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

A. Meyer zum Felde (✉)
The Boston Consulting Group, Boston, MA, USA
e-mail: Meyer.zum.Felde.Alexander@bcg.com

T. Wunder (ed.), *Rethinking Strategic Management*, CSR, Sustainability, Ethics & Governance, https://doi.org/10.1007/978-3-030-06014-5_3

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

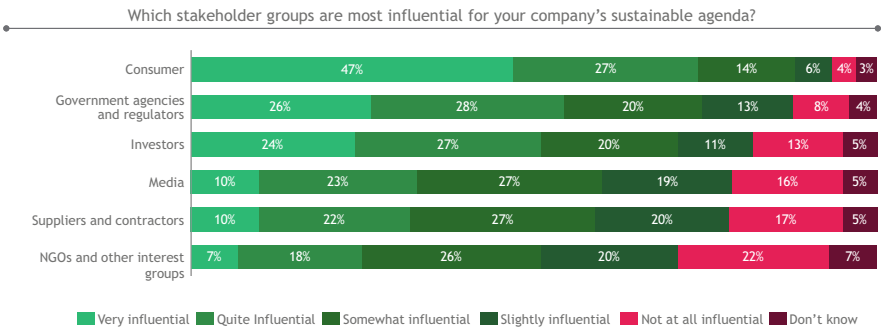

Fig. 3.1 Relevance of stakeholder groups for sustainability agenda (MIT & BCG, 2016)

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.

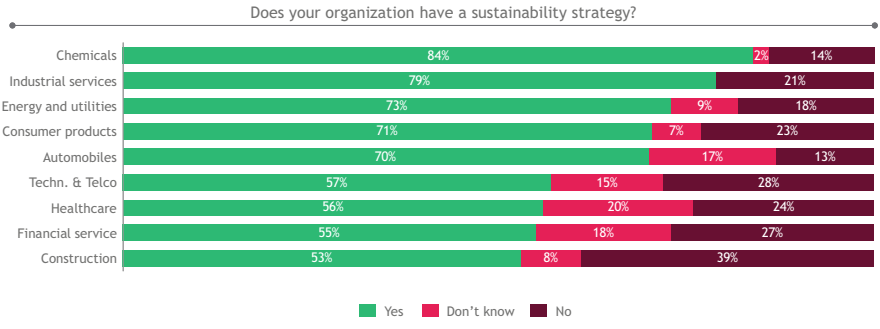

Fig. 3.2 Prevalence of sustainability strategies across industries (MIT & BCG, 2016)

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

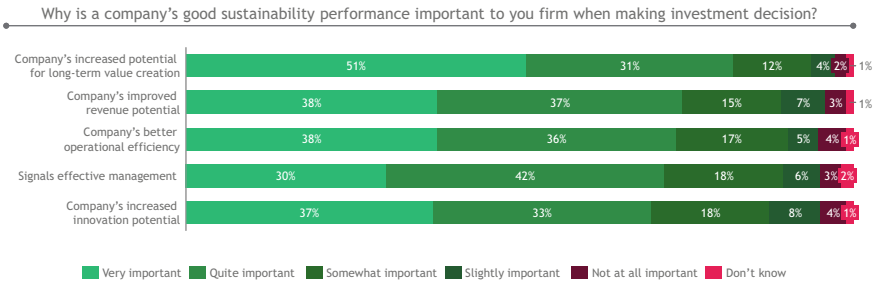

Fig. 3.3 Importance of sustainability performance for investment decisions (MIT & BCG, 2016)

(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.

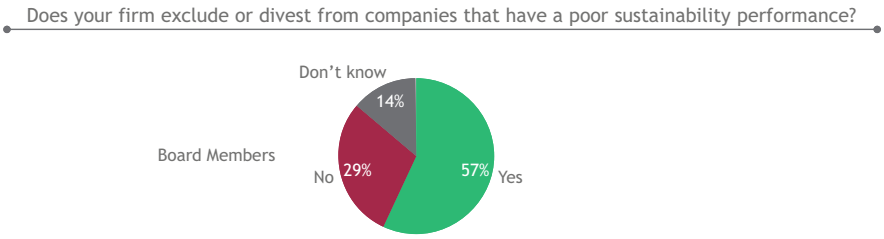

Fig. 3.4 Board members' reaction to poor sustainability performance (MIT & BCG, 2016)

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.

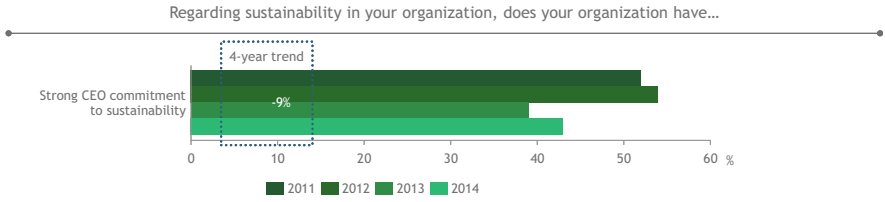

Fig. 3.5 CEO commitment to sustainability over time (MIT & BCG, 2017)

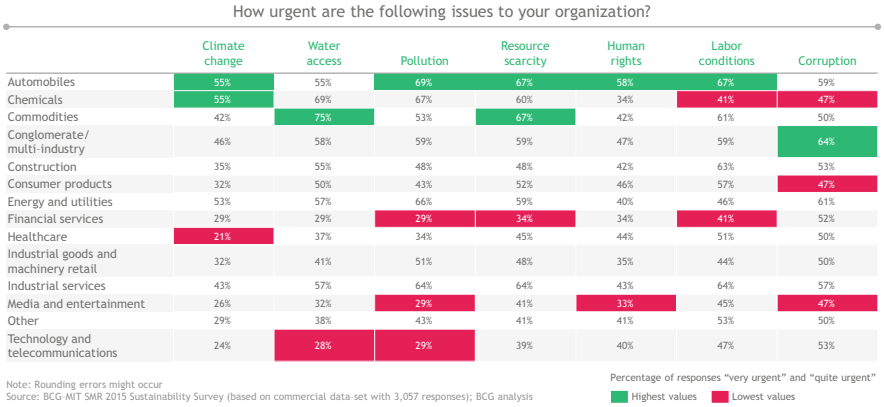

Fig. 3.6 Urgency of sustainability issues per industry (MIT & BCG, 2015)

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).

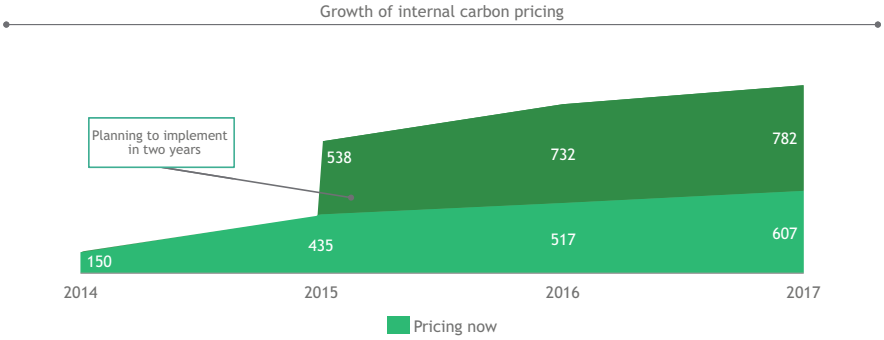

Fig. 3.7 Growth of companies using internal carbon pricing (Bartlett, Cushing, & Law, 2017)

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).

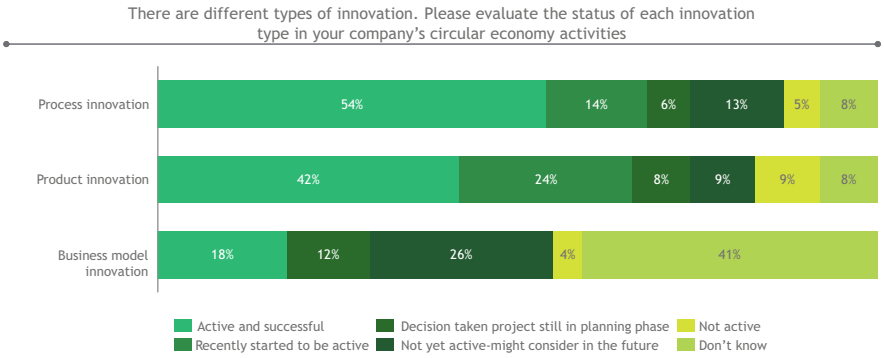

Fig. 3.8 Successful innovation along different dimensions (WBCSD & BCG, 2018a)

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.

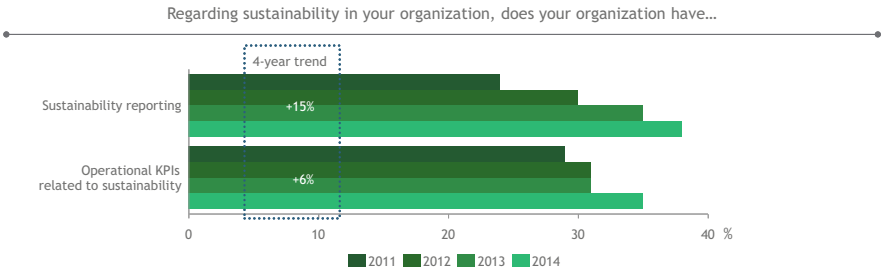

Fig. 3.9 Prevalence of sustainability reporting and KPIs (MIT & BCG, 2016)

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

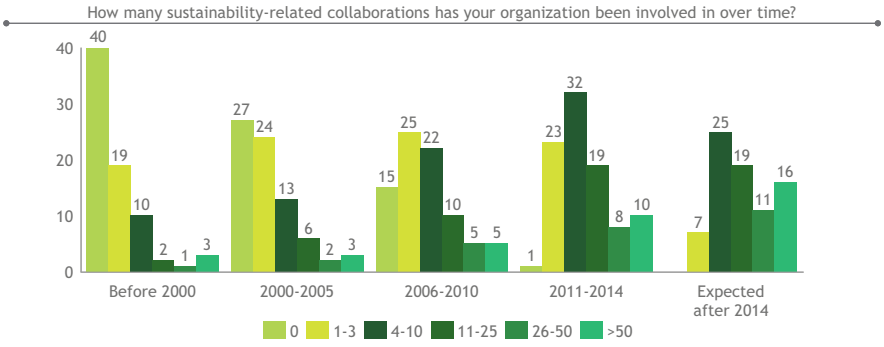

Fig. 3.10 Sustainability-related collaborations over time (MIT & BCG, 2015)

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.

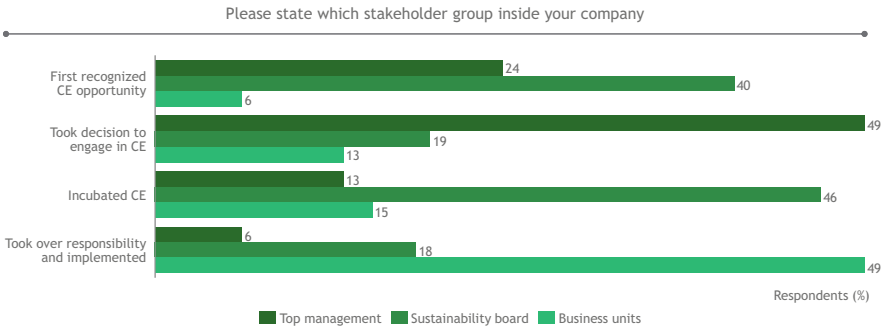

Fig. 3.11 Role of internal stakeholder groups in CE implementation (WBCSD & BCG, 2018a)

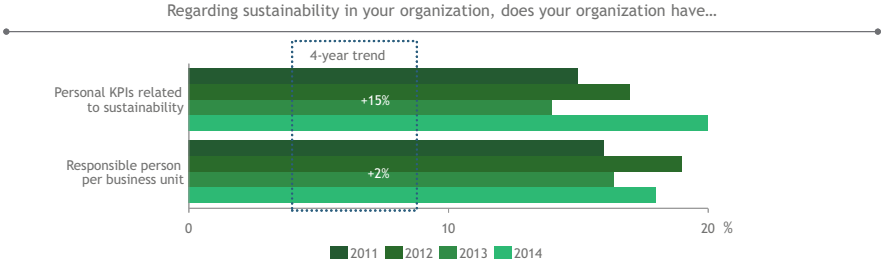

Fig. 3.12 Responsibilities and personal KPIs increasing over time (MIT & BCG, 2016)

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.

Disclaimer This disclaimer informs readers that the views, thoughts, and opinions expressed in the text belong solely to the author, and not necessarily to the author's employer, organization, committee, or other group or individual.

References

Bartlett, N., Cushing, H., & Law, S. (2017). *Putting a price on carbon – Integrating climate risk into business planning*. CDP Carbon Disclosure Project, October 2017.

Beal, D., Eccles, R., Lesser, R., Woods, W., Hansell, G., Unnikrishnan, S., et al. (2017). *Total societal impact – A new lens for strategy*. BCG TSI, October 2017.

BlackRock. (2018). *Larry Fink's Annual Letter to CEOs*. BlackRock. Retrieved May 28, 2018, from https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter

DW. (2018, February). East Africa pushes second-hand clothing ban. *Deutsche Welle*. Retrieved May 28, 2018, from http://www.dw.com/en/east-africa-pushes-second-hand-clothing-ban/a-42747222

EU. (2018). *Review of waste policy and legislation*. European Commission, Home Page, Waste Directives, January 2018. Retrieved January 30, 2018, from http://ec.europa.eu/environment/waste/target_review.htm

GFA, & BCG. (2017). *Pulse of the fashion industry 2017*. Global Fashion Agenda and The Boston Consulting Group, May 2017.

GRI. (2018). *About us*. Global Reporting Initiative, January 2018. Retrieved January 30, 2018, from https://www.globalreporting.org/Information/about-gri/Pages/default.aspx

HM. (2018). *Climate positive value chain by 2040*. H&M group, About H&M. Retrieved May 28, 2018, from https://about.hm.com/en/sustainability/sustainable-fashion/climate-emissions.html

Howard, E. (2017, January). Corporate leaders still in denial on climate change. *The Guardian*. Retrieved January 30, 2018, from https://www.theguardian.com/sustainable-business/2016/jan/15/katherine-garrett-cox-ceo-major-corporations-denying-climate-change

IATA. (2017). *Air passenger market analysis*. IATA, June. Retrieved January 30, 2018, from http://www.iata.org/whatwedo/Documents/economics/passenger-analysis-jun-2017.pdf

IISD. (2018). *Mainstreaming sustainable development into national and subnational development planning*. International Institute for Sustainable Development, May 2018. Retrieved May 31, 2018, from http://www.iisd.org/library/mainstreaming-sustainable-development-national-and-subnational-development-planning-latin

IKEA. (2018). Ikea.com. *Energy and resources*. IKEA, May 2018. Retrieved May 28, 2018, from https://www.ikea.com/gb/en/this-is-ikea/people-planet/energy-resources/

Kaplan, S. (2016). By 2050, there will be more plastic than fish in the world's oceans, study says. *The Washington Post*, January 2016. Retrieved January 30, 2018, from https://www.washingtonpost.com/news/morning-mix/wp/2016/01/20/by-2050-there-will-be-more-plastic-than-fish-in-the-worlds-oceans-study-says/?utm_term=.b405dacdd673

MIT & BCG. (2015). Kiron, D., Kruschwitz, N., Haanaes, K., Reeves, M., Fuisz-Kehrbach, S., & Kell, G. (2015, January). Joining forces – Collaboration and leadership for sustainability. *MIT Sloan Management Review*.

MIT & BCG. (2016). Unruh, G., Kiron, D., Kruschwitz, N., Reeves, M., Rubel, H., & Meyer zum Felde, A. (2016, May). Investing for a sustainable future. *MIT Sloan Management Review*.

MIT & BCG. (2017). Kiron, D., Unruh, G., Kruschwitz, N., Reeves, M., Rubel, H., & Meyer zum Felde, A. (2017, May). Corporate sustainability at a crossroads: Progress toward our common future in uncertain times. *MIT Sloan Management Review*.

Petroff, A. (2017, September). These countries want to ban gas and diesel cars. *CNN*. Retrieved January 30, 2018, from http://money.cnn.com/2017/09/11/autos/countries-banning-diesel-gas-cars/index.html

Ruz, C. (2011, October). The six natural resources most drained by our 7 billion people. *The Guardian*. Retrieved January 30, 2018, from https://www.theguardian.com/environment/blog/2011/oct/31/six-natural-resources-population

Sitra. (2018). Sitra Homepage. Retrieved January 30, 2018, from https://www.sitra.fi/en/

Smits, M., Wald, D., Viesmans, D., & Huet, E. (2014). *When social responsibility leads to growth – An imperative for consumer companies to go green*. BCG, June 2014.

WBCSD & BCG. (2018a). *The new big circle: How circular economy is already disrupting business models*. World Business Council for Sustainable Development (WBCSD) and The Boston Consulting Group (BCG), January 2018.

WBCSD & BCG. (2018b). *Bridging the gap: The role of green projects in scaling climate investments*. World Business Council for Sustainable Development (WBCSD) and The Boston Consulting Group (BCG), January 2018.

WBCSD Fresh. (2018). *Project FReSH*. WBCSD Fresh program, January 2018. Retrieved January 30, 2018, from http://www.wbcsd.org/Projects/FReSH

WRI. (2018). *Science based targets initiative*. World Resource Institute, January 2018. Retrieved January 30, 2018, from http://www.wri.org/our-work/project/science-based-targets-initiative

Alexander Meyer zum Felde is an Associate Director, Total Societal Impact & Sustainability & Circular Economy in the Hamburg office of The Boston Consulting Group. His fields of expertise include sustainability strategy, circular economy, sustainable investing, and climate change. He has supported clients across the world and in every major industry concerning sustainability opportunities. Moreover, he is responsible to manage BCG's external relations with Sustainability Partners and Academia regarding sustainability topics.