

a unique BM, the company attempted to solve two-sided market issues in sustainable transportation. However, Better Place's bankruptcy in May 2013 demonstrates some of the complexity associated with developing new BMs for sustainability.

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## BUSINESS MODEL-RELATED IDEAS: THE THEORY AND PRACTICE OF BMI

The BM is a systemic and conceptually rich construct, involving multiple components, several actors (boundary spanning) and complex interdependencies and dynamics. Because of that, the managerial cognitive effort required to visualize and explore possibilities for BMI as well as the effort for orchestrating (implementing and managing) the architecture of innovative BMs may be considerable.

Awareness of the complexities associated with BM cognition—description of existing BMs or design of new ones—coupled with the increasing relevance of BMs and business modelling for practice (cf. Zott et al., 2011), have led academics and practitioners to propose several avenues and tactics in support of BMI. Different tools such as perspectives, frameworks, and ontologies have been proposed that employ a mix of informal textual, verbal, and ad hoc graphical representations. These tools ascribe, with varying degrees, to three core functions at the nexus between the theory<sup>4</sup> and practice of BMI. First, they offer a '*reference language*' that fosters dialogue, promotes common understanding, and supports collective sense-making (cf. Amit and Zott, 2012). Second, by offering scaled-down simplified representations of BMs, they allow for graphical representations that simplify cognition and offer the possibility of virtually experimenting with BMI (for example, by supporting the formulation and elaboration of important 'what if' questions and the evaluation of strategic alternatives: Osterwalder and Pigneur, 2010). Third, they offer representations—both graphical as well as verbal—that allow managers and entrepreneurs to articulate and instantiate the value of their venture and to support the engagement of external audiences so as to gain legitimacy, activate resources, and foster action. We note that different tools and perspectives tend to emphasize certain functions while overlooking others. For example, the strength of certain perspectives resides in their simplicity and parsimony. As such, these perspectives are particularly effective in supporting collective sense-making around a BM. Other perspectives are more articulated; their development may be slightly more arduous but allow for a better appreciation of the dynamics occurring between the various components of a BM (cf. Casadesus-Masanell and Ricart, 2007, 2010).

More broadly, we note and illustrate in Figure 21.2 that tools supporting BMI could be structured into several levels of decomposition with varying depth and complexity depending on the degree to which they abstract from the reality they aim to describe.<sup>5</sup>

At the highest level of abstraction is a view of the BM as a *narrative* (Perkmann and Spicer, 2010). According to Magretta (2002), the BM is a story, a verbal description of how an enterprise works. It should be noted that BM narratives not only entail a descriptive function, but also a normative one. According to Brown (2000), narratives represent an important way in which people seek to infuse ambiguous situations with meaning and persuade sceptical audiences that their account of reality is believable. Perkmann and Spicer (2010) have suggested that because of their forward-looking character, BM narratives play an important role in inducing expectations among interested constituents about how a business's future might play out. Narratives of the BM can be constructed by managers and entrepreneurs and used not only to simplify cognition, but also as a communicative device that could allow achieving various goals, such as persuading external audiences, creating a sense of legitimacy around the venture (for example, by drawing analogies between a venture's BM and the BM of a successful firm) or guiding social action (for example, by focusing attention on what to consider in decision-making and instructing how to operate).

The recognition of patterns in the structure of BMs has led to the introduction of typologies and *BM archetypes*. An archetype can be understood as an ideal example of a type, in this case a BM. A well-known example is the *Freemium* BM, adopted by firms such as Acrobat: its core logic lies in delivering a basic version of the product for free and charging for a premium version. Gillette popularized what today is known as the *Razor and Razor Blade* BM, which rests on 'selling cheap razors to make customers buy its rather expensive blades' (Zott and Amit, 2010: 218). This model is now popular in other industries where products such as printers (and cartridges) or game consoles (and software games) are brought to market relying on a similar logic. Archetypes are often presented with an identifying label (a 'title' that identifies the BM type) followed by a short description of the core essence of the BM. Archetypes perform several functions, including offering descriptions of 'role models', that is, models to be followed and imitated (Baden-Fuller and Morgan, 2010).

While narratives and archetypes may serve several important purposes, they tend to be difficult to manipulate and manoeuvre (e.g. it is difficult to evaluate the likely consequences of changes in one part of the BM on the entire system on the basis of a narrative or an archetype). Higher descriptive accuracy, and perhaps a more rigorous approach to structuring and organizing plans for BMI, are offered by *graphical frameworks* of the BM, which are conceptualization and formalization of the BM obtained by enumerating, clarifying and representing its essential components (see Figure 21.2). A popular example among managers and practitioners is represented by the Business Model Canvas<sup>6</sup> (Osterwalder and Pigneur, 2002). The Business Model Canvas offers a scaled-down representation of the generic BM that is obtained by enumerating and visualizing what the authors consider to be the nine critical components of a BM. Similarly, Johnson and colleagues (Johnson, Christensen, and Kagermann, 2008; Johnson, 2010) have proposed a simple framework comprising four interdependent elements; customer value proposition, profit formula, key resources and key processes. By focusing on these elements the framework offers a synthetic 'representation

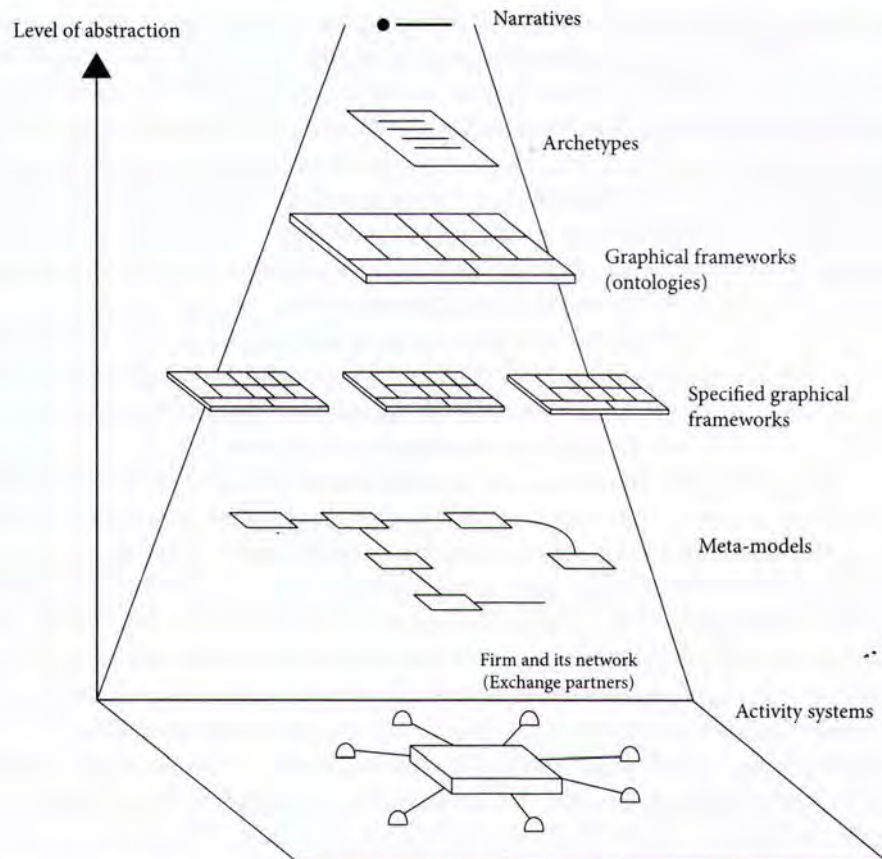


FIGURE 21.2 Business models at different levels of abstraction from 'reality'

of how a business creates and delivers value, for both the customer and the company' (Johnson, 2010: 22).

We contend that the power of frameworks and archetypes, and perhaps the explanation of their popularity among practitioners, stands in their simplicity and parsimony, which, however, come at the expense of descriptive depth. In particular, frameworks and archetypes have shortcomings in their inability to offer a full account of the dynamic aspects associated with a particular BM. *Meta-models*<sup>7</sup> of the BM may help to overcome this limitation. Casadesus-Masanell and Ricart (2010) have built on system dynamics (Sterman, 2000) and offered a way to conceptualize and represent BMs based on choices and consequences, and on an evaluation of the degree to which consequences are flexible vs. rigid (an important aspect to consider in dealing with BM reconfiguration). Causal loops (both damping and self-reinforcing) support understanding of how the architecture of choices drives the overall behaviour of a BM and leads to a configuration of consequences. This perspective allows for a more fine-grained description of existing BMs supporting the use of 'theories' to describe and understand the link between choices and likely consequences.

Gordijn and Akkermans (2001) have proposed a conceptual modelling approach that they call the 'e3-value ontology', designed to help define how economic value is created and exchanged within a network of actors. This modelling technique takes a value viewpoint, unlike other traditional modelling tools that take either a business process viewpoint (typical of operations management) or a system architecture viewpoint (typical of the information systems literature). The proposed meta-model borrows concepts from the business literature such as actors, value exchanges, value activities, and value objects, and uses these notions to model networked constellations of enterprises and end-consumers who create, distribute, and consume things of economic value.

In a similar vein, Zott and Amit (2010) have proposed an activity system perspective for supporting the design of new BMs. This perspective relies on an understanding of the BM as a system of interdependent activities (rather than choices and consequences) centered on a focal firm and including those conducted by the focal firm, its partners, vendors or customers, and so on. As such, it allows describing and conceptualizing BMs with considerable depth and accuracy. According to the authors, 'an activity in a focal firm's BM can be viewed as the engagement of human, physical and/or capital resources of any party to the BM (the focal firm, end customers, vendors, etc.) to serve a specific purpose toward the fulfillment of the overall objective' (2010: 217). To better understand the BM as a set of interdependent activities, Zott and Amit differentiate between design elements (i.e. content, structure, and governance) and design themes (efficiency, novelty, complementarities, and lock-in). Design elements comprise the selection of activities (content), the sequencing between them (structure) and choices concerning *who* performs them (governance) within the network. Taken together, design elements comprise the *infrastructural logic* of a BM's architecture. In addition, managers could structure the activity system around different *design themes*. For example, 'efficiency-centred' design (with efficiency being a design theme) refers to how firms use their activity system design to aim at achieving overall greater efficiency through reducing transaction costs. Other design themes are 'novelty' (innovation in the content, structure, or governance of the activity system), 'lock-in' (BM whose central feature is the ability to keep third parties attracted as a BM participant) or 'complementarities' (bundling activities within a system so as to produce more value than running activities separately).

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## MANAGING BUSINESS MODELS

Challenges associated with managing BMI go beyond the complexities related to managerial cognition and sense-making. While BMI has the potential for transformative growth and exponential returns for the innovator, it is a highly risky move that may involve changing the entire architectural configuration of a business. Accordingly, a critical challenge for managers is understanding when new BMs are needed (Johnson, 2010). Once opportunities have been identified whose exploitation requires the development of new BMs, managers in incumbent firms may be confronted with problems

longer valid, efficient, useful, or profitable. In such moments (or perhaps just before!), organizations that embrace BMI will embrace the possibility to reshape industries and possibly change the world. As this exciting field is expanding every day with increasing scholarly and managerial interest, we hope this chapter helps establish a better and more uniform understanding of BMI, and helps bridge the gap between theory and practice.

## NOTES

1. In economics and business management the Bottom of the Pyramid (or 'Base of the Pyramid' or simply 'BoP') is the term used to refer to the largest but poorest socio-economic group. The expression is used in particular by people developing new models of doing business that deliberately target that demographic, often using new technology.
2. As previously noted, the process of reconfiguration also comprises creating, implementing, and validating a BM. In this sense the set comprising reconfiguration activities could be considered a superset of design activities.
3. However, note the caveats to this aspect of the theory developed in, among others, King and Tucci (2002).
4. The term 'theory' as related to business model and BMI is used here quite deliberately as resembling van Aken's notion of Mode 2 knowledge production as the product of a Design Science Research approach (van Aken, 2005) or as comprising an articulated body of knowledge in the form of what Simon (1969) understood as *criteria for the design* of man-made social artifacts (in this case organizations).
5. Common across these tools is an (often implicit) understanding of the business model as a *model* (Baden-Fuller and Morgan, 2010), i.e., a simplified representation of a reality that exists at the level of the firm and its network of exchange partners.
6. Initially known as the 'Business Model Ontology', the framework developed by Osterwalder and Pigneur has become increasingly popular with managers under the label 'Business Model Canvas'.
7. We borrow the term *meta-model* from the literature on systems engineering. In systems engineering, meta-modelling is generally understood as the analysis, construction, and development of the frames, rules, constraints, models, and theories applicable and useful for modelling a pre-defined class of problems.
8. Johnson (2010) provides several real examples of companies competing through their BM. Zipcar offers car sharing services and competes with traditional car rental companies on convenience. IKEA mixed some degree of convenience and customization with radically lower costs for home furniture.

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