

Looking at sustainability strategies as a way of creating complex, yet coherent *transformation systems* is an approach that needs to make its way into strategic management, if companies want to contribute to humankind's ability to stay within the "safe operating space" of the planetary boundaries (Rockström et al., 2009). Only if leaders from the corporate world together with cross-institutional actors become collectively transformative at scale, will they maintain the conditions for their own operations. They also need to accelerate the internal changes needed to shift companies towards sustainable business practices. Designing these complex strategies as nested and mutually consistent *transformation systems* has a hugely empowering effect for all actors. Waddell reports that stakeholders in the renewable energy field started to create new connections and collaborations as soon as they realized that they were all part of a larger change system (Waddell, 2016). Yet, even within companies, too many purported change initiatives take a pilot or single-issue approach, with little regard for the fact that sustainability strategies must be interdependently implemented.

Figure 12.2 shows a summarized overview of the interrelated sustainability issues companies are confronted with. Approaching sustainability challenges in the form of a deliberate overall transformation system requires the building of multiple internal and

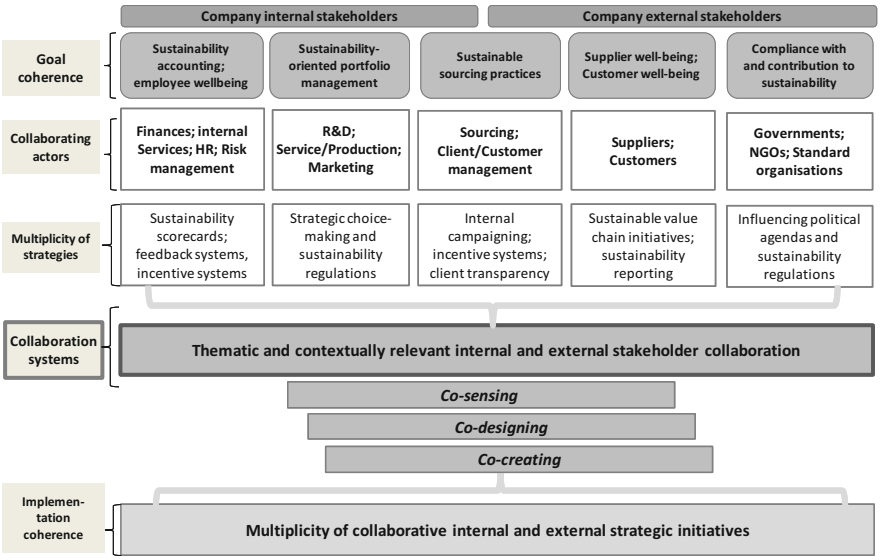

Fig. 12.2 The company related sustainability transformation system. Source adapted from Kuenkel and Kühn (2018), copyright by Petra Kuenkel

external stakeholder *collaboration systems*. The reward, however, is clear: based on a coherent goal as transformative guidance multiple actors—internal and external stakeholders—can jointly drive the strategic change. Small incremental change is as important as accelerating or aggregating it to systems change (Hinrichs & Kangas, 2003).

12.4.2 Stewarding Transformative Change Collectively

While most companies still see strategy as the responsibility of the top management only and subsequently design and implement strategic change in a top-down fashion, the concept of *stewarding transformative change collectively* mobilizes dynamic engagement of many actors. This does not necessarily mean to abolish hierarchy, but requires genuine efforts to integrate the three typical phases of successful multi-stakeholder collaboration initiatives: *Co-sensing, co-designing, and co-creating*.

Co-sensing means acknowledging that multiple actors in a top-down and bottom-up fashion, complemented by external views and expertise, can more rapidly arrive at a comprehensive assessment of a current situation. The most common first phase of strategy development is usually an analysis or assessment of the external environment (e.g. macro-environment, industry, markets) and the company (e.g. resources, capabilities, core competencies) as such. Data gathering and analysis is often done by experts or by external advisors. This can be interpreted as a sensing exercise, but *co-sensing* means mobilizing internal and external expertise in well-designed

structured dialogues, be they offline or online. It encourages both internal and external stakeholders to contribute to rapidly making a picture complete.

Co-designing means acknowledging that strategy is a continuous process of dialogue, iterative learning, and negotiation. The second phase of strategy formation most often refers to the formulation of a strategy and subsequent goal setting. This includes opportunity identification and risk assessment. It can take place in the form of scenario planning, followed by a decision for a certain scenario or a mix of scenarios. Decisions are made on the basis of competitive advantages, alignment with an overall strategy, readiness of the organization and fitness of portfolio management. The process of goal setting can be loose or strict, depending on the company's culture. It is also influenced by policies, regulations or compliance demands, and includes financial performance targets, followed by accountability metrics. A process of *co-designing* would not lose any of these elements, but more explicitly organize strategy formation through various internal collaboration systems. Additionally, it would call for and support strategy development by multiple internal stakeholder collaboration systems that fit under broader goal coherence. It may even include dialogues on future strategies with external stakeholders.

Co-creating acknowledges that only well functional collaboration systems of internal or external stakeholders will accelerate strategy implementation. In most strategic frameworks the third phase refers traditionally to strategy implementation with elements such as strategic initiatives, organizational restructuring, acquisitions or mergers, etc. It naturally contains elements such as incentive systems, performance measures as well as evaluation of results. Organized feedback loops would inform the re-assessment phase. Seeing strategy implementation as a process of *co-creating* has a number of implications. Rather than embarking on a strategy rollout in a top-down fashion, it highlights goal coherence, innovative adaptation, and iterative learning. Above all it fosters the emotional connection of all relevant internal stakeholders with sustainability issues. The emotionally compelling goal—this is a learning from multi-stakeholder collaboration initiatives—is what keeps people going, makes them inventive, and eases accountability.

12.5 A Conceptual Architecture for Sustainability-Oriented Strategic Management

For sustainability transformation through implementation of the 17 SDGs to become more effective, companies must identify their role within a larger change system, transform internally and operate in multi-stakeholder networks that drive the effectiveness of the overall large-scale change system as represented by the SDGs. The previous sections advanced the idea that sustainability-oriented strategic management must attend to a complex *transformation system* and that strategists need to enable multiple actors in that system to *steward transformative change collectively*. Conceptualizing sustainability not as an issue of *compliance* only, but as a continuously increasing *contribution* to the vitality or wellbeing of multiple systems

suggests seeing strategy as a collaborative endeavour. The last section therefore introduced a re-definition of the typical phases of strategic management as *co-sensing, co-designing, and co-creating*. Based on the design principles for successful multi-stakeholder collaboration initiatives, this section introduces a *conceptual architecture for transformative change* that can be used as a meta-guidance throughout all three phases. The *transformation system* companies need to attend to, when they embark on sustainability-oriented strategic management, can only be managed—or stewarded –with design principles that foster multiple different, yet complementary smaller *collaboration systems* throughout all three phases of strategic management. These can be described as issue-based groups of actors aiming to change the status quo for the better. Multiple initiatives at different levels, with different actors are required to effect transformative change almost like islands that connect and converge, and subsequently strengthen each other (Senge et al. 2015).

The key difference between more traditional linear strategic management frameworks (Helfat et al., 2009) and the conceptual architecture introduced here, is that the latter

- looks at the pattern that needs to be invigorated within each of the three phases (Kuenkel, 2017) (see Fig. 12.1).
- responds to the need for multiple thematic or contextually relevant collaboration systems, and
- subsequently brings people and their competencies centre stage.
- functions as a meta-guidance to ensure the design principles are present.

The radically new concept of *stewarding transformative change collectively* needs to be supported by methodologies that enable actors to identify the relevant practices related to the six design principles. These may be different depending on the strategy phase and the level of attention: company internal, industry, and stakeholder context or global or societal trends. The conceptual architecture illustrated in Table 12.1 summarizes the choice possibilities of design principles in an exemplary way. These principles in their translation to company related strategic management create a conceptual architecture that integrates intervention approaches with successful practices in collaborative transformation. The conceptual architecture aims at guiding practices that support transformative design of interventions for overall systems change.

12.5.1 Co-sensing Strategic Assessments

In the ***co-sensing*** phase of sustainability-oriented strategic management the discovery, data analysis, and assessment of the current situation refers to the company internal situation, the industry and stakeholder assessment as well as the assessment of societal and global trends. However, the results of this phase are a collectively created diagnosis of the current situation, not the result of an expert assessment

Table 12.1 The conceptual architecture for transformative change [source: adapted version from Kuenkel (2018)]

DESIGN PRINCIPLES	Recommended practices
FUTURE POSSIBILITIES **Leading to a co-designed strategy** • Ensure internal stakeholders contribute to strategy formation and drive implementation. • Enhance goal clarity, inclusivity, and accountability.	• **Future orientation:** Envisioning future and creating narratives of possibility • **Empowerment:** Fostering intention and unleashing capacities • **Decisiveness:** Following-through on implementation and measuring progress
ENGAGEMENT **Ensuring cooperative delivery** • Foster identification with the joint endeavor and make collaborative results visible. • Design high quality engagement processes, foster network building, and drive result orientation.	• **Process quality:** Step-by-step structured engagement of stakeholders • **Connectivity:** Leveraging network connections and ensuring cohesion of activities • **Collective Action:** Focusing on jointly achievable outcomes and enhancing collective responsibility
INNOVATION **Fostering agility and adaption** • Incentivize the co-design of transformation prototypes and attend to emergent opportunities. • Foster spaces for creative co-design, enhance knowledge exchange, and keep planning flexible.	• **Creativity:** Cultivating inventiveness and encourage creative solution-finding • **Excellence:** Pursuing mastery and fostering continuous improvement • **Agility:** Attending to emergent opportunities and staying flexible
HUMANITY **Focusing on collective value** • Take an ethical stand and integrate different levels of vitality and well-being: employees, company, suppliers, society. • Take appreciative approaches, foster mutual understanding, and alleviate power imbalances.	• **Mindfulness:** Attending to human encounter and fostering reflection • **Balance:** Balancing different requirements, needs and interests • **Empathy:** Embracing the perspective of others and exploring coherence
COLLECTIVE INTELLIGENCE **Harvesting dialogic communication** • Ensure communication architectures that enhance dialogue, diversity of perspectives, and network formation. • Ensure high quality dialogues and establish governance and learning mechanism.	• **Dialogic quality:** Fostering internal and external stakeholder dialogues • **Diversity:** Fostering diversity of viewpoints and driving multiplicity of change approaches • **Iterative learning:** Creating collective learning spaces and establishing feedback mechanisms
WHOLENESS **Attending to contextual impact** • Co-design the relevant transformation system and ensure complementary implementation. • Explore the relevant internal and external stakeholders system and stay up-to-date with trends and developments.	• **Contextuality**: Exploring the larger context as well as trends and developments • **Mutual support:** Supporting each other and taking a complementary approach • **Contribution:** Clarifying contribution to sustainability and driving collective impact

(although this can be done in a complementary way). Figure 12.3 shows the relevant design principles as well as example practices for co-sensing strategic assessments.

On the **company internal level**, the main design principles that function as entry points for collaborative quality and comprehensive results are *FUTURE POSSIBILITIES* with focus on *Empowerment* and *ENGAGEMENT* with focus on *Connectivity*.

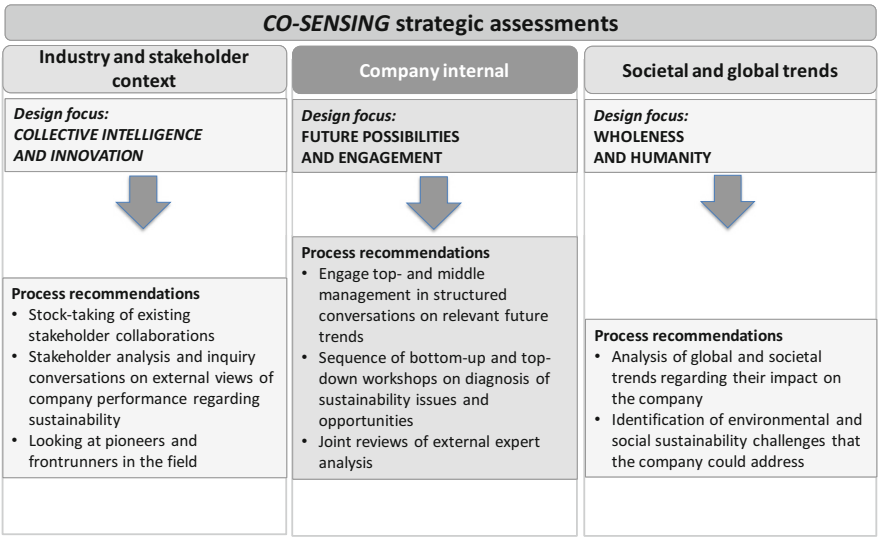

Fig. 12.3 Design principles in the co-sensing phase. Source Collective Leadership Institute, copyright: Petra Kuenkel

The main purpose of co-sensing at the company internal level would be to find answers to the questions:

– Which people and knowledge do we need to connect to arrive at a rapid assessment of the current situation regarding corporate sustainability?
– What are the existing narratives and structures that further or prevent transformations to sustainability?

On the level of **industry and stakeholder context** the main design principles that function as an entry point are *COLLECTIVE INTELLIGENCE* with focus on *Diversity* in acknowledgment of stakeholder views and *INNOVATION* with focus on *Excellence* as spotting frontrunners. The main purpose of *co-sensing* strategic assessments on the level of industry and stakeholder context is to find an answer to the questions:

– Which most critical as well as potentially collaborating stakeholders are most relevant for us to shift towards sustainability?
– Who are the front-runners in sustainability in our industry? How do they perform economically and what can we learn from them?

On the level of **societal and global trends** the main design principles that function as an entry point are *WHOLENESS* with focus on *Contextuality* by looking at the global context and *HUMANITY* with focus on *Empathy* as a form of looking at the company from the point of view of disadvantaged citizens. The main purpose of *co-sensing* at the level of societal and global trends is to find answers to the questions:

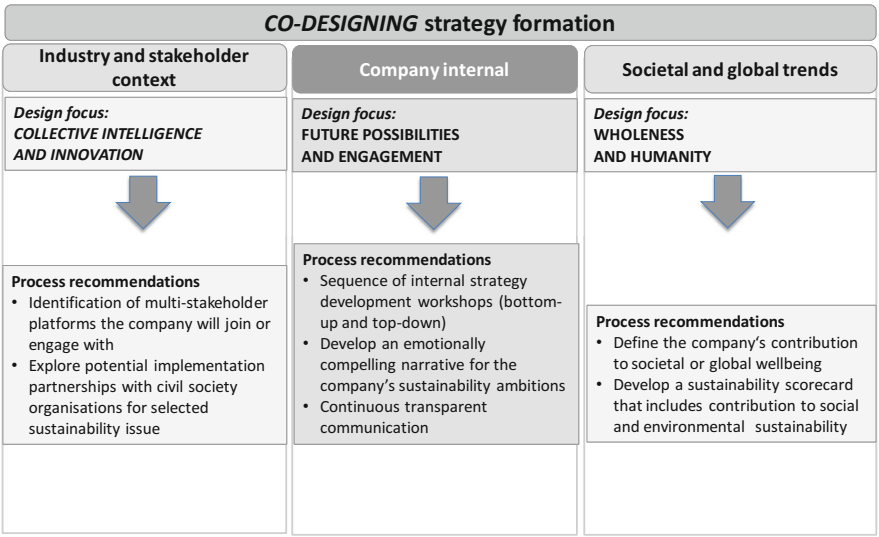

Fig. 12.4 Design principles in the co-designing phase. Source Collective Leadership Institute, copyright: Petra Kuenkel

– Which global trends regarding sustainability and endangered sustainability will severely impact our company performance?
– What are social, environmental, and economic sustainability challenges that we can help to address with our products and services?

12.5.2 Co-designing Strategy Formation

In the ***co-designing*** phase of sustainability-oriented strategic management the evaluation of the co-sensing exercises leads to strategic choices regarding opportunities, continuous improvement processes, portfolio adjustments as well as ways of nurturing innovation and best practices. It naturally develops into goal setting, but not in a top down fashion. Goals are co-constructed and then consolidated as a result of the co-sensing phase and can be collaboratively negotiated. Crucial is to design engagement processes in a way that the overall goal arrived at will indeed function as transformative guidance. Multiple initiatives' sub-goals then contribute to the overall goal in coherence. These different levels of goal setting take place in collaboration as an emotionally compelling process. It is the identification of people with small or larger sustainability goals that will eventually accelerate transformations. Figure 12.4 shows the relevant design principles as well as example practices that foster co-designing strategy formation.

Co-designing strategy takes mostly place on the **company internal level**. The design principles that work towards effective goals and most suitable strategic choices are the same as in the co-sensing phase. The design principles of *FUTURE*

POSSIBILITIES focuses on *Future Orientation* through envisioning processes and the design principle *ENGAGEMENT* emphasises *Process Quality* in the way goals are co-constructed. The main purpose of *co-designing* at the company internal level would be to find answers to the questions:

- How do we best engage all relevant internal stakeholders so that they become empowered to take responsibility for the desired changes?
- What is the emotionally compelling overall goal that invigorates people to take action and initiative towards sustainability transformations?

However, *co-designing* can also take place on the level of **industry and stakeholder context**, where contextually relevant or strategically important. The co-sensing phase may conclude that pre-competitive collaboration must be integrated into the strategy, or external stakeholder views may improve strategy formation. Very advanced companies may even obtain feedback on their strategy or at least for certain elements from societal stakeholders. Bringing external views and knowledge into the process of strategy formation follows the same design principles as in the co-sensing phase. The design principle *COLLECTIVE INTELLIGENCE* focuses on *Dialogic Quality* by enhancing meaningful conversations, while the design principle *INNOVATION* focuses on *Creativity* collaboration with external stakeholders is achieved. The main purpose of *co-designing* at the level of industry and stakeholder context is to find an answer to the questions:

- Which pre-competitive and multi-stakeholder collaborations help us improve sustainability strategies?
- How can partnerships and stakeholder relationships be more creatively leveraged for sustainability performance?

Co-designing with **societal and global trends** in mind means to go into strategy formation beyond the interests of the company and clearly define the company's contribution to planetary sustainability. This is best reflected through the design principles *WHOLENESS* with focus on *Contribution* by defining the company's role in global sustainability transformation and *HUMANITY* with focus on *Balance* between the company's wellbeing and the wellbeing of the (global) society. Main purpose of *co-designing* strategy formation at the level of societal and global trends is to find an answer to the questions:

- What is the company's contribution to societal wellbeing and global sustainability?
- How is an adequate balance between the financial viability interests of the company and the interests of environmentally and social sustainability best achieved?

12.5.3 Co-creating Strategy Implementation

In the ***co-creating*** phase of sustainability-oriented strategic management, implementation and iterative strategy review ensure progress in the desired direction. As part

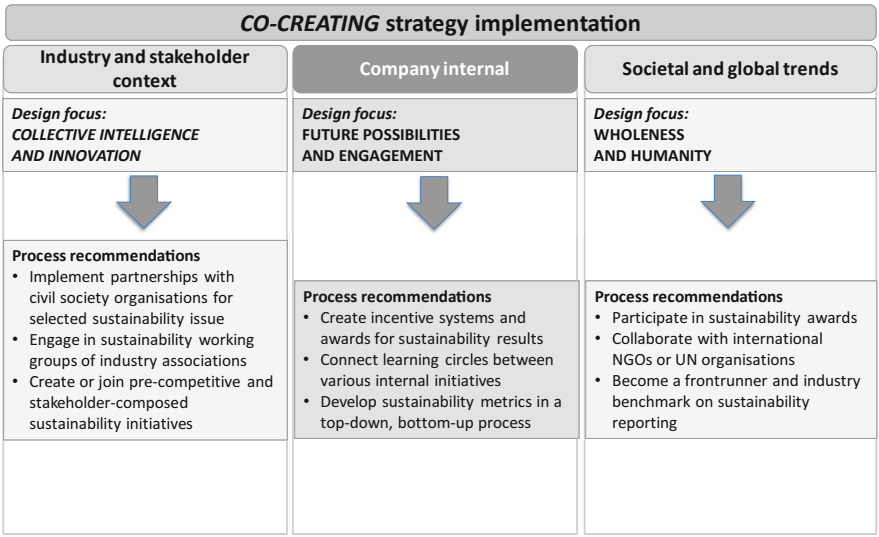

Fig. 12.5 Design principles in the co-creating phase. Source: Collective Leadership Institute, copyright: Petra Kuenkel

of the overall design of the transformation system this can take the form of strategic initiatives, organizational restructuring, and portfolio strengthening or expansion strategies. Metrics in the form of measurements for sustainability progress play an important role in this phase. Beyond the traditional forms of key performance indicators and financial viability analysis, metrics accelerate sustainability performance, if they are not simply imposed, but co-developed. Only then do they empower and encourage all actors to track progress. A high quality *co-creating* phase (based on the other two phases) results in many actors *stewarding transformative change collectively*. Subsequently, a company moves faster towards sustainability performance and is more agile in adapting to unforeseen circumstances. Figure 12.5 shows the relevant design principles as well as example practices that foster *co-creating* strategy implementation.

Strategy implementation is largely taking place at the **company internal level**. The design principles that work as an entry point to effectiveness in implementation are the same as in the co-sensing phase. However, the design principle of *FUTURE POSSIBILITIES* focuses on *Decisiveness* as a driver of getting things done and the design principle *ENGAGEMENT* emphasises *Collective Action*, the prerequisite for implementation at all levels. The main purpose of co-creating strategy implementation at the company internal level would be to find answers to the questions:

– How do we create a company-internal dynamic of making collective action for transformative change towards sustainability happen at all levels?
– How do we empower staff to implement, track progress, and learn continuously at all levels of the company?

There are a number of instances in which *co-creating* takes place on the level of **industry and stakeholder context**. This can be the company's engagement in sustainability initiatives or platform with competitors, it can be the way a company tries to influence industry associations towards sustainability or it can be specific sustainability partnerships a company implements together with civil society organisations. In sustainability-oriented strategic management these engagements are not add-ons for reputational purpose only, but part and parcel of the identified overall transformation system. The design principle *COLLECTIVE INTELLIGENCE* focuses on *Iterative Learning* between the company and external actors. The design principle *INNOVATION* focuses on *Agility* as a way of staying in touch with important stakeholders beyond the company. The main purpose of co-creating strategy implementation on the level of industry and stakeholder context is to find answers to the questions:

- How do we become part of a learning environment towards sustainability together with important stakeholders?
- How do we leverage our networks with key stakeholders to stay adept with sustainability needs?

Co-creating strategy implementation with **societal and global trends** in mind means to stay up-to-date with trends and developments that may potentially impact the company's strategy and performance. Most importantly this contributes to the company's ability to respond to new knowledge generation around sustainability issues. This is best reflected in the design principles *WHOLENESS* with focus on *Mutual Support* as a way of relating to the global context and the design principles *HUMANITY* with focus on *Mindfulness* as the company's ability to measure and report progress publicly. The main purpose of *co-creating* strategy implementation on the level of societal and global trends is to find an answer to the questions:

- How can we enact and adjust sustainability strategies in support of a local to global movement towards sustainability?
- How can we show and report our progress in response to the global sustainability challenges?

12.6 The Pathways Ahead

The importance of companies changing into drivers for global sustainability cannot be underestimated. The world is currently experiencing massive changes in many areas of human existence: scientists call the emerging era the Anthropocene,[7] because the influence of human interventions is already so great that they are affecting the entire balance of the biogeosphere (Steffen, Broadgate, Deutsch,

[7]For elaboration on the Anthropocene see also Chaps. 1 and 4.

Gaffney, & Ludwig, 2015). It is thus clear that ending poverty, addressing climate change, tackling civil and cross-border conflict, ensuring food security, meeting health challenges, dealing with environmental degradation as well as inequality and inequity cannot be done by adhering to strategies from the past. It has become evident, that in order to transform the world toward sustainability the role of companies as much as the economic system needs to alter, from focusing solely on GDP growth to aiming for the wellbeing of people and planet. Of note is that the rules of the game have changed. Existing systems (business, politics, finance, etc.) have been developed with a worldview stemming from linear thinking. Yet, it is becoming more and more apparent that we live in an interconnected global environment driven by exponentially growing technologies that are disrupting human and other lives like never before. This requires radically different ways of delivering wellbeing to all people on this planet whilst regenerating the ecosystems that we are close to tipping out of balance. To get there, companies need to become sustainable world-makers together with a wide range of other societal stakeholders. Accelerating transformations towards sustainability is going to be the work of millions of institutional actors, activists, change agents, game-changers, and ordinary people who need to invigorate human competencies for leading transformative change collectively. Co-sensing, Co-designing, and Co-creating strategies for transformative change needs to become the day-to-day management approach of companies.

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Chapter 13
Applying Materiality Assessment in Strategic Management: The Implicit Coating of the Materiality Lens

Stefanie Remmer and Dirk Ulrich Gilbert

13.1 Introduction

Increasingly firm success is not only judged by financial performance but also by the management of sustainability related issues. In addition to regulators, civil society organizations and customers, investors, and stock exchanges are now taking a greater interest in information related to ecological, social, and socio-economic topics (Ioannou & Serafeim, 2017; KPMG, 2017: 15). Their growing interest in non-financial information derives from the assumption that outstanding non-financial performance indicates safer and more profitable investments. The already existing pressure on managers to incorporate sustainability more systematically in strategic management intensifies. One possible way to realize this integration is utilizing synergies between strategic management and non-financial reporting. A meaningful key to this can be materiality assessment, a compulsory part of many non-financial reporting frameworks, which consultancy firms already advertise as a useful addition to the strategic management toolkit (KPMG, 2014).

In essence, materiality assessment is an instrument for the analysis of the external environment of a firm. In non-financial reporting, it serves to focus reporting efforts on topics, which are most relevant to a firm's stakeholders. From a strategic management perspective, decision-makers can use the tool to identify and to prioritize issues posing risks or business opportunities to the firm (Lozano, Nummert, & Ceulemans, 2016: 169–170; Perego, Kennedy, & Whiteman, 2016: 596; Wagner & Seele, 2017: 340). Many firms already have experience with non-financial reporting. Others are obliged to establish such activities due to new regulations. A noteworthy example of the latter is the EU Non-Financial Reporting Directive that took effect in 2018 (Stawinoga, 2017: 217). Against this background, it makes sense to investigate the relevance of materiality assessment for strategic management in more detail—particularly given

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that firms likely have to conduct it during non-financial reporting and that there might be something to gain from exploiting it for strategic management purposes.

Strategic management tools shape how businesses view themselves and their environment. They function like a lens that turns the complex environment of a firm into more manageable sets of information. By implication this also means that strategists cannot see what the lens is not designed to draw attention to. Strategic management tools also influence how strategists interpret what they see. It seems that too often firms apply instruments without questioning what they were designed to do. Without an understanding of the functionality of a tool in strategic management, its application might be misleading. This holds true in the case of materiality assessment. In fact, a critical reflection is particularly suggestive because the underlying concept of materiality is highly generic and various non-financial reporting guidelines and standards construct it in very different ways (Edgley, 2014; Perego et al., 2016: 59). With materiality assessment being the lens, the differences in materiality conceptualization can be described as coatings applied to the lens. In this book chapter, we investigate these implicit coatings of the materiality lens by the examples of the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI; see Table 13.1). We elaborate on how useful materiality assessment is for strategic management in general, and for the integration of sustainability in strategic management in particular. The chapter also inquires how the different coatings of the materiality lens affect the contribution of materiality assessment to strategizing.

Table 13.1 A comparison of SASB and GRI

		SASB	GRI
Explicit differences	Background, actors and goals	• Origin: University spin-off • Main actors: Researchers, investors and multinational corporations • Goals: Enable firms to manage ESG-related factors for enhanced financial performance; enable investors to understand risk exposure of their investment portfolio	• Origin: Non-profit spin-off/ multi-stakeholder initiative • Main actors: Civil society organizations and multinational corporations • Goals: Enable firms to manage ecological and social impacts conducive to sustainable development; enable stakeholder to form an opinion about firms
	Materiality definition	• Outside-in/performance • Limited to reporting entity	• Inside-out/impacts • Including value chain
	Materiality assessment	• High standardization	• Stakeholder engagement
Implicit differences	Normative foundation	• Shareholder value • Single, quantitative (financial) success measure • Consideration of stakeholder interests if performance relevant • Narrow understanding of sustainability	• Stakeholder value • Multiple, quantitative and qualitative success measures • No prioritization of shareholder interests • Broader understanding of sustainability
	Orientation of strategizing	• Business case/risk reduction • Oriented towards value creation (financial understanding of value)	• Strategizing for ethical business conduct • Oriented towards impact management

This chapter proceeds as follows. First, a brief introduction to non-financial reporting is provided in order to set the background for a closer look at materiality conceptualizations by two exemplary non-financial reporting initiatives, namely the SASB and GRI. These examples are chosen because they are among the most relevant frameworks currently existing and because they conceptualize materiality in strongly contrasting ways. Against the background of these differences, the potential contribution of materiality assessments to strategizing will be discussed under particular consideration that materiality assessment is being promoted as a tool for integrating responsibility and sustainability into strategic management. The chapter concludes with a brief summary and considerations regarding the choice of non-financial reporting guidelines for the purpose of strategizing in a business environment of changing expectations regarding the firm's role in society.

13.2 Non-financial Reporting and Materiality Assessment

To set the background for the discussion of the application of materiality assessment in strategic management, this section briefly explains the role of non-financial reporting initiatives and the purpose of materiality assessment in non-financial reporting.

Non-financial reporting originated in the 1960s and 1970s, when firms in the U.S. and Europe voluntarily began communicating about their role in society. At the time, businesses typically disclosed information on primarily social topics within traditional financial accounting reports. Over the decades, non-financial reporting has constantly changed and developed. Today the majority of firms disclose extensive social, ecological, and socio-economic information in stand-alone publications. Latest developments, however, point towards a reunification of non-financial and financial information in so called integrated reports (Hahn & Kühnen, 2013; Herzig & Schaltegger, 2011; Ioannou & Serafeim, 2017: 6–7).

Firms frequently adopt voluntary guidelines and standards for their non-financial reporting efforts (Ioannou & Serafeim, 2017; KPMG, 2017: 28). A number of initiatives of varying origins provide these references (see Table 13.2 for selected examples). The following section concentrates on the guidelines and standards provided by the SASB and the GRI. As will be outlined in the following sections, these two initiatives mark meaningful examples for guidelines and standards, which conceptualize materiality in strongly contrasting ways.

Table 13.2 Exemplary guideline and standard setting initiatives in non-financial reporting

Initiative	Founding year	Headquarters/ secretariat
International Organization for Standardization (ISO)	1946	Geneva, CH
AccountAbility (AA)	1995	London, UK
Global Reporting Initiative (GRI)	1997	Amsterdam, NL
CDP & Climate Disclosure Standards Board (CDSB)	2000	London, UK
International Integrated Reporting Council (IIRC)	2010	London, UK
Sustainability Accounting Standards Board (SASB)	2011	San Francisco, USA

Non-financial reporting initiatives have in common that they provide structure, rigor, credibility, and comparability to reporting efforts. One important factor in this regard is the principle of materiality (Edgley, Jones, & Atkins, 2015: 1–2; Jones, Comfort, & Hillier, 2016: 223). The concept of materiality is derived from the auditing and accounting processes of financial reporting (Hsu, Lee, & Chao, 2013: 143; Jones, Comfort, & Hillier, 2015: 433). It was adopted by non-financial accounting rather late (Unerman & Zappettini, 2014: 175). For example, GRI, which is one of the oldest and the most widely diffused non-financial reporting initiative (KPMG, 2017: 4), first incorporated reasonably detailed consideration of materiality in its GRI G3 guidelines in the year 2006. Whilst the assessment of materiality was not mandatory in the past, this changed with the newest set of guidelines, now called GRI standards, which were released in 2016 and took effect in 2018 (Taubken & Feld, 2017: 5; Unerman & Zappettini, 2014: 176). More recent initiatives such as SASB or the International Integrated Reporting Council (IIRC) incorporated materiality from the beginning on.

Materiality definitions within non-financial reporting guidelines and standards vary (Corporate Reporting Dialogue, 2016: 5–8; Jones et al., 2015: 433–434). The lowest common denominator is the following definition: "material information is any information which is reasonably capable of making a difference to the conclusions reasonable stakeholders may draw when reviewing the related information" (Corporate Reporting Dialogue, 2016: 2). The generic definition indicates that various understandings of materiality share a user-centricity. This means, the evaluation of what information is material must be made from the perspective of the stakeholders and not the management. Beyond that however, materiality definitions differ profoundly, which will be discussed in the following section.

Despite of definitional differences, assessing materiality, and subsequently focusing reporting on material information serves to better fulfill informational demands of stakeholders. It aims to enhance credibility, clarity, and effectiveness of the communication. At the same time, focusing on material issues promises to take some complexity out of the reporting practice as it narrows down the information reporting firms need to collect. Materiality assessment is therefore as much about the question what do disclose as it is about the question what not to disclose (Calabrese, Costa, Levialdi, & Menichini, 2016: 249; Hsu et al., 2013: 143–144). In addition, materiality assessment can assist firms in developing an understanding of how their business activities relate to sustainability issues, thereby enabling a more systematic integration of these issues in strategic decision-making. In other words, materiality assessment helps companies to identify and to prioritize the issues that are both relevant to stakeholders and to business strategy.

13.3 The Coating of the Materiality Lens

Materiality assessment is in essence an analytical tool. Like any other such instrument, materiality assessment constitutes a lens through which firms scrutinize and evaluate themselves and their environment. However, the materiality concept—as

foundation of this assessment—is highly generic, and non-financial reporting initiatives adjust it pursuant to their objectives regarding non-financial reporting (Edgley, 2014; Perego et al., 2016: 59). If materiality assessment is the lens, than the adjustments by the initiatives can be viewed as coatings applied to the lens. We use the terms outside-in materiality and inside-out materiality to describe these coatings (Taubken & Feld, 2017). Different coatings result in differing selection of information and their assessment. It is important to understand this, before judging the utility of materiality assessment for strategic management in general, and for the embedment of sustainability in strategic management in particular.

SASB and GRI provide meaningful examples of non-financial reporting initiatives, which conceptualize materiality in strongly contrasting ways. Hence, they are used as examples for the following discussion. There are explicit and implicit reasons for the differences in materiality conceptualizations. Explicit differences mean those that are obvious from the communication of non-financial reporting initiatives about themselves and their guidelines and standards. This includes that non-financial reporting initiatives have varying backgrounds, are dominated by differing actors and pursue contrasting goals. Their definitions of materiality are aligned with these goals and correspondingly favor different methods of materiality assessment. Implicit differences mean those that relate to contrasting normative viewpoints regarding the role of business in society, which are underlying initiatives' approaches to non-financial reporting and correspondingly the conceptualizations of materiality. To be precise, non-financial reporting and the conceptualization of materiality reflect the long existing dispute between proponents of the shareholder and stakeholder approaches to value creation, which in turn align with equally contrasting orientations of strategic management.

To informed readers it is likely unsurprising that non-financial reporting and materiality assessment like many other phenomena related to business sustainability are influenced by the shareholder-stakeholder-debate (Rasche, 2018). Nevertheless, it is necessary to point this out repeatedly, because the normative orientation has important implications for strategic management in general, and for the integration of sustainability in strategic management in particular. Too often, it seems, the impression is created that there is no need for firms to question their normative orientation. Instead, there is a strong claim that it is enough for firms to try "to do well while doing good" [another well-discussed example of a strategic management proposal following this claim is the Shared Value approach by Porter and Kramer (2011; for a discussion of the approach see: Crane, Palazzo, Spence, & Matten, 2014; Schormair & Gilbert, 2017)].[1] On closer inspection, however, this is a problematic claim, as we discuss in more detail in the next section.

[1]For a critical examination of the "Shared Value" approach see also Chap. 4.

13.3.1 SASB: Outside-in Materiality Definition and Materiality Assessment Through Standardization

Background, Actors and Goals SASB is a US-American non-profit organization and a research spin-off of Harvard University's Initiative for Responsible Investment. Established in 2011, it has since been closely advised and influenced by industry representatives and investors. SASB developed industry-specific non-financial reporting standards that are compatible with financial disclosure under US federal securities laws. The standards are designed for integration into existing investor communication and annual reports. Despite its US origin, the European Commission considers SASB's framework suitable for compliance with the EU non-financial reporting directive. The standards are primarily aimed at enabling investors to gain a better understanding of the risk exposure of their investments. Secondarily, the standards aim to enable firms to understand and manage ecological, social, and governance related issues (SASB, 2017a).

Materiality Definition SASB's goals are clearly reflected in the initiative's conceptualization of materiality, which explicitly serves to ensure that investors receive the information they require. SASB does not provide its own definition of materiality, but refers to the definition applied under US federal securities laws. Matters are considered material if there is a substantial likelihood that a reasonable investor would view its omission or misstatement as significantly altering the total mix of information (Corporate Reporting Dialogue, 2016: 8). Correspondingly, SASB's materiality conceptualization focuses on determining whether performance on a given environmental or social topic would affect the financial condition and operating performance of a firm (SASB, 2017b: 1). This orientation can be termed outside-in materiality (Taubken & Feld, 2017), because the focus lies on the impact the environment (outside) has on the firm (inside) rather than the impact the firm's business activities (inside) have on its environment (outside).

Materiality Assessment Method SASB assumes that the external environment, specifically the industry, of a firm, determines material matters. Accordingly, the initiative developed a standardized materiality assessment method, which provides lists of material issues for 79 industries and 11 sectors (status as of: mid 2018). A test developed by researchers of the Harvard University's Initiative for Responsible Investment serves to identify these material issues. As first step, SASB selects industry specific topics that could be relevant to investors. The relevance depends on whether an issue poses direct financial risks to firms of the industry in the short-, medium-, or long-term, already is or may be regulated in the near future, is becoming industry norm and driving competitive best practices, is raised by investors and other stakeholders and threatens brands or the license to operate, and whether it represents opportunities for innovation and growth. Financial analysts in a second step evaluate these topics by their potential to influence revenues, operating costs, asset values, liabilities and financing costs (see Fig. 13.1 for more detailed information on SASB's materiality determination method).

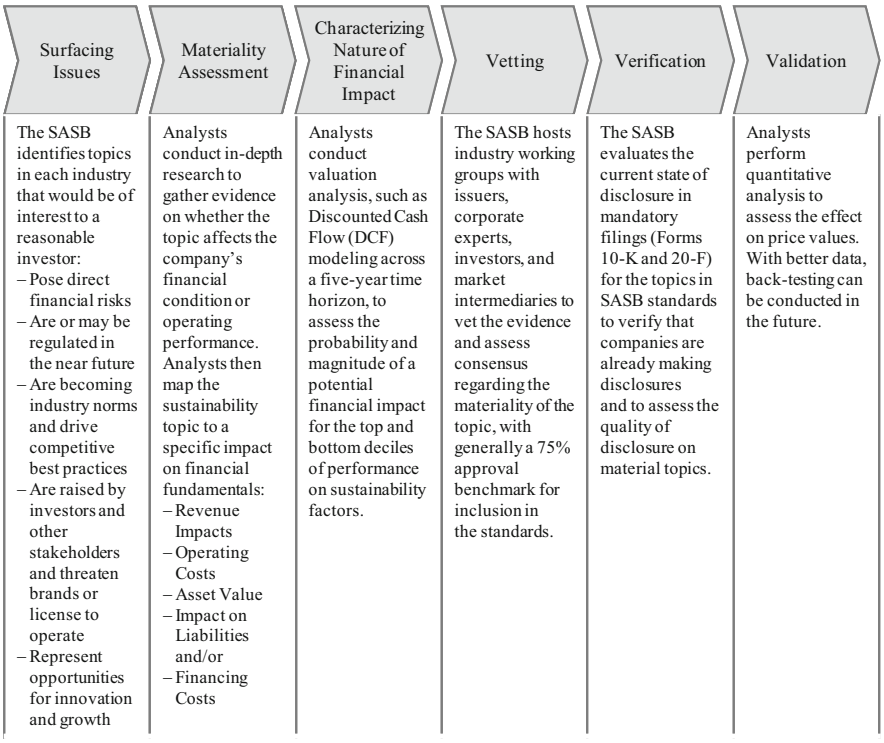

Fig. 13.1 SASB's materiality research method (SASB, 2017a: 9)

Topics considered material at the end of the research process are included in SASB's so called Materiality Maps (SASB, 2017a). In providing the Materiality Maps, SASB relieves firms of having to determine materiality by themselves. The high standardization of the assessment supposedly ensures that investors get the information they require and enhances the comparability of reports. It also aims to dismantle reporting barriers by making the process more cost-effective and creating a level playing field for reporting firms. Otherwise, companies could fear to be disadvantaged, if they disclosed negative information competitors keep confidential (Lydenberg, Rogers, & Wood, 2010: 55). In order to ensure the accuracy of the framework over time, SASB maintains and improves the standards through a process of research, consultation, agenda setting, public commenting, and ratification that takes place within a 3-year cycle and applies to each industry currently included in the scheme. In addition, SASB initiates research or standards-setting work to address emerging issues that require more immediate response. This process is meant to balance the need for timely outcomes with the need for comprehensive research and stakeholders—meaning industry representatives and investors—participation (SASB, 2017c).

Normative Orientation SASB is convinced that "getting good information into the hands of all investors creates fair markets and enables the markets to function as

intended" (SASB, 2017a: 3). Its approach to non-financial reporting is rooted in a belief that the market economy is inherently fair (Hafenbrädl & Waeger, 2017) and that firms should take a shareholder approach to value creation (Khan, Serafeim, & Yoon, 2016: 1697–1698). Proponents of this view argue companies should seek to maximize value for firm owners within the boundaries of what is legally permissible. Value in this context is financial and measured in profits, dividends or share prices. The concerns of other stakeholders than shareholders should only be considered if relevant for profitability (Friedman, 1970). Against this background, it is not surprising that SASB has created a materiality assessment method, which makes engagement with stakeholders, including shareholders, unnecessary. In fact, some view this to be a particular strength of SASB's standards, because in their perception the Materiality Maps are objective as long as no special interest group, be it NGOs or corporations, can "capture" the research process (Khan et al., 2016: 1698). SASBS's materiality conceptualization draws attention to threats and opportunities in areas, where shareholder and stakeholder interests are aligned. It serves as a lens separating sustainability topics with performance relevance from those without.

Orientation of Strategizing The shareholder-oriented understanding of materiality as presented by SASB reflects a rather narrow view on sustainability. The SASB approach to non-financial reporting closely relates to the logic of the business case for sustainability, which reframes good business conduct as an opportunity instead of a burden. It presents managers with opportunities to reduce cost and manage risks, to generate and increase sales and profit margins, to enhance reputation and brand value or to entry and develop markets. Managing in such ways would additionally increase the ability of firms to attract employees or enhance capabilities to innovate (Schaltegger, Lüdeke-Freund, & Hansen, 2012). Researchers have conducted extensive empirical research to demonstrate the existence of this positive link between firms' environmental/social performance and their financial performance (Lu, Chau, Wang, & Pan, 2014; Margolis & Walsh, 2003; Mattingly, 2017; Rost & Ehrmann, 2017; Wang, Tong, Takeuchi, & George, 2016). They hoped to convince firms of embracing stakeholder interest without having to involve managers in ethical debates about their firms' shareholder orientation (Bansal & Song, 2017). Despite the fact that research on the performance link has produced mixed results, the win-win idea of the business case has caught on well and inspired new strategic management proposals [e.g. the previously mentioned Shared Value approach by Porter and Kramer (2011)] and CSR initiatives such as SASB itself.

13.3.2 GRI: Inside-Out Materiality Definition and Materiality Assessment Through Stakeholder Engagement

Background, Actors, and Goals GRI was founded in the late 1990s by a US non-profit organization in cooperation with the United Nations Environment Programme. The initiative has taken a multi-stakeholder approach to the continuing

development of its non-financial reporting guidelines and standards. The core constituencies of the initiatives are businesses, civil society organizations, investment institutions as well as labor organizations (GRI, 2016: 3; Levy, Szejnwald Brown, & Jong, 2010: 94–98). GRI views the purpose of non-financial reporting in allowing "internal and external stakeholders to form opinions and to make informed decisions about an organization's contribution to the goal of sustainable development" (GRI, 2016: 3).

Materiality Definition In accordance with its goals, GRI considers topics material if they can "reasonably be considered important for reflecting the organization's economic, environmental, and social impacts, or influencing the decisions of stakeholders" (GRI, 2016: 8). These stakeholders are employees and other workers, shareholders, suppliers, vulnerable groups, local communities, non-governmental organizations (NGOs), and other civil society organizations (GRI, 2016: 8). In contrast to SASB's outside-in orientation, GRI's materiality definition reflects an inside-out understanding. It encourages firms to look from inside towards the outside by determining whether their activities (inside) affect ecological, social, or socio-economic issues in the environment (outside).

Materiality Assessment Method While SASB prioritizes investors over other stakeholders, GRI requires firms to balance multiple, often contradicting stakeholder concerns. Where SASB determines materiality by the influence on a single measure, i.e. financial performance, GRI requires firms to consider environmental and social impacts, which constitute multiple quantitative or qualitative measures. The difference between SASB's and GRI's conceptualizations of materiality becomes particularly apparent in GRI's materiality matrix. The matrix has become a key disclosure tool that assists in prioritizing material issues. Reflecting GRI's materiality definition, the y-axis of the matrix weighs issues by their influence on stakeholder assessments and decisions. On the x-axis, the same issues are positioned according to the significance of the reporting organization's economic, environmental, and social impacts (GRI, 2016: 11; see Fig. 13.2).

The emphasis on impacts on the environment (both positive and negative) is at the core of GRI's reporting framework. This also includes issues that produce minimal short-term impact, but which have a significant and reasonably foreseeable cumulative effect that can become unavoidable or irreversible in the longer-term (GRI, 2016: 12). Many reporting firms, however, have misinterpreted GRI's materiality definition. On the x-axis, they assessed the potential environmental and social impact upon the firm, instead of the other way around. In doing so, the materiality assessments became much more aligned with an outside-in materiality conceptualization as exemplified by SASB. This gave GRI reason to provide clarification on the subject with the release of its latest framework in 2016 (GRI, 2018; Taubken & Feld, 2017: 4–6). However, the new framework does not provide a standardized approach for the placement of issues within the matrix. Hence, determining materiality in accordance with GRI is a subjective process in which personal opinions, experiences and expectations are influencing the outcome (Calabrese, Costa, & Levialdi Ghiron, 2017: 440–441). GRI provides industry specific lists of topics as a starting point to think about material issues, but unlike SASB

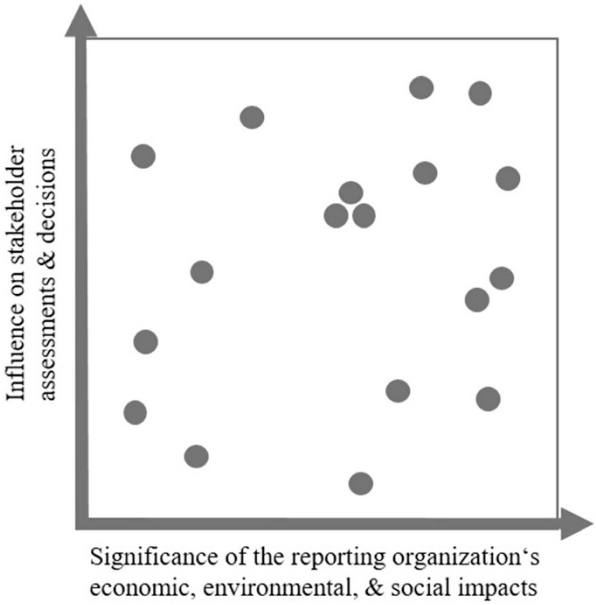

Fig. 13.2 GRI's materiality matrix (GRI, 2016: 11)

does not prescribe companies to report on these exact issues. Instead, it encourages firms to determine them through interaction with their stakeholders (GRI, 2016). The initiative does not propose specific methods to do so. Surveys among European firms suggest, that stakeholder engagement mostly takes the form of a two-way dialogue (e.g. workshops, surveys, and interviews), through which firms receive input from their stakeholders and simultaneously communicate their own point of view (Moratis & Brandt, 2017). GRI requires reporting firms to assess materiality consistently in each reporting period (GRI, 2013: 39, 2016: 16), but in practice the extent of stakeholder engagement might be fluctuating due to the relative leeway concerning the assessment method. A company might conduct elaborate stakeholder engagement in one year—maybe with the help of consultants—and examine the results with less effort in the consecutive years to ensure the ongoing materiality of reported issues.

Normative Orientation GRI's conceptualization of materiality is aligned with a stakeholder approach to value creation (Moratis & Brandt, 2017: 313). Proponents of this view challenge the assertion that firms should work on the behalf of only one kind of stakeholder, i.e. the owners of the business. They consider maximizing shareholder value to the detriment of other stakeholders unjust, and argue companies should serve the interests of all those who provide inputs to the value creation or are affected by a firm's activities (Freeman & Reed, 1983).

Orientation of Strategizing The economic rationale behind the stakeholder approach is ensuring continuous business activity through buttressing corporate legitimacy and securing the willingness of stakeholders to cooperate with the firm (Donaldson & Preston, 1995; Freeman, 1984; Mitchell, Weaver, Agle, Bailey, &

Carlson, 2016). Correspondingly, GRI's conceptualization of materiality takes shareholder interests into account, but does not necessarily prioritize them over the interests of other stakeholders (GRI, 2016: 8). It is not a business case oriented approach to linking non-financial reporting with strategic management. Opportunities for profitable investments and business activities can be revealed, but are not explicitly aimed at. Nevertheless, GRI encourages firms to build an understanding of how their organizational structure and management approach to responsibility and sustainability relate to changing impacts of their business activities (see GRI 102, GRI 103 in GRI, 2016). This focus on impacts differentiates GRI again from SASB. The latter also animates firms to think about their organizational structure and management approach, but with the business case in mind, not impacts.

In summary, firms have a number of guidelines and standards at hand, which they can utilize for non-financial reporting. However, when choosing between frameworks, firms should be aware of their underlying logic. The examples of SASB and GRI show, that these logics can vary widely. The initiatives have different backgrounds, dominant actors, and agendas leading them to construct materiality in ways that further their individual goals. Differing conceptualizations of materiality entail different methods of materiality assessments. SASB has an outside-in understanding of materiality promoting shareholder objectives and a narrow understanding of sustainability. Outside-in materiality tends to promote standardized assessment methods relieving firms from having to determine materiality by themselves. GRI on the other hand, has an inside-out understanding of materiality promoting the consideration of multiple stakeholder objectives. Inside-out materiality consequently requires firms to engage with stakeholders during materiality assessments. Table 13.1 gives an overview of the explicit and implicit differences between these exemplary frameworks. The following section will discuss how these differences influence the potential contribution of materiality assessments to strategizing in general and the embedment of sustainability into strategic management in particular.

13.4 Application of Materiality Assessment in Strategic Management

Firms continuously refer to various tools and techniques in strategic management to gain a profound knowledge about themselves and their environment. Using such tools and techniques enables them to better cope with the volatility, uncertainty, complexity, and ambiguity in their environment. It ideally makes them sensitive to subtle precursors of far-reaching changes. Firms can apply materiality assessment during the strategy process as an analytical instrument serving these exact purposes. However, strategists can only see what the tools are designed to draw attention to. In addition, the instruments have an influence on how strategists interpret, what they see. In the previous section, the analogy of a lens was used to describe this

characteristic. Materiality assessment can be viewed as a lens coming in different coatings, which we termed outside-in and inside-out materiality. The following section discusses what materiality assessment as an analytical tool could contribute to strategic management and how this potential contribution depends on the lens coatings. It will be specifically described, what potential utility materiality assessment has to inform the strategy management process, for the revelation of new business opportunities and development of consistent, potentially more sustainable strategies. It is argued that, if firms intend to exploit non-financial reporting for strategic management purposes, they need to choose a non-financial reporting framework (a lens) that aligns with their objectives regarding both strategic management in general and the integration of sustainability in particular.

Most prescriptive strategy process models describe four activity phases or stages: Strategic analysis, strategy formulation, strategy implementation, and strategic control (Gilbert & Behnam, 2009; Mintzberg, Ahlstrand, & Lampel, 2009). Due to materiality assessment originating from financial accounting, one could expect the tool to contribute the most to strategic control. Indeed, the identification of material topics can be used to strengthen the early-warning systems that is part of strategic control (Schreyögg & Steinmann, 1987), because it draws attention to potentially unrecognized, but critical issues related to sustainability. However, strategic control is a constant activity, while materiality assessment is normally a punctual, repetitive exercise in non-financial reporting. Strategic control also strongly focuses on risk management, while materiality assessment promises to help identify business opportunities. Therefore, a more valuable contribution of materiality assessment exists during the phases of strategic analysis and strategy formulation. As explained next, the materiality lens may be useful as a filter for the processing of information during strategic analysis and as a reference frame for the choice of strategic alternatives during strategy formulation. In addition, there is a contribution exclusive to materiality assessment conducted through stakeholder engagement that consists in an opportunity to open up strategizing in unconventional ways (see Fig. 13.3).

13.4.1 Filter During Strategic Analysis

A sheer endless amount of information is available to firms, but not all of the information is relevant to make strategic decisions. In order for firms to manage the informational overload in the environment, they typically send information through filters. Ansoff (1976, 1984) famously termed these filters surveillance, mentality and power filter. The surveillance filter determines what information in the environment the firm picks up. The mentality filter influences how this information is being evaluated. The power filter relates to the ability of powerful decision-makers to dismiss or promote information. Materiality assessment primarily functions like a surveillance and mentality filter with regard to sustainability issues. In addition, powerful decision-makers might perceive material issues identified through materiality assessment as more relevant and legitimate, because this information has been

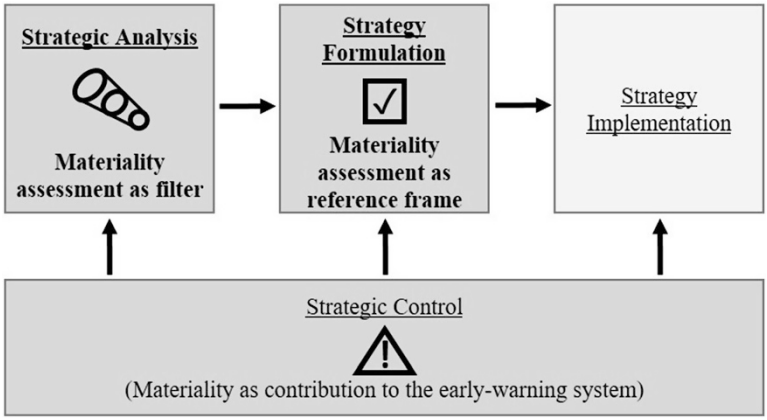

Fig. 13.3 Application of materiality assessment in strategic management

revealed through a structured method that is recommended by institutional actors in non-financial reporting. However, materiality assessment has the more relevant effect on strategic management in form of the surveillance and mentality filters.

Surveillance Filter The materiality assessment method, in the sense of a surveillance filter, determines how broad the scope of observation is, when firms scan their external environment for potentially relevant ecological, social and socio-economic issues, and developments. Importantly the scope of observation should be open enough for a variety of information and periphery incidents, so that firms avoid getting surprised by unobserved changes in the environment (Seely Brown, 2004). However, depending on the coating of the materiality lens the scope of observation differs. Both outside-in as well as inside-out materiality encourage the consideration of issues beyond the short term. Aside from that, the scopes vary considerably. Outside-in materiality combined with standardized assessment methods—as exemplified by SASB's non-financial reporting standards—merely requires firms to look at a checklist to determine material issues. Due to the research method underlying SASB's Materiality Maps, this list does only include topics, in which shareholder and stakeholder interests are aligned, but not topics in which they conflict. In addition, SASB in accordance with US federal security laws does not require firms to consider sustainability issues beyond the boundaries of their own organization (Corporate Reporting Dialogue, 2016: 8). In contrast, inside-out materiality combined with stakeholder engagement—as exemplified by GRI's non-financial reporting framework—broadens the scope of observation beyond what most firms are used to. It does so by requiring the consideration of issues, which are relevant to stakeholder irrespectively of whether they are in the interest of shareholders. The framework also encourages firms to think not only about their immediate sphere of control, but to take on responsibility in their respective sphere of influence for their suppliers and partners in the value chain (Wagner & Seele, 2017: 342). This assessment is required repeatedly in every reporting period. In summary, outside-

in materiality as put forward by SASB tends to promote a narrower scope of observation than inside-out materiality as laid out by GRI.

Mentality Filter Information that has passed the surveillance filter has been noticed but it has not been evaluated yet. The mentality filter determines which information is perceived as relevant enough to act on it. This requires firms to make sense of the received information. The sense making process depends on the depth of understanding decision-makers have of the issue and their attitude towards it (Ilmola & Kuusi, 2006). It seems unlikely that outside-in oriented and standardized materiality assessment methods facilitate a deep understanding of issues, as materiality is determined externally by standard setting initiatives. Again, the insights for the firms are limited to checking a list of likely material issues. Without a deeper understanding, however, firms might misjudge the importance of issues on the list or unintentionally ignore critical information regarding issues missing from the list. Inside-out materiality assessment, on the other hand, requires dialogue with stakeholders, which at least provides a possibility to gain new and deep insights from diverse points of view. This possibly facilitates a more appropriate evaluation of relevant and critical issues.

Whether organizations act upon information does not only depend on their understanding of an issue but also on their attitude towards it. Here the normative foundation of materiality definitions and the corresponding strategic orientation come into play: The business case thinking related to outside-in materiality encourages firms to reevaluate ecological, social or socio-economic issues, which have made it through the surveillance filter, against the background of performance enhancement. What might have been perceived as irrelevant to the firm might become relevant as either a risk, or a business opportunity. The latter, for example, could take the form of market solutions to societal problems, which could be developed into new strategic business areas. Additionally, what has previously been assessed to be a risk could turn into an opportunity, if the possibility exists to distinguish the firm as solver of sustainability related problems. In contrast to the performance oriented filtering by outside-in materiality, inside-out materiality rather stimulates a more ethically oriented reflection. Firms are encouraged to reassess issues, which might previously have been considered irrelevant due to their disconnectedness to shareholder value as now relevant due to their importance to other stakeholders. The filter then not only draws attention to issues where shareholder and stakeholder interests are aligned, i.e. risks and business opportunities, but also to issues where they conflict with each other, i.e. ethical dilemmas.

In conclusion, materiality assessment can have an effect on strategic analysis by providing a systematic way to incorporate ecological, social, and socio-economic issues relevant to strategizing. The contribution consists not in adding related issues to the observation scope, as other analytical tools draw attention to these areas as well (e.g. PESTEL analysis). Instead, the tool's utility consists in systematically narrowing down which exact issues are most likely to be relevant for strategic decisions in a volatile, uncertain, complex, and ambiguous environment. In other

words, materiality assessment focuses strategic analysis with regard to the somewhat overwhelming variety of issues related to sustainability.

However, the outside-in coating of materiality potentially reduces complexity to an extent that limits the tools suitability to identify opportunities for building lasting competitive advantages through addressing sustainability issues. There are two main reasons for this. The first reason is that topics posing risks and opportunities might be filtered out either because they do not make it on the standardized list of material issues (surveillance filter) or because they are not understood properly (mentality filter). This is especially likely in the case of opportunities, if the materiality assessment method focuses more on risks than on chances, as is the case for SASB's Materiality Maps. Additionally, firms might not be able to develop an understanding of issues sufficient to turn them into opportunities. The second limitation results from the standardization of the assessment method, which makes all firms applying it aware of the same topics. This somewhat contradicts the identification of business opportunities and unique competitive advantages.

In comparison, the inside-out coating of materiality has an ambivalent effect on complexity. Inside-out materiality increases complexity before it reduces it (Wagner & Seele, 2017). The increase results from the focus on stakeholder concerns and impacts, which challenges firms to deal with multiple, quantitative, and qualitative objectives. This is far more complex than filtering topics according to their potential effects on performance (Edgley et al., 2015: 8). However, the orientation towards stakeholders also broadens the observational scope of strategic analysis (surveillance filter). Hence, despite not being intended to foster business case thinking, inside-out oriented materiality assessment could ultimately prove more useful for the identification of business opportunities than its outside-in equivalent. In addition, inside-out oriented materiality assessment requires stakeholder engagement which somewhat evades extensive standardization. For example, GRI gives out principle based guidelines rather than standards, because the initiative is concerned that reporting firms could concentrate more on reporting practices than on understanding the impact of their business (mentality filter; Wagner & Seele, 2017: 340, 342). The lesser degree of standardization potentially allows firms to explore opportunities competitors are not aware of. By filtering in a different way, inside-out materiality may hence make a significant contribution to ensure both long-term economic success and societal value.

13.4.2 Reference Frame During Strategy Formulation

Strategic analysis and strategy formulation reveals a set of strategy options. At the end of strategy formulation, a firm must evaluate the pros and cons for each option to select those that ultimately form strategies. These strategies can be formulated for the firm level, the business unit level as well as for specific regions or business functions. Strategic management needs to make sure that a firm's strategies do not contradict each other. In other words, firms need to achieve a strategic fit (Porter, 1991). This

presents two challenges to strategists. They must make decisions for and against available options, and these choices must result in strategies that are consistent across the board. Materiality assessment can serve as a reference frame helping to fulfill both requirements (Edgley et al., 2015: 8). Strategic options that address material issues are likely preferential to alternative options, because they respond to potential risks, provide an opportunity to reduce costs or to differentiate the firm from competitors, or simply because they make a firm's strategy compatible with the expectations of its stakeholders. In other words, materiality assessment contributes to decision-making. Constantly testing if formulated strategies sufficiently address material issues should hence result in an increase of the overall strategic fit (Lozano et al., 2016: 176; Perego et al., 2016: 59; Wunder, 2016: 253–254, 264–265). This would be a major improvement for many firms as such an internal fit of different strategies is often lacking in practice, especially when sustainability issues are addressed in a standalone strategy while the rest of a firm's strategies are formulated with disregard of these very issues (Zollo, Minoja, & Coda, 2017). The advantage of using materiality assessment as a reference frame during strategy formulation is that material topics are tangible—unlike for example more abstract concepts of sustainability—and this makes it easier to refer back to them.

While using material issues as a reference during the formulation of strategies may enable firms to achieve a better fit, it does not necessarily help them to formulate strategies that are more sustainable across the board. Both orientations of materiality assessment are useful to align strategies overall, but they are not equally useful to formulate sustainable strategies. Outside-in materiality as put forward by SASB might be suited to achieve consistency regarding risk minimization and performance enhancement (within the limitations discussed earlier), but it is barely suited to achieve consistency with regard to the embedment of sustainability in strategic management. When firms choose guidelines and standards with an outside-in materiality understanding, they subscribe to the business case for sustainability. As explained in the previous section describing the normative foundation and resulting strategic orientation of SASB's reporting framework, the business case rationale presents a very narrow view on sustainability, which does not deviate far from business as usual. Firms should be aware that this approach is controversial and even considered "greenwashing" by some stakeholders. While proponents of SASB's framework see this as an advantage (SASB, 2016), others accuse the business case approach in general of ethical blindness (Rasche, 2018). There are substantial doubts that business case thinking can facilitate meaningful change. The argument is based on the fact that in many situations it is sheer impossible to create mutual benefits for the shareholders and society. Instead, very often decision makers face ethical dilemmas, which the win-win logic of the business case does not help to solve. Focusing attention and resources exclusively on activities that are mutually beneficial oversimplifies the challenge to act sustainably in today's global economy. There is also concern that the business case thinking would make firms prone to picking low hanging fruits, while issues of systematic harmful business activities and injustice remain untouched or might even (unintentionally) exacerbate (Crane et al., 2014; Gao & Bansal, 2013). In more drastic words critics warn that the business case rationale by

"parrot[ing] the limited logic of economic theory, it could end up applauding corporations that are in fact morally corrupt despite their elaborate façades" (Gond, Palazzo, & Basu, 2009: 58).

In contrast, if companies aim to embed sustainability in strategic management, a framework with inside-out materiality orientation like GRI is probably the better choice. To give an example that relates to materiality assessment, inside-out materiality potentially challenges firms to reconsider business areas where the firm has significant negative ecological, social or socio-economic impacts because it is in the interest of stakeholders. Something similar could only be expected from outside-in materiality if regulatory, legal, or reputational risks are so high that they outweigh financial opportunities. This supposes that stakeholders who are affected by the firm activities in this controversial business area are powerful enough to turn their concerns into reputational risks for the firm. This is often not the case, especially if local communities are afflicted. The focus on stakeholder concerns is more suited to confront strategists with ethical conflicts where shareholder and stakeholder interests are not aligned. If material issues are constantly used to evaluate strategic choices during strategy formulation, this could serve to systematically integrate reflection on sustainability into the strategy process (Behnam & Rasche, 2009). Formulating strategies on the one hand and testing them for compliance with legal requirements and sustainability targets of the firm on the other, would then not be two separated steps in the strategy process, of which at worst the latter does not even happen.

In conclusion, it is advisable for firms to choose guidelines and standards whose logic aligns with the firm's own objectives regarding non-financial reporting. They should consider the criticism on the business case rationale in their decision for and against specific non-financial reporting frameworks as well as in their reporting communication. Otherwise, they might overestimate the changes they are embracing and may find themselves confronted with unexpected criticism by stakeholders (Vigneau, Humphreys, & Moon, 2015: 472, 481). Similarly, institutional actors trying to push non-financial reporting should consider the underlying logics of various non-financial reporting initiatives. While GRI guidelines are still the dominant practice in the field, SASB and similarly oriented initiatives (e.g. integrated reporting according to IIRC) might increasingly compete with it in the future. Consequently, mandatory financial reporting might not bring about the extensive changes potentially intended by regulators if it primarily results in the diffusion of outside-in oriented non-financial reporting frameworks.

13.4.3 Opportunity to Open Up Strategizing

Related to the applicability of materiality assessment during strategic analysis and strategy formulation, there is another potential contribution of materiality assessment to strategic management, which consists in an opportunity to open up strategizing in unconventional ways. However, the contribution of so-called "open strategy" is

limited to inside-out oriented materiality assessments, because it promotes stakeholder engagement as part of the assessment method.

Strategy is traditionally exclusive, as it usually resides with top management or other elected staff. Firms normally also keep it secret in order to sustain competitive advantages. Both these orthodoxies of strategic management are increasingly being challenged. Scholars observe, that organizational, societal, cultural, and technological forces motivate firms to open up strategizing in terms of inclusion and transparency (Whittington, Cailluet, & Yakis-Douglas, 2011). Wider inclusion describes the involvement of a greater range of people in strategizing. This extends beyond the boundaries of the firm to customers or business partners.[2] Transparency is increased internally as well as externally during the strategy formulation stage and, more commonly, in the communication of strategies after formulation. Non-financial reporting and in particular stakeholder engagement during materiality assessment align with the general trend to increase inclusion and transparency in strategic management.

Inside-out oriented materiality assessment conducted through stakeholder engagement provides the opportunity to gain experience with open strategizing. From a perspective of non-financial reporting, it assists to align firm strategies with the interests of stakeholders in consonance with the stakeholder approach to value creation. It provides a potential source of checks and balances for strategic management as laid out earlier when materiality assessment was discussed as a reference frame during strategy formulation. Furthermore, it can be a stepping-stone for firms to get involved in more advanced forms of stakeholder engagement such as multi-stakeholder partnerships.[3] In such partnerships mainly business actors and civil society organizations come together to find a common approach to complex problems that cannot be solved by individual organizations alone, because these problems are characterized by high uncertainty, dynamics, and conflicting values of stakeholders (Dentoni, Bitzer, & Schouten, 2018).

Stakeholder engagement during materiality assessment can, however, also benefit the bottom line. Opening up strategizing promises access to information, ideas, and creativity of a larger number and more diverse people. More open forms of strategizing have most broadly been applied with regard to innovation management. However, increasingly the notion extends to strategy more generally (Hautz, Seidl, & Whittington, 2017: 298–301). The idea is that greater inclusion and increased transparency can also facilitate joint sense-making with internal and external stakeholders and favorable reputation management. This can cause employees to show greater commitment and other stakeholders to more intensively cooperate during strategy implementation. All this holds true for opening up strategizing in the context of inside-out oriented non-financial reporting. Stakeholders may be knowledgeable about trends in the environment and constitute a valuable information source for the

[2] See Chap. 5 on "open strategy" as well as Chaps. 11 and 12 on stakeholder engagement.

[3] See Chap. 12 on international multi-stakeholder collaboration.

recognition and interpretation of information relevant for the formulation of more sustainable strategies. In this sense, materiality assessment through stakeholder engagement may be particularly useful to formulate forward looking strategies, that are adopted to the challenges in today's complex and uncertain times (Andriof & Waddock, 2002). This benefit of engaging with stakeholders correlates strongly with the filter functions in strategic analysis described earlier. Beyond that, the interaction with stakeholders during materiality assessment can serve for additional purposes, such as asking customers for their preferences or even ideas regarding sustainability related product developments and business models. In addition to benefits for product development and business models, this could serve to build a closer relationship to the customer base potentially increasing their appreciation of the company and loyalty. In a similar way, firms could strengthen their relationships with other stakeholders such as business partners (e.g. suppliers) or civil society organizations. Signaling an interest and understanding of their concerns as well as acting upon it then potentially reduces transaction costs and uncertainty regarding stakeholder actions during strategy implementation (Hedberg and von Malmborg 2003; Herremans, Nazari, & Mahmoudian, 2016: 426; Higgins, Stubbs, & Love, 2014: 1111; Lozano et al., 2016: 176). If one considers these points it is surprising that the business case oriented, outside-in assessment of materiality as promoted by SASB has eliminated any engagement of firms with their stakeholders. Inside-out oriented materiality assessment conducted through stakeholder engagement on the other hand creates such opportunities, besides the fact that it is not an explicitly intended feature of the framework.

Many firms already apply a variety of practices during materiality assessment, which are highly commensurable with open strategizing (see Fig. 13.4). The practices range from one-way engagement, which firms use to inform or educate stakeholders and to explain themselves, via two-way engagement providing the opportunity for dialogue, to multi-way engagement, which allows stakeholders to execute greater levels of power over decision making. Empirical research indicates that with growing experience firms embrace activities more conductive to inclusion and transparency rather than practicing one-way engagement. However advanced multi-way engagement in the sense of collaboration, partnerships, or democratic decision making is rather an exception (Moratis & Brandt, 2017).

Opening up strategizing does not only pose opportunities but also challenges. Engaging with stakeholders through materiality assessment provides firms with the opportunity to gain experience with more open forms of strategizing. Some of the challenges associated with opening strategizing may be alleviated because the non-financial reporting purpose creates a certain boundary for the interaction between the firm and its stakeholders. Nevertheless, firms should be aware of the dilemmas associated with opening up strategizing: While it can grant access to wider sources of knowledge, it can also slow down decision-making as well as limit flexibility and control over the strategy process. Increased commitment resulting from inviting stakeholders to contribute can be undermined if they feel their contributions had no effect on the outcome of decision-making. Stakeholder engagement requires firms to disclose strategic information, which can threaten competitiveness,

Stakeholder Group	Examples of engagement methods
Employees	Annual and sustainability reports; Day-to-day dialogue; Employee satisfaction survey; In-house magazine; Intranet; Meetings; Newsletter; Performance management process (including performance review); Town hall meetings; Training and workshops; Website; Employee council
Customers	Annual and sustainability reports; Customer service center; Fairs, conferences and special events; Joint product development projects; Meetings; Satisfaction surveys; Website; Social media
Suppliers	Codes of conduct; Day-to-day dialogue; Joint product development projects; Meetings; Satisfaction surveys; Supplier audits; Supplier days
Shareholders and Investors	Annual general meeting; Answers of questionnaires from investors; Annual and sustainability reports; Capital market days; Investor presentations and conferences; Phone calls; Press releases and press conferences; Quarterly results; Road shows; Website (investor relation section)
Local communities	Community engagement report; Community events; Meetings with representatives of local associations, organizations or local communities; Neighborhood forums; Open house days; Participation in and development of local projects; Participation in working groups and committees; Social media; Surveys; Website

Fig. 13.4 Stakeholder engagement methods for different groups of stakeholders (Moratis & Brandt, 2017: 319)

trigger further stakeholder concerns or cause confusion if the information provided is poorly understood or misinterpreted by the recipients. Firms also cannot take for granted, that stakeholders are able and willing to give the time and efforts required when getting involved in strategy work. At last, opening up strategizing can increase pressure to extent inclusion and transparency to ever greater levels (Hautz et al., 2017). Stakeholder engagement in the context of non-financial reporting additionally requires opening up to stakeholder groups, which are not commonly involved in other forms of open strategizing, e.g. civil society organizations. It is a complex as well as time- and resource-consuming task to identify to whom the firm is responsible, how far that obligation extends, how to establish, develop and maintain stakeholder relations, and how to balance competing interests. Especially small and medium sized firms face resource and capability constraints which might prevent extensive exchange with stakeholders during materiality assessment (Arena & Azzone, 2012; Herremans et al., 2016: 426–430; Moratis & Brandt, 2017: 321; O'Riordan & Fairbrass, 2014; Wagner & Seele, 2017: 340).

In conclusion, stakeholder engagement during materiality assessment does not only influence the functioning of the tool as surveillance and mentality filter, it also provides the opportunity to harness additional benefits related to more open forms of strategizing. In particular, it provides firms with access to knowledge and ideas far beyond its organizational boundaries, which is increasingly viewed to be important for firms in order to adapt to the dynamic changes in today's complex global market environment. The possibility to approach stakeholder engagement within the boundaries of non-financial reporting can help firms to gain experience before adopting similar practices in other contexts. When deciding for or against non-financial reporting guidelines and standards firms could consider these benefits, but should

also be aware of the dilemmas and resource requirements related to stakeholder engagement.

13.5 Conclusion

This discussion started out from the observation, that materiality assessment is promoted as a useful addition to the strategic management toolkit. In particular, its application promises firms a way of more systematically incorporating sustainability into strategic decision-making. However, materiality assessment is based on the highly generic concept of materiality. Two exemplary non-financial reporting initiatives showed that conceptualizations of materiality and consequently the methods of materiality assessment differ widely. The analogy of a lens that comes in different coatings was used to describe this phenomenon. These coatings, namely outside-in and inside-out materiality, reflect the existing dispute between proponents of the shareholder and stakeholder approaches to value creation.

Materiality assessment can contribute to strategic management as a filter during strategic analysis focusing on risks and opportunities related to sustainability issues as well as conflicting interests between the different stakeholders of the firm. Materiality assessment also contributes as a reference frame during strategy formulation, potentially helping firms to make trade-offs and achieve a strategic fit across the board of individual strategies. In addition, materiality assessment provides the opportunity to gain experience with opening up strategizing in terms of inclusion of stakeholders as well as increased internal and external transparency, which is viewed to be important for the adjustment to changes in today's volatile, uncertain, complex, and ambiguous environment.

However, firms who want to exploit materiality assessment for strategic management need to be sensitive in their choice of non-financial reporting guidelines and standards, because not every conceptualization of materiality contributes to the same extent to the before mentioned benefits of the instrument. Firms need to be aware of their own specific objectives regarding the adoption of the tool in order to find the framework that aligns best with their goals.

If firms follow the business case rationale of sustainability and are mostly interested in risk management, they can use outside-in oriented materiality assessments as put forward by SASB. Due to the high degree of standardization, the method is time- and cost-efficient. It is also explicitly designed to draw attention to sustainability related risks in the environment. The high degree of standardization and the strong focus on risks, however, somewhat contradicts the identification of business opportunities.

Firms that follow the business rationale of sustainability and are interested in risk management but also business opportunities related to sustainability could be better served with inside-out oriented materiality assessment methods as laid out by GRI. The method is not primarily intended to support the business case and it is not as easily and efficiently conducted as SASB's method, but it can nevertheless be useful

in a business case sense. This is because it supports a broader observational scope during strategic analysis, potentially facilitates a more unique understanding of developments in the environment through stakeholder engagement, and allows for more open forms of strategizing.

Lastly, if firms intend to embed sustainability more comprehensively in strategic management they are well advised to adopt inside-out oriented materiality assessment methods as promoted by GRI together with more extensive forms of stakeholder engagement. There may be opportunities to "do well while doing good"—and it is legitimate to exploit them—but this maxim of the business case rationale cannot be the premise for doing business sustainably. Firms cannot evade dealing with tradeoffs between shareholder value and interests of other stakeholders. GRI's framework encourages firms to go beyond the business case and bring stakeholder concerns to the core of strategic management.

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Part IV
Learning from Strategy Practices

Chapter 14
Siemens Intrapreneurs Bootcamp: Purpose-Driven Innovation to Unleash People's Potential for Impact-Based Business

Laura Engelhardt, Steffen Mayer, Christoph Krois, and Bettina Maisch

14.1 Purpose as Foundation in a Volatile, Uncertain, Complex, and Ambiguous (VUCA) World and Basis for Impact

> You have a choice: You can go into a world that has been built or you can build the world yourself. And as a creative person, naturally we will choose the option of creating the world. (Prof. Yunus, One Young World Summit 2016)

With the emergence of ever faster technology developments, new business models, and more complex market environments, the way we innovate in business is undergoing a huge transformation. On top of that, we face fundamental disruptions in the global interconnectedness from climate change to socio-political systems. It is no secret that our world is becoming more volatile, uncertain, complex, and ambiguous—VUCA has become the "new normal" (Mack & Khare, 2016). This poses tremendous challenges to the business world but also holds a massive chance for new opportunities. Especially large corporations with their international market presence have the power to create significant impact for the sake of our planet and societies by their innovations and the way they run their business.

This case study illustrates the power of global companies to innovate for a greater good in a VUCA world. Embedded in theoretical foundations on the topic of corporate innovation management and purpose as orientation in complex environments, it specifically describes the pioneering format of the Intrapreneurs Bootcamp and its setup.

Living in a VUCA world implies that constant innovation is more important than ever. When asked about the most important factors for successful innovation, the majority of 246 CEOs from around the world see the right leadership and culture as most crucial. At the same time, the existing company culture was

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mentioned as second greatest constraint from being more innovative right after a lack of financial resources (Percival & Shelton, 2013). This reflects that in a changing world, formerly successful behaviors, orientation, and principles are not suitable anymore.

In a mechanistic world view, we had processes and input-output formulas resulting in a rather certain output. Nowadays, in an increasingly complex world, there is no reliable prediction of causal if-this-then-that relations. This means a solution cannot be predetermined but will evolve through new decisions for each respective step towards a potential solution. It is purpose, not formulas and processes that give employees/people their power and orientation to steer through those unknown waters (Buck & Buck, 2014).

According to a systemic view, purpose of a system can be everything that helps this respective system to survive and continue living (Luhmann, 1987). In the course of innovation, we find different levels of purpose that need to be consistent in their relation in order to create the greatest impact: The individual purpose, a common team purpose and a company purpose that frames the endeavors of a team.

On an individual level, purpose can be seen as an inner compass for each single person where one wants to create impact in life and your contribution has broader meaning (Hansen, 2018; Heath & Heath, 2017). Within this case study, purpose is understood in the context of a personal working environment. Purpose on individual level gives a bigger picture for oneself and hence a language of alignment to other team members. The inner drive to work on something meaningful helps to build resilience, to stand up again and again whenever an unforeseen hurdle comes up. This is an important trait in the course of innovation projects where early failure is the norm and success comes with much iteration.

The team purpose gives a joint answer to the question "what shall be made possible?" and hence gives a common orientation for the team operating in an uncertain environment. It is what holds a team together and helps a team to focus on the impact to be achieved with their project. It is easy to fall for a particular solution and stick to it which is what we often experience in daily business. However, in an uncertain environment it is necessary to stay open for different kinds of solutions as an innovative solution might fail while the problem itself still might be a relevant one. A well-defined purpose—not a specific solution—creates the prerequisites for an experimental mindset that is open for further ideas and solutions.

Purpose on a company level provides a larger context and is one important step towards implementation of an innovation idea. It gives an orientation which new businesses would fit to the overall strategy and would reach a common understanding of a business mandate. This is especially relevant for business ideas that are not within the given business mandates at the current state of time, thus help to create a culture for impact-driven and more sustainable innovation.

One might argue that a common purpose on a team level is the most relevant one for an innovation project. Nevertheless, the full power of purpose in the context of innovation within a company only unfolds when it is aligned to each team member's individual purpose and embedded into the greater company purpose.

14.1.1 Siemens: A Global Player with a Distinctive Company Purpose

The purpose statement of Siemens is mirrored in its mission: "we make real what matters." This reflects the goal and claim to pioneer a sustainable future across the globe: To contribute to an active society development on a global scale and creating a societal impact while running and developing a profitable business.

With currently around 377,000 employees in more than 200 countries/regions, Siemens is a global powerhouse and ranked first as top regarded company on FORBES Global 2000 companies in 2017. Siemens is positioned along the electrification value chain—from power generation, transmission, and distribution to smart grid solutions and the efficient application of electrical energy, i.e. in automation and mobility—as well as in the areas of medical imaging and laboratory diagnostics.

With "Vision 2020" Siemens has defined an entrepreneurial approach with the goal to enable the company to occupy attractive growth fields and sustainably strengthen its core business. In this way, Siemens is reacting to its fast changing markets in its growth areas electrification, automation, and digitalization.

14.1.2 Intrapreneurship as Fertile Ground for Continuous Innovation

As stated above, living in a VUCA world implies that constant innovation is more important than ever. In such a world, the stringent, almost production-like stage gate innovation processes that proved to be successful in very stable, mature markets do not provide the required agility and flexibility anymore. Companies that still apply the typical funnel logic to filter and drive—often technology-centered—innovation ideas, realize that they are too rigid, too slow. Moreover, presumably good ideas often lack implementation because there is no qualified team for implementing the idea or the idea lacks market validation—just to name two prominent examples.

Many argue that large corporations are not made for agility and flexibility anyway and opt for externally driven innovation, e.g. through startup cooperation or external incubators. Thereby, they aim at reintegrating new ventures once they have reached a certain size. For some cases, this proves to be successful and is a valuable addition. However, this is not enough to lead an overall transformation towards a necessary culture shift as described above.

New ways of innovation management with a consequent focus on purpose and impact are required. This includes people-centered, fast, iterative, and circular processes with radical test cycles. Moreover, a people-centered fertile ground which allows innovation to grow is needed which can be considered as the original task of innovation management (Buck & Buck, 2014). This foundation needs to provide a cultural basis of innovation leadership, psychological safety, appreciative communication on eye level, diversity as well as openness and the ability to sense opportunities.

In this context, intrapreneurship can lead the way to create a culture of continuous innovation and produce new business offerings. Intrapreneurship can be understood as the act of behaving like an entrepreneur while working within a large organization (Haller, 2014). At Siemens we established a specific understanding of intrapreneurship:

> Intrapreneurship means the enablement of people to follow their purpose and drive innovation with an entrepreneurial mindset, but from within and for an organization—activating all the resources, skills and knowledge that a company as a whole already provides, aiming for a business as well as societal impact. Intrapreneurs are creators acting out of a sense of opportunity in their internal and external environment while using the resources of their organization in a pragmatic, target oriented and sustainable way. (Laura Engelhardt and Steffen Mayer, 2017)

As we figured that intrapreneurship is a suitable way to both transform culture and actually drive and implement impactful innovation projects, we started an initiative at Siemens named "Intrapreneurs Bootcamp."

The Intrapreneurs Bootcamp is a global experiment for change makers with diverse skills to co-create the future using technology. It brings together select and deliberately diverse people with intrapreneurial aspiration and talent ("Intrapreneurs") who connect and create purpose-based innovation projects in a very fast and agile way. They are supported with innovation leadership sessions and toolsets in an inspiring and empowering setting.

The overall goal of this initiative is to consistently test an intrapreneurial mindset as a way to foster an innovation culture suitable in ever more complex environments and to ultimately strengthen the implementation of impact-driven innovation projects within Siemens. As "impact-driven" we understand to act out of a focus on key (societal) problems and challenges that shall be solved with the innovation on top of a business viability.

In the following, the main conceptual pillars, setup process, actual implementation, and prospect of the Intrapreneurs Bootcamp will be outlined.

14.2 Siemens Intrapreneurs Bootcamp with Consequent Focus on People Based on "Area of Genius" Principle

As stated above, an increasingly complex world lacks reliable causal chains. Thus, a solid decision for the next step can only be taken once the result of the prior one is known. Yet, with a common purpose as basic orientation, fast and iterative processes with radical test cycles can help to establish a systematic proceeding—given that the person who is using those processes holds the inner capacity to navigate in complex systems.

In terms of business building, there are established iterative processes (cf. build-test-learn cycle within Lean Startup (Ries, 2011) or the Design Thinking frameworks (Liedtka & Ogilvie, 2011)). Those processes cover the "how" to find a business idea solving an actual customer problem and are well suited to determine what users/customers need with a respective money earning logic.

However, in a corporate environment, the main innovation challenge is not the lack of promising business ideas but their quick and successful implementation. To collect reliable data is one way to support the implementation and certainly helpful. Yet, in the end it is people who drive innovation ideas into implementation, not processes nor data.

In literature, one finds many articles and research papers trying to derive specific personality traits of "the typical innovator" successfully driving an innovation idea into implementation. For sure, there are helpful personality traits such as openness and resilience (c.f. Dyer, Gregersen, & Christensen, 2011; Griffin, Price, & Vojak, 2012). Whereas we do agree, we have a much more profound perspective: We consider every person to have a unique "area of genius" which he/she can effectively apply in the context of business creation. The "area of genius" describes where one is at his/her best self and comprises the set of unique skills, experiences and knowledge as well as fields of interests and curiosity. It is where one's innate talent and greatest passion intersect. When one operates in the area of genius, one is the most content and at the same time the most successful (Downey, 2014).

As talent and intelligence develop over time in an interrelation of genes and environment, so does one's area of genius in a dynamic process that can be strongly influenced (Shenk, 2011). However, in order to make full use of this, a growth mindset is required. In the context of the Intrapreneurs Bootcamp, we understand this growth mindset in terms of both own growth in personal development and growth of the innovation endeavor.

Therefore, the Intrapreneurs Bootcamp has a stringent focus on people as creators (hence "intrapreneurs" not "intrapreneurship") and their capacities both in terms of personal development and expertise in processes and toolsets. Consequently, we developed a framework for the Intrapreneurs Bootcamp which covers both the journey as an intrapreneur reflecting personal growth as well as the evolvement of the intrapreneurial project. This framework will be outlined below under "One iteration from signal to launch in three modules."

The combination of "area of genius" principle and growth mindset is also reflected in the role and profile descriptions of sought-after participants (refer to passage "50 participants with 35 nationalities out of 190 applications chosen for Intrapreneurs Bootcamp 2017") as well as the selection and build-up of a supporter network of coaches and top management as described in passage "Supporting coaches and C-level managers selected based on purpose and growth mindset." It is unique talents, motivation, and mindset that we were interested in, no matter of position level or function.

14.2.1 Setup of Siemens Intrapreneurs Bootcamp in an Intrapreneurial Mindset Itself

The Intrapreneurs Bootcamp was initiated bottom up from scratch without an official business mandate but based on a solid internal need analysis out of a top down

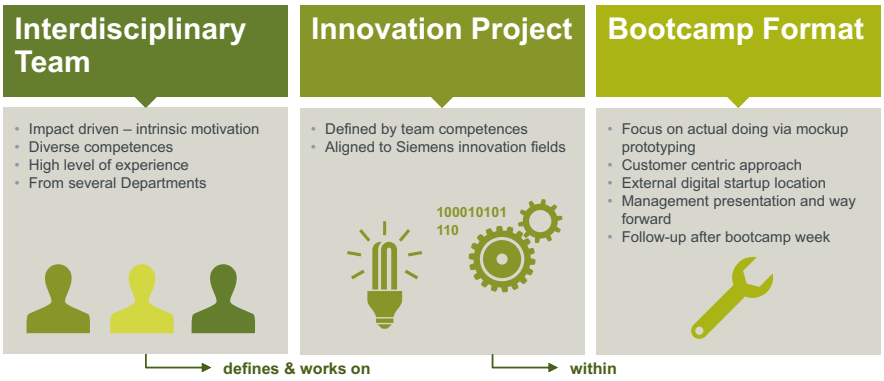

Fig. 14.1 Basic concept of Intrapreneurs Bootcamp

corporate innovation strategy perspective. The development and set up of the initiative including the overall concept, communication, and resource setup happened in an intrapreneurial way itself.

Based on a common purpose and envisioned future, we rolled out a first pilot that took place in 2016 with nine select intrapreneurs over 6 consecutive days.

During this time, participants formed self-organized teams and worked on business opportunities based on their individual purpose and the greater impact they envision for the company and society. They developed and tested purpose-driven innovative ideas and drove them towards a Minimum Viable Product (MVP) for market implementation. Besides, they received innovation leadership coaching as well as training and support in business creation tools (incl. early market tests and direct customer interaction, i.a. taken from Lean Startup and Design Thinking).

In the course of the first pilot we tested the basic concept demonstrated in Fig. 14.1 and identified that there are open-minded creators and bold thinkers within Siemens that are intrinsically motivated to create change and would be drawn to a fertile space to connect and create something that matters with strategic relevance.

The results of the first pilot showed that the target group can come up with an innovation idea with business relevance and first customer tests within 6 days when the individual's purpose was taken as starting point. This gave us enough confidence to continue applying the paradigm shift to start from within people and let ideas evolve instead of finding ideas and then attach people to them as it is often seen in the course of innovation management.

Furthermore, we tested the organizational conditions for an Intrapreneurs Bootcamp in terms of funding, resources, and support through coaches.

Based on those findings, the Intrapreneurs Bootcamp 2017 was set up and opened for 50 participants (40 Intrapreneurs and 10 Mentors) from across all Siemens divisions, hierarchical levels and functions who had to apply for a spot. The intention of opening the initiative for all Siemens employees was to reach a high diversity within the teams but moreover to increase the outspread and impact of the Intrapreneurs Bootcamp itself.

As a result of lessons learned, the week was split into three on-site modules over a period of 6 weeks to better integrate the learnings from each module in the participants' daily job and work environment. The total on-site attendance time of 6 days was kept. On one hand, it was important for us to test the edge of minimal time required to create something significant with an overall innovation success and on the other hand to minimize the time participants would have to leave their daily job. At the same time, it required a higher investment and commitment by participants as they had to travel three times—some with intercontinental journeys.

Originally having had innovation leadership coaching and support in business creation tools as two separate pillars in the pilot, we developed a framework that combines them both in a much more intertwined way. We used state-of-the-art innovation management methods as applied within Siemens as well as insights from leadership coaching and personal transformation based on neuroscience and systemic coaching approaches. This framework will be described in Sect. 14.2.4.

Even though we designed the Intrapreneurs Bootcamp for 50 people, we still had to pitch for resources and test whether this offer would be attractive enough to gain significant momentum and whether enough people within Siemens with sufficient diversity would be drawn to it. In order to test the attractiveness of the Intrapreneurs Bootcamp setup, a landing page with all relevant information was designed for the application process. The communication itself led to several test rounds until we found a suitable communication channel significantly rising the numbers of applications. In the end, it went up to 190 despite the fact that it was the first time that such a format was run in this broad setup. The application process itself will be described in the following passage.

Very fast, we realized that the Intrapreneurs Bootcamp attracted a lot of attention in various areas, functions, and people. We were in favor of collaboration in any sense and opened doors whenever we saw that our common purpose and mindset would be shared. A close exchange with other initiatives and functions within Siemens helped to join forces and to establish the Intrapreneurs Bootcamp.

As purpose was our key asset, we would be very restrictive when we saw it endangered: In order to be tolerant you need to be intolerant when it comes to intolerance. In this way, we could ensure a fertile ground for growth while circumnavigate corporate politics.

This extremely open and at the same time very restrictive behavior showed to be one of the key ingredients why the Intrapreneurs Bootcamp could reach its impact including Managing Board support in the end.

14.2.2 50 Participants with 35 Nationalities Out of 190 Applications Chosen for Intrapreneurs Bootcamp 2017

As stated above, we used a web-based application process to finally choose 50 participants with 35 nationalities out of 190 applications from all Siemens Divisions

across hierarchies and functions. 40 out of the 50 spots were foreseen for Intrapreneurs working on their purpose-driven innovation projects in teams. The remaining 10 spots were reserved for Mentors supporting the teams. Detailed roles and profiles of both Intrapreneurs and Mentors will be described later. The description of the sought-after participants was based on the above described "area of genius" principle combined with a growth mindset. We were interested in unique talents no matter of position level or function and tried to build an environment where those talents and personality traits are valued.

Since we were looking for intrinsically motivated colleagues, the application process for both Intrapreneurs and Mentors was deliberately tough. On top of a short application form covering basic personal data and questions about expertise, skills and personality, applicants had to submit a max. 2-minutes video of themselves answering the questions who they are and what they bring in, showing their commitment to the Intrapreneurs Bootcamp as well as what matters to them to create. In addition, each participant needed to have his/her supervisor's approval to take part and to cover respective travel expenses.

In order to ensure a proper selection process, we described roles and profiles of an Intrapreneur and a Mentor. As pointed out above, we used the principle of a unique area of genius paired with a growth mindset as guiding basis. In the following, these roles and profiles will be outlined.

The role of an Intrapreneur was to develop an impact-driven innovation idea in a team connected through a common team purpose.

The sought-after profile of an Intrapreneur included:

- Intrinsic motivation to drive change and tackle challenging & unsolved problems
- Willingness to get out of one's comfort zone
- Sense of collaboration, speak one's truth, and drive a team spirit
- Commitment and discipline to get things done
- Siemens first (oriented towards one Siemens and Siemens' future)
- With dedicated professional background and expertise, esp. in
  - market understanding (e.g. through sales/product management/marketing/strategy) and/or
  - technology domain experts (depending on problem statement) and/or
  - entrepreneurial leadership/methods

A Mentor's role was to provide on-site support of a designated Intrapreneurs Bootcamp team over the whole Intrapreneurs Bootcamp duration and preferably beyond. He/she acted as first point of contact to his/her dedicated team in case of questions regarding the progress of their ideas during and beside the modules. The role included to inspire teams to achieve what they can, challenging them in their assumptions and encouraging their development acting as a coach while knowing their expertise. Furthermore, a Mentor acted as ambassador for the intrapreneurship idea and received the same trainings as an Intrapreneur plus additional sessions in terms of a "train the trainer" concept.

The sought-after profile of a Mentor included:

- Intrinsic motivation to inspire, support and build a trust-based relationship with a dedicated team and to see the team as well as the idea grow
- Broad expertise and experience in several relevant domains/roles, esp. on collaboration, creativity techniques, processes, tools, etc.
- Broad network, ideally inside and outside of Siemens
- Willingness to grow personally

We selected the participants based on the diversity of the whole group in terms of expertise, organizational units, and functions to allow for highly diverse teams as well as an increased penetration and hence broader impact in the organization. The authenticity of their answers in relation to the respective sought-after profile (especially on how one can show intrinsic motivation to drive change, willingness to leave common grounds, and team skills) was the differentiating factor. When in doubt, "commitment beats competence" was our guiding principle.

14.2.3 Supporting Coaches and C-Level Managers Selected Based on Purpose and Growth Mindset

In order to ensure enough training capacity for that large number of participants and to ensure a state of the art framework, several internal and external dedicated coaches for innovation leadership as well as business creation methods and tools were brought in.

For the aspect of innovation leadership we chose to work with two external coaches from LUMAN in order to minimize any Siemens culture bias and especially to ensure a neutral perspective when it comes to personal development. In order to intertwine their perspectives with a Siemens view, we closely worked together in developing the overall framework upfront.

Siemens innovation management consultants were introduced to cover the business creation part, i.e. with a Design Thinking and Business Modeling background. They made sure that the provided and used tools and methods of the Intrapreneurs Bootcamp are in line with proven and state-of-the-art methods and tools within the Siemens context.

In addition, we brought in an external coach from Yunus Social Business with extensive experience in social entrepreneurship and startup creation in order to provide the impact attitude to the teams as well as a non-Siemens perspective.

To anchor the intrapreneurial endeavors in the Siemens organization and to support the journey of the teams after the official duration of the Intrapreneurs Bootcamp, eight mostly C-level managers from several Siemens divisions could be inspired to act as catalysts. As will be described below, the teams presented their ideas including required support during a final pitch called "pulse check." The role of those managers included to act as an "Ignitor," meaning to act as catalysts, network

opener (pot. funding), and to provide an open door for current projects as well as further initiatives.

It was of high importance to us to carefully select both coaches and top management representatives based on the same principles as the participants, namely a strong purpose and growth mindset to strive for an area of genius. This helped to foster a community that would ensure the required atmosphere of trust and psychological safety.

14.2.4 One Iteration from Signal to Launch in Three Modules

As stated above, we developed the framework to cover both the personal journey as an Intrapreneur as well as the progress journey of the intrapreneurial endeavor with a consequent focus on the people involved: "What am I able to fulfill in this world? What unique gifts do I have that I can most effectively use in this context?"

Furthermore, we added elements for a broader envisioned impact in the sense of Prof. Yunus' statement at the beginning as we consider this as a key point targeting at breakthrough innovation rather than incremental improvements. In order to create a future, you need to envision it first.

The Intrapreneurs Bootcamp framework is based on the cultural competencies for intrapreneurship derived by LUMAN and was adapted to our specific context. It is understood as circular process where each iteration builds upon the findings of the prior one. We designed the three modules of the Intrapreneurs Bootcamp to run through one iteration in order to internalize a basic understanding of each step and enhance the individuals' capacity to implement them in a different setting as well. Figure 14.2 gives an overview of the framework elements as well as the three modules "Commit & Explore," "Create & Validate," and "Catalyze."

Module 1: Commit & Explore (1.5 days)
This module covers the first four steps of the signal-to-launch-cycle:

- **Context & Connect**: Set the stage for intrapreneurship and lay cultural foundation to understand fundamentals of Intrapreneurship and define what is important to you to create. Connect participants to themselves and as teams
- **Signal**: Bring in a diversity of relevant information sources to create a picture of a future possibility
- **Possibility**: Drive out exciting future vision of possible solution based on defined team purpose/challenge to be solved
- **Commitment**: Learn about commitment and commit to the problem/challenge to be solved as a team

The main goal of the first module was to form purpose-driven teams and to develop first tangible ideas based on a joint team purpose and envisioned impact.

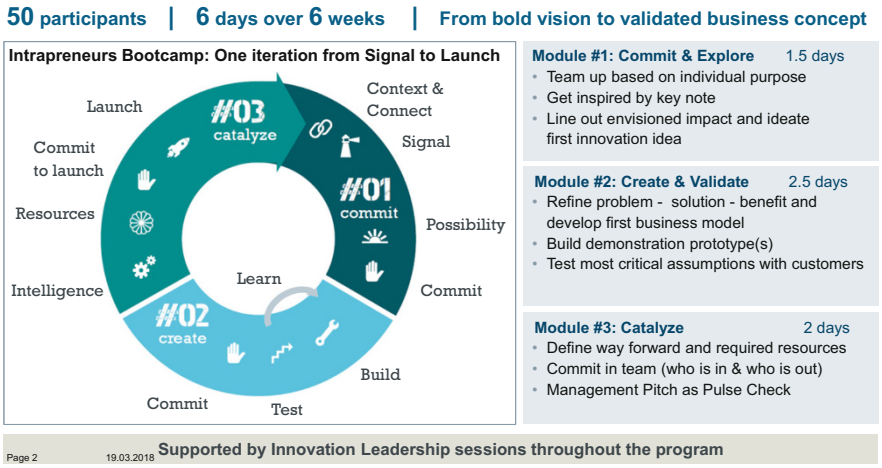

Fig. 14.2 Framework and modules of the Siemens Intrapreneurs Bootcamp 2017

Participants met for the first time and in order to reach this ambitious goal in 1.5 days, it is crucial to create an atmosphere of trust and psychological safety in every detail. As location we chose a penthouse space with a broad view over Munich to support the required vision.

Participants were guided through several exercises to build deep connections as a group and to express their individual purpose statement. Based on matching purpose statements, Intrapreneurs found their team members. In order to reach diverse teams, preferred leadership styles as well as their gifts in terms of knowledge, skills, competences, and networks they wanted to bring in needed to be balanced in each team. Based on the joint team purpose and skill set, Mentors and teams chose each other so that each team had one dedicated Mentor.

After that, a keynote on designing meaningful products that serve the company's strategy inspired the teams to widen their perspective towards impact. The teams then developed a broader impact vision, defined the challenge they were up to solve and collected all available and relevant information including stakeholders and open key points.

With the help of selected innovation methods and tools, the teams developed a first ideation iteration for customers, value proposition and envisioned offering. Finally, the teams pitched their purpose statement and a demonstration of their offering idea with respective customer/user value and defined their next steps until Module 2.

Module 2: Create &Validate (2 days)
This module covers the following steps of the signal-to-launch-cycle:

– **Build**: Synthesize insights and further develop solution. Prototype solution for communication and validation

- **Test** & **Learn**: Determine if the project is viable and worth committing to based on external customer feedback and technical feasibility
- **Commit** to taking the project to the management pitch phase

Regarding the innovation projects, the main goal of the second module was to refine the problem statement, solution and benefit matching the Siemens purpose and strategy. The teams performed several iterations in developing a first business model, building a demonstration prototype and testing their most critical assumptions with customers and other relevant stakeholders. The tests were performed through interviews and crowd sourcing via the platform "Innosabi."

In training sessions, relevant methods such as business modeling and test design of most critical assumptions were introduced. Coaches and Mentors helped the teams to choose the most relevant ones for them at the given progress status of their projects. Several pitch rounds for peer feedback made sure to incorporate relevant knowledge and contacts of other teams. To support rapid prototyping in machinery and atmosphere, we selected a Maker Space as location.

Innovation leadership sessions comprised several exercises from coaching practices based on visualization, physical experience and anchoring to integrate required capabilities and learnings. On an individual level, a guided mindfulness session was used to tap into implicit knowledge and to integrate and visualize all collected information thus far. A pair-wise exercise helped to cope with emotional rejection to be mentally prepared and in an open mindset specifically for interviews to test most critical assumptions. As a whole group, a physical exercise was conducted to envision, sense and anchor a possible future and impact of one's self, one's team, and the whole group of Intrapreneurs and Mentors. This resulted in a very powerful strengthening of the whole community.

Module 3: Catalyze (2.5 days)
This module covers the last four steps of the signal-to-launch cycle:

- **Intelligence & Resources**: Design the way forward towards a first MVP, incl. resources. Develop a convincing and proven storyline for pulse check pitch
- **Commit** to take the project further past the pulse check towards market implementation
- **Launch**: Activate the solution by pitching in front of ignitors

The goal of the third and final module was to prepare a pitch for the Ignitors—the top management supporters as described above—and pitch it during an open venue named "pulse check."

The teams prepared and trained their pitches in several iterations in an external "playground like" location and were supported as well as challenged by Coaches and Mentors. Furthermore, a successful intrapreneur of Siemens outlined his own way to demonstrate a possible role model and showcase.

The final day of the Intrapreneurs Bootcamp was designed to mentally prepare for the pitch, to close the official part of the 6 weeks program and to help the teams and intrapreneurial endeavors propel towards the next step of their journey. This day was symbolically conducted at the Headquarters as "the heart" of Siemens.

In the morning, an innovation leadership session was held on the topic of "Being at flow and high performance needs high self-care." It included group exercises to get accustomed to the room and dive into the corporate atmosphere while bringing one's own genius including all newly learned skills and made experiences back to the organization.

The pitch venue was complemented by a prototype expo and open to an audience of interested colleagues. The venue format reflected the same principles as the whole setup of the Intrapreneurs Bootcamp with a strong focus on purpose and an affirmative and collaborative mindset. In this spirit, Ignitors were introduced by their own purpose. In contrast to more competitive formats such as so-called "shark tanks," the Ignitors were willing and capable to act as comprehensive catalysts rather than pure investors taking a go/no go decision. They honestly acknowledged valuable insights and ideas and yet gave clear and concise feedback wherever they saw possible road blockers or had open questions.

All nine teams received specific support from at least one Ignitor and could take the first step to anchor the intrapreneurial endeavors in the Siemens organization towards a minimum viable product for market implementation.

With a final celebration the official and on-site part of the Intrapreneurs Bootcamp 2017 ended.

14.3 Potential for Cultural Shift Towards Impact-Driven Innovation Confirmed

> The Intrapreneurs Bootcamp is a very special journey in our company and we should spread its spirit within the company. Before joining the Intrapreneurs Bootcamp, I could not picture the future of big organizations like Siemens. How should we work on what really matters [to the planet and society], on something I am passionate for, with great and engaged people... Now I know! Let's make the future happen. (Participant of the Intrapreneurs Bootcamp 2017)

The Intrapreneurs Bootcamp 2017 demonstrated the potential for a significant culture shift towards an environment for continuous innovation that rewards disruptive thinking. The initiative engaged to participate far beyond the actual program and gained dedicated support by the Managing Board.

To evaluate the overall outcome and impact of the Intrapreneurs Bootcamp 2017, we asked for feedback at the end of the program. A questionnaire was used comprising quantitative questions (see Fig. 14.3) as well as open questions reflecting both personal development and program outline. With 23 answers it is yet too early to provide scientifically relevant causal relations. However, it is possible to derive tendencies that point towards a significant impact on personal and organizational level. Further feedback will be collected after the next Intrapreneurs Bootcamp rounds which will enable solid conclusions.

The feedback questionnaire structure reflected the envisioned impact of the Intrapreneurs Bootcamp to (I) strengthen a culture of continuous innovation in terms of implementing impact-driven innovation projects. This was mirrored in an

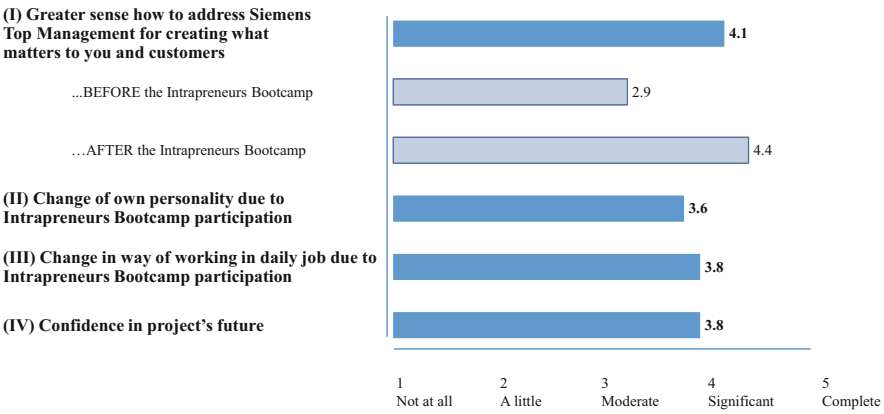

Fig. 14.3 Quantitative feedback of the Siemens Intrapreneurs Bootcamp 2017

overall lead question: "I have a greater sense how I can address Siemens management for creating what really matters to me and our customers." Not only does the rating of participants indicate a very high consent to this statement but also a significant change through the course of the Intrapreneurs Bootcamp program.

One participant summarized it in the following way: *"I want you to know that not only this camp is I believe one spark that can and will help Siemens transform its approach to innovation and empower its employees to really drive innovation in their respective jobs; I will also be able to use the tools and methods from the camp in my professional life; but most important for me personally, you really helped me grow as a person and learn more about myself."*

As stated above, the Intrapreneurs Bootcamp was developed around a stringent focus on people as creators and their capacities both in terms of personal development and expertise in processes and toolsets. This was also reflected in the questionnaire as sub-categories for (II) innovation leadership and (III) use of agile business creation tools as new way of working.

The lead question for innovation leadership was intentionally broad and strong in its statement: "How did your participation in the Intrapreneurs Bootcamp change your own personality?" Despite this, the quantitative answers appear to confirm a substantial overall contribution. This tendency is reflected in various participants expressing their personal growth. For example, one participant summarized: *"There are no words to say or represent what you have done with us, intrapreneurs, with our mindsets, the experience and the willingness to make this a better place to live and interact, that (. . .) we have a purpose in which we believe and stand for."*

In terms of processes and tools, participants used fast build-test-learn cycles during the Intrapreneurs Bootcamp program and worked with a high customer-centricity. For this category, the lead question read: "How did your participation in the Intrapreneurs Bootcamp change your way of working at Siemens?" It seems that participants actively bring their learnings back to their daily job environment when

looking at the quantitative results. This is especially relevant as participants were selected from various kinds of function not necessarily associated with new business creation. When asked for biggest learnings, a participant stated: *"Everybody can be innovative, not just the 'engineers' or R&D. Understanding and realizing what is my own purpose and how it motivates and drives my engagement. Looking outside my personal horizon and learning so much new (people, methods, structured development of an idea to a business offering…)."* Furthermore, a broader understanding across functions is reflected in some statements, such as: *"The Intrapreneurs Bootcamp totally changed my life. Because normally, we work to get a new technology but it's necessary to also have the business cases in the field and a clear customer understanding—especially in uncertain environments. And now I learned how to get this view."*

The last lead question addressed (IV) the continuation of the developed innovation projects after the official program. Answers indicated an overall high confidence of the teams to pursue in their endeavors. Directly after the Management Pulse Check, all nine teams continued to work on specific next steps in regards to their projects. Furthermore, they made broad use of the provided support of the Ignitors. Until today, six of nine teams are still working on their projects and are driving them towards a minimum viable product for market realization. Three teams stopped their team projects due to operational challenges such as additional "special" projects besides daily work and working in different time zones. Members of those teams had already been skeptic about the future of their project which is reflected in their respective feedback. As one key goal of the Intrapreneurs Bootcamp initiative was to strengthen the implementation of innovation projects, specific success criteria for those endeavors still running will be further evaluated in upcoming rounds.

Besides the innovation projects, several participants started own initiatives in their job environment such as spreading the word, creating classes to share their experience up to organizing their own boot camp. Or, as a Mentor concluded: "Everyone benefitted, was changed and will add greater value to Siemens because of the Bootcamp."

14.4 Way Forward with Dedicated Strategic Topics and Intensified Network Effect

As stated above, the Intrapreneurs Bootcamp was set up in an intrapreneurial way itself. This mindset and proceeding will be kept in its further development as well, which means the path forward will evolve after each step taken. Integrating all learnings and feedback of the Intrapreneurs Bootcamp 2017, there are two main directions for the future:

For one, the next Intrapreneurs Bootcamp program is being developed to run under a dedicated strategic topic of Siemens. In this way, it will be tested whether a focus topic can enhance the team project continuation and smoothen the journey

towards market implementation. Furthermore, such a program will tread a pioneering way for a company to realize a field of strategic relevance. It is anticipated to activate people across divisions, functions, and hierarchies to drive purpose-based innovation projects in specific fields of strategic interest. It will be crucial to design the program in such a way that the strong focus on both personal and collective purpose can be kept despite a defined setting of a given topic. Currently, an Intrapreneurs Bootcamp is brought to life in the field of Artificial Intelligence.

The second trail leads towards an intensified network and community buildup. This includes a strong alumni community of Intrapreneurs and Mentors as well as an active supporter network. Purpose of this network is to support each other and especially future teams by sharing experiences, knowledge, and resources as well as opening doors. Intensifying the close exchange with other Siemens initiatives and functions will further strengthen channels for implementation.

The Intrapreneurs Bootcamp was brought to life as bottom up initiative in a moment when purpose met an urge for action and an idea formed. With this idea sparking such an interest around the world, all signs are that it hit the pulse of the age. So, it will be the principles of a social movement that will spread or die away the Intrapreneurs Bootcamp idea and mindset not that of a top down order. Right now, it is still too early to prove specific impact KPIs. However, first waves can be seen. For example, regional Intrapreneurs Bootcamp clusters start to form, adapting the program to regional specifics and launching it regionally.

Only by activating additional energy by purpose-driven, best educated and motivated employees and aligning it with overall strategic goals, big corporations will be able to survive. A common ground for impact-driven innovation in a networked economy needs to be established and great teams with a common purpose are its foundation.

> Our company will be at a substantial loss and the future of our organization will be at stake if we fail to embrace innovation, if we fail to promote a corporate culture of creative leadership. Personally in these six days I feel I have learned more than I have in my entire (albeit short) career at Siemens. I see no option but to spread the ideas, spread the learnings, to continue the process of change throughout the company. (Participant of the Siemens Intrapreneurs Bootcamp 2017)

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Chapter 15
Creating a Climate Fit for Life at Interface: From Restorative to Regenerative, a Strategic Approach to Cross-Sectoral Co-Innovation

Geanne van Arkel

15.1 It Starts with Purpose

> . . .we know in our hearts that business makes a profit to exist, and it must surely exist for some higher purpose. *(Ray Anderson)*[1]

The success story of Interface started in 1973 with its factory in LaGrange, Georgia (USA). Under its founder and CEO Ray Anderson, the business has grown into a stock listed global manufacturer of modular carpet with around 3500 employees and an annual turnover of about US$1 billion. Their make-to-order capabilities, the global distribution network that expands over five continents, sales offices in 110 countries, and six manufacturing facilities are the foundations for a strong competitive advantage. The company's product range covers diverse markets that include corporate office, retail, universities, schools, healthcare, public spaces, and hospitality (The Natural Step, 2013).[2]

In 1994 a customer asked what Interface was doing for the environment. This triggered the start of the company's sustainability journey. Anderson initiated a global task force to look into the environmental positioning of Interface. At the

[1]Taken from Ray Anderson (2011), Confessions of a Radical Industrialist, How Interface proved that you can build a successful business without destroying the planet, Ebook, Random House, Chap. 16, page 6.

[2]Parts of this chapter are drawn and referenced from a case study prepared by The Natural Step (2013): "Interface, The Journey of a Lifetime. . .". TNS developed this comprehensive case with thorough and well documented material. The book chapter and strategy practice case at hand expands the "Interface Journey" by elaborating on Benyus' (1998) rules of nature; extending eight practical lessons for inspiring sustainable innovation and practice (Interface, 2013, p. 22) mentioned under Sect. 15.2; referencing to the systems conditions of the "planetary boundaries"; extending the view on regenerative partnerships (Sect. 15.3) and the Sustainable Development goals (Sect. 15.4).

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first meeting of the task force, Anderson was called to give a keynote speech. Then, through what seemed like good fortune, an employee sent him a book: "The Ecology of Commerce" by Paul Hawken (1993).

With the help of this book, which provided a clear moral imperative towards sustainability, Anderson developed a new sense of purpose. It gave him not only a better comprehension of the need to lead Interface into a sustainable future but also the source to craft a new vision which would take the company far beyond mere compliance (The Natural Step, 2013). After this wake-up call, Anderson was able to challenge Interface to pursue a brave new mission: "To be the first company that, by its deeds, shows the entire industrial world what sustainability is, in all its dimensions: people, process, product, place and profits—and in doing so, become restorative through the power of influence" (Anderson, 1998: 39).

The Task Force's first reaction was sceptical. It was stated that it would be impossible to stay in business without the use of fossil fuels of any sort. But the participants' attitude changed once the discussion was reframed around the professional obligation of Interface: "If even a company that depends extensively on oil can transform itself, then any business can do it, and no one will have an excuse not to do it" (The Natural Step, 2013: 7). To reach this aspirational goal, help was needed in developing a new vision and corresponding business model. After collecting and reading dozens of books by leading environmental visionaries, Anderson and others reached out to these authors in 1995 with the goal to share and bring in their diverse perspectives and expertise.

This group of visionaries became known within Interface as the "Eco Dream Team" (The Natural Step, 2013: 8). These progressive thinkers are Paul Hawken, Amory Lovins, John Picard, Bill Browning, L. Hunter Lovins, Karl-Henrik Robèrt, Bill McDonough, Janine Benyus, Robert Fox, Jonathon Porritt, Daniel Quinn, Bernadette Cozart, John Warner, Walter Stahel, and the late David Brower (Ray Anderson Foundation, 2018). They were the first ones who directly influenced the new direction for Interface, and through a range of interactions, were involved in re-defining the vision, later captured in "Mission Zero."

Regarding Interface's first sustainability initiatives, an existing program has proved to be the ideal vehicle. This method, namely the "Quality Using Employee Suggestions and Teamwork (QUEST)," was introduced prior to Anderson's epiphany with the goal to bring various improvements in the company. Their first step towards sustainable business focused on eliminating waste. To reach certain quotas, cross-functional teams were built. The sustainable development process was supported by sharing best practices and team learning. For motivating the team to think "outside of the box," several meetings with inspiring individuals from around the world were initiated.

Given their sustainable purpose, Interface faced the key challenge to encourage its employees to support the new direction. Anderson learned from Hawken about The Natural Step (TNS),[3] an organization Hawken was helping to launch in the

[3]For The Natural Step approach to sustainability see also Chaps. 8 and 17.

US. This organization, originally located in Sweden and founded just a few years earlier, gave him the feeling that it "could help find the 'sensitivity hook-up' among employees, work communities, customers and suppliers" (The Natural Step, 2013: 9) based on their clear definition of sustainability together with a scientifically grounded framework and tools.

With the new sustainable development direction, Interface started to move strategically towards becoming a fully sustainable company. Anderson referred to this in terms of climbing a mountain, symbolizing both the size and scope of the challenge; higher than Mt. Everest, "Mount Sustainability" might be a difficult one to summit, yet possible when you have a carefully designed plan. The understanding of the context in which they are operating and the development of a clear vision together with the definition of success are the results of studying Hawken's Ecology of Commerce and defining the Mission Zero program. With the system conditions, working within the "planetary boundaries" (Rockström et al., 2009) and enabling people to fulfill their basic needs stationed at the top of the mountain acting as the compass, Interface was now able to start backcasting from its desired future, and carefully plan a roadmap to lead them to the top of the mountain (The Natural Step, 2013).

To identify key areas where progress was needed, the company carefully worked out and focused on learning how nature is functioning. This was done with the help of the related science of Biomimicry[4] developed by Janine Benyus (Biomimicry 3.8, 2018). Tapping into the lessons learned from more than 3.8 billion years of innovation in nature, Benyus (1998) found nine rules that apply everywhere in nature:

- Nature runs on sunlight
- Nature uses only the energy it needs
- Nature fits form to function
- Nature recycles everything
- Nature rewards cooperation
- Nature banks on diversity
- Nature demands local expertise
- Nature curbs excesses from within
- Nature taps the power of limits

These rules, nowadays referred to as Life's Principles are summarized in the 7 Fronts and Interface's commitment to Mission Zero is present in each of them. With reference to the pre-defined metaphor of "Mount Sustainability," the fronts can be seen as the phases that need to be scaled to reach the summit. The 7 fronts in combination build the roadmap and act as guidance for their decision-making process with regard to resource allocation as well as what should be tracked and

[4]Biomimicry is the process by which sustainable solutions are sought to solve human challenges by emulating nature's time-tested patterns and strategies. The core idea is that nature has already solved many of the problems society grapples with. Biomimicry is inspiring products and processes but also systems, learning from organisms how they live and work together in relationships where they mutually benefit (Biomimicry Institute, 2018).

measured to ensure they are heading in the right direction (Interface, 2018a; The Natural Step, 2013).

- Front 1—Eliminate Waste
  Eliminate all forms of waste in every area of business.
- Front 2—Benign Emissions
  Eliminate toxic substances from products, vehicles, and facilities.
- Front 3—Renewable Energy
  Operate facilities with 100% renewable energy.
- Front 4—Close the Loop
  Redesign processes and products to close the technical loop using recovered and bio-based materials.
- Front 5—Efficient Transport
  Transport people and products efficiently to eliminate waste and emissions.
- Front 6—Sensitize Stakeholders
  Create a culture that uses sustainability principles to improve the lives and livelihoods of all our stakeholders—employees, partners, suppliers, customers, investors, and communities.
- Front 7—Redesign Commerce
  Create a new business model that demonstrates and supports the value of sustainability-based commerce.

It should be noted that the 7 Fronts are not isolated from each other. Several solutions that target the challenges of the various fronts overlap, thus offering answers to more than one front or, at best to all of them, "as it should be in a system which strives to be as holistic as possible" (The Natural Step, 2013, p. 14). Through continuous research and development regarding the Fronts, Interface was able to achieve much, especially in the case of fostering a culture of innovation and collaboration with stakeholders.

Every company has a variety of paths for leveraging sustainability as growth platform. However, these approaches are diverse and may not necessarily lead to success.

Interface pursued its own path based on solid foundations that include Mission Zero as inspiring vision of a sustainable company and The Natural Step model as guidance for strategic thinking and prioritization process. After identifying the 7 Fronts as key focus areas, the next step was to develop ideas and actions that could lead the company towards its vision.

Interface's first steps towards Mission Zero focused mainly on waste management and the introduction of recycled materials along the manufacturing process. The ReEntry program, that was launched in 1995, was developed as a collecting service for carpets that are being replaced, to be re-used or recycled if possible (The Natural Step, 2013).

The results of this integrated approach are being tracked and measured against the 1996 baseline and online available (Interface, 2018b).

- Footprint—The average carbon footprint of our carpet is down 66%
- Energy—Energy efficiency at manufacturing sites has improved by 43%

- Renewable Energy—87% of energy used at manufacturing sites is from renewable sources
- GHG Emissions—GHG emissions intensity at manufacturing sites is down 96%
- Raw Materials—58% of raw materials used to make carpet are either recycled or bio based
- Water—Total water intake intensity at manufacturing sites is down 86%
- ReEntry—Diverted 13 million pounds of post-consumer carpet from landfills

A major hurdle for manufacturers seeking to improve their operations is the cost (or perceived cost) of doing so. Interface focused on reducing the use of raw materials (inputs) with the highest price, greatest supply risks and biggest environmental footprint enabling the company to reduce costs significantly. Interface consistently reinvested these savings in sustainable inputs to create additional value. Switching to sustainable raw materials and renewable energy improves supply security and reduces products' environmental footprints, while creating jobs in the community. Interface didn't stop here: the company commercialized the competitive advantages established by growing market share, creating new products, and identifying further resource efficiency opportunities to continue to drive the cycle of improvement.

Together, the three stages of resource efficiency, sustainable inputs and commercialization of competitive advantages comprise a new industrial model that drives continuous innovation. Moving repeatedly around this cycle increases profits, creates local skilled jobs and reduces environmental impacts, whilst motivating staff and building supporters amongst investors, customers, and the community (Lavery Pennell, 2014).

Interface Europe alone has saved 7.6 million Euro annually thanks to this sustainability approach. And there are more benefits for a company as well. Interface is recognized for the 20th consecutive year in GlobeScan and SustainAbility's annual Sustainability Leaders Survey (SustainAbility, 2018). Next to adding to a better reputation, sustainability inspires employees to be more engaged, drives innovation and makes a company more future-resilient, since it is less depending on fossil fuel and scarce resources.

15.2 Embedding Sustainability

With the introduction of the Life Cycle Assessment (LCA) tool in 2000, Interface has been able to determine where the most important environmental impacts and opportunities arise. This was a crucial aspect for the company because it offers the full scope of a product's ecological impact throughout its lifecycle. The improved visibility pushed the company to take responsibility for the ecological impact it is causing with its business beyond its direct operational activities. With 80–90% ecological footprint caused by the entire supply chain, focusing only on the company's direct activities was considered not that transformational. The whole

supply chain including clients, designers, marketing people, and engineers, need to be aligned based on facts (The Natural Step, 2013; Arratia, 2013; Van Arkel and Jonker, 2012).

Whether applied to product design, marketing or suppliers, Life Cycle Assessment is based on the idea of backcasting. This refers to the process of starting with the end in mind, which means first the impacts of a desired product are mapped to redesign it in the next step with the goal to eliminate its undesirable impacts. To promote this approach, Interface is equipping everyone in its network with general knowledge about sustainability, and the 7 Fronts in particular. Thus, the LCA management tool offers Interface the possibility to work with suppliers on sustainable innovation and partner with others to develop new products.

With the FastForward to 2020 program Interface realized an advanced training to employees and associates, while a network of sustainability ambassadors helps to develop and promote the Mission Zero within the company (The Natural Step, 2013). This sustainability training-program empowers people to use both their expertise and their passion in contributing to the mission of Interface to become a restorative company in three levels.

Level 1 is an introduction training for new employees understanding what sustainability means for Interface, introducing The Natural Step, Biomimicry, and the 7 Fronts. People also share what sustainability means for them, understanding the different aspects. Level 2 comprehends a team session on functional level. How can you as an engineer, marketing team, or operators contribute to the mission of Interface, using your expertise. You ask the help question, which empowers people in their role. When people are truly motivated one can apply to become a Sustainability Ambassador (Level 3), which is not only a training with colleagues from different departments, but also includes writing a paper. This paper should be a proposal for a project that contributes to the Interface mission and should be defended from both a sustainability and economic perspective, so employees learn to "sell" their ideas.

The result is a significant internal involvement among employees at all levels. They are provided the space to help realize the company's sustainability goals. Through the strategic and inspiring foundation created in the nineties, employees know that they can contribute to a greater purpose which is an important motivation for many current and potential employees.

Making sustainability everyone's role, resulted in collaboration within the company and throughout the supply chain creating a stream of innovative products and services and subsequently contributed to a sustainable circular economy.[5] The Maintenance concepts, such as Tile Care, promote producing carpets with an increased life span. Or nature-inspired product innovations such as Microtuft carpet

[5]The "circular economy is restorative and regenerative by design. Relying on system-wide innovation, it aims to redefine products and services to design waste out, while minimising negative impacts. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural and social capital" (Ellen MacArthur Foundation, 2018).

tiles with 50% less yarn, randomly installable carpet tiles based on a forest's leaf coverlets and glueless installation inspired by the feet of a gecko. Biosfera was the first of many Interface carpet tiles ranges with 100% recycled yarn. In addition to product innovations, radical process innovations such as ReEntry 2.0 are another result of Interface's integral sustainability strategy. This technology separates the raw materials of a carpet tile to ensure that the yarn and the backing material can be recycled to create new yarn and backing material.

Interface's practical lessons that can inspire others toward sustainable innovation and accelerate sustainable growth are summarized in the following eight points (Van Arkel & Jonker, 2012).

15.2.1 Organizing Transparency

Search for ways the company can address the stages at which products and services are most damaging to the environment during their life cycles instead of simply examining the environmental damage executed by the company. In doing so, a company is better able to focus on significant sustainability challenges. In addition, a company may strengthen its competitive advantage as consumers are purchasing products and services and not the companies. To truly create a more sustainable product, it is imperative to be aware of the stages in which the product has the most negative environmental impact to enable the organization to focus on these areas. A LCA offers a clear image of the environmental pressures of a product during its entire life cycle from exploiting resources to production, transport, usage and maintenance, and the moment in which the product is going to be replaced or disposed. Such analysis is the beginning for innovations in the areas that are genuinely significant regarding environmental pressures. For example, fuel causes a vehicle's most extensive environmental pressure and not the energy required to manufacture the car.

15.2.2 Focus on Expanding Toward Related Markets

Ask yourself two questions. What is the organization's core competency? How can the organization exploit this competency to incite new markets? In the case of Interface, modularity is its core competency: the company invented the carpet tile. However, to cover a floor employing the carpet tiles, the tiles are glued. By developing a sustainable alternative for glue, Interface unearthed a new market; TacTiles is a revolutionary new way to install carpet tiles without glue. By connecting the corners of four tiles, creating a floating floor, TacTiles reduces the resulting environmental pressures by 90% compared with traditional glue. Additionally, the emission of volatile organic substances has been virtually eliminated. Because the greatest impact of the carpet tiles is in obtaining the raw materials,

offering maintenance to expand the life span is a sustainable service which subsequently reduces the carpet's environmental pressures. This solution contributes to a better indoor air climate, while improving the recyclability of the carpet tile and more important even, it increases the possibilities to reuse the carpet tile before it is separated into raw materials. This is essential for creating a circular economy with the lowest possible environmental impact.

15.2.3 Embracing Successful Failures

Some concepts are successful, and others are not, especially when investigating radical improvements. Affording engineers and designers the opportunity to take risks by investing in their ideas might lead to ground-breaking solutions. Such solutions require courage—and people need to be free to succeed and fail as well. This concept is known as "successful failure" at Interface. The FairWorks concept led the company in a new direction for designing flooring tiles that exclusively utilized natural materials such as river grass and banana leaves while addressing social issues. Interface created a business model based on collaboration with craftsmen in India which subsequently increased the craftsmen's income. Although the product has not been the commercial success that Interface would like it to be, the process led to the insight that the social dimension should be addressed throughout the core product, the carpet tile, which evolved into an inclusive circular business model called Net-Works. In addition new insights regarding the exploitation of natural materials inspired the company to introduce Fotosfera in 2012 which is a carpet tile produced with bio-based yarn, which nowadays is used in Conscient which even uses bioplastic in its backing.

15.2.4 Looking at What Nature Would Do

The question, "What would nature do?" might be beneficial to ask when searching for innovative solutions for a sustainability challenge. At Interface, applying Biomimicry Thinking—learning from nature—determined the sustainability strategy and changed the approach to design. Inspired by Biomimicry, Interface developed the concept of producing carpet tiles with a random design. Inspired by a forest foliage, Interface learned that every "tile" is unique in nature and that the total image of the floor still forms a single piece. Every carpet tile is unique in this "random design" concept, and tiles can be placed in random directions, minimizing loss from cutting. Importantly, it makes it easier to partially replace carpet tiles increasing the usage period and reducing the environmental impact, giving Interface the possibility to create new design services for reuse in the circular economy, with a product range that is around 45% of its turn-over.

15.2.5 Being Open to External Input

Investigating outside the boundaries of an individual company increases the chances of discovering new and effective processes. People with different knowledge, expertise, and experience—even from completely other sectors—can sometimes provide the missing piece of the puzzle. In 2004, Interface founded its innovation network. This group of creative, progressive people outside of the organization—all with an interest in sustainability—consists of designers, biopolymer experts, academics, and sustainability experts. As the number of external people involved increases, the company becomes a magnet for people with inspirational ideas. Interface is regularly approached by outsiders with inspiring and innovative ideas because of having a reputation of being open to co-creation and strategic partnerships.

15.2.6 Sharing Innovations

Do not keep innovations within organizations. Sharing innovations will support development in general and therefore also support the development of solutions needed to become more sustainable and circular. An innovation may not initially fit within the business model, but it may become the solution for a greater challenge in another sector. In Interface's search for alternative, biological materials for its carpet, the company became involved in an alternative research and development trajectory, leading to the development of Zelfo. This diverse and sustainable alternative for hard materials such as plastic is made of cellulose fibers which were waste materials in other business sectors such as cotton and paper industries and breweries. The company realized that the cellulose fibers could be exploited as sustainable material in many other sectors in addition to the floor industry such as furniture or as an alternative for building material or plastics without significant environmental pressure.

15.2.7 Offering Chances to Intrapreneurs

Every organization has hidden entrepreneurs or inventors. Stimulating their creativity and talent can incite many new ideas, provide employees with the freedom to innovate regardless of their function, and encourage employees to search beyond their own perspective. Someone who is employed as an operator in one of Interface's factories is not necessarily only capable of developing procedures to make his or her specific process more efficient. If he or she is provided the opportunity, inspiring ideas may emerge for product development or marketing departments. Through the "Fast Forward to 2020" training program, all employees within the company have been stimulated to develop innovative ideas that contribute to realizing the sustainability strategy. With 2020 in sight, the company is inspiring employees again with a beyond 2020 mission, called Climate Take Back.

15.2.8 Creating New Partnerships

New business models and innovations surface by cooperation, not only within the chain but also outside the organization's individual value chain. In this context, Interface has joint forces with the Zoological Society of London to help some of the poorest coastal communities in tackling the increasing problem of discarded fishing nets. Initiated in the Philippines, the "Net-Works" partnership addresses this major environmental issue in a manner that will deliver both social and commercial benefits. The goal is to establish a community-based supply chain for discarded nets, which is an innovative source of recycled material for Interface's carpet tiles. This initiative will enhance the standard of living of local fishermen and thus integrate the social dimension into the circular economy, which creates an inclusive circular business model.

"One cannot overstate the significance of aiming high with a goal such as zero impact by 2020, which inevitably requires people to think beyond their own current capabilities. What really influences people about Mision Zero™ is not so much the various actions to which it might give rise, but rather that it offers a new way to see the world. And seeing things in a different way can lead to a change in mindset. There is a unique combination of factors for each person that makes sustainability real for them, and they cannot be pushed to it- they need to see it. Once they have, they can't un-see it. You get people to see when you engage everybody, everywhere, and invite them to imagine a different future which is based on the best they ever were. It is then that people understand their role in the company has a part in achieving an ambitious vision, and they are contributing for something higher than just maximising profits. Working with a vision uncovers the indispensable value of the 'soft side' of business; the emotional, caring, nurturing side of people's personalities, and the extent to which Mission Zero has helped in uncovering it within Interface is remarkable" (The Natural Step, 2013, p. 24).[6]

15.3 Regenerative Partnerships

Customers didn't always embrace the sustainable solutions Interface offered from the start. When introducing Evergreen lease in 1996, clients were not interested. Transferring the model to a product as a service concept, thanks to Walter Stahel's work on performance economy (Stahel, 2010), delivering the carpet tiles in combination with a periodical maintenance service through partnerships with specialized maintenance companies, enabled the company to create an inspiring interior and to contribute to healthy indoor air quality. At the same time the usage time of the flooring is extended, while also the contact with the customer is maintained. When

[6]See also TEDxAtlanta—Jim Hartzfeld—Restorative Through the Power of Influence, November 2010.

there is a change or a need for a new floor, the optimal solution can be explored since the contact is already there.

Thanks to the increased interest in circular solutions more customers are interested in re-using carpet tiles as a carpet tile. To support this, a partnership with a social hub has been developed. Within the take-back program ReEntry, returned carpet tiles are sorted and cleaned by people with a distance to the labor market. In this way an inclusive circular business model is created, where the life-span of carpet tiles as carpet tiles is optimized and jobs for people in need are created.

The Net-Works program that started in 2012 incorporates a partnership with the Zoological Society of London focusing on marine conservation, Aquafil—our yarn supplier that developed 100% recycled nylon—and fishermen in the Philippines and Cameroon. Through this partnership, wasted ghost fishnets made of polyamide provide the yarn Interface uses for its carpet tiles. These nets keep on fishing for more than 600 years, affecting biodiversity at sea, are now collected by the fishermen and sold as material for Interface. The fishermen are not only restoring their environment, but also earn an additional income, being able to save for future investments and education for their children through community banks (Net-Works, 2018).

In 2017 Interface joined the NextWave charter, initiated by the organization Lonely Whale and computer firm Dell. Within the group of companies involved, all firms use different types of plastics and form a supply web enabling all sorts of plastic from the ocean to be put back into the supply chain. Through this model the value of the plastic will increase, thus reducing the likeliness of plastic getting into the ocean (NextWave, 2018).

These cross-sectoral partnerships not only enable Interface creating inclusive circular business models, but also support the company in more explicitly addressing the Sustainable Development Goals (United Nations, 2015), which will be explained next.

15.4 Aligning to Sustainable Development Goals

The global Sustainable Development Goals (United Nations, 2015) aim to "restore" the world and are considered a unified agenda for this world to create the future we want. This thinking is completely in line with Interface's mission to become restorative and its strategic approach to sustainability. The company's aspiration is to have positive impact on as many goals as possible, but at the same time focus on eliminating any negative impact the company might have on any of these goals. Kate Raworth's model on Doughnut Economics perfectly shows how companies should operate within the planetary boundaries while enabling everyone in this world to fulfill their needs, as defined in the system conditions of The Natural Step (Raworth, 2017).[7]

[7] See also Chaps. 1 and 17.

Sustainia benchmarked the Net-Works model explained earlier against the Sustainable Development Goals (SDGs). It concluded that Net-Works addresses multiple of the global goals. For example, Global Goal 8 "Decent Work and Economic Growth" is supported through providing access to financial services for over 900 families and opens new economic opportunities to coastal villagers. By transforming hazardous ocean waste into a valuable raw material, redefining traditionally held concepts about production and consumption, the Net-Works model is addressing Global Goal 12 "Responsible Consumption and Production." Furthermore, the program is addressing Global Goal 14 "Life below Water" by reducing the number of abandoned nets in ocean environments and, thus, protecting aquatic life from the dangers of "ghost fishing." And of course, it is addressing Global Goal 17 "Partnerships for the Goals" since the numerous actors and companies from diverse industries that are driving the Net-Works project serve as an example of how partnerships can create new value from a typical waste stream for all involved (Sustainia, 2018).

As proposed by the framework for strategic sustainable development (FSSD), it is of utmost importance to have a common understanding on sustainability. The Paris Climate Agreement and the Sustainable Development Goals (SDGs) offer such shared language, and thus, provide us with a clear target for 2030. Following the SDGs provides opportunities for business and capital to unlock new markets which offers the possibility for both creating potential for profit and working towards the SDGs. Marga Hoek (2018) shows in her book "The Trillion Dollar Shift" that there are many success stories of how businesses are making a difference.

The challenge for companies is to address the SDGs in a positive way, while working on eliminating the negative impact a company might have on any of these goals. Since only in this way companies can operate within the planetary and societal boundaries, which is exactly the sustainability journey Interface has embarked.

15.5 A Climate Fit for All Life

Interface supports internal and external collaboration. With 2020 in sight, Interface reassembled the original members of the Eco Dream Team including Paul Hawken to define what was next for Interface. Paul Hawken had a different take: maybe the world was waking up and it was game on. He and a coalition of more than two hundred scientists, researchers, fellows, writers, economists, financial analysts, architects, companies, agencies, NGOs, activists, and other experts have formed Project Drawdown to gather one hundred of the most viable ways to "draw down" carbon from the atmosphere (Hawken, 2017; Drawdown, 2018).

Interface has worked together with Paul Hawken towards the next ascent, another mountain, based on the work of scientists (Rockström et al., 2017), to decarbonize our society. The company is committed to running its business in a way that creates a climate fit for life—and call on others to do the same. The path to reversing global warming starts by a changed mindset. Many solutions already exist, and others are

added rapidly. Interface believes companies can reverse global warming when focusing on four key areas, summarized under Climate Take Back (Interface, 2018f):

- Live Zero—Do business in ways that give back whatever is taken from the Earth.
- Love Carbon—Stop seeing carbon as the enemy and start using it as a resource.
- Let Nature Cool—Support our biosphere's ability to regulate the climate.
- Lead Industrial Re-revolution—Transform industry into a force for climate progress.

With Climate Take Back the company is moving from the goal to become restorative towards regenerative, from learning from nature, to act as nature.

The first key area "Live Zero" refers to the definition of sustainability, and thus means to do business with the focus on taking only what can be replaced from the earth. Interface aims at this with its Mission Zero which has become "business as usual" for the company. With this focus Interface is expedite towards its 2020 goals and transforming from a company built on oil to one built on renewable energy, that works "in low carbon, inclusive circular business models with 100% recycled and bio-based materials" (Interface, 2018f). This is considered the condition to become truly sustainable.

It's important to stop seeing carbon in a negative manner and start seeing it as a potential resource (Interface, 2018h). This aspect is captured in the key area "Love Carbon" and defines that businesses must find solutions to help this resource to do the job nature intended. In this case, Interface research actively focuses on exploring raw materials that use waste carbon or sequester carbon to make its products. Interface already created a prototype of its first carbon-capturing tile, called "Proof Positive," with a minus two-kilogram CO_2 footprint per square meter (Interface, 2018g). Part of this prototype is already commercially available in the CircuitBac Green backing for Interface carpet tiles. To reverse global warming it is crucial to invest in technological, ecological, and social solutions. Though, changing our relationship to carbon will take the collaboration of many partners (Interface, 2018f).

An example is the revolutionary Carbon8 Systems (Interface, 2018d). This process creates a carbon-negative aggregate by combining waste CO_2 and thermal waste. This is then used to create the construction materials for buildings of tomorrow by actively locking carbon into a solid form within our built environment. According to Interface (2018d), by using just 20% of waste available in Europe, this revolutionary process is able to permanently capture over 1 million tons of CO_2 per year.

Originally nature is able to regulate the climate on its own, but right now, we're hindering the Earth's regulation systems by polluting our air with excess carbon. This leads to the third key area "Let Nature Cool." Interface realized that it needs a change in doing business practice to allow nature to do its job. Therefore, the company is exploring new practises that allow factories to run like ecosystems (Interface, 2018f). Within the pilot program "Factory as A Forest," Interface is working with Biomimicry 3.8 to define Ecological Performance Standards to measure ecosystem performance. The program consists of four steps: (1) Identify a local reference

ecosystem, (2) Quantify ecosystem and site performance, (3) Create design strategies, (4) Implement design recommendations (Sustainable Brands, 2018). Imagine when we start to design buildings as trees and cities as forests. Today's cities are suffering from air pollution, heat islands, water stress and loss of biodiversity, incorporating green roofs and facades will not only allow cities to have cleaner air, cooler cities, enabling water absorption and creating space for pollinators, but also will make the citizens feel better (Kellert, Heerwagen, & Mador, 2008).

In parallel to Interface's "Climate Take Back" initiatives, innovations from companies like Urchinomics, BioCarbon Engineering and Commonland aim to rebuild and preserve forest on land and in the ocean (Interface, 2018f). Various environmental changes and especially overfishing are the causes for a decline in the number of species that prey on sea urchins. This results in a massive increase in population of urchins that lead further to the destruction of the kelp forests. Those shallow water vegetations are able to convert almost as much CO_2 as terrestrial vegetation, and thus, are a valuable carbon sink. To counteract this, Urchinomics is helping to protect these habitats and carbon stores by removing the urchins to be farmed and subsequently sold as a high-quality delicacy (Interface, 2018e). A small UK business, BioCarbon Engineering, transforms the process of planting tree seeds by using drones to dispense seed pods across large areas (Interface, 2018c). Commonland believes that landscape restoration offers tremendous untapped opportunities for sustainable economic development. To demonstrate this potential, they develop landscape restoration projects that are based on business cases, working on four returns; return of inspiration, return of social capital, return of natural capital, and return of financial capital (Commonland, 2018).

It is obvious that industry has been a strong force for human progress. However, the unintended environmental consequences of industrialization have been serious. To counteract, an industrial re-revolution is needed, that works with nature, not against it, and that creates new business models to drive the necessary positive change to realize the mentioned SDGs by 2030.

15.6 Conclusion

Programs like Interface's "Net-Works"-Initiative provide a clear view on what can be accomplished when new thinking is applied to material sourcing. Furthermore, organizations like "Science Based Targets" support companies by determining measurable goals for the reduction of their greenhouse gas emissions, and moreover to create an universal approach for business to transition to a low-carbon economy. Simultaneously, NGO's like Architects Advocate are trying to change industry from the inside by enacting meaningful legislations and policy to mitigate climate change. Its core initiative is to connect architects and designers who agree to speak out publicly and share their knowledge and actions to create liveable communities.

For Interface it is clear that sustainability is a lifetime journey. It has shown that the focus on sustainability makes commercial sense because their sustainable

business has led to a more innovative, proactive, and efficient company. This made Interface less affected by scarcity and the rising cost of raw materials. Through their sustainable business model Interface could reach both profitability and the license to exist in the future we want.

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The approach she takes is developing regenerative, inclusive, circular new business models and partnerships by learning from nature. Design with purpose, passion, full product transparency, and open communication are the fundamentals of inspiring others in discovering the opportunities of sustainability.

According to Geanne, creativity, interdepartmental and cross-sectoral open collaboration, and sharing knowledge are crucial for accelerating the required system change towards an inclusive circular bio-based low carbon economy in which the Sustainable Development Goals are achieved by 2030.

Chapter 16
How Sustainability and a Culture of Trust Shape Entrepreneurial Success at VAUDE

Lisa Fiedler, Felix Bongen, and Anna Elleke

16.1 Holistic Understanding of Entrepreneurship

Since VAUDE [fau ` de:],[1] a 100% family owned company, was founded in 1974 it takes its responsibility for environmental and social aspects seriously. VAUDE Sport GmbH & Co. KG develops, produces and sells outdoor gear of the VAUDE brand: functional apparel for outdoors, backpacks and bags, sleeping bags, tents, shoes, and camping equipment. For example, as early as 1994, the "VAUDE Ecolog Recycling Network" was founded—the first recycling system in the industry for pure polyester products with collection and recycling. Ecolog products were technically engineered to be easily returned into the polyester fiber cycle. The "Ecolog Recycling Network" was equipped with the infrastructure needed. However, because too few products were returned to make the system "sustainable," we had to end the program. When Antje von Dewitz, the daughter of the founder, became CEO in 2009, VAUDE consequently developed a sustainable business model for the benefit of all.

Currently, the success of most global economic systems is too often based on social exploitation and the destruction of the environment. Our position is clear: The private sector has a significant impact on the ecological, social, and economic conditions in which we all live. In order to ensure the long-term preservation of our planet and to eliminate social inequality, we need to change how we think about the economy. We need a new model for corporate activity that takes on responsibility for both society and the environment throughout the supply chain.

[1] VAUDE is the German pronunciation of the initials of the company founder's last name, Albrecht von Dewitz, who founded the company in 1974 in an old hops barn.

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As an outdoor supplier, we have a very close relationship with nature. VAUDE "lives" from people enjoying the great outdoors, so we see ourselves as a company that is responsible for actively contributing to the protection and preservation of nature. Derived from this understanding we gave ourselves the vision:

> As Europe's most sustainable outdoor outfitter, we are contributing to making the world a better place, so that tomorrow's generation can enjoy nature with a clear conscience. We are leading the way globally and setting sustainability standards around the world.

We view entrepreneurship as a contribution to the public good. This means that we would like to use our actions to contribute to making the world a better place, for both people and nature. The Economy for the Common Good (Felber, 2010, 2015) expresses this understanding precisely. It measures business success not only by means of financial gains, but also by contributions to the public good. Human dignity, solidarity, ecological sustainability, social justice, and democratic co-determination along with transparency are also included. Therefore, VAUDE is a pioneer company in the Economy for the Common Good with an audited Common Good Balance Sheet.

Our sustainability approach is based on the United Nation's guiding principles for sustainable development. We therefore closely examine the goals for sustainable development adopted by the United Nations General Assembly in the fall of 2015 (United Nations, 2015). We understand these goals to be a comprehensive orientation for action; companies play an important role in reaching them. We are taking our responsibility seriously and view the sustainable development goals as an enriching perspective for the further development and assessment of our business activities.

As a mid-sized business, VAUDE sets environmental and social standards worldwide. Numerous awards independently show VAUDE's sustainable commitment and effectiveness.

To name just a few:

In 2015 VAUDE received the highest honors at the prestigious German Sustainability Award and was elated with being named "Germany's Most Sustainable Brand."

Following in 2016 VAUDE was honored with the Ecosport Awards in Paris in the category "Sustainable Management." This award is presented by the largest French associations of sporting goods manufacturers under the auspices of the Ministry of Sports as well as the Ministry of Sustainability. Moreover, in 2017 VAUDE won the European Business award for best in class for Environmental and Corporate Sustainability.

16.2 Sustainability at the Core of Strategy

The VAUDE Guiding Principles (see Fig. 16.1) are the foundation and the framework for our corporate strategy and every action we take. It provides orientation and a common understanding of our values and how we want to behave and interact with each other.

1 OUR ROOTS: "THE MOUNTAIN"

*THE MOUNTAIN. The **exhilaration** of the ascent, the **peace** at the top, the **far-sighted view,** and the **joy** of the descent are what drive us.*

THE MOUNTAIN stands for the **high, clearly defined standards** of our **products** and, at the same time, for experiencing nature **passionately.**
We accept the challenges that THE MOUNTAIN presents to us as people and to our **products.**

2 VALUE "WE"
Mountain. Nature. Team. Partnership. Fun. Family. We.

VAUDE stands for **partner-based** interaction with nature and with people.

3 DRIVER "FORWARD"
*Trends change as fast as the weather in the mountains. **Sustainability endures.***

We set off on the path becoming Europe's most sustainable outdoor outfitter so that the people of tomorrow can enjoy nature to the fullest.

We are pioneers along this path, questioning conventions and the limits of what is possible – creating **future-oriented products and solutions with sustainable innovations.**

Fig. 16.1 VAUDE Guiding Principles (VAUDE, 2018a)

Based on our Guiding Principles, the implementation of the corporate vision takes place through a multi-level, strategic approach. We derive corporate goals from our vision that are broken down into division, department, team, and employee goals. The process is designed and managed by the executive board and is integrated into the day-to-day business of all areas of the company. Next to this top-down process we have established a bottom-up process where employees of all departments are asked to bring in their views on relevant future aspects that should be addressed by the company.

Our corporate vision is based on a holistic approach. Sustainability aspects are fully integrated into the corporate strategy. Therefore, we don't have separate sustainability strategies that run parallel to our economic strategies.

Our goals are defined with concrete target figures and timeframes. We regularly examine to what extent we have reached our goals and/or analyze possible obstacles. These results form the foundation we use to continue our development and improvement.

Goals and target figures relating to sustainability are largely derived from the requirement and key figures of external sustainability standards such as the GRI,[2] EMAS,[3] FWF,[4] and others. We use these to measure and direct our sustainability goals. This procedure ensures the materiality of our goal setting. This means that we address all relevant social, environmental, and economic aspects in an appropriate way.

16.3 VAUDE Ecosystem: From Strategy to Action

Sustainability has many aspects and challenges, in particular for a company with a global supply chain. The VAUDE Ecosystem defines how we systematically embed all sustainability activities and measures of our business activities at our company headquarters in Tettnang (Germany) and throughout the entire product life cycle (see Fig. 16.2). The criteria of comprehensiveness and materiality underlie the VAUDE

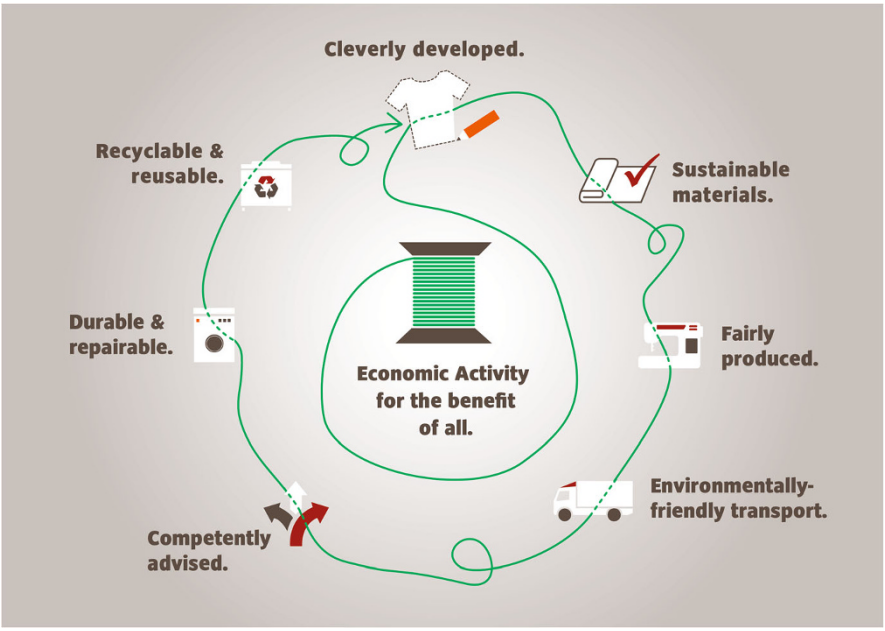

Fig. 16.2 VAUDE Ecosystem (VAUDE, 2018b)

[2]The Global Reporting Initiative (GRI) developed an international guideline for sustainability reporting. See also Chap. 13.

[3]The Eco-Management and Audit Scheme (EMAS) is a voluntary tool of the European Union for companies to improve their environmental management.

[4]The Fair Wear Foundation (FWF) is a voluntary multi-stakeholder organization to improve social standards in the textile industry.

Ecosystem's defined action fields. This helps us guarantee that all materiality aspects and issues of social and ecological responsibility at the company headquarters and throughout the entire supply chain are identified and addressed (VAUDE, 2018b).

At the core of the VAUDE Ecosystem is our understanding of business practices for the benefit of all. Further it addresses all areas of activity at the headquarters, for example climate neutral business and social responsibility for our employees.

Material aspects of sustainability within the product life cycle of VAUDE products range from durable and timeless design, sustainable materials, environmentally friendly and fair production to environmentally friendly use and care, and product disposal.

Our product development is based on long-lasting and timeless design. Products should be easy to repair and recycle.

The material selection is based on certified, environmentally friendly materials and components. We also use environmentally friendly printing processes for surface and motif prints. Further, VAUDE voluntarily commits itself to applying "best available technology" (BAT), excludes controversial technologies and materials and ensures the greatest possible traceability of all materials to their origin. For example, we gave ourselves the goal of making all of the fabrics completely without harmful and toxic fluorocarbons (PFC). Figure 16.3 describes our milestones to the elimination of PFC. With the launch of the Spring/Summer 2018 Collection, we achieved an important milestone. We mastered this challenge by years of working with our partners from the chemical industry and our material suppliers focusing strongly on the solutions themselves as well as on process reliability and by carrying out countless tests.

All criteria are part of our Green Shape concept, our set of criteria for environmentally friendly products. Our criteria for evaluation are strict and transparent. They are under constant review and cover the entire life cycle of the product—from design to production, care, repair, and utilization. VAUDE is a pioneer in this field and has developed its own rating system for environmentally friendly outdoor products as no independent and holistic sustainability standard for outdoor products exists.

At the production stage we consequently work on fair working conditions in the supply chain using the Fair Wear Foundation (FWF), the strictest social standard in the textile industry. Since 2015 we achieved the Leader Status with the FWF: 100% of our production volume is in the auditing process of the FWF and VAUDE achieved with 94% in the Brand Performance Check a high standard of points earned (Fair Wear Foundation, 2018).

Coming to the transportation stage: The distance that our products cover once they leave the manufacturing facilities and until they finally reach the hand of the customer is quite a long one. Still, each product individually is accountable for only a very small proportion of emissions. The majority of our products are manufactured in Asia and transported by container ship to Hamburg. From here they travel by rail to Ulm, and then are driven by truck to our logistics center in Obereisenbach. While marine and rail transportation create a very low level of emissions and thus are ecologically sensible, transport by truck, and air are emission-intensive (see Fig. 16.4). Therefore, we try to avoid not only airfreight, but also truck deliveries as well, whenever possible.

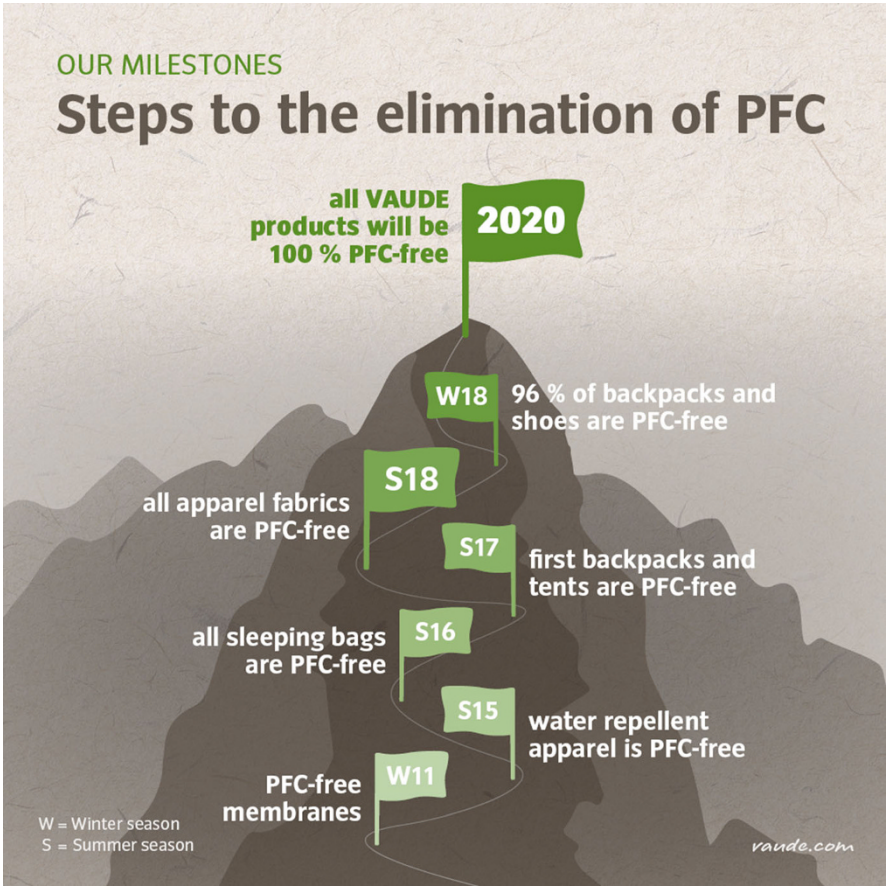

Fig. 16.3 Our milestones/steps to the elimination of PFC (Source: VAUDE, 2018c)

In the sales stage we put a lot of emphasis on the empowerment of consumers. Our goal is to sensitize consumers for the big impact they have and to provide them easy to understand and accessible information for their purchase decision. Thus we give sustainability information a central place on our communication channels and on the product itself. Further, we regularly offer sustainability training courses for our sales employees, specialist trade, and sales people in shops in order to educate them to true multipliers for sustainability. With the gear rental service iRentit we developed an alternative usage concept to the purchase. iRentit helps us to conserve resources that are used for production and wasted if the product is only minimally used.

In the use stage we as a brand have only limited influence on how sustainable our products are used by the consumer. However, the use stage has an important impact on the ecological footprint of a product. Therefore we focus on sensitizing our consumers for a long product use phase and offer several services to support this.

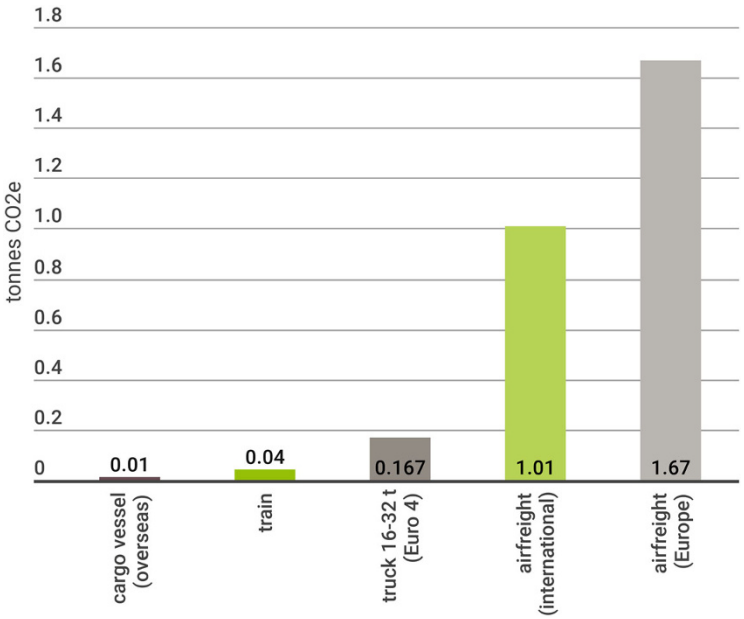

Fig. 16.4 Emissions per ton of freight (VAUDE, 2018e)

For example we provide comprehensive information on environmentally friendly use and care. In addition, we offer a repair service as well as do-it-yourself repair instructions and spare part shipment in cooperation with ifixit.

The end of life stage is characterized by the goal to close the product life cycle. We support the private resale of used products with the VAUDE Second Use Shop on eBay and by cooperation with FairWertung[5] we give our products a second life as second-hand clothing or gear. Further, we currently work on clear guidelines and criteria for the recycling of our products. In a project funded by the Deutsche Bundesstiftung Umwelt we set up an upcycling workshop where we use remnant materials and products which can no longer be used in their original function and create new products and uses. In addition, we plan to develop an external upcycling community to connect suppliers of upcycling materials and people who make new products out of those remnant materials.

We understand sustainability as team sport. All described sustainability activities and measures are coordinated in an interdisciplinary team, which consists of employees from a variety of company divisions. Sustainability is not something that is detached and isolated in its own department; rather it is embedded in all

[5]FairWertung is an umbrella organization for non-profit and church organizations which campaigns for greater transparency and accountability in the collection and recycling of used clothing. Used clothes containers, bearing the logo of FairWertung belong to organizations that adhere to the required standards.

relevant departments throughout VAUDE in the day-to-day work of the company. The Head of the CSR Team is the executive manager of Sales and Sustainability. The members of the VAUDE CSR Team are sparring partners for all employees and business partners for sustainability issues (Vaude, 2018f).

For basically all employees, sustainability is part of their daily business. Therefore, all our employees are seen as architects for sustainable development. This brings several challenges with it. Decisions under uncertainty have to be made and numerous conflicts of objectives exist. We work in a continuous change process and have to work on highly interrelated and complex issues.

In order to address these challenges, we consequently work on a corporate culture based on trust to provide our employees the right framework to work in.

16.4 A Culture of Trust and Innovation

As trust is of great importance in every interpersonal relationship, trust, and appreciation form the basis of our unique corporate culture. Maintaining and developing these is a continuous process that we all actively promote with much effort. Trusting relationships are the guarantor of successful innovative sustainable cooperation.

16.4.1 Corporate Culture

For us, trust begins with our view of human nature. We are fully convinced that our employees enjoy active participation at work. We want to create the best possible conditions for maintaining this commitment! Therefore, our culture of trust is also structurally anchored. We allow ourselves plenty of freedom in the pursuit of our objectives and avoid using control mechanisms if possible.

For example, a lot of the staff works without a mechanism that tracks their time spent at work and every new employee, at least in the administrative section of the company, gets the same freedom. With this the company trusts its employees by giving them the freedom of controlling their own work rhythm. This means we are able to choose if we stay late, when the work load demands it and to go home early if the weather in the mountains is promising, or take a rest day after an intensive working phase. It gives us freedom and flexibility to adjust our working hours to our needs but demands trust and responsibility at the same time.

Together we work to create an organization that breathes self-efficacy. For example, when we restructured our marketing department naturally we did not do so top down but took the time to involve every employee, held workshops where doubts and solutions were worked on with everybody and gave the space to reflect the changes. We wanted everyone to be part of the solution and our culture of trust

helped the participants to open up, to share their needs regarding the new structure and work better together.

Our conviction is that in an atmosphere of trust people are more creative, honest, and loyal. In a context of growing complexity, agile and interdisciplinary cooperation processes are crucial for success. Many challenges can't be mastered by accurate planning.

Making the best use of the free space is an opportunity and a challenge at the same time. We often do not tell our employees how to get things done, but leave that to their own expertise. Therefore, we deliberately focus on the topic of self-efficacy. Where rigid rules and instructions are missing self-effective behavior is essential.

16.4.2 Structures, Processes, and Projects

In 2014, the program "Trust and Innovation" was launched, which aimed at integrating structural, cultural, and individual development measures as shown in Fig. 16.5. An evolutionary and open-ended process was created in the form of workshops, trainings, and projects. In designing this process, organizational development worked closely with the business and human resources managers.

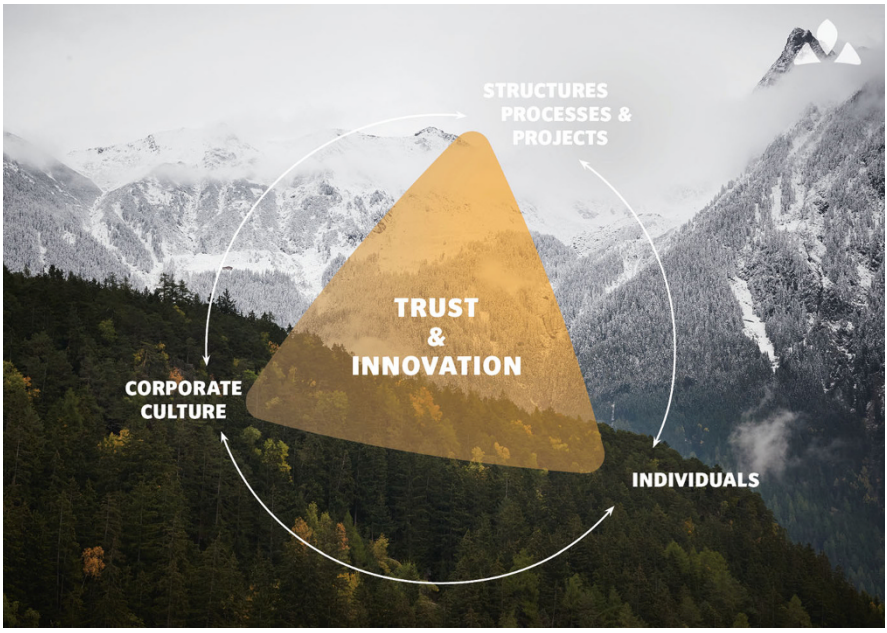

Fig. 16.5 Trust and Innovation at VAUDE (Source: VAUDE)

We consider the development and introduction of our new idea management "Steps" as an important structural milestone for the promotion and further development of our culture of innovation. Five central components characterize our idea management:

1. Interactive participation of all employees through the internal social media platform:

   Every idea that is submitted is transparent and not only visible to every staff member but can also be commented and voted for by everyone. This way the barrier to participate is held as low as possible.
2. The establishment of an idea-dependent stage-gate process:

   Ideas are categorized into stage 1 (small), stage 2 (medium), and stage 3 (big) ideas. Depending on the motivation of the participants and the potential of the idea a stage 1 idea can become a stage 2 or 3 idea, if for example more resources (staff, money, time) are needed to work on it. Stage 1 ideas can be easily implemented with little staff and little budget. The higher the stage, the higher the investment but also the reward when successfully implemented.
3. Accompanying the process through so-called idea scouts:

   Their assignment is to support and protect ideas and consult the people who work on ideas. It is important to bring the relevant stakeholders together to evaluate and in the end, implement the ideas or to shut them down, to release resources again and make space for others. The idea scouts are chosen by the idea manager, who is supervising Steps. By not choosing them top down, we get the most motivated employees to fulfill this task and uncover unknown potential, as the job is free for everyone to apply for.
4. The distribution of decision-making power is based on the individual motivation of our employees:

   The crucial ground layer for this is our culture of trust. Often the ideas happen alongside our usual processes and the decisions are not made by managers but by the employees who are affected by the idea and who are motivated to do something about it. That is exactly the way it was anticipated but it is only possible because of the trust the organization has in every individual and itself.
5. Embedding Steps into a continuous and holistic structural and cultural development process:

   It is of importance to us to give Steps and the ideas of our employees the significance and attention they ought to have. Being innovative, changing things that aren't up to date anymore and questioning the status quo are crucial factors to stay successful and be a secure and sustainable company. Using the potential that occurs from ideas of our staff is of great value to us and through incentives like a new idea studio, new rewards, and ongoing support we try with multiple options to embed Steps into our organization.

In the development of Steps it was particularly important to us that form and content are always congruent. In other words, we aimed to develop an innovative idea management process together. As a result, Steps is a structure, a defined process

for free and systematic idea submission, development, implementation, and award. The whole ideation process is completely transparent. It is limited only by the wish of the submitter. All reasons for transposition and/or refusal, discussions, open questions, etc. are visible for all. Our goal is to make unused potentials, knowledge, capabilities and motivation transparent in our network.

For this purpose, the entire Steps process happens on our social intranet (IBM Connections). Steps is free for anybody and for any kind of ideas: anybody can submit all kind of ideas. We consciously decided not to use eventual hurdles, restrictions, or rule catalogues. The idea generator should not have any obstacles for the submission. We feel that idea generation is a corporate task and that the company should provide a simple structure and an environment of appreciation and trust.

A restriction like "everything that's part of your job and role may not be submitted" does not exist at Steps. There are three reasons for that:

1. Avoiding high administrative and temporal control efforts.
2. Enabling a "second chance" if the respective executive rejects a proposal by the employee.
3. Avoiding inadequate restraint by the employee in the introduction of ideas out of concern for the company's response.

Another peculiarity of Steps is that parallel to unsystematic or free ideas, idea-campaigns can also be started. They should promote the focused generation of ideas. Starting a campaign can be considered as a resource for the entire company that includes and uses the intelligence and innovation skills of all employees.

From the program "Trust and Innovation" we developed a new way of working at VAUDE. We recognized that the best and most innovative solutions at VAUDE are vision-driven. Consequently, we developed the role of a visionary. At the start of a new project or campaign the visionary states a vision for the outcome. The vision acts as a guideline for the team, explains why we are aiming at something and provides plenty of freedom for implementation at the same time. Thus, it empowers the team to self-effective working. If the team feels lost in the process of implementation, it can rebook the visionary.

Our Green Shape Core Collection for example was created like this. The Vision of our CEO was to create the most sustainable VAUDE collection possible and to set a benchmark in the outdoor apparel business. By giving the team the vision where they should head, as well as the freedom to use their competence in whatever way they can do best and being there for them if they had questions concerning the Vision, the most sustainable VAUDE collection ever was created. It substantiates our pioneer position in terms of sustainability and shows ways into the future of what will be possible if sustainability and innovation come together in the outdoor apparel business. The collection was awarded with the "iF DESIGN AWARD Gold," the ISPO Eco Achievement Brand Award, and the Green Tec Award.

16.4.3 Individuals

As already mentioned, our view of human nature is a very positive one, which makes us believe that our success is possible because of the work of each and every one of us. As our culture is so important to us, combined with our understanding that culture is nothing you can plan but something that is already there and is created by every single human interaction, the individuals working at VAUDE are of the highest value to us. One of our core values is "We." The "We" embodies our belief that we can't do it alone and we need to work together, see and respect our individuality and use it to create even better solutions. The task is to trust each other and that is a task for everyone, not just for the organization or a special group of people within the organization.

That is why we try to give as many opportunities as possible, to get the opinions of the employees on certain matters. For example, we have an open HR strategy appointment twice a year, where every staff member is invited to share their doubts, fears, anger, and wishes and work together with us on solutions how we can do better in the future. We are all equally important and have different needs and views. That is what makes us who we are and what makes us good in what we do. It is not easy but it is the VAUDE way and it feels right.

16.5 Conclusion: Sustainability as an (Innovation) Driver!

Trends change, sustainability remains. This is one of our Guiding Principles and one of the secrets of our success. Our values assume a number of important functions.

- Our employees are highly intrinsically motivated because they find their work meaningful.
- Sustainable business requires pioneer work. Our goals require new ways to go, as there are simply no best practices in many areas.
- Our value oriented attitude provides orientation and security.
- We believe that our values and the authentic experience of these values will enable our employees to cope with ever-changing challenges, to maintain real willingness to change, and thus to fill our innovation culture with life.

We consciously manage the duality of security and uncertainty. We offer secure jobs, a sustainable value orientation, flexible working time models, a lot of creative freedom, and thus the opportunity to try out. At the same time, this means that the organization and its employees have to be extremely flexible, open, and constructive in dealing with needs for change. Often this leads to success. Of course, we also experience difficulties and concerns, which we would like to appreciate without losing sight of our goals. We think that makes us different from other companies. We not only demand innovation-friendliness, but also provide a secure framework in

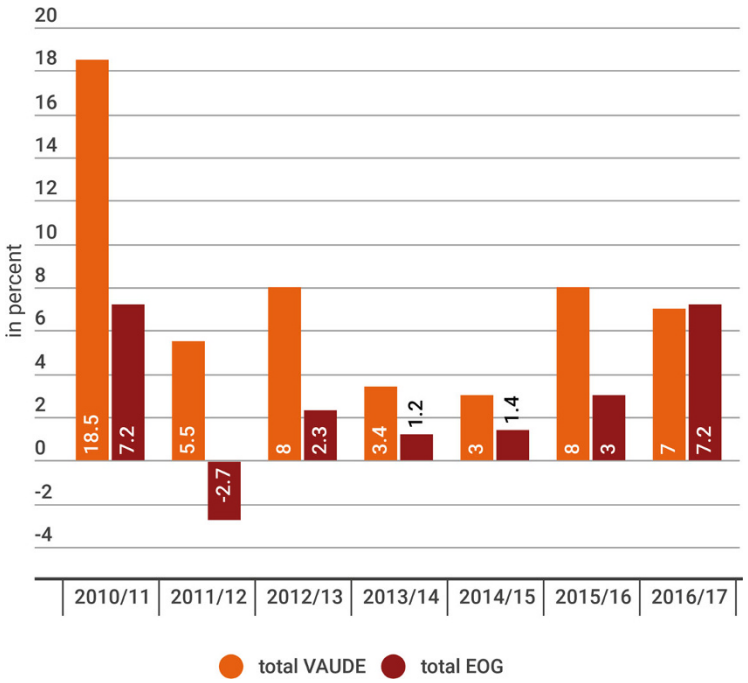

Fig. 16.6 European Outdoor Group (EOG) growth rates compared to VAUDE (EOG countries only) (Source: VAUDE, 2018d)

which we can also talk about fears and job-related or private challenges and receive support. This puts people in a position to be more creative and capable. Because nothing jeopardizes the long-term willingness to change as much as fear and lack of appreciation.

Although our commitment is ideologically anchored, at the same time it also reflects our entrepreneurial conviction that our actions will ultimately lead to greater economic success. We were able to increase our economic equity ratio from 36.4% in 2013 to 52.1% in 2017.

Thomas Kind, Director, Head of the Corporate Finance Center Department for Sparkassen, Landesbank Baden-Württemberg on the cooperation with VAUDE: "As a Sparkassen Finance Group, we have been accompanying VAUDE on their road to success for decades. In our eyes, VAUDE is an outstanding example of how, as a family-owned company, you can successfully and symbiotically harmonize both environmental and social values with business objectives. This is balanced sustainability" (VAUDE, 2018d). Moreover, the multitude of awards we receive for our path and the growth rates (see Fig. 16.6) strengthen this conviction. Sustainable business is successful!

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Part V
Mastering the Transformation and Looking Ahead

Chapter 17
Sustainability and Technology Acceleration—How to Surf the Killer Waves: A Systems Thinking Approach to Become Fit for the Future

Rüdiger A. Röhrig and Edwin J. M. Janssen

17.1 "WHY"—Fundamental Change Is Imminent: One Individual—Two Perspectives

17.1.1 The Individual in the Business Context: Addressing the Key Decision Maker as a Member of the Economy

Today's *Key Decision Makers* such as entrepreneurs, executives, C-suite members, investors, and strategy influencers are confronted with unprecedented challenges. Swinging from one quarterly result to the next without losing the liana to satisfied shareholders, has been the pressuring theme for the board room's agenda for a long time; at least for listed companies.

Setting and pursuing strategic goals in the four quadrants: short-term vs. long-term and top-line vs. bottom-line (a.k.a. *Growth*, *Productivity, "Innovation"*[1] and *Re-engineering*), as shown in Fig. 17.1, has been part of their regular routine.

Furthermore, living in VUCA(D)[2] times, additional pressure is building up on executives at an exponential rate. So much, that even more long-term oriented, family-owned businesses experience an incredible heat.

More and more stakeholders are demanding more and more. From all the dimensions of change in the external environment, the next technological breakthrough seems to be the issue that gets by far the most attention from *Key Decision Makers* and *Key Stakeholders* of any organization.

[1]Innovation is often referred to as product innovation, however, innovation happens in all four quadrants, hence the labeling of this quadrant in quotation marks.

[2]Originating from the US Military VUCA stands for: Volatile; Uncertain; Complex; Ambiguous. D as in Disruptive has been added to emphasize market effects (Lawrence & Steck, 1991).

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T. Wunder (ed.), *Rethinking Strategic Management*, CSR, Sustainability, Ethics & Governance, https://doi.org/10.1007/978-3-030-06014-5_17

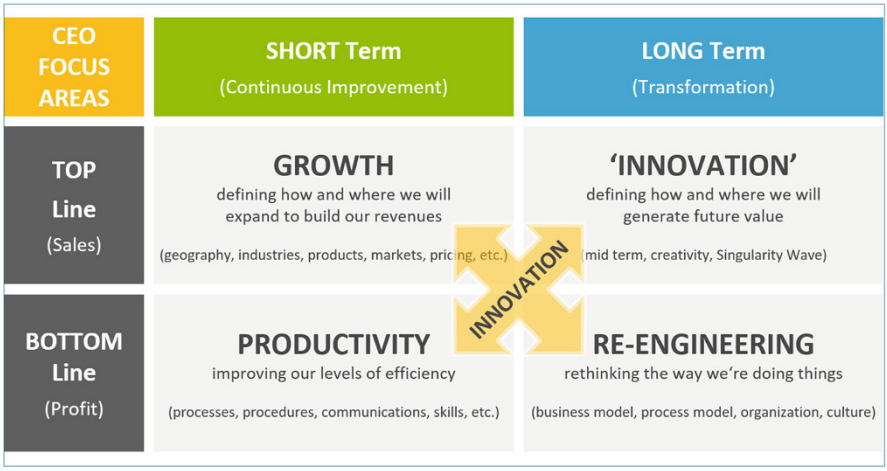

Fig. 17.1 The four CEO's focus areas. Source: ©Sustainable Growth Associates™

The wave of technological advancements (short: *Technology Acceleration Wave* or *Singularity*[3] *Wave*) on concepts such as robotics, artificial intelligence, big data, bio-informatics, block chain, additive manufacturing, Internet of Things (IoT), just to name a few, can quickly become the perceived savior or killer for any organization. Hence, intense action can be observed in all four quadrants, mostly applying a reductionist approach to find a singular solution for an allegedly singular problem.

But how to deal in particular with the "U" and "C" of VUCAD, i.e. the uncertainty and complexity? How can executives be confident that their decision to embrace—or ignore—a given technology is the right thing to do, instead of a high-risk gamble with their organization and its stakeholders? Even if the decision is right, how can they be sure that they capitalize on a given technology in the right way?

In other words, is there a way to simplify complexity without forgetting about key aspects and is there a set of instruments, like a radar, compass, sonar, log, etc. for *Key Decision Makers* to successfully navigate these unchartered waters covered by the fog of VUCAD while keeping up the necessary speed?

To fully comprehend and embrace the answer to this question, a second unprecedented trend requires our full and immediate attention, best looked at from an alternate perspective.

[3]The term *Singularity Wave* as synonym for *Technology Acceleration Wave* references to the exponentially growing advancements in any kind of technologies, a trend which is well captured in the landmark Time magazine 02.2011 article "2045, The year man becomes immortal" (Grossman, 2011) and was elaborated by, among others, the Singularity University (Singularity University, 2018). See also Chap. 18.

17.1.2 *The Individual in the* Private *Context: Addressing the Parent, Partner, Friend, Explorer, etc. as a Member of the Society*

The before mentioned individual in the business context, the *Key Decision Maker*, does have a private life as well. Embedded in family structures, personal networks, social organizations, etc. he or she is an integral part of the unprecedented success in the development of our species—as the beneficiary as well as the person accountable.

Over several decades, most countries have been enjoying a constant improvement in their Human Development Index (HDI).[4] As illustrated in Fig. 17.2, on average people are getting older, receiving better education, and enjoying a higher living standard.

This trend on national level results from countless technological, economic, and social innovations, e.g. in agriculture, medicine, transportation, food, manufacturing, ICT, mobile communication, education, social media, semi-conductors, etc. Hence, this *Societal Success Story* is—apart from pure luck and vast numbers of trial and error—due to foresight, entrepreneurial thinking, perseverance, and wits on an individual as well as an organizational level. As such, it is directly or indirectly linked to an individual's or an organization's strategic intent—their *Key Decision Makers' Agenda*.

If these societal national advancements aren't evidence enough that "overall,"[5] our species has been doing the right things, then what is?! And who wouldn't want this trend to continue: for the people in different nations having a longer life expectancy, better access to education, and a higher living standard?

This seems to prove the inevitable relevance and purpose of the economy to carry this *Success Story* forward. Doesn't that justify and require business to continue taking its role and responsibility to make that happen?

However, obviously this is not a complete picture.

There is a downside to this development, which must no longer be ignored, and which can be visualized when the HDI development is related to our planet's capability to sustain us, expressed by the Ecological Footprint (EFP).[6]

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[4]"The Human Development Index (HDI) is a summary measure of average achievements in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living. It does not reflect on inequalities, poverty, human security, empowerment, etc." (United Nations Development Program, 2018). The maximum HDI value of 1 is broken down in quarters, defined as low, medium, high and very high development.

[5]The term "overall" in this case is about national statistical figures and does not take into account the variances affecting individuals and organizations who may see themselves confronted with opposite trends due to societal break-downs, wars, hunger, etc.

[6]"Ecological Footprint accounting measures the *demand on* and *supply of nature*. On the demand side, the *Ecological Footprint* measures the ecological assets that a given population requires to produce the natural resources it consumes and to absorb its waste, especially carbon emissions. (...) On the supply side, a city, state or nation's *Biocapacity* represents the productivity of its ecological assets. These areas, especially if left unharvested, can also absorb much of the waste we generate, especially our carbon emissions." (Global Footprint Network, 2018). The EFP is measured in global hectare per person.

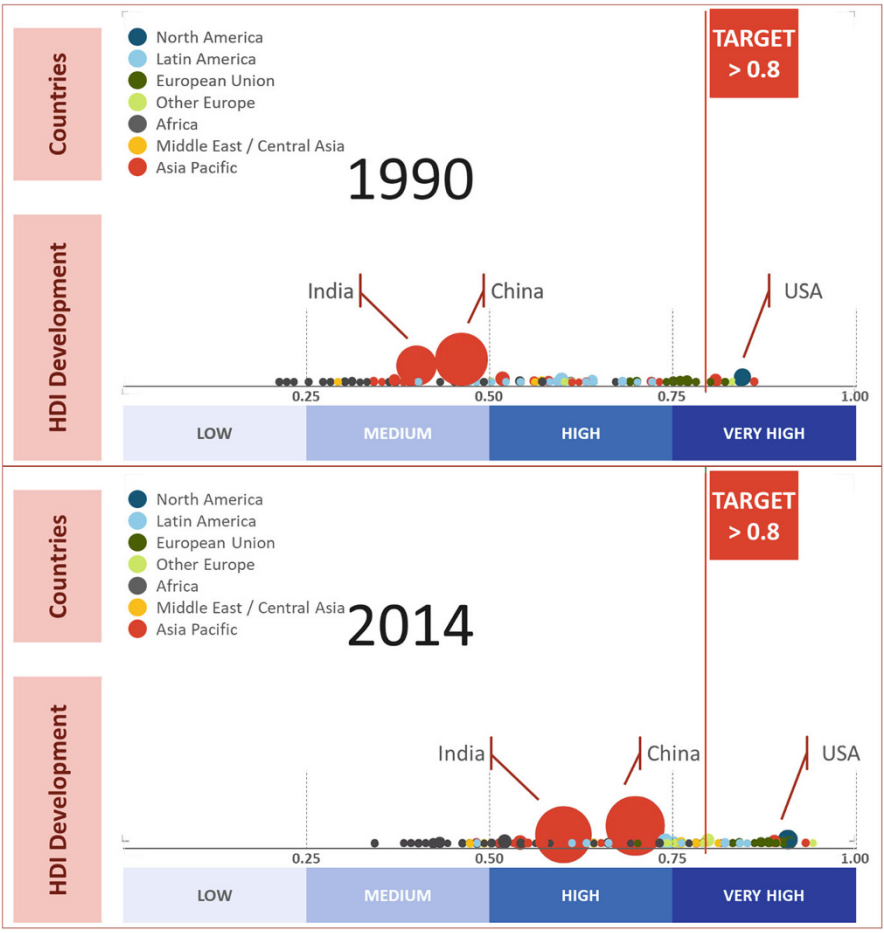

Fig. 17.2 Human Development Index (HDI) Development 1990–2014 (diameter indicating population size, data from United Nations Development Programme UNDP)

While the individual countries advance their HDIs, their ecological footprints move way above the maximum threshold, marking our biosphere's limited capacity to provide its eco-services that enable us to produce the resources we consume and enjoy, and to absorb the waste we produce. Metaphorically speaking, our species is eating up the planet at an exponential rate, as illustrated in Fig. 17.3.

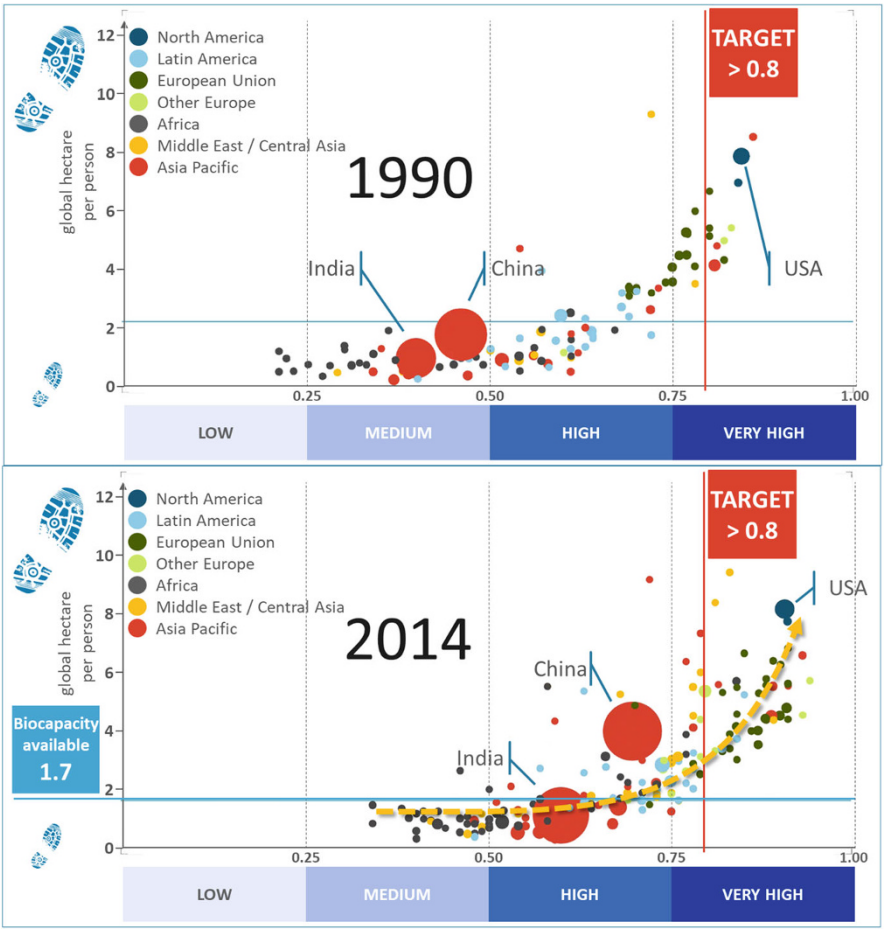

Fig. 17.3 Human Development Index (HDI) development vs. Development of Demand for Earth's Eco Services of 1990 vs. 2014 (Circle diameter indicating country population size). Refer to The Natural Step (2018b) for an animated version

The dramatic consequences of this malpractice can no longer be denied and comprises by far more than just the increasing signs of climate change, indicated also by scientists' proposed epoch dating: the Anthropocene.[7]

[7]"The Anthropocene defines Earth's most recent geologic time period as being human-influenced, or anthropogenic, based on overwhelming global evidence that atmospheric, geologic, hydrologic, biospheric, and other earth system processes are now altered by humans. The word combines the root 'anthropo,' meaning 'human' with the root '-cene,' the standard suffix for "epoch" in geologic time. The Anthropocene is distinguished as a new period either after or within the Holocene, the current epoch, which began approximately 10,000 years ago (about 8000 BC) with the end of the last glacial period." (Anthropocene.info, 2018); see also Chap. 1.

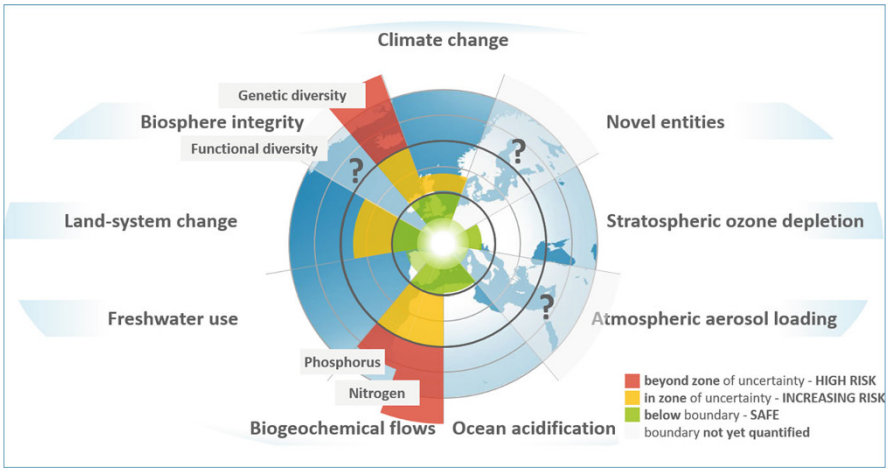

Fig. 17.4 Planetary Boundaries (social challenges not considered) (Adapted by SGA from Steffen et al. (2015))

Our planet is seriously ill due to the action of just one species we ironically named *Homo sapiens (Latin: "wise man")*. Various symptoms of patient Earth are well expressed by the so called *Planetary Boundaries*, a concept developed by a team of internationally renowned scientists led by Johan Rockström.

Rockström et al. (2009) identify nine critical Earth-system processes, which regulate the stability and resilience of the Earth, and propose, to the extent possible, quantitative planetary boundaries, illustrating a "safe operating space" (Rockström et al., 2009) within which humanity can continue to develop and thrive for generations to come (Steffen et al., 2015).

Figure 17.4 illustrates, how critical the situation already is in several categories (indicated in orange and red), while for some, such as *Biosphere Integrity* (e.g. insects for pollination) and *Novel Entities* (e.g. micro-plastics in the oceans), sufficient scientific data is not even yet available (indicated with "?").

To further complete the picture of our *success story,* we should also look at social aspects on a consolidated global scale. Inspired by the initial Planetary Boundaries, economist Kate Raworth developed the idea into a "safe *and just* operating space" with her "*Doughnut"* (Raworth, 2012) by adding *Social Boundaries*. Visualized with twelve social indicators from a variety of sources,[8] she shows that despite us

[8]"The 12 dimensions of the social foundation are derived from internationally agreed minimum social standards, as identified by the world's governments in the UN Sustainable Development Goals." (Raworth, 2018); Illustrative indicator sources: FAO, World Bank, WHO, UNDP, UNESCO, UNICEF, OECD, IEA, Gallup, ITU, UN, Cobham and Sumner, ILO, UNODC, and Transparency International. See also Chap. 1.

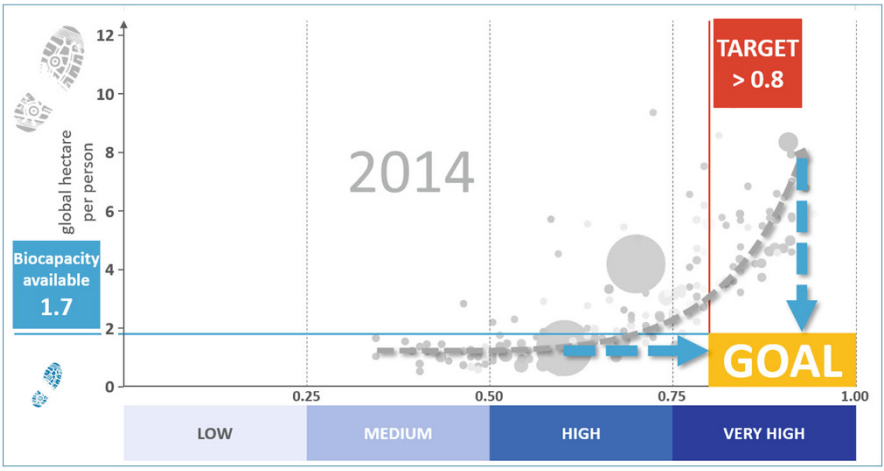

Fig. 17.5 HDI vs. EFP—Goal and Need for Action (Adapted by Sustainable Growth Associates™)

crossing these planetary boundaries, there is still a huge part of society where people's basic needs and rights are not met (leading to various knock-on effects). With that and other models she challenges current views on economics, taking into account relevant aspects currently left out (Raworth, 2017).

In a nutshell, while at first glance the HDI development and similar models indicate that nations societies overall *seem to be* **doing the right things**, they obviously *seem not to be* **doing things right**. If society in total does not adapt its behavior, it will be crushed by this development (The Natural Step, 2018a)—as from here referred to as one of the two "killer waves," the *Sustainability Wave.*

As attempting to turn back the clock on the HDI development is neither a feasible nor desirable solution, there is only one *Goal* that should be pursued to meet our needs: "*The Lower Right Corner*" as illustrated by Fig. 17.5.[9]

But how can the contradiction of businesses' activities, being a main driver for societal advancement on one hand, yet again a main driver for ecological breakdown on the other hand be resolved?

Since—according to Albert Einstein—we obviously "cannot solve our problems with the same thinking we used when creating them" another perspective seems to be required as prerequisite to reconcile economy, society, and environment.

[9]Alternatively, The Natural Step introduced the Funnel metaphor to depict our sustainability challenge where declining walls indicate decreasing space to maneuver which need to re-open. Kate Raworth visualizes and speaks about the "safe and just operating space" between the social foundation and environmental ceiling in her Doughnut.

17.2 "WHAT"—To Be Comprehended and Embraced: One Individual—The Systems Perspective

17.2.1 The Individual in the Systems *Context: Addressing the Reflected Integrator as Member of the New Leaders*

Summarizing the above, the following can be stated so far: Our economic behavior, essentially motivated and shaped by *Key Decision Makers* and *Influencers*, has—on average (!)—been leading to an impressive development of our societies' quality of living. However, overwhelming evidence shows that this development happens

- at the cost of significant parts of societies, not participating in, or benefiting from, this development,
- at the cost of our environment, as prerequisite to sustain all our lives, and
- at an exponential rate.

Hence, continuing this economic behavior is not sustainable, requiring any organization to fundamentally "Rethink Strategic Management."

It can be safely concluded that the way we so far understood the correlation of Environment, Society, and Economy—often referred to as People, Planet, Profit, or "Triple Bottom Line" (Elkington, 1997) does not reflect its true interdependence, nor the required trade-off mentality.[10]

An often cited, traditional picture depicts these systems as overlapping domains at best, with the Economy being too big to fail—a picture which can no longer be held up. Taking a systems perspective, the correlation of these three domains is better illustrated as nested circles with the individual in the center as shown in Fig. 17.6.

This picture might look as splitting hairs at first, however, it illustrates a fundamental consequence in its interpretation. While an outer circle can exist without the inner circles, this is not true, the other way around. The environment can exist without society, but society certainly not without the environment. Furthermore, there is no economy without a society, instead, it requires a healthy society to develop and uphold a healthy economy. With organizations being part of the economy, and individuals being part of organizations, individuals will fail when their organization fails, organizations will fail, when the economy fails, the economy will fail, when the society fails, and society fails, when the environment fails.

In other words, operating within the limitations of the outer systems—1st Environment, 2nd Society, and 3rd Economy—is imperative for any organization to become and remain sustainable. This is a fact that will overthrow almost all of today's organizations' way of doing business. Combined with the simultaneously occurring *Technology Acceleration Wave* any organization must live through a fundamental transformation process to become fit for the future, and given the outlined, negative

[10]As also reflected by Elkington in his "strategic product recall" of the Triple Bottom Line at its 25th anniversary (Elkington, 2018).

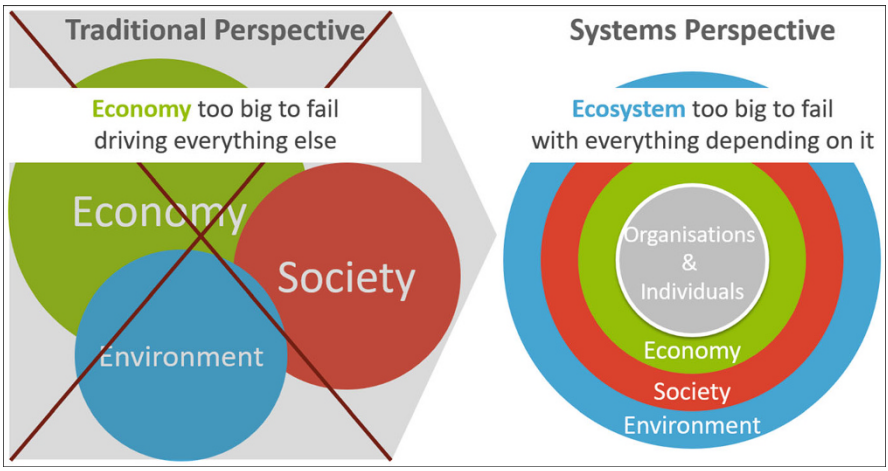

Fig. 17.6 Traditional vs. systems perspective of environment, society, and economy (Adapted by Sustainable Growth Associates™) (Graphics based on Senge et al. (2008, p. 102), text based on Doppelt (2008, p. 18))

socio-ecological symptoms, that transformation (achieving the Goal as illustrated in Fig. 17.5) has to happen ASAHP (As Soon As Humanly Possible).

Any *Key Decision Maker*, comprehending and embracing this conclusion, steps into a next level of awareness and chooses to take a systems perspective of the reflected *Integrator*, thus becoming a member of the constantly growing Group of *New Leaders*.

These *New Leaders* embrace change and show a sincere commitment to getting it done. They no longer ask the often-heard question of executives, taking the traditional "management" perspective,

"*Where is the business case of 'Sustainability'?*"
(Can we afford to invest in this initiative?)

instead, rephrase it into a "leadership" perspective

"Where is the 'sustainability case' for my business"?

or, in other words,

"*How can I use 'Sustainability' for my business to stay and thrive in business?"*
(Can we afford NOT to invest in this initiative?)

Answering this question requires to understand, what "Sustainability" in the *Sustainability Wave* truly means.

17.2.2 The New Definition of Success: Acknowledging the Rules of the Sustainability Game

The *New Leader* no longer doubts the dependency of his or her organization of the outer systems, but needs guidance on what this really means. While this guidance

has been available for many years, it appears that the findings of the numerous great minds behind it required their time to break through.

In the mid 80s, scientists from different branches, disciplines, and universities supported Dr. Karl-Henrik Robèrt, founder of the non-profit "The Natural Step®,"[11] in his quest to find the key causes of our unsustainable course by gaining consensus with an attitude of: *what is it that we CAN agree on?* The multi-disciplinary science review process, together with system thinking helped to find a principle-based scientific definition of sustainability and a method for operationalizing it, which can be summarized as "backcasting from sustainability principles."

The process and results have been repeated, improved, and confirmed by the science community. The resulting The Natural Step framework, or Framework for Strategic Sustainable Development (FSSD) (Broman and Robèrt, 2015) has been successfully applied by working with business and society and described in hundreds of publications over the past three decades. In more recent years, the interdependencies with and mechanisms behind societal sustainability have also been further explored, defined, and refined.

The FSSD as advocated and applied by The Natural Step® provides the structure and principled guidance the *Key Decision Maker* and *New Leader* is looking for, and which companies around the world such as Nike®, Interface®, Philips®, Pratt & Whitney®, Mövenpick Hotels & Resorts, Volvo®, Electrolux®, Scandic® Hotels, Scott Bader®, just to name a few, have already considered, selected, and used for the development of their people, business and/or enterprise, each in their own degree of progress on their journey.

At its core, the Framework introduces three ecological and five social Sustainability Principles (SPs) that are representing the key causes of unsustainability and can be used as the rules of the game to backcast from (illustrated in Fig. 17.7 and described in Fig. 17.8). To safeguard the sustainability of the superordinate systems *Environment,* respectively *Society* or, in other words, the possibility for humanity to flourish, these principles, or system conditions, *must not be systematically violated* by any of the subsystems Economy, Organizations, or Individuals.

As said, together, the SPs define the conditions, or the "rules" of the game within which needs to be played to allow the possibility to "win." As such, they are not "just another great idea" in the world of sustainability, where to be fair, a new concept seems to be introduced every day. Violating the SPs is in a way like disregarding gravity while jumping from a roof top without any means for a safe landing. In the case of socio-ecological sustainability the fall might take longer, given our perception of time, but the impact will be just as deadly, with the current generations deciding over both, their own fate as well as the fate of future generations now (as outlined in Sect. 17.1.2).

At the same time, the SPs offer a tremendous amount of freedom, while inspiring innovation and creativity in the same way design constraints, or design principles do. Describing what we must *not do*, the SPs also tell us what we *can do*: Anything

[11]Disclaimer: Both authors relate to The Natural Step Germany and the international TNS network.

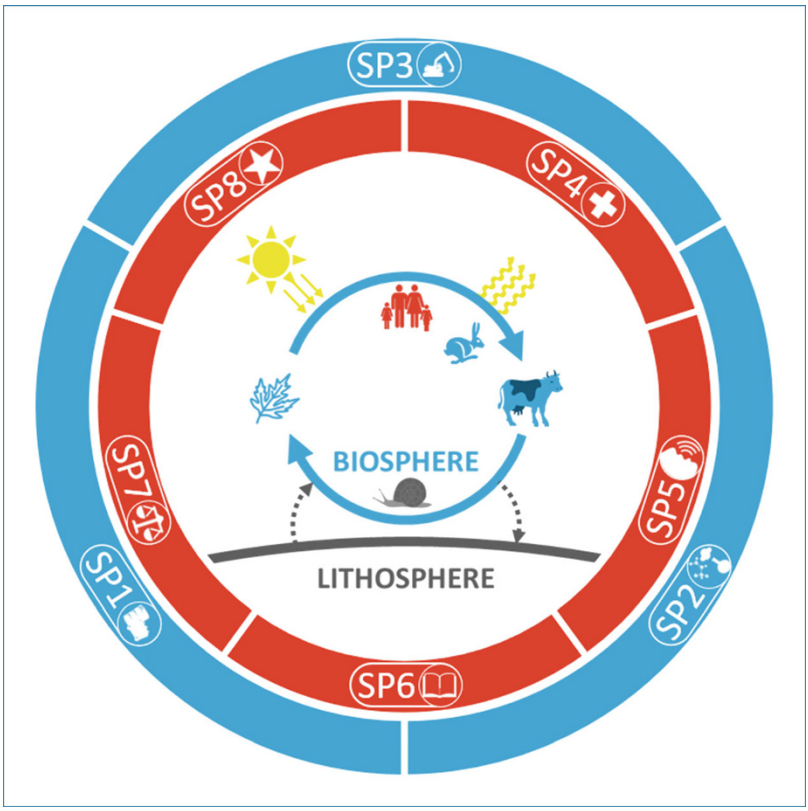

Fig. 17.7 Environmental and social sustainability principles to allow for continued flourishing (The Natural Step® and Sustainable Growth Associates™)

else! They have been uniquely designed to be necessary and sufficient to cover the relevant topics, generally applicable and scalable, concrete and non-overlapping.

Hence, next to helping us understand how humanity is challenged and where innovation needs to take place, the SPs provide inspiration and guidance for purposeful, context-driven innovation, and (both individual and collective) leadership. If that doesn't sound intriguing for the Key Decision Makers and creative minds out there, what does?

The SPs make the term sustainability tangible and as such, provide all an organization needs to know AND apply to become fit for the future—at least with respect to the social and ecological systems we depend on.

To drill down to what this means for an organization, Fig. 17.9 details the correlation of an Enterprise in the Systems Context. As a member of the systems Environment, Society and Economy, an *Enterprise* has an operational presence in, and interdependence with all three domains. Whatever the Enterprise's activities, they interrelate with its customers, employees, suppliers, other players of the economy, other members of society, the environment's natural resources, and the direct or indirect access to the sun as primary energy source of all embedded systems.

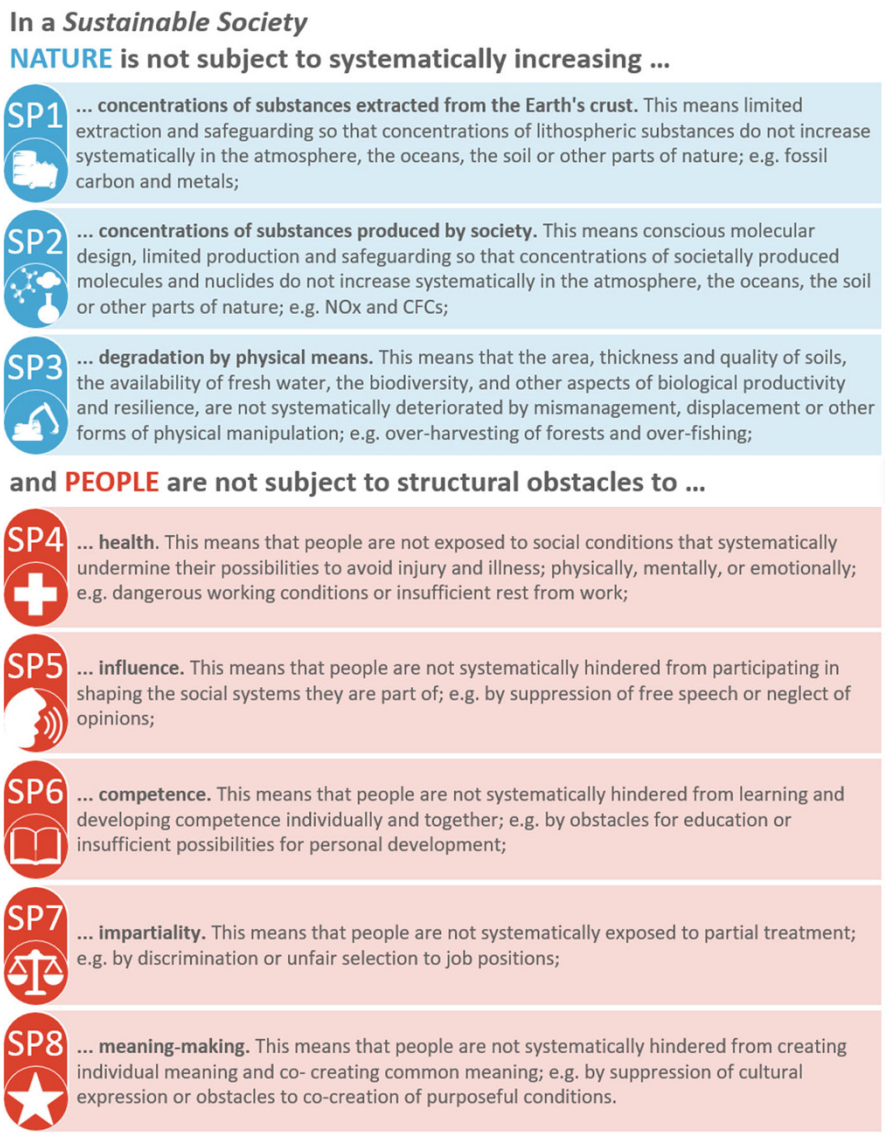

Fig. 17.8 Three environmental and five social sustainability principles—definition (Broman and Robèrt, 2015) (Graphics adapted from The Natural Step®©)

Inspired by limited progress of sustainable development in business overall, and building on The Natural Step's definition of socio-ecological sustainability, the Future-Fit Foundation, has taken the initiative to define further what it means for a business to be future-fit® (Future-Fit Business Benchmark© 2018a, b). The limitations of progress lay partially in how organizations and their shareholders define success and what they compare, or benchmark, themselves with.

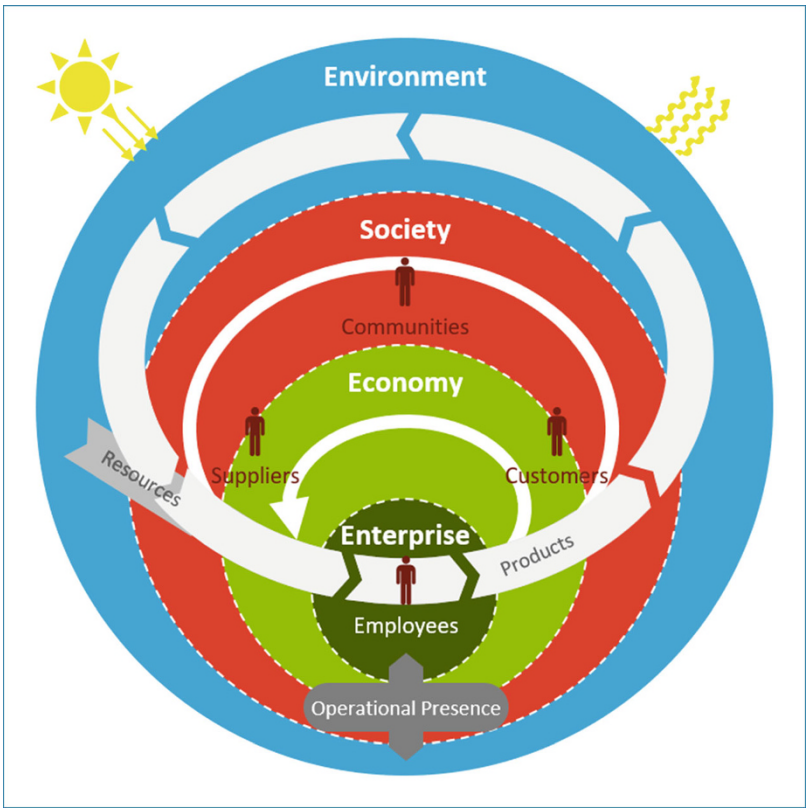

Fig. 17.9 Value streams in the systems context (Adapted by SGA from The Natural Step and Future Fit Business Benchmark©)

As illustrated in Fig. 17.10, comparing an organization's current state with

- past year(s)' performance, offering no guidance at all due to contextual changes and missing direction,
- peers' current performance, means—at best—showing off as "least bad,"
- its own or its stakeholders' moving targets and opinions, jeopardizes losing track and stimulating incremental improvements at best.

Hence, only the comparison with a measurable definition of socio-ecological future-fitness, i.e. related to success in the outer systems, provides a clear direction and the necessary information about the distance still to go. Striving for this state is in the organization's own best interest as well as that of others. Furthermore, helping others to move towards and achieve their goals creates value with corresponding potential returns.

The idea behind the Future-Fit Business Benchmark (FFBB) is to provide an answer to the following two questions:

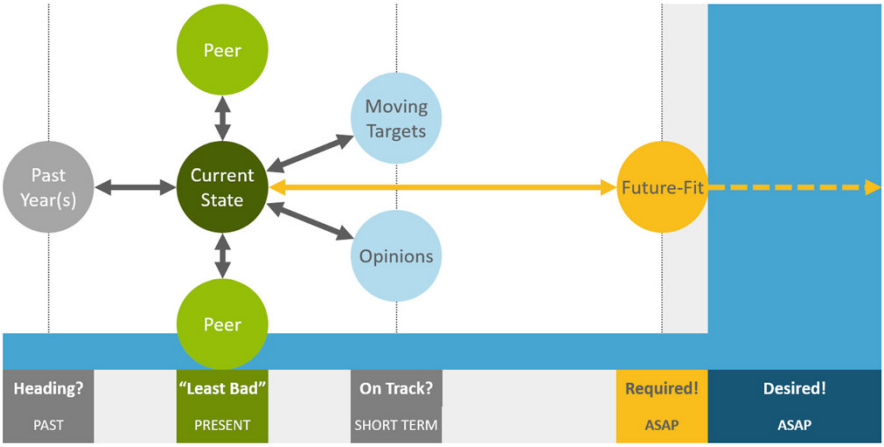

Fig. 17.10 Definition of future-fitness compared to other sustainability measurement approaches (Adapted by SGA from Future-fit Business Benchmark© R2, 2017)

Now that we have a science-based definition of the socio-ecological sustainability (the FSSD)

1. "How would we know a truly sustainable company if we saw one?"
   and
2. "How can we tell, how far away a company is now from where it needs to be?"

In a multi-year[12] process, they derived the so-called Future-Fit Goals, described in the organization's (FFBB) (Future-Fit Business Benchmark©, 2018a). The FFBB answers these questions by:

1. defining 23 Future-Fit Goals to achieve break-even, equal to operating within socio-ecological limits,
2. requiring 100% fulfillment of all FFBB goals as mandatory target, allowing to determine the remaining distance to go, and
3. promoting corresponding Positive Pursuits, necessary for rebuilding—to the extent possible—the socio-ecological capital that has already been depleted.

The goals comprise five areas (see also Fig. 17.11), namely an organization's:

- *Business Inputs* it depends on, covering energy and any natural resources,
- *Business Activities* it conducts, incl. up- and downstream value chain activities, covering e.g. no-harm emissions, community health, zero waste, etc.
- *Employees* and *Workers* it engages, covering e.g. living wages, fair employment, health and safety, etc.
- *Products & Services* it provides, covering e.g. honest communication, no harm to people and the environment, product repurpose, etc.

[12]One of the authors, Edwin Janssen, was involved as Technical Advisor since the beginning, early 2013.

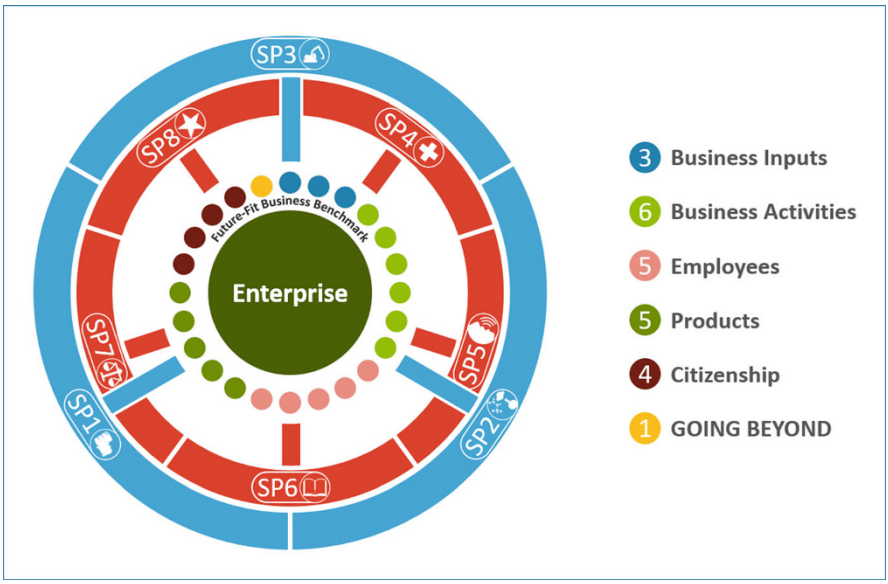

Fig. 17.11 Eight socio-ecological sustainability principles and 23 derived organizational future-fit goals broken down by category (Graphic: Sustainable Growth Associates, Goals from Future-Fit Business Benchmark©, 2018a)

- *Citizenship* it contributes to covering e.g. underlying ethics, tax payments, lobbying activities, etc.

Nonetheless, as important as social and societal sustainability and the various tools and concepts mentioned are, terms like "full sustainability" and "Future-Fit®" obviously need to be treated with caution by the *New Leader*. While achieving all goals of the FFBB is mandatory for any organization and increases its likelihood to flourish (Ehrenfeld and Hoffman, 2013),[13] their pursuit alone is insufficient for warranting business success and continuity. After all, embedded in *Society* and *Environment*, there are still other human constructs such as the *Economic system* and the *Technosphere*, with its own (flawed) design and success criteria (which are not covered here).

To put it straight: organizations striving for, or even already meeting, the FFBB goals can still be outperformed by other market players, showing the same socio-ecological performance, but simply do better on the economics. Both players doing the right things, can still show substantial differences in doing them right, in particular, when it comes to surfing the *Technology Acceleration Wave*.

There are vast amounts of businesses out there, all with their specific reasons to exist and approaches to create value for a given target group. Although striving for

[13] See also Chap. 8.

Fig. 17.11 (continued)

socio-ecological success will foster cooperation, it by no means marks the end of competition, although it will eventually become a fair one.

Hence, the *New Leader's* challenge is to unfold his or her organization's capability to visualize its *raison d'être* and future contribution to individuals and other

organizations, within the socio-ecological boundaries. This requires the courage to take a bold first step and many subsequent steps. The *New Leader's* reward will be, among other things, an agile, self-learning, context-driven, purposeful, value creating organization of people, that will always remember this turning point as the seed that enabled them to grow into what they have become.

17.3 "HOW"—Thriving Within the Systems: One Organization—Making It Happen

So now that the "WHY we must change" and the "WHAT needs to be done," is clear, the "HOW to do it" turns out to be the next challenging question. Two processes named *ACER* and *ADVISE* provide a practical approach that *Key Decision Makers* can work with.

17.3.1 The ACER Process

For any change to happen, an individual—and later an organization—should have the right mindset. For this to happen they must first ***A****wake!* to being able to ***C****omprehend!* why change is necessary and what needs to be done how, to hopefully ***E****mbrace!* the need for change as prerequisite to ***R****espond!*, taking the first of many steps to follow (see Fig. 17.12).

Below, these steps are explained in reverse order, starting from the desired behavioral change. Ultimately, change is about doing! Doing things differently or/and doing different things. No matter if it is giving up smoking, changing one's diet, or altering course of an organization. The deed is what counts, not the intention alone, in other words—it is about to "*Respond*!."

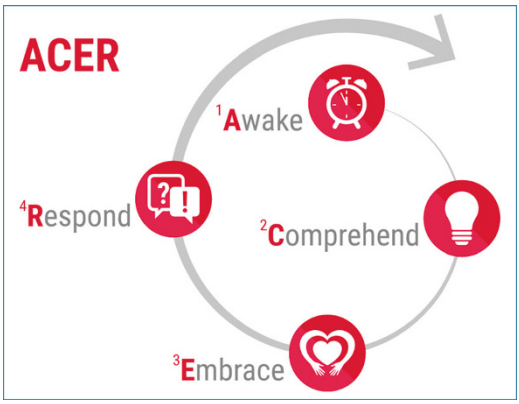

Fig. 17.12 The ACER Process to induce change (Source: © Sustainable Growth Associates)

However, for any individual to *Respond!* something more essential is required.

Respond! requires motivation. The pain one no longer wants to endure and/or the gain one wants to achieve. To build on the examples before—the imagination of getting rid of shortness of breath, while maybe starting to enjoy the beauty of scuba diving, the desire to reduce one's limited mobility, while becoming capable of an easy run through nature, the vision of an organization no longer fearing competition, while developing towards an inspiring, thriving enterprise. So, *Respond!* requires the individual to *Embrace!* the need for change, which can become a vast challenge, when one's very essence is touched.

However, for any individual to *Embrace!* something more essential is required.

Embrace! requires understanding. As a species, we seek meaning. We ask questions on why, what, how, when, who, etc. We collect data, generate information, build knowledge, create understanding, and eventually might develop wisdom. Facts that reveal during this process are not always to our liking, nonetheless *Embrace!* requires the individual to *Comprehend!* the need for change.

However, for any individual to *Comprehend!* something more essential is required.

Comprehend! requires awareness; to at least have the prospect of change. Any individual needs to have first and foremost the capacity and capability to acknowledge that something is going on that asks for his or her immediate attention—to *Awake!* which not everyone is capable of for any given challenge.

This chapter has been structured applying this very logic:

Awake! is about encouraging *Key Decision Makers* to reflect on both their business as well as their private perspective. Generally, they recognize, that—overall—they might be contributing substantially to the well-being of society in the short term, while simultaneously being responsible for destroying it in the long run, if they continue doing business as usual. Acknowledgement of interdependencies to either flourish or perish with the larger society and the environment is relevant. Awoke, they might be open to systems thinking and understanding.

Comprehend! provides this new perspective—the systems perspective—and outlines a clear definition of success on environmental and societal level as rules of the game in the economy: the three Ecological and the five Societal Sustainability Principles (SPs). Building on the SPs, the Future-Fit Business Benchmark© provides measures and figures to translate them into a language, which allows for an easier application in the business world. The hardest step however is yet to be taken.

Embrace! touches the individual at his or her very core. At this point The *Key Decision Maker, New Leader, Influencer, Father, Mother, Friend, Adventurer, Nature Lover, Philanthropist, Politician, Artist, Scientist, Consumer*, etc. either struggles with, or strives for change. A fundamental response is required, coming along with responsibility, no matter the decision, depending on intellect, attitude, maturity, empathy, and personal values—one's very essence.

The *New Leader*, who takes on this responsibility requires *Response-Ability*, the ability to *Respond!* This is operationalized with the (A)DVISE process, elaborated next, where "A" as in "*Acering"* also applies to others.

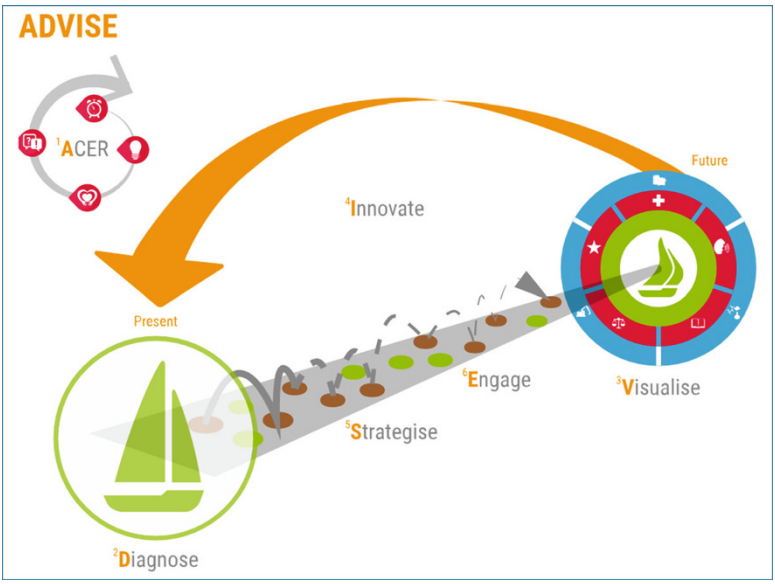

Fig. 17.13 The ADVISE Process (Source: © Sustainable Growth Associates)

17.3.2 The ADVISE Process

With the *New Leader* embracing the need to change, *Respond!* summarizes a second process, requiring to (Fig. 17.13)

- ***A**cer!* **Key Stakeholders**, as prerequisite to[14]
- ***D**iagnose!* your position, to collectively
- ***V**isualize!* your future, allowing to
- ***I**nnovate!* for success, to ultimately
- ***S**trategize!* your approach, allowing to
- ***E**ngage!* and execute your transformation.

At first, the ADVISE (Fig. 17.13) process seems to depict a most familiar approach, which has probably been applied since mankind has begun sailing the oceans. Take for example Columbus' enterprise of discovering a new route to India. Such an endeavor certainly required a lot of *acering* of key stakeholders (although unquestionably nobody called it like that). Then, *diagnosing* his venture's position was just as essential as *visualizing* the future triumph. Both determined the delta for which *innovative* solutions needed to be found, prior to developing the most promising *strategy*, as basis to finally get the gang of pioneers *engaged* to set sails.

[14]"*ACERing* Key Stake Holders" follows the same logic as before but asks for a different approach. Instead of the individual level, it is now the organizational level that needs to find its turning point. Without getting the Key Stake Holders on board, change is simply not going to happen. See also Part III of this book.

While it is beyond the authors' knowledge, if Columbus acted this strategically, the example as such illustrates the well-established, proven approach to strategy development and implementation. This process is everything but linear, as a matter of fact, it requires regularly revisiting the individual steps in short intervals.

Then what is so special about the ADVISE process?

It is the application of each step *taking a whole systems perspective*.

Any organization assessing its **p**olitical, **e**conomic, **S**ocietal, **t**echnological, **l**egal, and **E**nvironmental context (PESTLE), can now build on an unwavering correlation of the two outer—and as such—most relevant systems of *Environment* and *Society*, both with their crystal-clear definition of dependence and success. As such, the complexity of the peStlE context is not just reduced by two, so far shaky, variables, it rather wins two determinants that the other four must subordinate to, which could as well be expressed as follows:

$$p, e, t, l = f(E, S)$$

$$with\ E = SP1 \cup SP2 \cup SP3\ and\ S = SP4 \cup SP5 \cup SP6 \cup SP7 \cup SP8$$

With this perspective, promising technologies might become a dead end or need radical changes, disregarded technologies might win in significance, novel issues might reveal that have been invisible before, well proven business models might no longer have a future, and unprecedented business models might evolve and praised investment ideas might not bring the expected ROI.

In a nutshell, it is the ADVISE process with its related approach, tools and methodologies, that enables an organization to determine its very specific, own future-fitness goals and that becomes the radar, compass, sonar, log, etc. to navigate the fog of VUCAD in unchartered waters.

The individual steps of the ADVISE process:

17.3.2.1 *Acering!* Key Stakeholders

As it is unlikely that the *Acered Key Decision Maker* alone generates the required momentum for the journey ahead, the organization's *Key Stakeholders* need to get on board. It is therefore worthwhile to take a closer look at five personas[15] that can be portrayed, when relaying and anchoring the message on socio-ecological sustainability as indispensable condition for the organization's future-fitness:

The *Innocent*, who simply lacks the potential to even grasp the topic, not to mention its relevance.

[15]These personas are anecdotal types, based on numerous interactions with individuals, many of them being Key Decision Makers, and their reactions respectively responses to the topic of socio-ecological sustainability from a systems perspective. They are helpful definitions to prioritize communication measures.

The *Ignorant*, who does have the potential to capture the topic and its relevance, but unconsciously follows reactive patterns of denial or consciously refuses to confront the facts or recklessly disregards the consequences of acts.
The *Incompetent,*[16] who accepts the topic and reacts to related obligations, while lacking the skills, confidence, and proficiency to address appropriate action.
The *Independent*, who welcomes the topic and responds earnestly, yet underperforms due to a reductionist approach.
The *Interdependent*, who embraces the topic and responds holistically taking a systems perspective.

While the *Interdependent* does not require to be "*acered*," the *Innocent* would not be receptive to it. With the *Ignorant* requiring substantial effort, it is the *Incompetent* and the *Independent* being the most promising Personas that could be won for starting the movement.

While the Personas *Innocent* and *Ignorant* evidently should not be part of the crew kicking off the work ahead, the team as such may quickly be enlarged with contributors across all functions and levels of the organization. If, however an *Innocent* or *Ignorant* persona must be part of this first step, e.g. to meet existing governance rules, they will require substantial attention and need to be proactively managed.

For some *Key Stakeholders* this will just be the change they desperately have been waiting for, others will have to leave their comfort zone, and some will be afraid of the unknown and maybe even decide to leave the organization.

This is a very delicate situation for the organization and asking for appropriate leadership. Confidence and commitment are just as important as empathy and the ability to integrate. After all, systems thinking acknowledges diversity, which doesn't mean that there won't be any more tough decisions to make.

The goal of this first step of ADVISE is to help the team of initial change agents to discover the potential value of a strategic commitment to future fitness. Following the ACER Process, this requires building the necessary awareness, competence, and dedication through appropriate skill development, in the form of inspiring key notes, interactive workshops, tailored on- and offline training, dedicated interactions with other organizations, etc.

Networking with other organizations, who have gone through a similar process before, helps to generate additional momentum while learning from the successes and failures of others. Experience shows that once an organization is positively infected, they develop incredible creativity to get others enthused as well.

Now, that the first Key Stakeholders are on board, truly aligned, equipped with the necessary knowledge of future-fitness, understanding the related approach, embracing their special role, they form the initial *Team of Change Agents*, ready to play their part in the journey ahead.

[16]Incompetent in this case is meant as being fully aware that the current understanding of an individual, or organization does not suffice to master a given challenge.

17.3.2.2 Diagnose! Your Position

The goal of this second step of A**D**VISE is to have a thorough understanding of the organization's current reality in relation to the yet to be further defined shared new ambition. Diagnosis consists of three complimentary views which can be referred to as the three Cs or C^3, namely

- The *Context* it maneuvers in,
- The *Cognition* it is seen in,
- The *Condition* it operates in.

Context is the inside-out (organization's perspective) as well as the outside-out (external expert perspective) analysis of the political, economic, social, technological, legal and environmental opportunities, and threats of the entity under investigation.

Supported with competent external support, the *Change Agents* will identify and assess trends critical for their business. The FSSD's Sustainability Principles—defining success regarding *Society* and the *Environment*—will quickly reveal a realistic assessment of a given industry, with some likely trends to be expected—which may differ from other forecasts—and call for appropriate moves.

Due to its dominating force and speed, *Context* also provides a landscape of technologies crucial for the organization's success, answering key questions such as: How does digitization impact our business when taking the systems perspective? What innovative technologies evolve that could accelerate our transformation towards future-fitness? Which industrial trends can be ignored, and which must be taken seriously?

Metaphorically speaking, *Context* provides the necessary intelligence on the local weather, tides, currents, shelves, traffic, etc. as well as their most likely developments. In practice, the time horizon to consider is much longer. It provides a central input to consider, once the organization has identified its destination and developed its course towards it.

Cognition is the outside-in analysis of the organization's perception. What assets and liabilities do external key stakeholders such as customers, suppliers, competitors, societal organizations, and alike see, when assessing the organization's Leadership & Governance, DNA & Culture, Processes, Products & Services, Communication, and Finance.

Gathering this intelligence asks for corresponding interaction with these external stakeholders. This step provides numerous opportunities to connect with them on a new level. A fact also relevant for all other steps of the ADVISE process.

Metaphorically speaking, *Cognition* provides the necessary intelligence if and to what extent the outside world not only rewards the organization's current sailing performance (economic behavior), but also trusts in it to make a significant difference in mastering the turbulent winds ahead (future potential).

Condition is the inside-in analysis of the organization's strengths and weaknesses, applying the same structural approach as *Cognition*. For obvious reasons,

Condition can become a deep dive. It is about being ruthlessly honest in particular when it comes to assessing the organization's Leadership & Governance, DNA & Culture as well as its products & services and the underlying processes.

There is a variety of tools and methodologies available to model, assess, benchmark and score the different aspects of the organization and its products. In general, these require adaptation or specific application to ensure optimal insights for this purpose. Some have been specifically designed to support context-driven purposeful innovation leadership, such as the Strategic Life Cycle Assessment (SLCA^{SM}) methodology (The Natural Step, 2018b), which has the purpose of "designing-out" unsustainable aspects throughout the life cycle of a product and/or service. Their description would go way beyond the scope of this chapter; however, it is crucial that the use of any of these tools receives the right mindset, facilitation, and experience to deliver meaningful results.

Comparison or benchmarking should happen in relation to the organization's ambition (and excellence) to understand the gap to be bridged. Metaphorically speaking, *Condition* provides the necessary assessment of actual capabilities and readiness of ship and crew to sail charted and uncharted waters.

While *Diagnose!* might sound like an extensive amount of work, which it can be, it can also be performed at a lower level of detail, just to get started and then expand gradually. *Diagnose!* usually reveals significant liabilities that need to be dealt with and assets that can be leveraged including low-hanging fruits, providing potential to positively influence the organization's top and/or bottom line. In addition, it further develops the organization's competence in system thinking and leads to a growing number of *acered* members, fueling the desire to get going and provides crucial input for the next step of ADVISE.

17.3.2.3 *Visualize*! Your Future

The organization, now understanding its position and capabilities in stormy waters, i.e. the above-mentioned *Sustainability* and *Singularity "Killer Waves,"* has developed sound intelligence, which already translates into a competitive advantage. However, the wind direction is always right, if one does not know where to go. Just to shoot for meeting sustainability targets, or even future-fit® goals, is simply not enough. The required transformation to flourish, within the boundaries of the outer systems, asks for the development of a shared *Vision*. It should clarify what it is to move towards and what it is to develop into, based on the answer to the question: why is this organization needed at all? Its *Purpose*!

Answering the question, why an organization would be needed in a sustainable future provides access to its true nature. To take an extreme example: with the clear definition of socio-ecological sustainability, which any organization must achieve, since its business success depends on it, why would a manufacturer of e.g. land mines, or with processes or products that harm people in any way, be needed in such a future? That said, elaborating an organization's *Purpose* can not only be difficult, it

can also be painful, except when dealing with the *Innocent* or *Ignorant*, with whom the approach doesn't resonate anyway.

When it comes to the *Vision*, let's emphasize that the future is not written yet. An organization, having systems thinking embedded, would not *guess* the most likely future (based on forecasted scenarios), but instead aspire to *create* the most desired future (based on acknowledged success principles for the systems it depends on). It is therefore in all our hands and as such, in the organization's hands, to do just that: contemplating, creating, designing, building it. *Visualize!* demands the organization to elaborate, what future it desires, what role it wants to play in the process of creating such a future, and how it needs to advance for becoming able to fill this role.

A compelling *Vision* and especially a powerful *Purpose* contain the seed for success. They create excitement and encourage as well as challenge people's creativity and capacity to innovate. They attract others, who want to contribute. They ask for, but also support, leadership by providing direction, promoting alignment, and fostering commitment.

From the systems perspective, *Visualize!* integrates a variety of (online) tools, methodologies, concepts, and sources to elaborate the organization's purpose and develop its vision.[17] The development may take several intense days and may be spread to cover multiple weeks, or months depending on the level of depth and (type of) engagement. *Visualize*! is a three-phase approach of

- Inspiration
- Imagination
- Integration

Inspiration includes stimulating homework for the *Change Agents* and may involve meeting with family and friends to reflect—obviously on a voluntary basis—a variety of thought and emotion provoking questions about the future they want to live in and the role their organization is supposed to play in this future. Their reflections, irrelevant the format, deliver substantial input, and scene setting for the next phase.

Imagination aims to achieve unfolding of and agreement on the *Core Values* and its "*Massive Transformative*" (Isamil, Malone, & van Geest, 2014) *Purpose,* a vibrant description of the future the organization wants to contribute to and the "*Big, Hairy, Audacious Goal*—BHAG" (Collins and Porras, 1996) it wants to achieve by doing so.

Already stirred by the first phase *Inspiration*, generally all *Key Stakeholders* experience the *Imagination* engagements as very emotional. Apart from reflecting the key results of *Diagnose!*, which is primarily a facts & figures presentation, the participants walk through a bouquet of exercises, all designed to carefully access their individual sources of energy. This is essential for the vision development

[17]Potential sources are Collins and Porras (1996, 2002), Future-Fit Business Benchmark© (2018a), the UN Sustainable Development Goals (United Nations, 2015), the Singularity University's teaching on Exponential Technologies (Singularity University, 2018).

process. After all, recalling the ACER process, bridging the gap between *Comprehend!* and *Respond!* is a matter of deep emotional concern.

Integration aims to include the rest of the organization for further advancement of the *Imagination* results. This process eventually leads to a clear and compelling vision statement, the BHAG(s), as well as core values and a purpose that is shared by the organization and guides innovation.

With that, we are ready to start to collect, validate, discuss, select, and develop ideas on how to bridge the gap between where we are today (*Diagnose!*) and where we want to be "tomorrow" (*Visualize!*).

17.3.2.4 *Innovate*! for Success

For the organization to fully *Engage!* its transformation process, *Innovate!* provides vital input for the development of the master plan. *Diagnose!* and *Visualize!* together produce the "creative tension" (Senge, 1990) that is required for innovation to happen. This phase is about stimulating stakeholders to come up with creative solutions to close the gap with the renewed ambition and harvest (large numbers) of diverse ideas.

Success depends on the available innovation engine. Here it is relevant to realize the scope of (ideas for) innovation, which includes all innovation types e.g. products, services, processes, management system(s), organizational structures, operations, business models, stakeholder engagement, and covers all aspects of the organization. Next to the tangible, hard side of the innovation system (e.g. strategy, processes, tools, KPIs (beyond R&D)), it is relevant to also think of the intangible, soft side (e.g. culture, motivation, collaboration, risk appetite, sharing mode).

Having said that, some organizations have a mature, working innovation ecosystem, or innovation engine in place (although the integration of sustainability throughout might be suboptimal), while others lack the needed processes, capabilities, and/or tools to innovate effectively and efficiently. *Diagnosis!* already reveals an organization's innovation maturity and recommended actions.

The transformation journey, affecting all aspects of the organization across multiple horizons and soon to be involving all stakeholders, requires—at least in a minimal version—a working innovation engine to support future ideation and Research, Development, and Innovation (R&DI) processes.[18]

With certainly no shortage of possible ideas for innovation on a short-, mid-, and long-term horizon, the organization is now fully equipped to consolidate and set strategic goals and develop its strategy for achieving them, thus transforming into a thriving enterprise, fit for the future.

[18]Full implementation, or improvement, of an innovation ecosystem to ensure it serves context-driven, purposeful innovation leadership is to be considered an initiative on its own as part of the Masterplan.

17.3.2.5 *Strategize*! Your Approach

This is the most serious phase of the ADVISE process. The purpose of this phase is to take all results from previous phases and combine this into a comprehensive though concise organizational Masterplan or Roadmap, which elaborates how our organization is logically intending to bridge the gap.

Hence, the ideas of *Innovate!* require to be consolidated, scrutinized, assessed, and ultimately translated into measurable short-, mid-, and long-term *Strategic Goals*, initiatives and projects. All should be scrutinized and prioritized using a minimum of three crucial strategic questions:

Does achieving this goal, or completing this initiative:

1. move us in the *Right Direction*?
2. provide us with a *Flexible Platform* for next steps?
3. deliver us an attractive *Return on Investment* (ROI)?

The first question checks whether it helps us towards our vision guided by the sustainability principles taking into account various stakeholders simultaneously. The second helps us to prevent dead-end investments by considering also whether and what next steps would be possible. The third, where ROI does not only concern financial but also other capitals (e.g. human, environmental, built, intellectual, social capitals), helps us to understand how and when it will provide us the return. In addition, the organization may have other strategic considerations to add which will help prioritization.

Due to its strategic nature, the new goals and initiatives need integration with existing portfolio of priorities, which may already be underway. This may require revisiting governance processes and criteria on one hand, while on the other hand it may result in killing projects that do not meet your renewed criteria and free up resources.

Strategic Goals are the stepping stones, intermediate camps, supporting pillars, filling stations, which the organization considers decisive for making the full journey. They should include FFBB goals in some form or another, as they provide must-fulfill corner stones on material topics. Nonetheless, they are insufficient to outline the corporation's strategic path. After all, future-fitness needs to include the organization's economic perspective, which for obvious reasons looks completely different depending on the industry and value chain position the entity operates in.

The work required to achieve the *Strategic Goals* can be clustered in *Initiatives*, that will cover all aspects of the organization, being Leadership & Governance, DNA & Culture, Processes, Products & Service, Finance, and Communication. These Initiatives will serve short-, mid-, and long-term horizons, with an Initiative often serving several Strategic Goals.

Once the messy process of strategizing is done, the organization is equipped to compile all available results elaborated so far into its *Master Plan for Future Fitness*, including the organization's

- Vision (incl. Core Purpose, Core Values, Vision Statement, BHAGs)
- Short-, mid-, and long-term Strategic Goals

- Roadmap of Initiatives
- Governance and Organization
- ...

It is now ready to fully engage or execute its transformation, which, as a matter of fact, at this time has already been under way, although most people concerned might not have become aware of it—yet.

17.3.2.6 *Engage*! Your Transformation

With the position evident, a bold vision articulated, various options developed, and a strategy agreed upon, it all comes down to *getting the "job" done*—to *Engage!* the transformation journey.

The previous steps were a much trickier part of the process as it is not something organizations are used to doing on a frequent basis and because it is also an introduction into dealing with complexity, which doesn't stop here. *Engage!,* for most, is a more familiar terrain as the focus for a large part returns to getting into action mode. The *Roadmap of Initiatives* is translated into action plans and projects to be initiated, planned, executed, monitored, controlled, and closed. Waves with e.g. 1-year horizons comprise multiple projects, which serve several initiatives to ultimately move along the stepping stones of strategic goals towards the fulfillment of the organization's vision.

Independent of the industry, a *"House in Order (HIO)" Program* often is at the center of Wave 1, to ensure the foundation to build change upon is strong. Therefore, it may be about strengthening the weakest aspects of the organization, or it may comprise projects to e.g.

- eliminate physical and non-physical waste (Muda)[19] in the organization's core, management and supporting processes, still based on the current business model
- educate, encourage and engage employees to take on responsibility for their individual contribution
- communicate openly and honestly towards other stakeholders for winning their support
- setting the foundation and establishing the capability for transformation and change (e.g. change, project, innovation, compliance management)
- etc.

This might sound like standard business, it is however essential to recall that at this stage, each of these projects has been derived strategically from the vision and from considering the organization's systems context and its dependencies. The set of

[19]Muda (無駄) is a Japanese word meaning "futility; uselessness; wastefulness," and is a key concept in lean process thinking (Ohno, 1988). At Toyota originally seven forms of waste were identified.

projects might confirm measures the organization had already going on, taking it in the right direction, but also stops those taking it in the wrong direction.

While harvesting low hanging fruits is a continuous element of ADVISE, *Engage!* also requires to establish more structural methodologies to monitor, control, and report progress such as a *Sustainability Balanced Scorecard* (Figge et al., 2001). Such scorecard extends the classic Balanced Scorecard model (Kaplan and Norton, 1996) of financial, customer, process and people perspectives, and related goals with the societal and environmental goals the organization has developed. Implemented appropriately, it provides relevant information instantly on every level and along every function of the organization, a prerequisite to successfully navigate and maneuver it.

The organization is now on its mission becoming fit for the future. And if done properly, applying context-driven, purposeful leadership for innovation, considering socio-ecological restrictions, there will be no stopping it.

17.4 Conclusion

By now, hopefully, answering the following three questions should no longer trouble the Key Decision Maker:

- "WHY we must change?"
- "WHAT needs to be done?" and
- "HOW to do it?"

The Sustainability Killer Wave has already been hitting many businesses. Our exponentially growing demands for ecoservices, far beyond our planet's capability to supply them, and the erosion of trust will further increase this vehemence. Yet, living in VUCAD times, the Technology Acceleration Killer Wave appears to be the topic that seems to be getting the most attention, potentially creating new problems occurring, when it comes to planning and deciding on the journey ahead. However, there is no way of solving the problems on the same level we generated them. Taking a different approach is no longer an option, while at the same time providing endless new opportunities.

This is, WHY we must change.

This different approach asks for taking a systems perspective when dealing with the threats and opportunities ahead. The *Key Decision Maker* acknowledges the dependence of the well-being of his/her organization with the well-being of

- the Economy, the organization is operating in
- the Society, the Economy is embedded in, and
- the Environment, that any Society is embedded in.

Acknowledging these dependencies, triggers the question on what success of the outer systems Environment and Society would be. This question has been answered with the science-based Sustainability Principles and their translation into future-fit

goals. Any organization must transform its business towards operating and thriving within these limitations. Having this in mind, surfing the Technology Acceleration Wave will provide the means to successfully surf the Sustainability Wave, making the "Killer Waves" the "Perfect Wave," if surfed professionally.

This is, WHAT needs to be done.

Becoming *Awake* to acknowledge the need to act, being able to *Comprehend* how to do it, and willing to *Embrace* the necessary change, are three essential steps before any conscious *Response* takes place. Not every Key Decision Maker will become *Acered* in time. Those who do, will quickly realize how essential it is to *Acer* the organization's key stakeholders, before they *Diagnose* the organization's position, *Visualize* their future, *Innovate* for success, *Strategize* their approach, and *Engage* their transformation—The ADVISE Process.

This is, HOW to do it.

The Systems and their correlation as well as the current system trends have been described, Success has been defined, Strategic Guidance been obtained, Actions been derived, and Tools been applied where and when appropriate and useful. Everything that's required for a successful transformation of individuals, organizations, and our society as a whole—in this order—is already available. Hence, it all comes down to the ultimate challenge for the Key Decision Maker: to either embrace the Role as New Leader, or to make room for those people ready to take over.

While this chapter focuses on providing inspiration and guidance for Key Decision Makers, the needed *New Leaders* can be found anywhere. At any level of an organization, in academia, at the cashier of the super market, at school, in NGOs, in politics, etc. Their number is increasing and so is the number of their followers. If this paper helps to make this collaborative movement faster by fostering direction, alignment, and commitment, it has fulfilled its purpose.

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Chapter 18
Why Every CEO Needs to Be Future Smart: From AI to Sustainability

James Canton

18.1 Introduction: Why Future Smart Is Vitally Important to Every CEO

We are living in a world where fundamental changes in technology, lifestyle, markets, population, business, energy, climate, globalization, and work are emerging or almost pervasive. These changes are shaping an entirely new era, a new conversation, a dynamic set of provocative change that will transform markets, society, and the economy. Thus, companies need to be prepared to survive within this new and radically changed environment. To be exact, companies need to be strategically led into this uncertain future by a Chief Executive Officer (CEO) who is aware of these game-changing future trends, by a CEO who is Future Smart.[1]

Being Future Smart will become or already is a vitally important competency for every business leader today. It describes the ability to see changes and signals that will create a trend as well as the understanding and exploring of possible future scenarios in order to better prepare for them today or even shaping the upcoming future. To sum up, being Future Smart has three strategic objectives:

- predicting the future,
- better preparing for the future, and
- taking actions to apply this knowledge to create the future.

[1]The chapter is primarily based on the book "Future Smart: Managing the Game-Changing Trends That Will Transform Your World" (Canton, 2015a) and enhanced with some new ideas and concepts. Selected additional sources are explicitly referenced.

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However, for senior executives it is very difficult to stay current or even think about the future of their company. One reason is that many CEOs are heavily involved in tackling short-term business challenges and day to day operations, which distracts their time and attention and limits available resources for being Future Smart. Furthermore, there are also CEOs who still think the future will be similar to the past and that a company can be led by looking backward. Unfortunately, this type of dysfunctional leadership is the norm in some industries where change is slow and governments unknowingly subsidize this form of business. Regardless the reason, the result is the same: a poor and unsustainable leadership that might bring companies into serious trouble.

Consequently, there is an increasing strategic importance to understand the fast and agile trends within markets, culture, economy, technology, and within an organization's particular industry. Being Future Smart and forecasting future trends are a way for reframing business strategy. Through this, business leaders can create the missing link between business strategy and the upcoming seismic changes and then take effective actions to capitalize on those predictions. So, every CEO must prepare for disruptive change, new risks, and trends because they will be fiercer than everything we have known before.

This chapter will help to get Future Smart. First, it will point out *why* being Future Smart should be a new (core) competency for business leaders and *how* this can be achieved. Then, the chapter will elaborate on sustainability and artificial intelligence (AI) as two examples for fundamental and interdependent developments CEOs need to prepare their companies for. This will be framed by ten vital questions related to these two areas that need to be answered to gain and maintain competitive advantage in an uncertain future.

18.2 Future Smart as a New CEO Competency

Most business leaders are not ready to manage the fast and radical future trends that are coming. The reasons are diverse: First, extreme changes such as emerging technologies and climate change are happening faster and more volatile than in the past. In some cases, these are changes with a disruptive character that will radically challenge established businesses or even transform entire industries. This ultimately ends up in a future where old models of economics and capitalism will not work anymore. CEOs must be prepared for this different future. However, today's leadership and economists still focus too much on traditional instruments and do not consider these massive changes in existing and novel markets. This leads to another reason: There is a mindset that resists the underestimated value of forecasting. To a certain degree, this lack of future awareness is rooted in contemporary education. Some CEOs were never taught in their business schools how to look forward for leading a company through disruptive times and how to be Future Smart. They were only taught to look backward, look on the last months, quarter, year, or decade in order to decide for the upcoming changes and period of time. But it is not possible to

look into history and think leadership of the past will be the same in the future. This backward-oriented thinking and future myopia finally results in being stuck in the present and the inability to see ahead for developing new strategic visions for what may occur. Drastically spoken, the next 10 years will be mind-blowing, and no one is ready. Organizations and their CEOs are not skilled in forecasting or just not interested in exploring the scenarios that might influence the future of their company.

This lack of future situational awareness is a huge business liability. To overcome this liability, CEOs need a framework that helps them to understand the future challenges, risks and opportunities and to factor change into their strategic planning. This framework primarily consists out of seven managerial skills that make CEOs smarter and more effective leaders:

Forecasting and Strategic Planning First, the fact that so few organizations conduct forecasting or competent strategic planning is a risk factor given the rapid changes facing our world. Consequently, the forecasting processes as they are currently managed by CEOs must become more professional. This would lead to a more effective management and results in a more discoverable future.

Scenarios Second, besides forecasting and strategic planning processes, developing a larger set of possible scenarios should be an integrated competency led by every strategist. Developing scenarios are crucial to better manage future risks and disruptions and will make your company a more Predictive Enterprise—able to anticipate change instead of just be reactive.

Organizational Culture Third, becoming Future Smart is not only the CEO's job. Sensing the future needs must be baked into the entire organizational culture, cultivated by senior executives. Especially, all the possibilities of available tools such as social media, computer based analytics, big data, and web networking tools should be leveraged to predict signals from the market, industry, and culture.

Ideation and Innovation Fourth, conducting Innovation Opportunity Research of new ideas is essential to foster Management Regeneration and create or extend competitive advantage. This could be cultivated as an ongoing management capacity. Most important here is not that the CEOs necessarily need to have the ideas themselves, they rather should inspire and animate employees and delight customers to create new ideas for products, processes, services, or business models.

Shaping Futures Fifth, successful Innovation Opportunity Research directly affects the CEOs' capability to shape the future in their favor. Shaping Futures means that business leaders have the capacity to use their significant resources to innovate, capitalize, invest or design new products or services, to create positive future outcomes that may shape the future of entire industries, markets, or their enterprise which is essential to success.

Societal Accountability Sixth, CEOs are essential to lead their company into a fruitful future. However, they should not disregard the societal (i.e. social and ecological) accountability their company has as well. A Future Smart organization is not only maximizing profits for shareholders but also taking on improvements in

human, social and ecological sustainability. Accordingly, Creating Better Futures should be on every manager's agenda as a priority, given the enormous societal accountability trends that are fast shaping the entire global culture of customers, government, and market forces.

Agility and Resilience Seventh and last, the New CEO Agenda in general is about developing a professional capacity to become Future Smart. The vitally important tasks on this agenda are building awareness, agility, and resilience to emerging disruptions, fostering innovation, better navigating change, and predicting trends.

Being Future Smart is not a God given ability; some CEOs have and others do not. The seven managerial skills need to be cultivated and will help business leaders to become smarter and more effective and thus, become Future Smart. This quite valuable set of skills will help to be more aware sooner, to benefit ahead of time and be able to compete better. In order to develop these skills some questions need to be asked that are challenging the leadership but also your entire organization and ultimately, are forcing to rethink the current strategy and simultaneously prepare the company for the uncertain future.

18.3 Future Smart with AI and Sustainability: 10 Questions Every CEO Needs to Ask

In this world full of emerging fundamental changes, there is a vast number of different trends and mega trends that need to be considered when a CEO wants to transform a company and wants to become Future Smart. Examples are changing demographics, rise of mega cities, climate change, globalization or more recently even de-globalization, scarcity of resources, emerging technologies as well as global responsibility. This chapter will address two mega trends that are currently on every CEO agenda: AI and sustainability. These trends have a disruptive and pervasive character that will affect everybody and strongly shape our common future.

AI is used as an overall term for all forms of machines, chips or systems that mimic human learning, cognition, thinking or sensory capabilities such as neural networks, machine learning, predictive analytics, online bots, robots, Internet of Things, etc. The real game-changing elements, however, are Machine Learning, Machine Intelligence, and Machine Consciousness. These technologies enable computers to create their own understanding based on previously analyzed data. This helps to analyze a vast amount of data and even unstructured data such as images and videos. Now it is possible to teach AI systems what we want and they can operate with a certain degree of autonomy. This makes a huge difference to traditional IT systems. Its myriad ways further enlarge the game-changing character of AI for business, government and society. And this is happening now, not in 10 or 20 years. The AI Economy has already started and is in full swing. There is a growing investment in the billions of US dollars in various forms of AI by private companies

and governments. Almost every industry will be affected by the AI Economy, such as manufacturing, medicine, security, media, entertainment, health care, finance, etc. Besides these effects on the economy, AI could also be used to address some of the major challenges in our today's world such as hunger, poverty, changing climate, pollution, and water and energy management. Thus, this technology could be a serious game-changer by accelerating our economy and simultaneously solving our biggest problems. Ergo, firms that leverage AI will become more successful (Canton, 2016a, 2017b).

The second major trend that is shaping our economy is sustainability. This trend is driven by a growing ecological and social awareness in the society caused by the increasing number of extreme weather situations as well as serious environmental and social problems on a global scale. Meanwhile, it is well-known and mostly accepted that carbon energy sources are fostering Global Warming that leads to increased threats of extreme weather changes such as glacial melting, shoreline floods, wide-spread drought, and drastic climate shifts. Ecological disaster will arise on scale not seen before. Thus, climate change will become a global policy and public issue. Everybody must act now to mitigate these disasters and companies with their tremendous economic power must become stewards of the planet and its people. Due to the growing public's desire for creating an environmentally sustainable world, clean technologies (Clean Tech) will become one of the largest global industries in the twenty-first century. Thus, firms that change their business strategy towards more sustainability will be able to leverage this trend and become more successful than firms that are only maximizing the profits for their shareholders.

It is a pitfall to think of AI and sustainability as two separate developments. According to their significant societal importance, firms must understand and leverage the interdependencies between AI and sustainability to manage risk and create competitive advantage. Answering the following set of questions will help CEOs to improve their future situational awareness regarding AI and sustainability and craft business strategies for the next 1–5 years or beyond that deliver competitive advantage. This chapter is not aiming to provide answers to these questions because the answers do heavily differ depending on the particular firm, however, it shall provide an idea of what affects a company's future competitive advantage.

18.3.1 How Will the Company Compete on Sustainability Innovation: One of Tomorrow's Largest Global Markets?

With regard to the urgent need for solutions of the world's biggest problems and changing customer wants, every firm must start to create a higher purpose for conducting business and thus, become a societal-oriented enterprise.

Climate change is a threat that affects all of us and it is accelerating. So, we urgently need to catch up by massive investments in new technologies to manage

and mitigate the impact. We actually have the capabilities, the intelligence, and the technology to achieve that. We just need to combine all of our capabilities and knowledge in a new form of science—Climate Engineering. This new science combines engineering, ecology, Big Data, cloud computing, communication, and computer science for inventing new solutions that might mitigate the climate change, protect humanity and thus, prevent devastating global disruption. Or at least, help us to forecast these disasters. Fortunately, we have already moved into this direction and a similar industry called Clean Tech is emerging. This industry was already financed with about $1 billion in venture funding in 2013. So, why are not more companies Future Smart and invest into this fruitful industry?

Furthermore, it will be expected or if not demanded by a changing customer mindset that every business has a societal purpose and makes the world a better place. If companies leverage this they will thrive, if not they will threaten their core business and their customer base. Additionally, in the future most products and services will become a commodity based on advanced technologies and production efficiencies. So, the only possibility a company can distinguish itself in the perception of the customer is by creating a higher purpose and addressing societal issues through the business activities of the company. However, the particular societal purpose a company is providing must fit to its customer's concerns. So, companies are well advised to listen to their customers to adopt and care about what issues and concerns they care about.

The consequence of the need for sustainable innovation, the fact that Clean Tech will become one of the largest global markets of the twenty-first century and the changing customer's mindset require business leaders to ask, how their companies will compete on sustainable innovation within this tremendously growing market.

18.3.2 How Will a Zero-Carbon Footprint Affect the Company's Future Competitive Advantage?

As mentioned, climate change is accelerating and if we do not catch up, it will cause devastating global disruptions that will threaten the lives of hundreds of thousands people. Hence, humanity must collaborate to mitigate these changes. Naturally, it is expected that also companies must become sustainable and so, stewards of the planet and its people. Enterprise sustainability, however, addresses a wide spectrum of domains such as waste, recycling, pollution, carbon footprint, energy, materials, vendor choices, and the supply chain. Consequently, creating a zero-carbon footprint and a waste-free production might be a huge project that ties up a vast amount of resources. However, these might be resources that are urgently needed in other parts of the company to protect or extend the competitive advantage. Although an accountable and sustainable company is socially desired, senior executives must ask the question of how a zero-carbon footprint might affect the company's future competitive advantage.

As aforementioned, more and more consumers demand companies that fulfill a higher purpose and do not put profit before anything else. A company that is Future Smart recognizes these changing customer needs and thus, focuses not only on increasing profits for shareholders but also on improvements in human, social, and environmental sustainability. Doing so, customers will reward companies which credibly demonstrate that they care about societal responsibility and thus, these companies will be highly profitable and successful.

Another game-changing trend in the future will be the War for Talent that describes the competition between companies for the smartest people that have the capabilities to shape the future. This war will be disruptive for many companies, as talent will be the key to competitive advantage or even survival. In order to win this war, a clear commitment of a company to societal accountability and responsibility for the planet will help to gain competitive advantage. Especially, the so-called Generation X and the Millennials as future workforce require more than just profit-oriented companies and jobs. Consequently, CEOs that prioritize profit higher than societal purpose will struggle in attracting talent and meet the future expectations of their customers. Thus, surviving as a business might be uncertain as being societal responsible will definitely shape the future competitive landscape.

18.3.3 What Can the Company Do to Actively Drive Societal Change?

As already pointed out, societal purpose and societal accountability will get increasingly important for companies in order to convince customers of their products or services and to attract talents. This will inevitably affect the future competitive advantage of companies. A Future Smart company needs to be not only a non-polluter and non-exploiter of local people but a positive contributor to a sustainable planet. The important role of business for a better future cannot be overestimated. Today, however, not enough firms have already recognized this urgent need for change and the necessity for their contribution. This was already perceived by the United Nations in 2000 and further advanced in 2015 with 17 sustainable development goals which address major global issues like poverty, sustainability, and education. This set of goals has gained awareness as it not only addresses the needs of nature and the world's poorest people but also globally aligns business leaders (United Nations, 2015).

The reasons for following these goals are diverse: The future customer will be an Empowered Customer. They will be empowered in the sense of choosing the preferred product, based on a set of demands such as societal accountability, higher purpose, etc. In addition, today's widely spread social media platforms serve as a stage for every customer to share his opinion about a certain product or service. These platforms can have the power to push a product out of market and shape brand perception. For these customer groups, companies will also be held accountable for awful practices like

child labor. Thus, this should not only be avoided, companies should actively fight against that. This is also valid for political crises, streams of refugees, etc. Although companies are not directly responsible for these developments, it will be expected that they help mitigating the impacts. Furthermore, following these goals will help the people at the bottom of the pyramid to improve their education, their chances and consequently, enables them to gain prosperity. This in turn will not just improve a company's reputation. This also enables these people to buy products that normally would not be affordable and thus, will create new markets.

18.3.4 How Will AI Transform a Company's Marketplaces and Ecosystems?

Besides sustainability, AI is and will be the second game-changing trend and is already transforming marketplaces and ecosystems in many ways. As mentioned, AI refers to different kinds of technology trends based on internet, intelligent machines, and systems, such as neural networks, machine learning, predictive analytics, Internet of things, etc. as well as the increasing connectivity of devices. The ongoing rise of technology will turn the currently known form of economy into an economy that is characterized by accelerated change, connected markets, fast innovation, ongoing digitalization, smart technology, mobile commerce, and predictive systems (Canton, 2017b). Together with computers and smart phones, the omnipresent internet has accelerated business, its productivity, its volatility and has created new markets and millions of new jobs. These technological advancements also have positive effects in general as increasingly more people have access to knowledge and education through these technologies. This is vital for business and entrepreneurship all over the globe and consequently, is affecting almost every economy in the world.

Besides trends such as the Quantified World, the Data Tsunami or Digital Money, which are all enabled and fostered by technology and AI, there is one trend particularly accelerated through the widespread dissemination of the internet (Canton, 2017a): This is the increasing interconnection of all market participants that has significant effects on marketplace and ecosystem. The nonstop connection of customers to the internet, for example, allows companies to track every step and action they make and leverage this information to better align their business to the customer wants and behavior. However, customers are aware of this. Hence, they will increasingly expect companies to meet their needs in return of the data they provide to them. Customers tell companies for example what problems they have, where they want to shop, what they want to buy, and which device they want to use. Consequently, in the New Future it is all about solving detected problems and thus, being innovative will be vitally essential. The economy is changing into an Innovation Economy.

This new ecosystem is an agile, predictive, and postindustrial network that is driven and accelerated by technology and knowledge. Contrary to the known ecosystem, AI and humans will work together and will create markets, create

innovations, and monetize ideas at an unexpected speed. The core resource in this new economy is knowledge. Knowledge enables companies to create new business ideas, to think in new ways what business should look like and, thus, to create new distinction among competitors based on innovation. Knowledge and innovation can also create new opportunities to collaborate among different market participants. Combined with the capability of Smart Prediction a powerful competitive advantage can occur. The participants of the Innovation Economy are acting on the largest global marketplace ever which is a convergence of mobile, TV, auto, computer, sensors, and wearable platforms. This marketplace is linking 8 billion people. And as already indicated before, they are not acting in an isolated role, they are acting as consumers and as producers who also share knowledge and talent mutually. Consequently, this network changes in the way its participants change and thus, is a constantly evolving digital platform.

18.3.5 How Can a Company Leverage AI to Shape Its Future Competitive Advantage?

AI is not only affecting the business ecosystem, it is also the foundation for creating competitive advantage that might disrupt an entire industry or beyond that. AI will shape power, influence, relationships, and change within the competitive landscape of many industries. Those participants that harness AI better, faster, and more effective than others will gain a vital and almost unfair global competitive advantage. A crucial capability of AI is analyzing a vast amount of data and predicting the future based on the analyzed data. Especially, predicting needs and wants and then translating that into products and services is a vitally important capability for gaining a long-lasting competitive advantage (Canton, 2016a, 2017a).

We are living in a more and more quantified world. The amount of gained digital information about everything is tremendous and will further grow. The Big Data trend is fostered by the increasing connectivity of sensors and machines as well as the widespread usage of internet which enables the tracking of customers through web analytics for instance. Big Data is it not just about gaining as much data as possible; it is also about extracting meaning from the gained data through analysis and visualization. AI is essential to process this amount of data. Matching the data with other data sets along with conceptualizing and operationalizing information enables companies to make decisions. This might result in new products or services, business lines or the identification of new business opportunities. Insights gained through Big Data could be, for example, the information which drug works best, what brands deliver superior quality, or what innovation will create the highest customer value. Therefore, if done right and with the right data, Big Data may be a source for a powerful competitive advantage.

Smart Prediction is another valuable application of AI that can be seen as a convergence of Big Data, Analytics, and Cognitive Computing. It aims to get insights

about the future that go beyond the results gained through Big Data. Companies that build up this capability might gain a competitive advantage that is truly disruptive. In result, they become a predictive organization. This can be leveraged for example for predicting customers' behavior and attitudes to votes and purchases, their current demands and future market developments in general. Thus, this technology enables companies to release products or services which are more aligned with the customer now and in future. Particularly, in the agile, uncertain, volatile future, this might be a capability that can create a very valuable competitive advantage.

Besides these two exemplary applications of AI, the possibilities are tremendous. AI can be used from translating and speech recognition, to analyzing of unstructured data such as pictures and videos, recommendation engines, and decision bots. AI is the core technology behind drones, robotics, medical tech, and autonomous driving cars. And the best of it—through the internet's ubiquity everybody can get access all the time from almost everywhere on the planet. Consequently, leveraging this high potential technology can create a disruptive competitive advantage (Canton, 2015b, 2016a, 2017b).

18.3.6 How Can AI Help to Deliver Customer Value Faster and Better Than Competitors?

As pointed out above, AI is a game-changer. It will shape future marketplaces and ecosystems and will be the enabler for creating competitive advantage. But what makes AI to such a powerful technology? It is the opportunity for companies to deliver customer value faster and better than their competitors as can be seen with leading technology companies such as Apple, Google, IBM, Microsoft, Tesla, Intel, or NVIDA. In these examples, AI does not only drive superior customer satisfaction, it even enables these companies to deliver a customer value none of their competitors can provide (Canton, 2017b).

The advancements in technology and AI, for example, let companies automate their work processes and make them more transparent. Buzzwords like Industry 4.0 or Enterprise 4.0 are standing for a new form of conducting business and manufacturing through factory automation, robotics, analytics, prediction, knowledge engineering, virtual reality, the blockchain, Internet of things, etc. Most of these trends are enabled through an AI application (Canton, 2017a). These automated processes let companies deliver value faster and being more transparent for their customers. An example is the well known and highly appreciated order tracking after an online purchase. This is not only providing transparency, but also lets the customer influence the delivering process by changing the date of delivery in case nobody is at home for instance. Technology can also be leveraged to reveal companies that are acting socially inappropriate, for example, through a drone that is flying over an Asian sweatshop.

Beside this, there are many other examples of companies from different industries using AI to deliver a new service or deliver a known service faster and better than

others do. Waze, for instance, is an app that reports live traffic information so that users can drive an alternative route in case on their intended route is a traffic jam expected. To do so, Waze is exploiting the location and movement data from the Waze users' smartphones to detect where many users are moving slowly which might indicate a traffic jam. Another example is Amazon, which is not only making retail online purchasing as easy as possible, they are also using AI to provide recommendations for complementary products that might be useful based on previously bought or viewed products. That is not only driving the sales, but is also providing an additional value for the customers. However, not only in consumer industry AI applications can deliver value. Also in business or even in heavy industry, AI can be the enabler for optimizing processes, save money and thus, deliver a customer value that cannot be offered by competitors. GE, for instance, is using AI and Internet of Things for monitoring and prediction. Through sensors and connectivity technology their machines and plants can be monitored and assessed via network (TechEmergence, 2017). In this case, AI is used for interpretation of immense amount of data to predict errors and maintenance needs (Canton, 2017c).

18.3.7 How Can Technology Be Leveraged to Co-create Mutual Value with the Stakeholders?

Future Smart companies will not only leverage technology, focus on innovation and be societal accountable, they are also cooperative. The co-creation of value describes the crafting and creation of a mutually appreciated outcome in collaboration with other stakeholders of a company. This can be customers, competitors, suppliers, and employees but also governments, environmental organizations, communities, and every other imaginable stakeholder.

As aforementioned, the Innovation Economy will be the future ecosystem that is characterized as an agile, predictive and postindustrial network driven and accelerated by technology and knowledge. Particularly, knowledge will be the key resource that enables companies to think in new ways and to create distinction from competitors, but also to create new possibilities to collaborate with other market participants. Thus, this new market is shaped by collaboration. Based on the internet as the backbone of this ecosystem, millions of digital entrepreneurs are working in collaboration and with the customers to create innovation. They have noticed that innovation is the primary source for competitive advantage. However, innovative and disruptive ideas are usually co-created by different stakeholders that bring in different ideas and point-of-views. This future of collaboration is already getting real, as can be seen by companies like Facebook, Twitter and Google who are monetizing relationships as their core business. Twitter and Facebook are enabling global publishing and communication, Google enables search and commerce over markets and Baidu, a Chinese entrepreneur platform, connects entrepreneurs that would never have been connected

before. Furthermore, crowd-funding platforms like Kickstarter show that co-creation is not just a future form of conducting business, it is happening now.

Taking a broader view, stakeholders of a Future Smart company are not only homed within their industry, but rather the social and ecological environment they are acting in on a global scale. Thus, co-create mutual value with and for stakeholders also includes crafting ideas that solve social or ecological issues. For instance, technology can be leveraged for a sustainable energy management. By 2025 many clean energy innovations will be available and the grid of energy producers and consumers will be that complex that it needs to be managed in a smart way. AI can provide a solution to manage a Smart Grid that would create mutual value for all participants. Another issue that could be solved in collaboration and with the support of AI is hunger and malnutrition. We produce enough food to feed the world but the major problem is its distribution. Companies, governments, and social organizations could co-create a solution for distributing the available food by leveraging AI (Canton, 2017b).

18.3.8 How Will AI and Sustainability Affect Organizational Culture?

Undoubtedly, AI has a game-changing character. AI will not only affect almost every industry such as security, health, real estate, finance and media, it also will inevitably radically transform work, jobs, and organizations. However, AI and innovative technology are standing for the establishment of a totally new era of work and jobs, the Innovation Economy. Thus, an AI approach in a company's strategy inevitably comes along with significant changes in the organizational culture since it requires a Future Smart mindset. The problem: Only few people are aware and ready for this transformation. Getting ready, however, is inevitable since AI is definitely on its way. Companies that are not getting ready for this change will not survive.

With the rise of AI's importance and its further dissemination in the business world a global change in how we work is arising. This new era will be primarily based on digital technologies. Thus, all jobs focusing on digital technology, cloud computing, Big Data, genetics, mobile commerce, robotics, etc. will gain importance. This in turn, lets work become knowledge driven, digital process driven, innovation focused, technology infused, distributed, collaborative, and entrepreneurial. In particular, both skills—knowledge engineering and entrepreneurship—will be vitally important. Knowledge-Value Engineering is a kind of engineered data science that provides a unique value: it embraces the embedding of products and services with specialized algorithms. This brings intelligent functionality to products, services, and networks. Entrepreneurship will be the second required skill shaping the future organizational culture. As the future world will be fast changing, uncertain and complex, employees need a high tolerance for chaos, learn how to manage complex information from various sources, understand data, stand up for

things they think are right, keep an eye on the competition and most important, have an entrepreneurial mindset with being innovative, agile, and taking risks. This is a mindset of connected minds, mobile technologies, system- and market-thinking and will help them to shape the future and thus, will shape the organizational culture. As a consequence, these two required skills will foster an increasing Freelancer Market. The changing digital business will reduce full-time-employees and let a great portion of all new jobs become a freelancer job. Thus, a company's culture will be strongly affected by the increasing portion of freelancers. As their projects can last days, months, or even years, a company's workforce will continuously change. However, due to their entrepreneurial mindset, Freelancers will bring the much-needed entrepreneurial culture shift into businesses and enterprises. Through this time-based collaboration, working will become much more agile and volatile and topics such as knowledge management and team building might become an issue.

Lastly, a factor that will shape the organizational culture is the desired societal purpose of a Future Smart company. As already pointed out earlier, future companies need a societal purpose to gain competitive advantage through attracting customers and talent. On the one hand, companies are expected to develop a societal accountability mindset. In the future, CEOs must increasingly put purpose before profit, this is not only required by the changing climate, but also by a changing mindset of customers and talent. On the other hand, employees who care about social and ecological issues will expect that their employers do the same. Business leaders need to create an organizational culture that embraces a greater purpose. In future companies such a mindset must be supported by both employers and employees, otherwise a company cannot deliver societal purpose credibly. Thus, this externally and internally demanded purpose-before-profit mindset will shape a company's organizational culture as well.

18.3.9 What Is the Societal Impact of the Company's AI Approach?

The previous chapter pointed out the impact AI has on a company's culture. However, as AI gets exploited in an increasing number of companies, AI will also significantly affect the society and the environment and thus, more and more parts of our daily life. Unfortunately, its impact is not only positive.

One of the most discussed downsides of AI is the replacement of jobs. An AI system can work continuously and more precisely than humans ever could. It can process data faster and is able to find correlations and patterns within the data that are just detectable with an AI system. There are predictions that more than half of the knowledge workers will be replaced by AI and robots in various industries, such as finance, manufacturing, media, medicine, and mobility. Some predictions even go further stating that every job a human can do will be possibly replaced by AI. If this holds true, more than one billion people on the globe will be left behind by the

exponential acceleration of technology and the skill gap will further widen. The society needs to find ways to mitigate the resulting effects of this significant change. Among others there are three possible solutions: restructuring the so far known world of work, changing the social system to deal with the potential mass of unemployed people, and rethinking the education of future employees to prepare them for the changing working conditions—making them Future Smart. Besides that, also organizations, markets, and personal career development plans need to be redesigned and aligned with a world where AI is a partner, producer, and a competitor (Canton, 2017d). Another often discussed concern about AI is the increasing autonomy. Through neural networks, machine learning and the growing amount of available data for training the machines, AI systems get more and more intelligent. Smart machines start collaborating and talking to each other. Though this is intended, it might become a problem when humans do not understand their way of collaboration anymore or when the machines encrypt their communication autonomously. This was exemplified in an experiment conducted by Google where two neural networks developed their own kind of encryption while having a conversation. Scientists were not able to decrypt this encryption (Oath Tech Network, 2016). Consequently, this might result in AI that surpasses human intelligence. Danger lies in this development if we cannot control AI before AI controls us (Canton, 2016b). A third concern about AI and its increasing pervasiveness in many parts of our daily life is security. Since IT systems and AI control more and more systems, it becomes increasingly attractive for hackers to get into important systems that are controlling our lives. Besides that, the ongoing data gathering for diverse purposes, the data centers get flooded with any kind of data. Particularly in case of customer data, medical data, government data or business data, security is crucial. A potential data loss could cause an incredible damage for the affected company or organization and their customers. Thus, a Future Smart company must follow some ethical guidelines as well as calculate and embrace these risks when crafting a strategy based on AI and other technologies.

Notwithstanding these risks, the potential positive effects of AI and technology are tremendous. The potential use cases of AI are almost endless; a lot of them were already named in this chapter. AI will manage future Smart Grids, AI helps doctors to better detect and maybe prevent cancer, AI could also enhance human performance someday, AI can help to better distribute food globally, AI will transform transportation, and many other cases are possible and actually feasible. Thus, AI can not only provide additionally ideas for conducting business, it also can solve our biggest problems, such as hunger, security, water, disease, poverty, and sustainability (Canton, 2015b, 2017b, d). Furthermore, some of the risks mentioned above can also be turned into a positive effect if managed the right way. For example, due to the increasing intelligence of AI linked with the higher efficiency, technology can perform jobs, nobody wants to do anyhow. If the loss of needed jobs is cushioned in any form, by a changed social system for instance, people could work less and enjoy life more. The same is valid for the increasing autonomy of AI systems. If humans keep the total control about AI and the machine-to-machine communication, an Autonomous Economy might occur. In this economy, automated

buildings, homes, and cars buy and sell their needed resources autonomously. Automated factories will build customized pharmaceuticals, autos, computing devices, etc. If managed properly, this economy could be much more effective, fair and less stressful than the current (Canton, 2016a, 2016b).

18.3.10 What Organization Do You Need to Build and Integrate Sustainability and AI Capabilities?

Building and integrating sustainability and AI capabilities in a company with existing structures is a challenging task. To transform a traditional company towards a Future Smart company, towards a company that builds and integrates sustainability and AI capabilities, some fundamental changes within the organization and its culture are required. This is a daunting task and it needs to happen fast, because the future is coming fast and requires companies to be highly responsive and agile. But it is worth it. For accelerating the transformation, it is necessary to understand the changes in the modern and future working world.

Knowledge is key for innovation which will be the key source for future competitive advantage in the Innovation Ecosystem. To thrive within this ecosystem, it is crucial to create an environment that attracts knowledge and enables and fosters being creative and innovative. This is the typical environment of start-up companies and where entrepreneurs feel comfortable. The time of the passive employees, just doing their jobs is over. Employees want to be innovative and take action and responsibility to grow the organization and transform it to a future smart organization. An important factor to attract entrepreneurs is to allow a kind of ownership. That does not necessarily mean to own stock or a part of the organization. It could also mean, to have power to create something, influence and make a difference. This can result, for example, in an idea combined with the freedom to explore it, and then to turn it into a new business solution, profit center, or societal impact that will push the company further. This is how entrepreneurs want to work and how they are attracted. Furthermore, this is also very beneficial for the employer, since entrepreneurs care about their organization. Although they do not have any shares they must be treated like owners. They need influence, impact and power to change the company. In return they have a high commitment and a desire to positively influence the future of the company. This is a real win-win-situation.

Having power is also an element of the three key trends that shape the New Work Ethic and that employees expect from their organization. The New Work Ethic is about societal accountability, emerging technological innovations and power. Besides the aforementioned power, to have an influence, future employees expect their organization or potential organization to be stakeholders of a better world, to be committed to social change and to be accountable for the environment. Future Smart companies embrace a higher purpose and align their workforce to that. Such a company must be more than just a job, just an organization, just profit and loss.

Especially the Millennials future workforce are socially concerned. They want to work in a company that is giving back, is doing the right thing for society, is contributing to a better world—thus, is a kind of social enterprise. A company's mission should therefore embrace a higher purpose. However, this needs to be alive in the company's culture and needs to be credibly communicated. If done right, this shift will attract new talents that live the entrepreneurial culture and are committed to a higher purpose.

However, it is not possible to replace existing employees and hire new ones to build up a Future Smart organizational culture. This would be in absolute contrary to the societal purpose companies should desire. Besides salary, a Future Smart company should provide the opportunity to learn, grow and develop their individual potential. For instance, they should educate existing employees to become entrepreneurs, to develop this mindset and teach and reward them for being innovative. Education becomes a fundamental part of the organization. Furthermore, employees should be rewarded for learning new things. In turn, to be a valuable employee for a company, it is expected to be a lifelong learner. This will become essential to the future of workforce due to the constantly ongoing changes.

There is no unique way, no universally applicable solution for getting a Future Smart company and attracting mass of talents. The key, however, to understand what people want and how to attract them, is to examine their values. Subsequently, companies must examine how they can create a fit with these desired values and attract talent. A Future Smart company should embrace the New Work Ethic and work on their cultural transformation as soon as it can—and, most important, before its competitors do. This transformation may become crucial to a company's success as the talent pool becomes smaller and competition for talent increases. The starting point for this transformation is the question, what organization does a company need to build and leverage sustainability and AI capabilities.

18.4 Conclusion: Strategizing as Usual Is Not Enough

Today and much more in the future, companies are facing fundamental changes with a disruptive character that will shape markets and entire industries. A CEO must be prepared for new opportunities and threats, where well-known established models for crafting strategy and conducting business will not provide effective solutions anymore. Becoming Future Smart embraces this necessary preparation for the future as it aims to establish three capabilities: Predicting the future, better preparing for the future, taking actions to apply this knowledge to create the future. Thus, being Future Smart will become a vitally important competency for business leaders. This valuable skill enables the management to think differently and being ready for innovation, being hungry for change, being willing to learn, being ready to adapt, and being competent to shape the future in one's own favor. This helps CEOs to get in synch with future changes affecting competition, marketplace, and customers. Consequently, being Future Smart is the key for anticipating change, planning the near

and far future, and thus for being successful and operating a profitable and sustainable enterprise.

However, being Future Smart is a necessary competency not just for business leaders. Predicting, preparing, and shaping the future need to be baked into the entire organizational culture. A company that is Future Smart moves fast, is agile, predicts what comes next, delights its customers, embraces a culture of change and innovation, develops new knowledge-rich products and drives improvements in human, social and environmental sustainability. These will be crucial characteristics to attract customers and talents and, consequently, to gain competitive advantage. Besides that, a Future Smart company is leveraging both sustainability and AI—not separately, but simultaneously and integrated. Through ongoing societal issues such as climate change, hunger and poverty, companies will be expected to solve these issues and become a steward of the planet. Simultaneously, technology will continue to be a serious game-changer by accelerating our economy and potentially solving our biggest problems. Future Smart companies leverage both in an integrated strategy. They address the biggest problems of humanity by leveraging technology and will become more successful than companies only maximizing profits for their shareholder.

Conclusively, the so far conducted "business as usual" is not enough anymore. Leveraging both trends and their synergies strongly requires rethinking and adapting strategy with effective strategic management frameworks and processes as well as a Future Smart organization. This needs to happen fast! Before competitors wake up, talent pools get smaller and climate disasters have reached destroying, irreversible effects.

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Part VI
Epilogue

Chapter 19
Epilogue

Thomas Wunder

The chapters in this book were intended to help business leaders, strategy practitioners, and all corporate decision makers as well as students of management to improve their level of *comprehension and concern* of why sustainable strategizing is important in the twenty-first-century business world. Human thriving, even at current population levels, depends on planetary thriving, which are both influenced by thriving business. It is my hope that the *actionable business knowledge* presented in this book encourages and supports current and future business leaders to contribute to this multifaceted notion of "thriving" through sustainable strategizing and positive impact. This way, prospering business activity will provide current and future generations the opportunity to thrive as well.

While this book was finalized, civilization was confronted with fresh evidence of human sustainability issues particularly with regard to our most pressing global concern, climate change. This confirming evidence is re-emphasizing the need for corporate strategists to take "sustainability" seriously in their strategic sensemaking and ideation processes and to develop impactful strategic business responses and actions. The chapters in this book offer ideas, management methods, and strategy practice examples to help mastering this task. Below several developments are listed which seem even more important since the chapters of this book were completed.

- A landmark climate report published early October 2018 describes a strong risk of crises with serious consequences in the next decades if transformational global action is not taken soon to limit global warming to 1.5 °C above pre-industrial levels (IPCC, 2018). It paints a picture of the immediate consequences of climate change that is far more dire than previously thought (Davenport, 2018; Edenhofer

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& Rockström, 2018; Harvey, 2018; Stern, 2018).[1] Moreover, according to a recent analysis, the ocean has warmed 60% more than the worst predicted estimate of the IPCC (Resplandy et al., 2018). However, the recent IPCC special report on the impact of global warming was also received with hope as it shows that with immediate action staying below a threshold of 1.5 °C is still possible (Mooney & Dennis, 2018). Business leaders can play a crucial role in leading the way to tackle this issue.

- In summer 2018 weather experts reported the strongest Artic sea ice break ever, which was caused by warm winds and a heatwave in the northern hemisphere. Scientists are concerned about massive destabilization of polar ice caps (Willis et al., 2018) and the risk of tipping the Earth towards hothouse state (Watts, 2018). Also, recent research shows that large ice sheets can move quickly into the ocean, which can cause significant Ocean level rising (Abraham, 2018). These findings make it more crucial for us to embrace sustainable strategizing as one way to ensure viability of socio-ecological systems, business ecosystems, and organizations (see Chaps. 4 and 5).[2]
- The Proceedings of the National Academy of Science in the United States published an article on possible trajectories of the Earth System (Steffen et al. 2018). If not halted in time, these pathways would cause serious danger for the entire ecosystem and subsequently for our societies and economies. The sixteen scientists warn of self-reinforcing bio-geophysical feedback dynamics through human-induced emissions of greenhouse gases. This would severely endanger the stabilization of the climate and create a "Hothouse Earth" that could change the conditions for life on Earth in an unprecedented way. The authors call for collective human action as the only chance to steer away from the danger towards stabilizing climate conditions (see Chap. 12).
- Recent analyses by J. Hansen and P. Kharecha (2018) have underscored the huge "carbon debt" to posterity that has been generated just since 1980 and the huge

[1]Note that the "Risk Indicator" software from Global Challenges Foundation (2018) indicates that within just 15 years there is an 85% likelihood of reaching 1.5 °C global warming from (the expected) 450 ppm, and within the same time period, there is a 60% likelihood of reaching an "intolerable" 2 °C temperature increase and unpleasant tipping points. These calculations are based on the "average scenarios" from the IPCC's AR4 (Assessment Report) and the AR5 (IPCC, 2015) was even more pessimistic. Vulnerability reports such as the Climate Change Performance Index (https://www.climate-change-performance-index.org/), Environmental Risk and Climate Change assessments from Maplecroft (https://www.maplecroft.com/), the Global Catastrophic Risk Reports from the Global Challenges Foundation (www.globalchallenges.org), and the Global Risks Reports by the Word Economic Forum underscore that companies need to find ways to combat environmental risk, among others.

[2]For more information on issues of sustainable development and environmental protection in the Arctic such as unfolding permafrost thawing and big ice melting see www.arctic-council.org. More specifically, see www.thwaitesglacier.org and corresponding reports about recent heterogeneous retreat and ice melt (Milillo et al., 2019).

private, public, and personal investments required to prevent "hothouse effects" in most places around the globe.

- Military organizations take climate-related sustainability issues as a threat multiplier very seriously, as reflected in the climate-related risk survey results issued by the U.S. Department of Defense in 2018 and other reports (U.S. Department of Defense, 2014, 2018). Military experts see climate change as a risk to global stability that may lead to more wars and refugees (Abel, Brottrager, Crespo Cuaresma, & Muttarak, 2019; Banerjee, 2019; Tirone, 2019). Furthermore, geopolitical tensions are growing in the Arctic as melting ice reopens natural borders (Watts, 2019). Do corporate strategists apply the same level of concern (see Chap. 3)?
- Among the first major private sector participants to invest heavily in "the economics of unsustainability" were re-insurance firms such as MunichRe or SwissRe trying to protect the customers from catastrophic losses arising from climate change and associated natural disasters, e.g., hurricanes, crop failures, floods, and wildfires (McDuff, 2018). Accounting for risk factors related to sustainability issues has become mainstream also in the financial asset management market (see Chap. 6).
- According to the Edelman Trust Barometer (2018: 5), only 53% of the general population in 28 countries trust their governments whereas 64% have trust in business. Despite some agnostics about business and sustainability (Dauvergne, 2018), this emphasizes the importance of business leaders to lead the way to a sustainable future (see Chap. 1) as governments or civil society alone may not provide sufficient leadership for various reasons.
- Recent findings demonstrate how increased market power of "superstar companies" has boosted their profitability whereas their labor take-of-share has fallen (Fleming & Brook, 2018). CEOs of the top 350 companies in the United States earn 312 times more than their workers on average last year (Rushe, 2018). This shows how an increased corporate "winner-take-all" mentality fosters shortfalls in our social foundations and emphasizes the need for more "inequality aware" organizations (see Chap. 10).
- In 2018 the Earth Overshoot Day fell on the 1st of August. This is the day when all of humanity has used more from nature than the planet can renew in the entire year. Today, we are using 1.7 Earths for our consumption and waste absorption and it is expected that we will need 2 planets by 2030 (Earth Overshoot Day, 2018; The World Counts, 2018). Moreover, the World Wildlife Fund reported in its Living Planet Report 2018 a 60% decline in wildlife populations in just over 40 years between 1970 and 2014 (WWF, 2018). All this re-emphasizes the need to move business imperatives from reducing unsustainability to creating sustainability (see Chaps. 1 and 2).

In 2018 we also witnessed many encouraging and impactful initiatives that have the potential to trigger positive changes. They underscore the relevance of new business concepts for sustainable strategizing and the importance of collaboration and open strategy:

- One of the most influential investor firms in the world, BlackRock, informed business leaders in 2018 that their companies need to have a social purpose if they

want to receive the support of BlackRock (Sorkin, 2018). "Society is demanding that companies, both public and private, serve a social purpose. To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society" (Fink, 2018). In his 2019 letter to CEOs, Larry Fink underscores this message by calling business to lead with purpose and not just live with high-minded mission statements (Fink, 2019). This was the fourth annual letter from the BlackRock CEO in a row conveying a strong message related to environmental and social issues.[3] This requires a rethinking of value and impact (see Chap. 7) and emphasizes the need for purpose-driven strategizing and mindsets (see Chaps. 1, 14, 15, 16, and 17). BlackRock is not an isolated example as State Street (2018) and Vanguard (McNabb III, 2017) are putting similar emphasis on long-term sustainability orientation.

- The new business imperative for private and public companies to combine economic aspirations with social purpose is reflected in the increasing number of B Corps[4] and its legal reflection as Benefit Corporations. B Lab (2018a) currently lists 2619 Certified B Corporations in 60 countries covering 150 industries. In the meantime, also major companies such as Brazil's Natura have joined this movement (B Lab, 2018b). In 2018 food giant Danone's North American operation became a Certified B corporation (B Lab, 2018c). These companies apply business concepts for sustainable strategizing that consider the social and environmental impact of business activity (see Chaps. 7, 8, and 9). The "B-Impact Assessment" tool is used by more than 50,000 organizations world-wide (B Lab, 2018d).
- The We Mean Business (2018) coalition is currently listing 812 major companies with $16.9 Trillion in market cap that are leading the way toward a sustainable future through 1321 "commitments to bold action." The importance of purpose-driven-leadership with regard to social and environmental value creation is also emphasized in a recent CEO study conducted by Leaders on Purpose (Gyori et al., 2018). There are many examples of CEOs who can be characterized as being "Future Smart" (see Chap. 18).
- TWI2050—The World in 2050 (2018) is a recent report of an international initiative by researchers and practitioners that explores science-based transformational and feasible pathways towards sustainable development. TWI2050 is a massive global research initiative that works on providing the much needed guidance for policy makers responsible to implement the Sustainable Development Goals (SDGs) as articulated in the United Nations' 2030 Agenda. This is another example of potentially impactful international collaboration which is required at all levels of the global society (see Chap. 12).

[3] Although many stakeholders applaud this new era of institutional activism, Blackrock, which has $6.4 trillion assets under management, has also been criticized for not putting enough pressure on companies to tackle climate issues (Holder, 2019; Jolly, 2019). Note that there was also a fake CEO letter reported early this year (Jolly, 2019).

[4] "Certified B Corporations are a new kind of business that balances purpose and profit. They are legally required to consider the impact of their decisions on their workers, customers, suppliers, community, and the environment. This is a community of leaders, driving a global movement of people using business as a force for good" (B Lab, 2018a).

- The importance of cross-sectoral multi-stakeholder collaboration to develop and maintain positive momentum has been highlighted in various chapters of this book (see Chaps. 12 and 15). A recent initiative of a collaborative approach to sustainability is Drawdown Europe (www.drawdowneurope.eu) which has been launched in 2018 as part of the global "Project Drawdown" coalition (www.drawdown.org).[5]
- In fall 2018, the Global Commission on Adaptation led by Bill Gates, former United Nations Secretary General Ban Ki-moon, and World Bank CEO Kristalina Georgieva has been launched. Co-hosted by Global Center on Adaptation (www.gca.org) and World Resources Institute (www.wri.org), the commission facilitates a global multi-stakeholder movement to improve resilience to climate-related threats by bringing scale and speed to climate adaptation solutions (Carrington, 2018). One of the focus areas is related to the question of how businesses can incorporate climate change risks into their investments as well as their social and economic development plans (Global Center on Adaptation, 2018).
- The Club of Rome issued its first "Climate Emergency Plan" (2018) in December urging all stakeholders, including business, to adopt a high-impact transformational action program that will reduce greenhouse gas emissions and improve community resilience. It explicitly calls for reframing business models in high-carbon industries, which will require new concepts and frameworks for sustainable strategizing as provided in Part II of this book.
- The Network of Business Sustainability (www.nbs.net) is as an initiative fostering dialogue and collaboration in and between academic research and the business community to shape a more sustainable future. With currently more than 6000 researchers and managers involved, it fosters open strategizing (see Chap. 5) and drives public-private co-creation and collaboration (see Chap. 12) focusing on a systems perspective (see Chap. 17). It draws on both real-time practitioner knowledge and contemporary research.[6]

[5] In addition to Drawdown and other initiatives, active environmental and sustainability programs and NGOs seeking market-based or transitionary sustainability solutions and thus are potential collaborators with business include B Lab (www.bcorporation.net), Breakthrough Institute (www.thebreakthrough.org), BSR (www.bsr.org), CDP—formerly known as Carbon Disclosure Project (www.cdp.net), Ceres (www.ceres.org), Circular Economy Club (www.circulareconomyclub.com), Conservation International (www.conservation.org), Environmental Defense Fund (www.edf.org), International Cooperative Alliance (www.ica.coop/en), Natural Resources Defense Council (www.nrdc.org), Network of Business Sustainability (www.nbs.net), OECD Innovation Strategy (www.oecd.org/site/innovationstrategy/), Rocky Mountain Institute (www.rmi.org), Tellus Institute for a Great Transition (www.tellus.org) and Great Transition Network (www.greattransition.org), The B Team (www.bteam.org), The Climate Group (www.theclimategroup.org), The Prince of Wales's Corporate Leaders' Group (www.corporateleadersgroup.com), United Nations Environment Programme (www.unenvironment.org), We Mean Business Coalition (www.wemeanbusinesscoalition.org), World Business Council on Sustainable Development (www.wbcsd.org), World Resources Institute (www.wri.org), and World Wildlife Fund (www.worldwildlife.org).

[6] Other knowledge hubs providing case studies and best/good practice examples related to business sustainability include The Case Centre (www.thecasecentre.org) with currently almost 2.000 cases related to sustainability, SustainAbility (www.sustainability.com), and "B the change" (www.bthechange.com).

- The generative potential of values-based stakeholder management (see Chap. 11) is assuming new relevance with the integration of refugees in Europe, but also with combating causes for refugees to escape their homes. The "Lab of Tomorrow" (GIZ, 2018) facilitates multi-stakeholder co-creation of new business models (see Chaps. 7, 8, and 9) in developing and emerging societies (Breuer, Lüdeke-Freund, & Brick, 2018).
- After mid-year 2018, China and the European Union agreed to cooperate on policies that support the transition to a circular economy (see Chap. 15). This will not only provide companies new opportunities for sustainable strategies but is expected to accelerate the adoption of circular economy practices at a global scale and thus the transformation to an economic system balancing business, people, and the environment (Ellen MacArthur Foundation, 2018). Furthermore, China plans to dominate the $550 billion market for electric car battery reuse and recycling, which could be a clean and circular energy game changer (Romm, 2018).
- The Natural Step Chemical Coalition was created in 2018 to improve sustainable life cycle management of chemicals and materials which is key for the transition to a circular economy (The Natural Step, 2018). For almost 30 years, The Natural Step has helped organizations to better understand sustainability challenges and to make meaningful progress (see Chap. 17).
- In the world of legitimate finance, G20 countries are increasingly recognizing that massive sums of investment are needed for "green finance," so strategies can be viable in the longer term. The Green Loan Principles (GLP) of the International Capital Market Association (ICMA) are becoming ever more significant elements with the Global Green Finance Council (GGFC) (Loan Market Association, 2018). Aggressive sustainable investments (see Chap. 6) can slow the rates of negative change to permit orderly adjustments in most parts of the globe. Industry leaders take actions to further sustainable strategies products such as green bonds. Issuance reached USD167.3 billion in 2018, which shows strong market growth (Climate Bonds Initiative, 2019).[7]
- At the Global Climate Action Summit 2018, the then Governor of California, Jerry Brown, announced that California will launch its own satellite to track greenhouse gases causing climate change (Holden & Milman, 2018). An example of why this tracking is so important is provided by recent discoveries of Arctic lakes releasing large volumes of greenhouse gases (Mooney, 2018). Jerry Brown also signed both a bill establishing a legal target of zero emissions for the state's electricity system by 2045 as well as an executive order setting a goal of zero emissions by 2045 for the entire California economy affecting transportation, agriculture and every other industry that puts emissions in the air (Gillis &

[7]Investors and lenders are increasingly realizing that assets can become "stranded" just as quickly from a change in corporate or product reputation as they can from an industrial accident, hurricane, or land surface subsidence from aquifer declines or earthquake tremors from hydraulic fracturing ("fracking") for natural gas or oil.

Harvey, 2018). This is an example of strong political leadership toward a sustainable future which will also strongly impact the business world.

- For nearly 20 years, the Global Reporting Initiative (GRI) has been gathering, standardizing, and distributing thousands of organizational performance reports from around the globe. Its supporters and readers control USD trillions in assets. In the USA, the Sustainability Accounting Standards Board (SASB) is advancing many similar criteria, but their framework begins with a different set of assumptions and perspectives (see Chap. 13). New initiatives for "advanced" economies such as the Reporting 3.0 Platform are being rolled out with the goal to spur the emergence of a regenerative and inclusive global economy (Reporting 3.0, 2018).
- Building roads from recycled plastic waste (Boffey, 2018), advancements in Carbon Capture and Storage (CCS) or Carbon Capture, Utilization, and Sequestration (CCUS) technologies,[8] space-based emission detection devices such as MethaneSAT or TROPOMI (EDF, 2018), and the transformation of waste carbon to jet fuel and other products (LanzaTech, 2018) are promising examples of how new technologies can help advance ecological sustainability progress. Unfortunately, new technologies such as artificial intelligence (AI) or geoengineering may not only have the potential to solve issues but also pose a significant threat to sustainability (Harari, 2017; Ó hÉigeartaigh, 2017).[9] For companies, sustainability and singularity or technology acceleration are two interdependent developments that need to be carefully managed (see Chaps. 17 and 18).
- The One Planet Summit held during September 2018 in New York City is another reminder that there are many active private and public players including Google, World Bank, United Nations, European Union, and Bloomberg Philanthropies collaborating for creating positive impact with regard to sustainability (One Planet Summit, 2018).

Based on the current state of the planet and the information presented in this epilogue, business leaders need to make decisions about which scenario of the future may unfold and how they may choose to engage in leading the way to shape their desired future. Will there be a brighter future for humankind created through market forces, unprecedented technologies provided by the "ingenuity of man" such as geoengineering or negative emission technologies, and policy reform? Or will there be a grimmer future with sanctuaries of prosperity surrounded by environmental degradation, social chaos, conflict and violence? Or a transformed world in which fundamental economic, social, and political changes enable businesses, the natural environment and humans to thrive? (Raskin, 2016) Nobody knows the answer but the choices we make today will determine which world we will ultimately get in the

[8]For more information on CCS see http://www.ccsassociation.org/ as well as on CCUS (e.g. Hybrid Na-CO_2 system) see http://news.unist.ac.kr/scientists-turn-carbon-emissions-into-usable-energy/.

[9]For more information see Centre for the Study of Existential Risks (CSER) at the University of Cambridge, UK (www.cser.ac.uk). Furthermore, new technologies will have a significant first-order impact on energy use, water consumption, and the use of critical resource (e.g. metal) as well as chemical elements causing new recycling issues (von Weizäcker & Wijkman, 2018: 44–49).

future. It is my hope that this book helps managers to make business sense of "sustainability" and lead the way toward a thriving future through sustainable strategizing and positive impact.

The majority of approaches and ideas presented in this book fit change into our current economic models of free and social market economies although they challenge dominant neoclassical management paradigms and models. I believe this connectivity is required for triggering corporate action as all-encompassing "solutions" and some great ideas proposed in the world of sustainability may simply be not acceptable to people in charge of strategic decisions or policies and such are not feasible. However, looking at the magnitude of issues we face it can only be a first incremental step to ensure that our social and natural systems are thriving in the future. The goal of most parts in this book was not to challenge the underlying economic system and thus the roots of the problem may have not been fully addressed. Instead of trying to embed sustainability within the existing economic system dominated by short-termism and shareholder interest, it might perhaps be more appropriate to drive transformation of the economy towards sustainability and run it in service to life as suggested by various authors (Felber, 2015; Hoffman, & Ehrenfeld, 2015; Jackson, 2016; Maxton & Randers, 2016; Sukhdev, 2012; von Weizäcker, & Wijkman, 2018).[10] With a Special Topic Forum on "New Theoretical Perspectives on Market-Based Economic Systems" (Barney & Rangan, 2019) as well as a Special Research Forum on "Understanding and Tackling Societal Grand Challenges Through Management Research" (George, Howard-Grenville, Joshi, & Tihanyi, 2016), the Academy of Management has recently addressed portions of the "disconnect" between the pressures on the Planet's biosphere as well as other socio-ecological issues and the conceptual frameworks used in much of our research and teaching. Nevertheless, research on business and sustainability tends to remain unnecessarily separated from the advances in knowledge in the natural and physical sciences. Lack of engagement with the wider sustainability agenda has been compounded by the scarcity of trans-disciplinary teaching and research programs in our universities.[11] The world economy could grow on a massive scale in this century putting enormous pressure on Earth's resources of which we are already overusing at 170%. If technology will not significantly help to solve our ecological and social problems or will even worsen them, the planet cannot sustain 11 billion people and a much larger economy by the year 2100 (Ehrlich & Ehrlich, 2008; The World Counts, 2018). To put this in the words of Kate Raworth (2017: 30): "Today we have

[10]See also the Sustainable Strategizing 2.0 mindset illustrated in Chap. 1.

[11]See also Chaps. 1 and 4. The disconnect between socio-ecological issues and conceptual frameworks and paradigms used in management research and teaching was recognized about a quarter of a century ago by a variety of scholars including Stuart Hart, Paul Shrivastava, Jean, and Ed Stead as well as many others. At this time, questions of the legitimacy of business institutions and their responsibilities in society were regarded as exotic, abstract, and somewhat peripheral to mainstream research on the firm. In the 1990s, these questions were discussed primarily in the SIM Division (Social Issues in Management) and the ONE Division (Organization and the Natural Environment) of the Academy of Management.

economies that need to grow, whether or not they make us thrive: what we need are economies that make us thrive, whether or not they grow."

Obviously, it is hard to imagine a sustainable business in an unsustainable world, people may not be motivated to act for various reasons (Graef, 2017; Markman, 2018; Marshall, 2013) and, perhaps, we may need some kind of crisis or catastrophe to trigger action (Samuelson, 2018). However, there are also new and evolving business mindsets and some kind of "Green Swans" (Elkington, 2019) that strive for positive impact. Given the many examples provided in this epilogue, I am optimistic that this can be one of various transformational drivers urgently needed to provide current and future generations the opportunity to thrive. The focus of this book was business as business leaders are best positioned to lead the way knowing that they alone will not be able to master this challenging task. In addition to the private sector (i.e. privately-held and publicly-owned companies), important contributions to sustainable development need to come from the public (e.g. governments) and particularly the plural sectors as Henry Mintzberg (2015) noted a few years ago.[12] Dialogue and collaboration within and particularly between these sectors are crucial to create the urgently needed solutions for a sustainable future (Mintzberg, Etzion, & Mantere, 2018).

There is much at stake today as humanity seems to be on a suicidal trajectory. More than ever, we need business leaders, corporate managers, and scholars that push the limits to prevent their children and grandchildren from facing a devastated world. Climate related natural disasters, scarcity of water, and fertile soils, massive species extinction, social conflicts as well as artificial intelligence deciding what is right and what is wrong are just a few elements of such a scenario. This is not "science fiction" but very real in the life span of most people reading these lines or at least their children and grandchildren. As far as business is concerned, this ultimately comes down to strategic choices made by individual executives who understand the seriousness of the issue, are convinced that sustainable development is possible, and recognize the various new management concepts and ideas available to tackle the issue and create viability for their very own organizations and society. These individual choices greatly determine which future we will get. Ray Anderson (2009), the former CEO of Interface, emphasized this point almost a decade ago at the very end of his passionate TED talk: "(. . .) we have a choice to make during our brief, brief visit to this beautiful blue and green living planet. To hurt it or to help it. For you, it is your call."

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[12] See also Chap. 2.

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In 2010, Thomas transitioned to academia as a full professor of Strategic Management at the Neu-Ulm University of Applied Sciences in Bavaria, Germany, where he is leading the Master of Advanced Management program. Since then he has dedicated his research, writing, and teaching to the integration of corporate strategy with sustainability, which is summarized in his book *Essentials of Strategic Management. Effective Formulation and Execution of Strategy* (2016). He also edited the practitioner-oriented German book *CSR und Strategisches Management* (2017) for Springer and has published a number of articles and book chapters. Thomas seeks to provide current and future business leaders with practically actionable and impactful science-based knowledge for strategizing toward a thriving future for both business and society. Knowing that a great portion of strategies fail due to poor execution, he puts special emphasis on the translation of strategies into action, both in regional and international cross-organizational settings.

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