Chapter 22 Helping Business Contribute to a Sustainability Transition: Archetypes of Business Models for Sustainability



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Abstract This chapter discusses business models for sustainability (BMfS). The objective for BMfS is to increase positive or decrease negative impacts of business performance on the environment and society, simultaneously providing long-term well-being of the organization and its stakeholders. The chapter looks at BMfS from a systems perspective and analyses how sustainable values are integrated into organizations' performances. Furthermore, benefits and challenges of BMfS related to capacity building, stakeholder inclusion and the scope of innovations inherent in the models are discussed. Conclusively, the chapter appraises the potential of BMfS to contribute to macro level transition to sustainability.

22.1 Introduction

Business models for sustainability (BMfS) continue to gain attention, both in academic research and in practice as a means to achieve sustainability innovation and restructuring in organizations. Business model innovation for sustainability (BMIfS) is the process of increasing positive or decreasing negative impacts on the environment and society that also allows the long-term well-being of the organization and its stakeholders (Geissdoerfer et al. 2018). The complex process requires that an organization situate itself within its network of actors to see how sustainability-focused innovations will permeate its business model (BM) activities and effects on wider society.

BMfS archetypes are introduced in Part II Chap. 9. These are common patterns of BMfS that have been categorized according to their type of sustainability innovation (Bocken et al. 2014). Based on the archetypes' guidance, organizations can identify types of innovative and strategic activities that can help infuse an existing

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BM with sustainability or create a completely new model with sustainability as the core logic. The archetypes provide inspiration to organizations by demonstrating how BMfS differ from traditional BMs and innovations that have worked for others. However, the focus on one innovation mechanism or type within each archetype may encourage a limited view to sustainability innovation in BMs, which in turn may influence the sustainability perception and performance in the organization. Taking only the archetypes perspective may also hinder the full integration of sustainability into an organization's value proposition, value creation and delivery, and value capture activities – preventing the creation of a business model that helps mediate environmental and social needs. On the other hand, more holistic archetype implementation, i.e., models which provide ways to infuse stakeholder needs and environmental objectives through the whole business model, can enhance organizations' sustainability performances significantly on a systems level.

The transition to sustainability and meeting the objectives set by the UN Sustainable Development Goals (SDGs) (United Nations General Assembly 2015) requires a holistic and transdisciplinary approach that is rooted strategically in an organization and therefore demands broader thinking than the identification and implementation of a single potential archetype. Organizations must consider their full value chain performance, including their network of stakeholders, to build and positively impact social and environmental sustainability in the long-term. Such requires the redefinition of value within the organization to include both financial and non-financial (social and environmental) value forms, and their exchange and capture within the business model (Evans et al. 2017). More holistic archetypes may therefore be identified in the future, that influence and direct the organization's sustainability awareness and performance towards the wider system of which it is part.

The next sections of this chapter discuss BMfS archetypes in relation to the following topics:

- (a) The process of BMIfS and the integration of sustainable value into systemic organization performance,
- (b) benefits and challenges for capacity building in organizations' sustainability and environmental management portfolios,
- (c) the inclusion of stakeholders in existing and future BMfS design and realization, and
- (d) the scopes of innovation embedded in the archetypes and their impact on changing societal systems.

Conclusively, their potential to contribute to developing changes and innovations at the organizational level that contribute to system-level sustainability transition is appraised.

22.2 Business Models for Sustainability

Innovation, knowledge building and strategic change for sustainability are dependent on a shift in the rationales and values that drive an organization (Laasch 2018, 2019). This requires, among others, a turn from creating value for customers and shareholders, to

creating, or at least not destroying, value for all stakeholders, including the environment and society as key players (Boons and Lüdeke-Freund 2013; Bocken et al. 2014). Stakeholders are here understood as individuals and groups, who have an interest in the situation and its development or could potentially be affected by it.

Traditional BMs have been based on a shareholder primacy perspective, selling goods and services to customers with the lowest cost to the organization to ensure the highest financial return and value added for its shareholders. A *BMfS*, on the other hand, creates value beyond the organization and its shareholders to actively integrate the needs of stakeholders into what it delivers to the customer (value proposition) along with its upstream and downstream activities and resources (value creation and delivery). Additionally, a BMfS bases itself in the exchange of social, environmental and economic value with its stakeholders and value chain actors (value capture), rather than in only financial flows of costs and benefits.

The term 'value' and its variants comprise multifocal interpretations and have has been extensively discussed in management sciences. A general definition of 'value added' is: "the difference between the value of a firm's output and the cost of the firm's inputs" and it is seen as "the key measure of corporate success" (Kay 1995) (p. 19). Value creation depends on the relative amount of value that is subjectively realized by an individual, an organization, or a society connected to the willingness to exchange a monetary amount for the value received. Moreover, a more recent 'value-creation' variant focuses, supplementary to the monetary value, on the resource-creation potential of firms considering, knowledge, innovation, social networks, and sustainable growth (Lepak et al. 2007).

BMfS are rooted in *sustainable value* that "incorporates economic, environmental and social benefits conceptualized as value forms" (Evans et al. 2017 p. 601). These value forms should then be considered within and across the BM components of value proposition, value creation and delivery, and value capture. Figure 22.1 provides examples of economic, environmental, and social value forms that contribute to sustainable value creation.





22.2.1 Business Model Innovation for Sustainability

Innovation is a process of creating new value. Because sustainability objectives require departure from the traditional logic of purely profit-making BMs, the development, adaptation and advancement of BMfS should be approached as an innovative process. Disruptive innovation is specifically interesting to develop BMfS since it transforms businesses on a systems level by, for example, making BMfS applicable for a broader range of companies, and obsoleteing more traditional competitors. Traditional business model innovation (BMI) literature, focuses on the process of the successful commercialization of new technologies or ideas through an organization's BM (Chesbrough 2007). BMIfS extends this by adding or adapting aspects, technologies and mechanisms that reduce negative and increase positive sustainability impacts in the organization's BM, and that support the long-term viability of the organization and its network of stakeholders (Boons and Lüdeke-Freund 2013; Geissdoerfer et al. 2018; Sinkovics et al. 2021).

Research on sustainability-oriented innovation has addressed several individual elements, for example, how to make supply chains more sustainable or how to use corporate responsibility activities to create value for employees and their families. Each of these technological or social innovations contribute to making the BM one that supports sustainability, but BMfS also require that the BM itself is reconceptualized to create and capture sustainable value within its wide stakeholder network (Stubbs and Cocklin 2008; Evans et al. 2017). BMIfS therefore requires changing how is business is done so that strategic aims for sustainability infiltrate the BM and its activities (Schaltegger et al. 2012a). Based on their sustainability strategy, an organization may choose to take a *defensive*, accommodative or proactive approach to innovating its BM (Schaltegger et al. 2016). These range, respectively, from making small incremental changes to mitigate risk and reduce cost, to improving internal processes that consider sustainability on some level, to the redesign of the core logic of the business for sustainable value (Schaltegger et al. 2016). It is the proactive approach that helps organizations initiate and guide a wider sustainability transition, while accommodative and defensive approaches are typically in response to top-down sustainability mandates or policies on the corporate, governmental, or societal levels. A BM with sustainability at its core requires that the business model itself is reconceptualized to create and capture sustainable value within its wide stakeholder network (Stubbs and Cocklin 2008; Evans et al. 2017).

A holistic approach that considers sustainability across the BM, and that is representative of the system of interactions between BM components and stakeholders is therefore needed (Boons and Lüdeke-Freund 2013; Abdelkafi and Täuscher 2016; Proka et al. 2018). This requires recognition of the interdependencies between an organization, its business model, its partners and surroundings, and expands the scope from small incremental modifications, to innovative change with environmental and social needs at the center (Wells 2013). BMs are the mediating layer between operational activities and organizational strategy (Osterwalder 2004; Rauter et al. 2017), and BMI processes therefore serve as a link between the internal



Fig. 22.2 Sustainable value network. (Evans et al. 2017)

and external business environment, strategic aims, and their operationalization in the BM structures and activities. When markets, regulations or stakeholder expectations change, the organization can then assess the system of activities that make up its value network (Zott and Amit 2010) to identify how to innovate within the BMfS in line with its strategic aims and performance objectives. Figure 22.2 provides a representation of an organization's value network in which the relationships between the focal organization and its stakeholders are shown as value forms (exhibited in Fig. 22.1). For example, relationships with societal stakeholders may bring.

The shift in ideology of the current market, from profit as the only value, to the incorporation of environmental and social value, requires, in itself, a different way of thinking that transforms the way organizations and society place value on consumption and short-term thinking. By innovating and re-designing their BMfS, organizations can contribute to environmental and social sustainability and facilitate attitude change of their consumers and stakeholders to shift demand toward sustainability. On a macro level, disruptive innovation in BMfS design is a key factor to promote, for example, a circular economy through transformation of the linear market (Diepenmaat et al. 2020).

BMI for sustainability requires the simultaneous consideration of the business model and its value network, the three dimensions of sustainable value, active engagement with stakeholders and the long-term perspective, all while organizations have to manage day-to-day operations and viability (Stubbs and Cocklin 2008). Although complex, by situating its BM within the value network, an organization can use it as a mediator between institutional and societal influences and sustainability innovation within its boundaries (Lüdeke-Freund et al. 2018; Lüdeke-Freund 2020). This enables the organization to react to external influences, such as new initiatives or regulations, and to support and incorporate stakeholder needs. The BMfS is then a framework through which organizational boundaries must expand to expose interactions with social and environmental actors in the business and institutional contexts (Boons and Lüdeke-Freund 2013; Brehmer et al. 2018).

22.2.2 Barriers to BMI for Sustainability

Business model research, and by extension BMfS research, has been conducted from multiple perspectives spanning from classification and architectures to operational and strategic mechanisms, taking both static and innovative process development approaches (Morris et al. 2005; Demil and Lecocq 2010; Foss and Saebi 2017; Ritter and Lettl 2018; Geissdoerfer et al. 2018) into account. To apply the concept of BMfS on strategic and organizational levels, it is important to move from seeing it only as an outline or architecture of the status quo, to acknowledge it as a system of interacting activities with may initiate change and contribute to innovation.

A challenging aspect of pursuing the research or implementation of a BMfS is linking the concept to practical execution by identifying feasible and appropriate opportunities and providing accessible tools. Barriers to BMI often arise because of a disconnect between the current functioning of the organization and the implementation and follow-up of new changes (Chesbrough 2010). Further, when adding sustainability considerations into the BMI process, the hurdles may be amplified. The multidimensional aspects of sustainable development can be difficult to balance and decision making between continuing opposing activities that support the financial viability of an organization yet do not support its sustainability objectives is difficult. While increasing the performance of its environmental management and sustainability portfolio can lead to the competitive advantage of a company (Kramer and Porter 2011; Schaltegger et al. 2012b), financial and human resource investments and restructuring may be required up front. When evolving the BMfS, i.e., the structures and mechanisms that allow an organization to create and capture sustainable value, the expanse of sustainability aspects and consideration of their interactions must be evaluated and monitored even more closely.

Even when an organization attempts to innovate its BMfS, successful implementation may not take place. Due to challenges related to, for example, balancing tensions between environmental, economic, and social objectives, redefining organizational logics and established norms, redistributing resources to build sustainability capacity, and establishing systems for engaging with stakeholders, a *design-implementation gap* has been identified (Evans et al. 2017; Geissdoerfer et al. 2018). Tools to assist organizations in the ideation and implementation processes of BMI for sustainability are therefore fundamental to their progress.

22.2.2.1 BMfS Archetypes as a Tool for BMI

Many tools have been developed to aid in the BMIfS process. One tool is *BMfS archetypes*, initially outlined by Bocken and colleagues in 2014 to help unify and interpret the exploding and fragmented literature on BMfS (Bocken et al. 2014). The archetypes are presented conceptually, and with reference to examples from business practice in the following sections.

The archetypes provide common models, patterns, or forms of BMfS that have been employed by other organizations. Their categorization helps to classify current knowledge on the subject and develop reference points for future research and application (Lüdeke-Freund et al. 2018). Such classification is important because the "ordering of objects into classes provides meaning to reality" and therefore helps to clarify the research area (Lambert 2015, p. 50).

Archetypes are also used as a tools for practitioners to begin thinking about how they may innovate their BMfS (Lüdeke-Freund et al. 2016; Jonker and Faber 2021). The simplicity of the archetypes allows organizations to focus on specific innovation mechanisms that they know other companies have already tested and applied, and therefore can serve as a low barrier entry point to the beginning of their innovation journey. When faced with pressure from customers, financing or regulatory bodies, organizations often want to look externally to what has worked for others as timely inspiration to their BMI process. They may therefore look to the recurring patterns of BMfS that have been successfully employed in other organizations. In the initial categorization of BMfS archetypes (Bocken et al. 2014), the models are grouped by their main innovation area - technological, social or organizational (Boons and Lüdeke-Freund 2013), and are discussed in terms of the way they seek to propose, create and capture ecological and social value. This grouping was later shifted to headings of environmental, social and economical categories (Bocken et al. 2016; Ritala et al. 2018). A ninth archetype was also added. The adapted grouping is intended to help clarify the sustainability dimension in which the new kind of sustainability innovation is occurring. Table 22.1 presents the nine archetypes along with examples and references for further reading.¹

In terms of environmental innovation, the more technical archetypes of "maximize material and energy efficiency," "create value from waste," and "substitute with renewables and natural processes" suggest changes to the production processes, design or material selection within an organization's BM to reduce environmental impact in upstream value chain processes. In relation to the Levels of the CapSEM Model, the environmental archetypes can be considered to be representative of sustainable innovations on Levels 1 (production process-related) and 2 (product-related). Most display a closed systems perspective that sees the organization as a unit that interacts with the environment through e.g., 'pull and push' of markets. These archetypes, if not combined with wider BM changes, will lead to incremental changes and innovations, and less mature BMI for sustainability. Some advanced examples of the "create value from waste" archetype may contribute to

¹It should be noted that these are not the only archetypes for BMfS. Another categorization of BMfS groups 45 sustainable business model patterns across 11 pattern groups based on their main value creation area (mainly economic, social-economic, social, mainly ecological, integrative) (Lüdeke-Freund et al. 2018). This taxonomy follows a more empirical and transparent methodology and was developed in response to the 'ad hoc' nature of the archetypes presented in (Bocken et al. 2014). Focusing on how and what kind of sustainable value is created may be a better way to group types of BMfS, however the taxonomy (Lüdeke-Freund et al. 2018) has not become nearly as mainstream as the archetypes (Bocken et al. 2014).

| Grouping | Archetype | Examples |
|--|---|---|
| Environmental (Technological innovation) | Maximize material and energy efficiency | Low carbon manufacturing/solutions |
| | | Lean manufacturing |
| | | De-materialization; Digitalization |
| | | Increased functionality; Lifespan extension |
| | Create value from waste | Closed loop/Cradle to Cradle |
| | | Industrial symbioses |
| | | Remanufacture; Take back management |
| | Substitute with renewables | Renewable energy sources and innovations |
| | and natural processes | Zero emissions initiatives |
| | | Slow manufacturing |
| Social (Social innovation) | Deliver functionality rather than ownership | Product-oriented (maintenance, extended warranty) |
| | | Use-oriented (Renting, leasing, sharing) |
| | | Result-oriented (Pay per use) |
| | Adopt a stewardship role | Biodiversity protection |
| | | Consumer care – promoting consumer |
| | | health and well-being |
| | | Ethical trade (Fair Trade) |
| | | Radical transparency |
| | Encourage sufficiency | Consumer education/communication |
| | | Demand management |
| | | Product longevity |
| | | Premium branding/limited availability |
| Economical (Organizational innovation) | Repurpose for society/ environment | Not for profit |
| | | Hybrid businesses, social enterprises (for profit) |
| | | Alternative ownership: cooperatives, collectives |
| | | Benefit corporations (B-corps) |
| | | Social and biodiversity regeneration initiatives |
| | Inclusive value creation | Collaborative approaches (sourcing, production, lobbying) |
| | | Peer-to-peer sharing |
| | | Inclusive innovation; Base of the pyramid solutions |
| | Develop scale-up solutions | Open innovation |
| | | Incubators and entrepreneur support |
| | | Impact investing |
| | | Crowd funding; Peer-to-peer lending |
| | | |

Table 22.1 BMfS archetypes

Modified from Bocken et al. (2016, 2019), Ritala et al. (2018)

the larger transition to a circular economy. However, since many of the existing examples suggest closed loops within a specific company or industry sector, rather than the economy at large, they are generally grouped in this analysis on the earlier Levels of the CapSEM Model.

Moving beyond environmental performance, socially innovative archetypes can be aligned with perspectives from Levels 3 and 4 of the CapSEM Model. These archetypes specifically include the consideration of stakeholder needs and larger initiatives that support sustainable development objectives and are therefore related to the higher Levels of the CapSEM Model that move beyond environmental performance to adapt BM structures in line with strategic sustainability approaches. Socially innovative archetypes focus on innovations that shift existing production and consumption patterns such as "delivering functionality rather than ownership", "establishing product sharing systems", and "adopting a stewardship role", for example by requiring suppliers to meet standards for ethics or biodiversity protection. On both the consumer and producer side, socially innovative archetypes include "encouraging sufficiency," among others, through designing products with longevity in the use phase to decrease the tendency to buy new products frequently. These archetypes progressively follow up the technological innovation archetypes that adhere to an 'accommodative' approach to organizational sustainability (Schaltegger et al. 2012b), that is, to reduce environmental impacts, and resist developing novel standards for decision-making in business. Other examples include circular economy based models that support changing production and consumption patterns, e.g., sharing platforms, product as a service, resource recovery and circular supplies (Moreno et al. 2016), and product-service system (PSS) models. These differ from the technical "create value from waste" BMs as they do more than change material, energy, and waste streams in production processes, and enable and depend on changes in upstream and downstream networks, and in producer and consumer conceptualizations of need and responsibility.

The economical archetypes demonstrate patterns of organizational innovation and can be situated on Levels 3 and 4 of the CapSEM Model. While it may seem counter-intuitive that the economic archetypes are at the higher Levels, this is due to their reconceptualization of the typical for-profit business model, that is, they make changes to the current economy in support of market and societal transition. They attempt to integrate societal norms and ethical thinking and decision-making into sustainable business strategies and solutions. Focusing on "repurposing the business for society/the environment," "inclusive value creation," and "developing scale-up solutions" supports the kind of disruptive business models needed for sustainable transition away from incumbent models (Christensen et al. 2006; Kivimaa et al. 2021). Logically, this surpasses the technological innovation archetypes by acknowledging that it is not possible to derive values for society from natural systems (Keitsch 2020a). Pragmatically, this means there is a need to relate to larger initiatives that support sustainable development objectives and to include societal stakeholders' needs, values, and norms in order to generate sustainable network impact.

Although the nine archetypes are separated and referred to individually, they must be combined to move to more holistic BMIfS that penetrates through the full business model (Bocken et al. 2014). For example, in the case of a product sharing platform BMfS (i.e., deliver functionality rather than ownership), material and energy efficiency measures of the technical archetypes must also be part of the BM to prevent unnecessary production of exorbitant products, or risk little reduction of environmental impact. Such parallels the logic of the CapSEM Model, as the tools and methods on the higher levels require application of the tools and perspectives of the lower levels.

22.3 Discussion

The categorization of archetypes above illustrates the possibilities for implementation of BMIfS processes into the business models of real-world organizations. Using archetypes as a representation of the potential for sustainable innovation within BMs can provide organizations examples of experience and techniques from practice and help reduce the risk associated with restructuring a BM (Bocken et al. 2014). The reduced risk can help encourage organizations to attempt their own incorporation of sustainable value, through the selection and combination of different archetype principles appropriate for the particular business. The archetypal innovation strategies and mechanisms can then be considered in relation to an organization's specific value chain processes and existing business model. They can also be combined in configurations that best support the organization's sustainability strategy and stakeholder needs. When applied in practice, BMfS archetypes can be used by organizations among others as a quick fix to meet sustainability demands, without considering all aspects of sustainability and the societal and environmental impacts on a holistic scale. Some authors claim that, trapping ideas from established models may yet limit the impact of BMI outside of the organization (Morris et al. 2005; Chesbrough 2010; Demil and Lecocq 2010; Boons and Lüdeke-Freund 2013), which will be further discussed in the following.

Improving sustainability performance and innovating BMs for sustainability helps organizations support and incorporate macro-level sustainability objectives into their activities. To design, implement, or transit to a BMfS, organizations must implement activities that make their business model one that promotes sustainable innovation and that contributes to sustainable development in the larger system of which it is part (Diepenmaat et al. 2020), not only in the organizational unit. While archetypes may help direct the identification of sustainable innovation opportunities, they may also lead to ignorance of the entire set of activities and interactions that make up the organization's BM. It is therefore required that the organization also views its BM as a system of activities, to create a comprehensive picture of how it operates within its multilevel context. Incremental choices that impact one activity and the achievement of its purpose may positively or negatively affect other activities, therefore impacting or changing the accomplishment of the overall objective of the value proposition for the customer and stakeholders. From a systems perspective, socially innovative archetypes are the most advanced systems. They represent BMfS that are 'autopoetic,' i.e. that perceive business as an 'ecosystem', embedded in a network of other entities, or 'subsystems'. Their rationale is that business evolves and thrives not just together with other businesses but also through interdependencies and in interaction with various subsystems (Valentinov 2014). Moving towards CapSEM Model Level 4, the socially innovative archetypes expand the structure of business interactions, and design new types of exchanges among organizations and societal stakeholders. Moving to an autopoetic systems literacy allows sectors and industries to realize the interconnected structure of organizations, technologies, consumers and products (Kohtamäki et al. 2006; Keitsch 2012).

In terms of sustainability performance, businesses oriented toward organizational innovation may commonly develop incentives and a vision to strive for sustainability goals, develop individual initiatives while using political mechanisms to ensure that their activities will reach these goals, and coordinate the internal with the external pace of innovation (Anggraeni et al. 2007). The economical archetypes, then, can support the complete reformation of traditional make-and-sell BMs through organizational level innovation. For example, to 'repurpose the organization for the society and/or environment,' as, e.g., not for profit organizations or social enterprises, or to 'develop scale-up solutions' to sustainability that reduce competition and increase collaboration among organizations in support of open innovation initiatives, industrial cluster formation or crowd-sourced models. Economical archetypes focused on organizational innovation allow actors to revise their value orientations and innovate their business models as results of novel activities, roles and structures. The societal context of businesses is even more emphasized in organizational innovation archetypes and the mutal influence of business and societal stakeholders is explained in close context to socio-cultural innovation via new partnerships, business-citizen initiatives such as Open innovation platforms and transdisciplinary collaboration (Keitsch 2020b). These archetypes put stakeholder collaboration in the forefront in co-developing sustainability knowledge and -implementation strategies. The aim is to achieve 'sustainable well-being' of all societal stakeholders by aligning business strategies and solutions to ethical principles defined by social systems, institutions, and environments. The 'common good' of sustainable well-being is heuristic, it assumes that even if assumptions, expectations, attitudes, values, and interests that influence decisions vary greatly in societies, consent is possible.

The *repurpose for society and the environment*, and the *development of scale up solutions* in the table above illustrate the aim of sustainable well-being as one onset for the organizational innovation archetypes. In terms of disruptive innovation, these archetypes can complement policy and social groups efforts to support the transformation necessary to achieve sustainable societies. For example, the scale up solutions might bring major benefits for society by including larger populations, and new groups in the development process. As Iizuka and colleagues (2021: 16) point out: 'Disruptive inclusive innovation (DII)'' can be initiated by the private sector without much government involvement. Entrepreneurs respond to the unmet

demands of citizens by devising an innovative business model, linking the underserved population with new services using emerging technologies to generate broader impacts".

22.4 Conclusion

Implementing and examining the full portfolio of sustainability needs and requirements that result from the activities within the business model can help an organization change or adapt its BMfS to create more disruptive and inclusive social and environmental impact. While archetypes are useful for ideation and experimentation, it is essential that they are inserted into the understanding of the business model as a whole. This entails considering innovation archetypes within the network of activities and actors that make up the current BM, identifying the expected impacts on stakeholders, and determining the contribution to the organization's sustainability performance (i.e. 'autopoetically'). This is supported by the definition of BMIfS provided by Bocken et al. (2014) in their archetype work: "Innovations that create significant positive and/or significantly reduced negative impacts for the environment and/or society, through changes in the way the organisation and its value-network create, deliver value and capture value (i.e. create economic value) or change their value propositions" (p. 44). However, consideration and integration into the wider value network of stakeholders is often hindered due to, for example, the challenges of the 'design-implementation gap' between ideation and implementation of BMfS (Geissdoerfer et al. 2018), the fundamental shift of core business logics from profit-making to sustainability creating (Laasch 2018) or a limited understanding of the dynamics of the process of BMIfS (Lüdeke-Freund 2020).

The question remains, if moving towards BMfS with the help of the archetypes will apply to every organization in a shifting market. Especially small and medium sized organizations that are not able to integrate insights from subsequent research and experience and may end up using tools that do not benefit their context, reducing their chances of success. For this reason, structural support in the form of, for example, transdisciplinary stakeholder collaboration, is essential to mitigate failures and achieve systemic macro level sustainability, a view that will be further elaborated in the next chapter.

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