

# Chapter 7

## Sustainable Business Models: Rethinking Value and Impact



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### 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.<sup>1</sup> 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

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<sup>1</sup>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 indispensable 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.

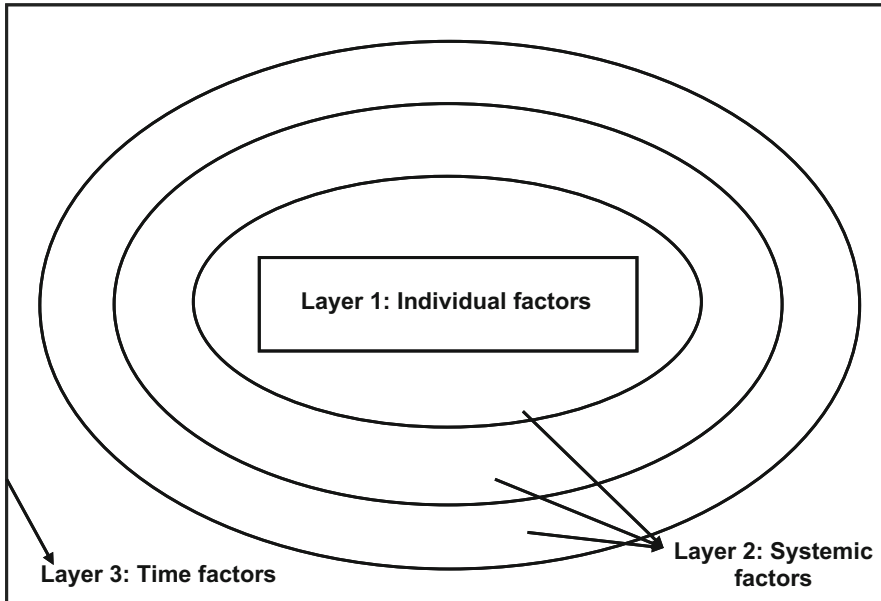


Fig. 7.1 Three layers of value

- **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 <i>other stakeholders</i> ? <i>What impacts do we want to create?</i>
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 <i>different forms required and the intended impact</i> ? <i>How do we prevent value destruction and unintended negative impact?</i> 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 <i>we and our stakeholders can benefit from the value we create and deliver over a long period of time</i> ? <i>Treats profits as part of broad value equation</i>

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](http://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.<sup>2</sup> Interface has similarly extended the lifecycle of carpet tiles through re-use in its ReEntry program, which was a strategic priority toward Mission Zero.<sup>3</sup> 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](http://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,

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<sup>2</sup>See Chap. 16.

<sup>3</sup>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,<sup>4</sup> Cascade's CO<sub>2</sub> 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%.<sup>5</sup> 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

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<sup>4</sup>Nominal dollars, not adjusted for inflation.

<sup>5</sup>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.<sup>6</sup>

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),<sup>7</sup> Triple Layer Business Model Canvas (Joyce & Paquin, 2016),<sup>8</sup> 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.<sup>9</sup>

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<sup>6</sup>For extending competitive advantage to viability advantage see Chap. 5.

<sup>7</sup>See Chap. 8 for more information about this method and its application.

<sup>8</sup>See Chap. 9 for more information about this method and its application.

<sup>9</sup>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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