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Business Model Innovation: Toward a Process Perspective

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Abstract and Keywords

Business model innovation matters to managers, entrepreneurs, and academic researchers because it represents an often underutilized source of value and, as such, could translate into sustainable performance advantage. Yet, despite the importance of the topic and the increasing attention it has received from researchers, relatively little is known about the *process* of business model innovation. To address this gap, this chapter draws on the design literature to derive a generalizable and normative model of the business model innovation process. This contribution links creativity at the individual and firm levels with innovation at the business model level of analysis and thus acknowledges explicitly the multilevel nature of innovation.

Keywords: innovation, business model, business model innovation, innovation process, design, design process, creativity, activity system, firm boundaries, process model

Introduction

Companies often make substantial efforts to innovate their processes and products to achieve revenue growth and maintain or improve profit margins. However, innovations to improve processes and products are often expensive and time-consuming, and their future returns are uncertain. Hesitant to make such big bets, more companies now are turning toward business model innovation (BMI) as a complement to product or process innovation. A global survey of more than 4,000 senior managers by the Economist Intelligence Unit (EIU) found that the majority (54%) favored new business models over new products and services as a source of future competitive advantage. EIU analysts concluded that “the overall message is clear: how companies do business will often be as, or more, important than what they do” (Economist Intelligence Unit, 2005, p. 9). And in a similar global study conducted by IBM, in which more than 750 corporate and public sector leaders were interviewed on the subject of innovation, researchers found that “competitive pressures have pushed business model innovation much higher than expected on CEOs’ priority list” (Pohle & Chapman, 2006, p. 34).

Business model innovation (BMI) can be defined as the design and implementation of an activity system that is new to the focal firm or new to the product-market space in which the focal firm competes (more definitions of key constructs are provided in a later section).¹ It matters to managers, entrepreneurs, and academic researchers for several reasons. First, it represents an often underutilized source of value. As was shown by Amit and Zott (2001), the business model represents an opportunity for value creation through four value drivers: novelty, lock-in, complementarities, and efficiency. Second, competitors might find it more difficult to imitate or replicate an entire novel activity system than a single novel product or process. Because it is relatively easy to undermine and erode the returns of product or process innovation, innovation at the level of the business model could translate more readily into sustainable competitive advantage (Snihur & Zott, 2014a). Third, because (p. 396) BMI can be such a potentially powerful competitive tool, managers must be attuned to the possibility of competitors’ efforts in this area. Competitive threats often come from outside traditional industry boundaries (Johnson et al., 2008).

Yet, despite the importance of the topic and the increasing attention it has received from researchers (e.g., Amit & Zott, 2012; Casadesus-Masanell & Zhu, 2012; Chesbrough, 2010; Markides, 2006; Zott and Amit, 2007), relatively little is known about the *process* of BMI. A small subset of the business model literature has begun to delineate high-level process models (e.g., Bucherer, Eisert, & Gassmann, 2012; Frankenberger, Weiblen, Csik, & Gassmann, 2013), yet without addressing the concrete steps that business model designers could take in order to come up with innovative models. A second subset of this literature has been examining single cases of business model change, which often yield rich insight into the “how-to” although generalizability may be challenging (e.g., Aspara, Lamberg, Laukia, & Tikkanen, 2011; Siggelkow, 2002; Sosna, Trevinyo-Rodríguez, &

Velamuri, 2010). What appears to be missing from the received literature is a generalized process model that describes at a high level of abstraction how BMI works and that is also rich and detailed enough to have normative implications for researchers and to give useful guidance to practitioners.

In this chapter, we take a first step toward addressing this gap, which is important for at least two reasons. First, research has shown that the process of innovation interacts with, and influences, other parameters of innovation, such as its magnitude (radical vs. incremental) and its likelihood of success (Tatikonda & Montoya-Weiss, 2001). Hence, researchers need to consider process models that they can examine further regarding their interaction with BMI antecedents, contingency conditions, innovation content, and outcomes. Second, practicing managers who are interested in building innovative business models need guidance on how to accomplish this, in order to better assess the trade-offs involved, as well as the resources and capabilities required. Without such guidance, valuable time, effort, and value-creation potential may be wasted.

To address this gap, we build on the idea that innovation can be achieved through design. That is, we draw on the design literature to derive a detailed model of the BMI process. Our contribution falls squarely within the aims of this *Handbook* by linking creativity at the individual and firm levels with innovation at the business model level of analysis. We thus acknowledge explicitly the multilevel nature of innovation.

Concept Definitions and Literature Review

Rapid advances in information and communication technologies have brought about fundamental changes in the ways in which economic agents interact with each other. According to Weill and Woerner (2013), three trends have been converging that push companies to innovate their business models: digitization of business, increasing numbers of “digital natives” who expect a brilliant digital experience, and the increase of the customer voice via ratings of services and online comments through social media. These developments, among others, have encouraged firms to fundamentally rethink and reshape the ways they “do business”—that is, the ways in which they organize and conduct exchanges and activities with customers, vendors, partners, and other stakeholders across firm and industry boundaries. Because of these technological advances, senior managers of focal firms have an increasing number of combinatorial possibilities in how they structure what used to be called their “value chain” (Porter, 1985). By innovatively designing boundary-spanning exchanges and activities, they create a networked structure of interdependent activities, which we term the business model. Thus, the business model has become a source of innovation (e.g., Zott & Amit, 2007, 2008)—for example, when it connects previously unconnected parties, links transaction participants in new ways, or introduces new transaction mechanisms.

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Building on Zott and Amit (2010), we define the business model as an activity system that is designed and enabled by a focal firm in order to meet perceived market needs and thereby create value for all stakeholders involved: customers, strategic partners, suppliers, and, of course, the focal firm. It encompasses interconnected, potentially interdependent activities that are conducted either by the focal firm or by other stakeholders, thus spanning firm and possibly even industry boundaries. An activity involves the engagement of human, physical, information-based, and/or capital resources to serve a specific purpose (e.g., the distribution of the focal firm's products) toward the fulfillment of the overall objective, or core logic, of the business model (Magretta, 2002). Interdependencies exist when the combined effect of activities on an objective function (e.g., performance) is different from the sum of (p. 397) the effects of each of the activities considered in isolation (Siggelkow, 2001, 2002). They arise when business model designers choose the set of organizational activities (which we call "content"); when they design the links and coordination mechanisms that weave activities together into a system (which we call "structure"); and when they shape the mechanisms that make the system work (which we call "governance").

The business model construct is conceptually distinct from organizational structure (Zott & Amit, 2007) and from product market positioning strategy (Zott & Amit, 2008). However, it must be considered a fundamental aspect of a firm's overall strategy because it defines how the focal firm is embedded in its "ecology" (Adner & Kapoor, 2010; Amit and Zott, 2014)—that is, in the multiple networks of firms, institutions, and customers that surround it—thereby determining not only the possible partners that can help it co-create value but also its likely competitors. In other words, the business model stakes out the focal firm's cooperative and competitive landscape. For instance, the Israeli start-up company FriCSO considered three basic business models for commercializing its revolutionary friction-reduction technology (Loch, Zott, Guttman, Jokela, & Nahminas, 2008): machine manufacturer (which would embed the technology into machines and then sell the machines to original equipment manufacturers [OEMs] and suppliers); research and development company (which would develop technology and license it to machine manufacturers); and service company (which would provide an outsourced service to the OEMs and suppliers). In each of these business model choices, FriCSO faced a distinct set of "friends" and "foes." For example, in the manufacturing model, it would compete against other already established, and therefore powerful, machine manufacturers. By contrast, in the licensing model, it would partner with those manufacturers. Each of the models also had different capital requirements (e.g., in the machine manufacturing model FriCSO would have to invest in a factory) that influenced its ability to create and capture value.

The business model is thus one of the most fundamental strategic choices that entrepreneurs, CEOs, and general managers must make, in addition to deciding which market needs to address (i.e., which customer segments to serve), in which (e.g.,

geographic) markets to compete, how and when to enter these markets, and on which resources and capabilities to anchor a company's competitive advantage.

Product, process, and technology innovations have traditionally been viewed as the source of innovation and value creation. Although BMI can be traced back to Schumpeter (1934), it has received increased attention from managers and scholars in recent years. The "newness" of the business model may refer to any of its design elements—that is, its content, structure, or governance. Because of the systemic, interconnected nature of the business model, a change in any of these elements (compared with existing models) may engender further changes at the system level (e.g., it may lead to changed functionalities and performance prospects). For example, the addition of the iTunes music distribution activity to Apple's business model (a content and structure innovation) enabled the firm to achieve higher value creation through the powerful combination of selling its innovative and sleek electronic devices together with the content that feeds them. We posit that the more wide-ranging the changes at the system level, the more encompassing (and radical) the BMI.

What Business Model Innovation Is Not

To clarify the concept further, we examine what types of changes to a focal firm's activity system do *not* constitute BMI. First, we suggest that modifying an activity without modifying the activity system does not constitute BMI. Any change of an individual activity that results in higher activity performance (such as faster, cheaper, or higher-quality output from the activity) without affecting the overall gestalt of the business model in terms of its content, structure, or governance does not qualify as BMI. Consider, for example, the augmentation of activities through the deployment of new technology, such as the adoption of injection-molding production technology for the manufacturing of candles. This is a technology innovation that results in more efficient manufacturing, but it does not represent BMI.

Second, modifying an exchange without modifying the system does not constitute BMI. Any change in a link between activities that results in higher exchange performance without affecting the overall gestalt of the business model in terms of its content, structure, or governance does not qualify as BMI. To illustrate, a focal firm invests in communication technology that allows its sales force in the field to communicate more effectively with corporate headquarters. This improves the exchange between sales and centralized firm activities, such as production, but it is not BMI.

(p. 398) Furthermore, service innovations are not necessarily associated with BMI. Service innovation can also result from changes not related to the business model, for example, when customer experience is improved through better training of employees, or by changing the incentive system in the company. Or consider Zara's BMI of highly vertically integrated fashion design, production, and delivery, which allows the firm to

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react rapidly to changes in customer preferences and to implement a fast-follower strategy. However, neither the products nor the services Zara provides are particularly innovative (Pich, van der Heyden, & Harle, 2002).

BMI is thus distinct from innovation in products and services; methods of production, distribution, or marketing; and markets (Schumpeter, 1934). An innovative business model can either create a new market or allow a focal firm to create and exploit new business opportunities in existing markets. Dell, for example, implemented a customer-driven, build-to-order business model that replaced their traditional build-to-stock model of selling computers through retail stores (Brynjolfsson & Hitt, 2004).

Empirical research has established that BMI conceived of as novel transaction architectures (i.e., new to the state-of-the-art) positively influences firm performance, even when the environment switches from resource-rich to resource-poor (Zott & Amit, 2007). Research has also established that BMI and product innovation have a positive interaction effect (i.e., as complements) on firm performance (Zott & Amit, 2008).

BMI provides a path for value creation, complementing new technologies. Chesbrough (2010) identified two barriers to BMI in existing firms. The first is an underlying configuration of assets that hinders change. The second is cognitive issues related to managers' inability to evaluate the value potential of ideas that do not fit with their current business models. These barriers can be addressed through experimentation and leadership (Sosna et al., 2010).

Types of Business Model Innovation

Some of the prior research on BMI has focused more narrowly on the extent to which business models are *de novo*—that is, *new to the state-of-the-art* and not just new to the firm (Birkinshaw, Hamel, & Mol, 2008). Santos, Spector, and van der Hayden (2009), for example, defined BMI as the “reconfiguration of activities in the existing business model of a firm that is new to the product/service market in which the firm competes.” Niduolu, Prahalad, and Rangaswami (2009) viewed the development of new business models as a key step in their five-stage model of corporate transformation to become environmentally sustainable. Their central challenge is “to find novel ways of delivering and capturing value, which will change the basis of competition” (p. 60). According to these authors, opportunities for BMI lie in developing new delivery technologies that change the value chain by combining digital and physical infrastructures or by turning products into services. Similarly, Johnson et al. (2008) focused on *de novo* business models, based on the belief that there is “no point in instituting a new business model unless it is not only new to the company, but in some way game-changing to the industry or market” (p. 58). In a similar vein, Markides (2006, p. 20) emphasized the need to discover fundamentally different business models in existing businesses: “To qualify as an innovation, the new business model must enlarge the existing economic pie, either by attracting new customers into the market or by encouraging existing customers to consume more.”

Conceived in this way, business model innovators do not introduce new products or services but redefine an existing product or service and how it is delivered to the customer. Companies such as Amazon, Dell, and Southwest can be considered business model innovators because they enlarged their addressable markets (i.e., enhanced sales to existing and new customers) through BMI.

Changes to business model design, however, can be subtle; they may not have the potential to disrupt an industry but could still yield important benefits to the business model innovator (i.e., the focal firm). Consider Taco Bell, the restaurant chain offering Mexican-style fast food, which in the late 1980s decided to turn the restaurant's kitchen into a heating and assembly unit in a program called "K-minus." The chopping, cooking, and clean-up activities were transferred to corporate headquarters. The food was sent precooked in plastic bags to the restaurants, where it was heated, assembled, and served (Applegate, Schlesinger, & DeLong, 2001). This incremental BMI was not game-changing for the fast food industry, but it allowed Taco Bell to realize economies of scale and improvements in efficiency and quality control, as well as increase space for customers within the restaurants (Santos et al., 2009). Other firms might wish to change their business models in similar (incremental) ways or follow a business model innovator in their industry in order to achieve competitive parity.

(p. 399) Performance Consequences of Business Model Innovation

Several authors have related BMI to firm performance. For instance, Zott and Amit (2007) showed that BMI positively affects the market value of entrepreneurial firms, and Pohle and Chapman (2006) found that established companies whose operating margins had grown faster than their competitors' over the previous 5 years were twice as likely as their lower-performing peers to emphasize BMI, as opposed to product or process innovation. Bock, Opsahl, George, and Gann (2012) found that BMI effort in companies positively moderates the relationship between activity reconfiguration and strategic flexibility, enhancing firm performance. Snihur and Zott (2014a) differentiated BMI from product, process, and management innovation and introduced the concept of *robust* BMI design. Robust BMI involves strategically designing the content, governance, and structure of the new business model so that it appears legitimate to stakeholders but at the same time prevents imitation from competitors. Such robust design is likely to be associated with more sustainable performance advantages for business model innovators, compared to other innovators.

Sanchez and Ricart (2010) explored BMI in low-income markets and distinguished between what they called *isolated* and *interactive* new business models introduced by firms in those markets. Isolated business models are defined as business models based on an exploitation strategy, leveraging the firm's existing resources and capabilities and replicating its business model to a low-income country. Interactive business models are defined as those based on an exploration strategy, leveraging external resources to search for new models through partnerships rather than seeking efficiency with an

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existing business model. By conducting extensive interviews with managers in five successful companies and two companies that experienced BMI failure in low-income markets, Sanchez and Ricart found that interactive business models lead to a more sustainable competitive advantage in this context than isolated business models.

Other authors have explored the impact of BMI on competitive dynamics in an industry. Casadesus-Masanell and Zhu (2013, p. 464) analyzed the impact of BMI imitation by incumbents. They defined BMI as the “search for new logics of the firm, new ways to create and capture value for its stakeholders, and... new ways to generate revenues and to define value propositions for customers, suppliers, and partners.” Their main premise was that in addition to implementing a differentiation strategy with new or better products, firms have a strategic option to compete through distinct business models. In their model, the entrant has a choice to introduce BMI or not, and the incumbent then decides to imitate BMI or not. Based on game theoretical analysis, they showed under what conditions a new entrant might prefer not to introduce the new business model and when the incumbent might prefer to imitate the entrant’s BMI. Their work provides a dynamic analysis of competition through BMI. Taking new business models into consideration allows for more sophisticated understanding of industry dynamics than merely analyzing the product innovation options available to competitors in an industry.

Drivers and Process of Business Model Innovation

Given the significant performance consequences that BMI can have, it is important to understand how BMI can be generated. Amit and Zott (2014) identified four antecedents of business model design: goals, templates, stakeholder activities, and environmental constraints. They linked these design drivers to various design themes, one of which was novelty (i.e., BMI). They argued that mindful (as opposed to mindless) consideration of incumbents’ templates is likely to foster BMI. They also argued that working around *external* constraints is more likely to happen through BMI in new companies rather than in established firms. The latter are *internally* constrained by their extant business models (Chesbrough & Rosenbloom, 2002), by leadership and managerial inertia (Chesbrough, 2010), and by their extant resources and capabilities (Bonaccorsi, Giannangeli, & Rossi, 2006).

Qualitative research focusing on the antecedents of BMI in new firms indeed points to the lead founder as an important driving force. Analyzing data from interviews and other secondary sources in eight firms, Snihur and Zott (2014b) found important individual-level cognitive differences between firm founders who design new business models and those founders who do not undertake BMI. They also found that team-level effects are less noteworthy than usually expected in the innovation literature; indeed, teams are associated with a lack of BMI. Extending these insights from new ventures to the context of established firms, Snihur (2013) found that search breadth (i.e., the quantity of diverse sources firms use to generate innovation) and search (p. 400) depth (i.e., the intensity

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with which various sources are exploited to generate innovation) were significant predictors of BMI in a sample of established firms from Europe and the United States.

Based on these insights, Amit and Zott (2012) proposed that top managers ask themselves six key questions as they consider BMI: (1) What perceived needs can be satisfied through the new model design? (2) What novel activities are needed to satisfy these perceived needs? (3) How could the required activities be linked to each other in novel ways? (4) Who should perform each of the activities that are part of the business model? (5) How is value created through the novel business model for each of the participants? and (6) What revenue model fits with the company's business model to appropriate part of the total value it helps create?

In a similar vein, Johnson et al. (2008) viewed the business model as driven by a perceived customer need. They stated that "success starts by not thinking about business models at all. It starts with thinking about the opportunity to satisfy a real customer who needs a job done" (p. 52). Following this step, the business model designer should (1) articulate the current business model and what makes it successful; (2) take into account relevant signals that suggest that the business model needs to be changed; and (3) decide whether reinventing the business model is really worth the effort (i.e., whether it will bring real change to the industry or market in which it is embedded).

Yet, despite the valuable insights emerging from these early empirical and conceptual studies on BMI, we still know very little about the actual process of BMI and how it is (or should be) undertaken by firms. A small subset of the business model literature has begun to delineate high-level process models, yet without addressing the concrete steps that business model designers could take to come up with innovative models. Based on a comparison of process models from the product innovation literature and in-depth case studies of BMI in both established and new firms, Bucherer et al. (2012) identified four phases of BMI: analysis, design (i.e., development of solution alternatives), implementation, and control. They noted that at a high level of analysis, there is little difference between product innovation and BMI, although there are likely to be deviations among the concrete activities performed within each of the phases. The authors also noted a further similarity between product innovation and BMI: The process is rather chaotic early on, characterized by iterations and nonlinear sequencing of activities. Frankenberger et al. (2013) suggested a slightly different set of BMI phases, again based on process models from the innovation management literature and insights from business model case studies. The four phases identified are initiation (understanding the ecosystem), ideation (generating new ideas), integration (aligning the business model internally), and implementation (making investments). In discussing these phases, the authors focused more on the challenges than on the particular activities performed by business model designers.

A second subset of this literature has examined single cases of business model change, which often yield rich insights into "how to" but lack generalizability. Sosna et al. (2010) studied BMI at the Spanish firm Kiluwa, which developed a franchised network of

Naturehouse stores selling dietary complements in Spain and abroad. They explained how the firm managed to transform its business model through a process of trial-and-error and subsequently scaled up for international expansion. They differentiated two distinct phases: a 5-year period during which the company experimented and explored the nutrition advice store concept, followed by a high-growth exploitation phase during which the company replicated the stores across Spain and the neighboring countries. Demil and Lecocq (2010), drawing on similar concepts, characterized the development of the London football club Arsenal's business model as a "fine-tuning process." And Aspara et al. (2011) focused on the exchanges between corporate headquarters and business subunits in describing the corporate transformation of Nokia between 1987 and 1995. They point out the importance of corporate mechanisms, such as ranking of business units, management accounting systems, and personnel rotation, in facilitating the transfer of a business model from a subunit to corporation level.

Finally, some authors have presented typologies of business model changes (Cavalcante, Kesting, & Ulhøi, 2011) or focused on the later stages of the BMI process (Chesbrough, 2010; McGrath, 2010). Building on the insights of the received literature, we believe it is important that the development of a comprehensive, generalized process model not only describes at a high level of abstraction how BMI works but also is rich and detailed enough to have normative implications for researchers and give useful guidance to practitioners. For this, we examine the design literature.

(p. 401) Design Process

Given the scarcity of academic studies on the actual process of business model design (let alone on the specific process of generating *innovative* business models), we turn to the broader literature on design in order to generate insights about the BMI process. Design has been defined as the activity of changing existing situations into desired ones; it involves human beings using knowledge to create things that do not yet exist but should (Simon, 1996). The notions of design and innovation are thus closely related. Designers, like innovators, deal with ill-defined problems and attempt to find new and desirable solutions. According to Bánáthy (1996, p. 20), "If solutions could be offered within the existing system, there would be no need to design. Thus, designers have to transcend the existing system. Their task is to create a different system or devise a new one."

Design as a process broadly consists of two phases: an analytical phase of finding and discovery, and a synthetic phase of invention and making (Owen, 1993). These phases allow designers "to generate new products, services, business models, and other designs" (Beckman & Barry, 2007, p. 29). According to Brown (2008, p. 88), design can be broken down into three essential components: (1) deep and holistic understanding of users (analytical); (2) visualization of new possibilities, prototyping, and refining (synthetic); and (3) the "creation of a new activity system to bring the nascent idea to

reality and profitable operation” (synthetic). That is, the design process and the notion of business model (i.e., activity system) innovation are inextricably linked.

For the remainder of this chapter, we draw on a model of the design process (e.g., employed by the Californian design company IDEO) that has five phases, two of which are analytical (*observe, synthesize*) and three of which are synthetic and highly creative (*generate, refine, implement*). We will sketch how that process model can be applied to the design of the business model, thus offering arguments that could be useful toward a more process-oriented perspective on BMI. The design process has been described in the academic literature (e.g., Sutton & Hargadon, 1996) and has also received wide coverage in the business press (e.g., Brown, 2009). Although originally used for the design of new products, the model has been deployed more recently to design new services (Bhavani & Sosa, 2008), as well as entirely new businesses (see <http://www.ideo.com/expertise/business-design/>). Its versatility makes it an attractive framework for BMI. Notice that the arguments we develop on the basis of that model are meant to be relevant to the design of business models of new ventures, as well as for redesign of the business models of established incumbents.

Toward a Process Model of Business Model Innovation

The design process model consists of five stages that are linked iteratively: Although we present the model as linear, in reality designers may jump back and forth between the various stages. The stages are *observe, synthesize, generate, refine, and implement*.

Observe

The first stage, *observe*, involves a close examination of how customers use products and services (such as how they use hospital services, take the train, or use their cell phones). It relies on going to the source, not to market research experts (Kelley, Littman, & Peters, 2001). The goal at this stage is for the designer (or more precisely, the design team) to develop a deep understanding of the customer experience, especially of the problems customers face when buying and consuming products and services. This is because “effective design begins with a clear understanding of the problem to be solved” (Boland & Collopy, 2004, p. 189), and for that designers need to be “first-class noticers” (Martins, 2009, p. 30). This also increases the chances of generating truly novel ideas, which are “more likely to be triggered by observing the odd practices of an amateur carpenter or the incongruous detail in a mechanic’s shop than by hiring expert consultants or asking ‘statistically average’ people to respond to a survey or fill out a questionnaire” (Brown, 2009, p. 41).

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Specific techniques that could be helpful for achieving this level of understanding include the use of interdisciplinary teams (e.g., anthropologists, economists, psychologists, engineers, sociologists); journey mapping (i.e., the graphic representation of how customers interact with a company in receiving its product or service—see Liedtka & Ogilvie, 2011); “shadowing” customers (i.e., following them closely and observing their real-time use of products and services); or the use of visual techniques such as photographing consumers or asking them to document their own experience with stories, photos, and videos (see Beckman & Barry, 2007; Bhavani & Sosa, 2008).

Observe, in the context of the business model, has to be interpreted more broadly than just with (p. 402) respect to how end-users interact with a product or service. First, in line with Beckman and Barry (2007), the focus should be on *all* business model stakeholders—not only end-users but also suppliers, partners, and the focal firm itself. Second, observation should be concerned with how stakeholders play their respective roles within a given business model, not (only) on how customers use the products and services delivered as part of it. So the observation stage for the design of new business models is more encompassing and more complex than for the design of new products or services. It requires the designer to gain a deep understanding of the design drivers of the new business model.

Synthesize

The second stage of the design process, *synthesize*, requires that designers take stock, share, and make sense of all they have learned during the observation stage. It involves the ordering of data, search for patterns, and identification of recurring themes and issues that have become salient during the observation stage (Brown, 2009). Beckman and Barry (2007) referred to this step as building “frameworks.” They noted that the essence of this step requires the designers to identify “interesting nuggets or stories from all of the data collected, to find patterns of behavior across the many instances of behavior that were observed, and to see what is missing within the system of use, usability, and meaning that forms the innovation or solution” (Beckman & Barry, 2007, p. 36). Extracting meaningful patterns from masses of raw data collected (i.e., synthesis) is a “fundamentally creative act” (Brown, 2009, p. 70), although there are techniques such as mind mapping (see Liedtka & Ogilvie, 2011) to support it. In short, synthesis is “an attempt to move forward and create a response to the problem—the generation of solutions” (Lawson, 2006, p. 37).

Synthesize, in the context of BMI, means to gain a comprehensive, holistic understanding of the design challenges and influences that the focal firm faces (e.g., what customers are we or should we be serving? What are their needs and goals? What are their problems? Where are we currently falling short in helping customers solve their problems? What could we do better? To what extent do we rely on strategic partners to conduct activities for us? The business model designer needs to develop a strong sense of the market gap(s)

that the focal firm addresses, the problems that it solves for its various stakeholders, and the forces that will shape the design solution.

Generate

The third stage of the design process, *generate*, involves the creation of potential design solutions, at least on a conceptual level. Beckman and Barry (2007, p. 43) noted that this part of the design process “is, perhaps, the best documented and exercised in practice” because of the wide array of techniques available for concept generation, ranging from logical (e.g., morphological analysis) to intuitive (e.g., brainstorming). Each of these techniques comes in many forms (e.g., group vs. individual brainstorming).

IDEO’s use of group brainstorming, for example, relies on a given set of rules, such as “defer judgment,” “build on the ideas of others,” “one conversation at a time,” “stay focused on the topic,” and “encourage wild ideas” (see Kelley et al., 2001; Sutton & Hargadon, 1996). “Brainstorming is the goal-oriented cousin of daydreaming. ... It is fundamental to how we think about innovation” (Liedtka & Ogilvie, 2011, p. 102). Kelley et al. (2001, p. 55) noted that “you can deliver more value, create more energy, and foster more innovation through better brainstorming.” Brown (2009, p. 79), however, cautioned that “brainstorming cannot be built into the structure of every organization.”

Generate, in the context of BMI, involves either making modifications to an existing business model that represent novelty (in terms of new business model content and/or structure and/or governance—see Amit & Zott, 2010) or creating an entirely new activity system from scratch. This can be achieved by engaging in a disciplined brainstorming exercise (which represents a structured technique for unleashing creativity), during which ideas for new business models are generated, inspired by the previous synthesis stage, keeping in mind the previously identified design drivers and the resources and capabilities of the focal firm.

Refine

In the fourth stage of the process, *refine*, the designers proceed to an evaluation of the various design solutions that have been generated in the *generate* stage. The purpose is to narrow down the number of design possibilities to a few. Liedtka and Ogilvie (2011) referred to this process as “concept development”—the act of choosing the best ideas, assembling them into detailed solutions, and evaluating them using focal firm and stakeholder criteria. Beckman and Barry (2007, p. 43) observed that although there are a number of formal evaluation techniques, such as scorecards or multivoting, the evaluation of alternative (p. 403) design solutions is performed “in very informal and ad hoc ways in most organizations.” And Liedtka and Ogilvie (2011, p. 113) suggested that

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“whereas brainstorming is best done by a diverse group that includes people outside the innovation project, concept development requires a dedicated core team.”

One critical component of the refinement stage is concept testing. This often is done through “rapid prototyping,” which entails the production of “mock-ups” or working models that visualize the design solution, make it tangible, and thus facilitate evaluation and decision making (Ulrich & Eppinger, 2004). For example, in the context of an Internet-enabled business model, rapid prototyping might entail the production of mock-up screenshots that illustrate how the focal firm provides its services in conjunction with its partners. However, “the goal of prototyping is not to create a working model. It is to give form to an idea, to learn about its strengths and weaknesses, and to identify new directions” (Brown, 2009, p. 91). Rapid prototyping, in particular, “is an iterative set of activities, done quickly” and aimed at giving the concepts “detail, form and nuance—you bring them to life” (Liedtka & Ogilvie, 2011, p. 23). It helps “people experience a possible future in tangible ways [and] allows a very low-risk way of quickly exploring multiple directions before committing resources to the best one” (Boland & Collopy, 2004, p. 191).

Stakeholder (especially, customer) involvement at this stage is crucial. Designers present prototypes to customers and other stakeholders and observe their reactions and feedback, in order to “iterate [their] way to an improved offering” (Liedtka & Ogilvie, 2011, p. 159). This feedback from stakeholders “is based in the reality of an experience, rather than in an interpretation of a description of that same experience” (Boland & Collopy, 2004, p. 191). This is what makes prototyping so valuable for refining a design solution.

Refine, in the context of BMI, involves (1) consolidating the various new business models generated in the previous stage into classes of alternatives; (2) evaluating these alternatives according to relevant criteria (e.g., feasibility, viability, and desirability—see Brown, 2009); and (3) prototyping them as far as possible (i.e., experimenting on a small scale and narrow scope). By combining and repeating these steps in an iterative manner, the goal in this phase of the design process is to narrow down the fundamental choices for new business model designs and achieve focus and clarity on the details of the emerging designs.

Implement

In the last stage of the process, *implement*, a specific design is selected, and a new product, service, or business (model) is created. In the context of BMI, once the parameters of the new design have been determined, the focal firm also needs to make the requisite organizational and strategic adaptations. The firm’s existing stock of resources and capabilities will have to be modified to fit the requirements of the new design. Some existing resources and capabilities will have to be shed, others redeployed, and new resources and capabilities will have to be created or acquired (Sirmon, Hitt, & Ireland, 2007). In addition, core processes will likely have to be changed. However,

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before engaging in a full-scale launch, the focal firm may decide to perform what Liedtka and Ogilvie (2011, p. 23) called a “learning launch: creating an affordable experiment that lets customers experience the new solution over an extended period of time, to test key assumptions with market data.” For example, before Apple broadly launched its retail stores, it learned about key parameters in its first location (Tysons Corner Center, Virginia) in 2001.

Implement, in the context of BMI, requires putting in place all the elements envisioned by the new design. This includes design elements that refer to the content (i.e., activities), structure (i.e., exchanges), and governance (i.e., partnerships) of the business model. The demarcation with the previous stage (especially the idea of “prototyping”) could be rather fleeting, insofar as it may be neither easy nor desirable to say where the trial-and-error phase stops and full-blown implementation begins. This is especially when implementation proceeds in a gradual, trial-and-error manner, such as when it is guided by the learning-based principles of discovery-driven planning (McGrath & Macmillan, 2000) or effectuation (Sarasvathy, 2001). In any case, attention must be paid in this stage to the focal firm’s organization and how it fits with the new business model. Organizational redesign may be required as part of implementation in order to make the new business model work.

Conclusion

In this chapter, we have begun to delineate a process perspective on BMI. We have anchored our conceptual development on two observations: (1) the existence of a gap in the literature on business models regarding the question of how new or existing firms actually do (or should) change their (p. 404) business models, and (2) the idea that innovation can be achieved through design, which follows an effective process.

The core of the model is formed by five stages—observe, synthesize, generate, refine, and implement. These stages are linked in a closed loop, indicating that individual designers, or design teams, may have to cycle through the process multiple times in an iterative manner, sometimes skipping steps, before converging on a new business model design for the focal firm. That design may be novel in terms of its content and/or structure and/or governance. The novelty, in order to qualify as a BMI, needs to be manifest at the system level in terms of business model performance or functionality (i.e., how the system behaves and how it performs *as a whole* and not just in any of its parts). Our model thus links creativity at the individual and firm levels with innovation at the business model level of analysis. The five-stage business model design process that we have outlined in this chapter, once codified (as within the Californian design firm, IDEO), can be considered a firm-level capability. Creative individual designers (e.g., entrepreneurs) often play a strong role in that process. And the outcome is BMI, which can span firm and

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even industry boundaries (Amit & Zott, 2001). We thereby acknowledge explicitly the multilevel nature of innovation.

Innovation, in turn, lies at the heart of an entrepreneurial process that centers on the discovery, creation, and profitable exploitation of market opportunities (Baker & Nelson, 2005; Drucker, 1985; Kirzner, 1997; Schumpeter, 1934). Innovation-driven entrepreneurs can disrupt the market equilibrium and initiate a “gale of creative destruction” (Schumpeter, 1934). The creative process that leads to BMI involves out-of-the-box thinking about the value-creation opportunities for a focal firm. It thus involves endowing resources with new wealth-producing capacity by enabling new combinations of resources and capabilities that are either controlled by or accessible to the focal firm.

We believe that our model of the business model design process has implications for both practice and academia. For relevant decision makers such as CEOs, entrepreneurs, and general managers of business units, our model holds promise for thinking more proactively about business model design. As Amit and Zott (2014) argued, such “mindfulness” about design is a first, crucial step toward breakthrough BMI. More specifically, by building on the design literature, the model suggested in this chapter attempts to integrate the received knowledge on business model content with the challenges associated with the process of BMI. It yields a concrete, step-by-step approach to developing such innovation, which has been largely absent from the business model literature. For researchers, our model opens new territory by pointing toward the importance of BMI *as a process*. By drawing on the design perspective, we offer a first step in the direction of understanding that process better. But much more research, both conceptually and empirically, is required to fully understand how innovative business models are developed in practice and how they should be developed in order to offer maximum benefit for stakeholders.

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Notes:

(1.) Some scholars have suggested broader domains for BMI, in line with their corresponding definitions of the business model concept. Mitchell and Coles (2003), for example, propose that BMI involves modifications in the “who,” “what,” “when,” “why,” “where,” “how,” or “how much” involved in providing products and services to customers.

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Similarly, Johnson, Christensen, and Kagermann's (2008) notion of BMI involves the firm's value proposition, target customers, product and service offering, resources (e.g., people, technology, equipment), revenue model, cost structure, processes, rules, and norms.

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