

**Bridging Strategic Planning and Business Model Management**  
**A Formal Control Framework to Manage Business Model Portfolios and Dynamics**  
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# **Bridging Strategic Planning and Business Model Management –**

## **A Formal Control Framework to Manage Business Model Portfolios and Dynamics**

### **Abstract**

Despite the increasing interest in the intersection between strategic planning and business model management, research and practice struggle to integrate the two activities. By applying a rationalist view and drawing on the formal control theory, we develop an integrated management framework that provides a conceptual model of how to achieve consistency between the relevant goal and the planning levels. Therefore, we decompose the complex organizational activities into the level strategy, business model portfolio, tactics, and operations. For each level, we specify the formal activities and objectives and elaborate how the levels determine each other. Furthermore, we explain how higher and lower level formal control loops ensure alignment and that the appropriate level of the organization responds to changes in the environment. Finally, we discuss how these formal control mechanisms allow for proficient management of the dynamics inherent in strategy and business model management.

**Keywords:** formal control; formal planning; strategic planning; business model portfolio; business model dynamics;

### **1. Introduction**

When the term business model became mainstream approximately 15 years ago, few conversations failed to mention Amazon as a best practice example of a firm that changed its industry by introducing a new business model to sell books. Today, Amazon follows a much broader strategy to provide end consumers and business customers with physical and digital goods. Under the Amazon umbrella, one finds different businesses such as Amazon Books (including Kindle), Amazon Marketplace, Amazon Music and Videos (including Echo, Alexa, and IMDB), Amazon Prime (linking the retail, music, and video business plus original broadcasting content with the productions of Amazon Originals), Amazon Gaming, Amazon Web Services, Amazon Go, Amazon Pay, Amazon Fire, and Amazon Advertising – each of them operating its own business model that is generally related to that of the others. Double-digit growth rates in both business and market capitalization during the last few years demonstrate that the chosen business models are convincing for customers, business partners, and investors alike. While

these examples show that business model management and strategic planning are intertwined with each other, the academic literature on this link remains silent: business models are extended, transformed, and newly created just as the organizations they are representing, but research does not provide any guidance on how to design and orchestrate the landscape of business models within an organization over time.

In general terms, the business model articulates a firm's value proposition; describes the deployment of intellectual and physical resources, technologies, and capabilities in value-creating activities (inside and outside the firm); and ensures that a share of the financial value generated will be captured within the boundaries of the firm (e.g., Haslam, et al., 2015). The body of literature on business models (e.g., Lambert & Davidson, 2013) has made considerable progress regarding the conceptualizations and definitions of business models (Magretta, 2002; Wirtz et al., 2016, Massa et al., 2017), their underlying dimensions or elements (e.g., Al-Debi et al. 2008; Demil & Lecocq, 2010; Hamel, 2000; Hawkins, 2002; Johnson et al., 2008; Markides, 2000; Osterwalder & Pigneur, 2010), business model archetypes (Baden-Fuller & Morgan, 2010), and the innovation and renewal of business models to gain sustainable competitive advantage (Clauss, 2016; Gassmann et al., 2013; Spieth & Schneider, 2016; Teece, 2010; Zott & Amit, 2010). The literature connecting business models with strategic planning, however, is still fragmented. Scholars have recently started to link the concept of business models with strategic management theories by looking through different lenses at this relationship, such as market demand, resources and dynamic capabilities, industry dynamics, and organizational design (Ritter & Lettl, 2018).

These conceptual studies highlight several aspects that need to be considered when aiming to develop this perspective further, namely, alignment, dynamics, and a broader portfolio view on business models. The alignment and interrelations between the elements of a business model are supposed to determine success or failure of an organization (Ritter, 2014). This notion brings the concept of business models closer to the concept of strategy (DaSilva & Trkman, 2014) because the strategy also describes how all elements of what a firm does fit together (Porter, 1996). To achieve this alignment, firms can follow a deliberate approach by anticipating future developments and deriving appropriate plans, or an emergent approach by constantly adjusting to the given situation (Dorst & Dijkhuis,

1995). Some scholars emphasize that the alignment perspective is the only one contributing to the academic discussion (Foss & Saebi, 2018) and that a business model is nothing but the operative definition of the strategy (Casadesus-Masanell & Ricart, 2010). However, scholars have not elaborated on the organizational mechanisms necessary to achieve this alignment between business model and strategy.

Closely related to the aspect of alignment is the dynamic dimension inherent in the concept of business models, which refers to how firms can adapt to changes in the environment in the way they successfully translate strategic choices into operational business (Fjeldstad & Snow, 2018). Prior research recognized that appropriate adaptations to changes in the environment require each element of the business model to continuously interact with its relevant stakeholders (Demil & Lacocq, 2010) and the organization to build dynamic capabilities (Teece, 2010) but does not provide organizational mechanisms to manage “business models in motion” (Ritter & Lettl, 2018).

Finally, with few exceptions (Meskendahl, 2010; DaSilva & Trkman, 2014; Meifort, 2016, Snihur & Tarzijan, 2018), the main body of research applies an isolated view of business models that does not consider a portfolio of potentially interrelated business models. As a result, strategic planning and business models are typically managed separately, which often leads to critical inconsistencies in their operative realization. Given that firms often hold multiple business models that share activities, resources, and value partners, an integrated business model portfolio view is needed to manage the interdependencies across business models within a firm (Snihur & Tarzijan, 2018). However, present conceptual studies do not provide further details on how business model portfolio management is linked to strategy and on which organizational mechanisms are required to manage the interactions and dynamics.

Thus, research on the integration of business model into strategic planning remains fragmented and unclear (Ritter & Lettl, 2018). In practice, this current state is reflected by low formality in business model development and an unsystematic approach to linking business model design with strategy making (Bucherer et al., 2012). In this article, we apply a rationalist view and develop an integrated management framework that links formal strategic planning and business model management. We

decompose this complex management task into different levels – strategy, business model portfolio, business model tactics, and business model operations – and clarify the formal activities and objectives of each level. Our framework elaborates how these levels are interrelated and determine each other, ensures that information asymmetries are reduced, and ensures that all levels are aligned. As organizations act in changing environments and have to consider the concerns of multiple stakeholders, the framework also maps the mechanisms that allow organizations to adapt to the dynamics across all levels. In developing our integrated management framework, we draw on the control theory (Ouchi, 1979; Lord & Levy, 1994) with its formal mechanisms of process control, output control, and control loops within and between decision levels. The control theory serves as an adequate theoretical foundation because strategic planning and business model management in their formulation and implementation require the involvement of different departments, functional domains, and positions at different levels of the organization.

Our research joins the conversation on business models and strategic planning and contributes to the literature by connecting the fragmented viewpoints and developing them further to an integrated coordination and control framework that provides mechanisms to achieve alignment between strategy, business model portfolio, and environment. By introducing multiple decision levels and control mechanisms, the proposed management framework should support to make better strategic decisions, effectively translating strategy into operating business, and responding to dynamic changes in an agile manner. The purpose of the proposed model is to provide organizations with a framework that (a) lays out a logical sequence for strategic planning and implementation that also considers that realizing strategy might require multiple, interdependent business models; (b) clarifies tasks and responsibilities that can be assigned to employees at different levels and the necessary information flows and control mechanisms to ensure goal congruency across levels; and (c) provides efficient bottom-up response and escalation mechanisms that ensure the adaptability of an organization and that allow for effective recognition and exploitation of opportunities arising from changes in internal and external environments. From a research perspective, the framework should help academics position their research on business model management with regard to their chosen level of analysis (i.e., portfolio

level or tactical level) and should clarify how to connect strategy making with business modeling from a control perspective.

## **2. Theoretical Foundation**

### ***2.1 Formal Strategic Planning and the Need to Integrate Business Model Management***

Formal strategic planning follows a rationalist view that top management develops a vision of the company and translates it into a formal plan of goals and activities that are systematically implemented throughout the firm over time (Grant, 1991). It is seen as a formalized periodic process of strategy formulation, implementation, and control and typically includes a logical sequence of activities designed to translate the top management goals to middle and lower levels (Floyd & Wolf, 2015). The most common elements in this sequence of activities are articulating a vision, defining a mission, setting objectives, analyzing internal and external environments, selecting generic strategies, generating, evaluating, and selecting strategic alternatives, implementing the strategy, and controlling its realization (Armstrong, 1982; Hambrick & Frederickson, 2005; Minzberg, 1994). A number of studies have shown a robust positive relationship between formal strategic planning and firm performance (Glaister et al., 2008; Glaister & Falshaw, 1999; O'Regan & Ghobadian, 2007; Schwenk & Shrader, 1993). More recently, Dibrell et al. (2014) found that the effect of formal strategic planning on firm performance is fully mediated by firm innovativeness. Thus, performance increases only when formal planning efforts are directed toward the firm's flexibility and renewal. This finding is of particular relevance because it highlights that formal planning systems must ensure appropriate response mechanisms to allow for adaptation to changes in the environment.

Past literature proposes that a business model translates the strategy into an operative definition and represents the firm's realized strategy (Shafer et al., 2005; Richardson, 2008; Johnson et al., 2008; Casadesus-Masanell & Ricart, 2010). This suggests that business model development and management should be an integrated part of formal strategic planning, but current models have not clarified at which stage(s) the business model should be considered. Recent studies analyzing current practices in the field also demonstrate that business model management has not yet become an

integrated part of formal planning. Even large firms neglect or actively refuse to formalize and institutionalize their business model activities because they think that changes in the business model are just sporadic events (Bucherer et al., 2012). In an attempt to identify how and where firms determine their business models in the formal planning process, Cortimiglia et al. (2016) found that most parts of the business model tend to be defined at the end of the formal planning process, which suggests an operational rather than a strategic approach toward business model development. Other scholars report on approaches in which business models are used only in an ad hoc fashion during the firm's strategic discourse:

*Business model as a communication tool for strategy anchoring:* Some organizational planners use business models to anchor and to stimulate the strategic discourse in their organizations. They use the business model framework to explain the “given” business logic of the organization (Havemo, 2018) and then initiate a discussion about alternatives. In this sense, the business model serves as a contextual communication tool rather than as an analytical tool with a clear link to strategy (Hacklin & Wallnoefer, 2012).

*Business model as an exploratory tool for strategy option making:* Another approach observed in the field is the use of business models to explore alternatives within the strategic constraints of the firm's current strengths and weaknesses. Drawing on existing resources and capabilities embedded in the business model's value creation element, alternative value propositions are evaluated and selected. This approach not only results in incremental modifications of the business model (Cortimiglia et al., 2016) but can also shift the firm's business strategy (Bucherer et al., 2012).

*Blurred boundaries between business model and strategy:* For new firms, strategy and business models are not distinguished but are fully integrated and developed together (Blank, 2013). In other words, new firms are started from scratch, do not have to consider prior strategic choices, and just need to focus on the commercialization of their idea (Chesbrough & Rosenbloom, 2002). Once a market or technology opportunity has been identified, value proposition and target market are defined immediately. Strategy making is initiated, but the analysis of the internal and external environment is focused only on validating the opportunity and refining the value proposition. The search and selection

of strategic alternatives is limited to value creation, value delivery, and value capture. Thus, the entire strategy-making process involves validating a predefined value proposition and selecting the best business model configuration to enable it (Cortimiglia et al., 2016).

This brief overview shows that the observed approaches to linking a firm's strategy and business model in practice are highly situation specific and appear unsystematic or even unplanned. Thus, there is a need for a structured, formal approach that supports organizational decision makers to adapt to increasing dynamics in the environment and translate their strategy into business models and actions that retain a competitive advantage. To develop this perspective further and generate a comprehensive framework, we draw on the formal control theory. This theoretical lens is a good fit for our view on formal strategy and business model management and provides appropriate mechanisms to align the activities and decisions at different levels within the firm and with the environment.

## ***2.2 Formal Control Theory***

Formal control addresses the organization's challenges in integrating the activities of their differentiated subunits and individuals to achieve the organization's goals. The organizational control theory proposes two formal mechanisms to achieve this integration (Ouchi, 1977, 1979; Eisenhardt, 1985; Turner & Makhija, 2006): output and process control. Output control refers to specifying interim and final outcomes that the organization desires and monitoring the progress in achieving them. Process (or behavioral) control refers to specified activities that the organizational members have to perform to realize the defined goals. Process and output controls are the main components of a formal control system that itemize the activities and define decision points to align organizational behavior with the predefined goals. Formal control facilitates the clarity about the organization's goals and the means to achieve them. Consequently, clear goals, tasks, and responsibilities support the coordination between different units and reduce information and knowledge asymmetries among organizational members (Jaworski & Macinnis, 1989; Schultz et al., 2019).

We further rely on the technical control theory because it expands the former view by realizing that goals and formal control are located at different hierarchical levels and introduces the concept of lower



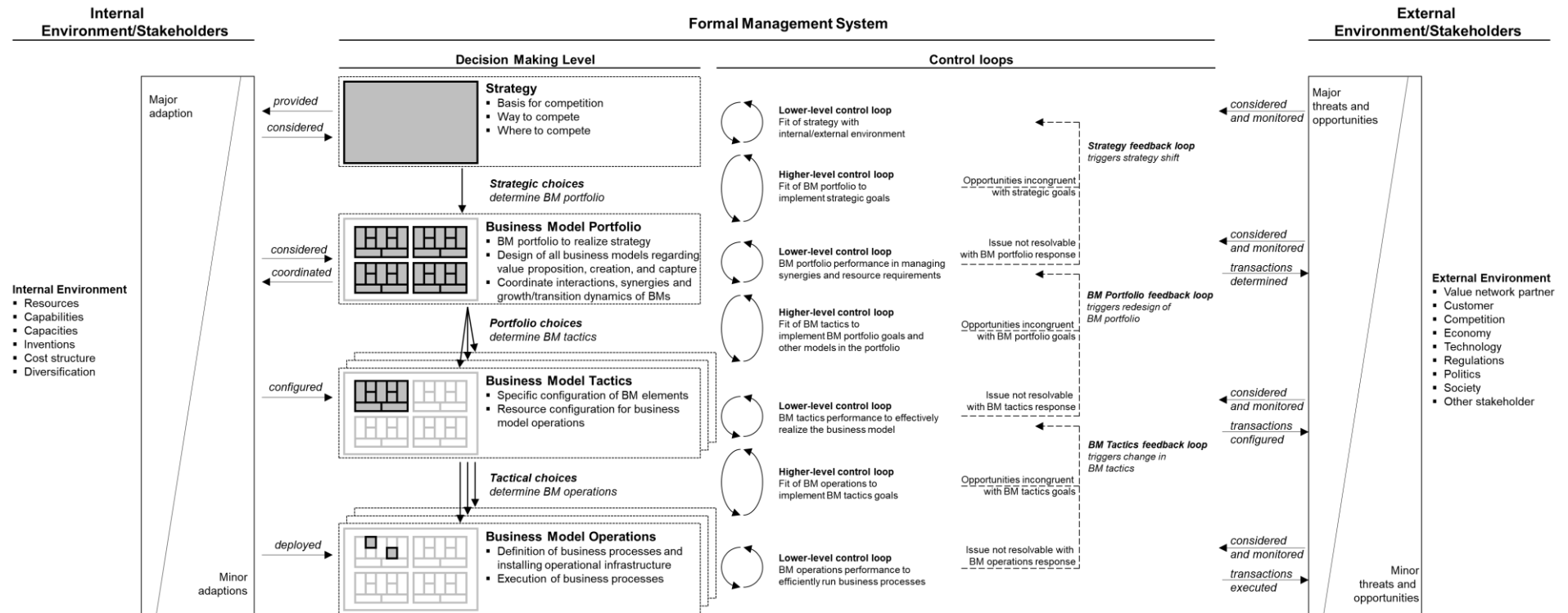
and higher level control or feedback loops (Lord & Levy, 1994; Diefendorff & Gosserand, 2003; Schultz et al., 2013). Based on the idea of a goal hierarchy, short-term goals guide behaviors at operational levels and are regulated by lower level control loops. Long-term higher level goals determine the short-term goals through a higher level control loop. These mechanisms ensure that the goals are aligned across levels in such a way that the short-term goals at lower levels represent the means by which the higher level goals are intended to be achieved. The importance of applying both lower and higher level feedback loops increases with the complexity and duration of tasks. Greater complexity makes it more difficult for individuals to fully understand emerging problems, to recognize interdependencies, and to find or realize appropriate solutions (Fransoo & Wiers, 2006). In such situations, higher order control guides operational levels by determining their lower level goals. In case operational levels fail to achieve their goals, the feedback loops can trigger change and adaption of higher level goals. Drawing on the concepts of process control, output control, and control loops, we now develop an integrated management framework that specifies the activities and outcomes at different decision levels and elaborate on the mechanisms necessary to align them.

### **3. The Integrated Management Framework**

Drawing on past research, the integrated management framework that we propose introduces four distinct levels: *strategy*, *business model portfolio*, *business model tactics*, and *business model operations*. Strategy determines the field in which the firm wants to succeed, and the business model translates the strategic direction into an operative definition (e.g., Johnson et al., 2008; Casadesus-Masanell & Ricart, 2010) that defines the necessary activities and transactions with stakeholders (Chesbrough & Rosenbloom, 2002; Zott et al., 2011). Because multiple business models might be required to fully pursue the strategy (Sabatier et al., 2010), the business model portfolio is the second level, operating at an intermediate level between strategy and its tactical and operational realization. Decisions at the business model portfolio level determine the tactical and operational level of the business model necessary to implement and operate it.

Following the principles of output and process control, we now explain the main focus, objectives, activities, and deliveries at each level. The mechanisms of feedback and control loops allow us to further link the different levels with each other. Figure 1 illustrates the integrated management framework, and Table 1 summarizes the core elements of each level. We illustrate each decision level using short case studies drawn from different industries to show how to apply them in different business contexts. In the following section, we illustrate the mechanisms of the entire integrated framework for one case in greater detail.

**Figure 1.**  
Business model (BM) decision making levels



**Table 1.**  
Description of the Levels in the Integrated Management Approach

	<b>Strategy</b>	<b>Business Model Portfolio</b>	<b>Business Model Tactics</b>	<b>Business Model Operations</b>
<i>Focus</i>	<ul style="list-style-type: none"> <li>Make strategic choices</li> </ul>	<ul style="list-style-type: none"> <li>Translate strategic choices into business model portfolio choices</li> </ul>	<ul style="list-style-type: none"> <li>Make residual choices for each business model</li> </ul>	<ul style="list-style-type: none"> <li>Implement each business model</li> </ul>
<i>Determines</i>	<ul style="list-style-type: none"> <li>Way to compete</li> <li>Where to compete</li> <li>Basis for competition</li> </ul>	<ul style="list-style-type: none"> <li>Set of realized business models</li> <li>Dynamics of business model realization</li> </ul>	<ul style="list-style-type: none"> <li>Design of the specific business model elements</li> </ul>	<ul style="list-style-type: none"> <li>Operative activities</li> </ul>
<i>Determined by</i>	<ul style="list-style-type: none"> <li>Opportunities/threats and strengths/weaknesses of internal and external environment</li> </ul>	<ul style="list-style-type: none"> <li>Strategic choices</li> </ul>	<ul style="list-style-type: none"> <li>Business model portfolio choices</li> </ul>	<ul style="list-style-type: none"> <li>Tactical choices</li> </ul>
<i>Objective</i>	<ul style="list-style-type: none"> <li>Advantageous competitive position</li> </ul>	<ul style="list-style-type: none"> <li>Strategy realization</li> </ul>	<ul style="list-style-type: none"> <li>Business model's effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Business model's efficiency</li> </ul>
<i>Output</i>	<ul style="list-style-type: none"> <li>Contingent plan of action</li> <li>Strategic resources and capabilities</li> </ul>	<ul style="list-style-type: none"> <li>Activity system</li> <li>Stakeholder agreements</li> <li>Portfolio of business models translating strategy into dynamic business logic</li> </ul>	<ul style="list-style-type: none"> <li>Plan of action</li> <li>Detailed definition of the business model's elements and their interplay</li> </ul>	<ul style="list-style-type: none"> <li>Activity system</li> <li>Execution of business processes of each business model's elements</li> </ul>
<i>Main tasks</i>	<ul style="list-style-type: none"> <li>Analyze current and future internal and external environment</li> <li>Make contingent choices on where, how, and on what basis to compete</li> <li>Ensure internal consistency and fit between resources and the external environment</li> <li>Build flexible resources and (dynamic) capabilities</li> <li>Provide assets and resources</li> <li>Monitor strategic performance and adapt focus</li> </ul>	<ul style="list-style-type: none"> <li>Assess alternative business models</li> <li>Design each business model's value proposition, creation, and capture</li> <li>Identify and coordinate stakeholders for value creation and capture</li> <li>Ensure strategic fit of BM portfolio</li> <li>Identify synergies and coordinate resources across models</li> <li>Manage timing and the transition of new and old business models</li> <li>Monitor business model portfolio performance and environment</li> <li>Adapt business model portfolio according to major changes in the environment</li> </ul>	<ul style="list-style-type: none"> <li>Assess alternatives for the design of business model elements</li> <li>Configure business model elements and required resources</li> <li>Monitor overall business model performance and environment</li> <li>Adapt business model elements according to minor changes in environment</li> </ul>	<ul style="list-style-type: none"> <li>Develop business processes</li> <li>Run the business model</li> <li>Monitor business process performance and environment</li> <li>Adapt business processes according to inefficiencies and minor changes in environment</li> </ul>
<i>Lower level control loop</i>	<ul style="list-style-type: none"> <li>Monitor whether higher level strategy fits the environment</li> </ul>	<ul style="list-style-type: none"> <li>Monitor whether business model portfolio considers interdependencies between elements of business models regarding resources, timing, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Monitor whether business model is configured effectively considering the interplay between business model elements</li> </ul>	<ul style="list-style-type: none"> <li>Monitor whether business processes of business model elements are efficient</li> </ul>
<i>Higher level control and feedback loop</i>		<ul style="list-style-type: none"> <li>Monitor whether business model portfolio realizes strategic goals</li> <li>Initiate change in strategy (goals) where issues cannot be resolved by portfolio adaptations or where internal/external changes manageable at portfolio level are incongruent with strategic goals</li> </ul>	<ul style="list-style-type: none"> <li>Monitor whether business model configuration complies with business model portfolio goals</li> <li>Initiate change in business model portfolio (goals) where issues cannot be resolved by tactical changes or where internal/external changes manageable at the tactical level are incongruent with business model portfolio goals</li> </ul>	<ul style="list-style-type: none"> <li>Monitor whether business processes comply with business model tactical goals</li> <li>Initiate change in tactics (goals) where issues cannot be resolved by operative adaptations or where internal/external changes manageable at operational level are incongruent with business model tactical goals</li> </ul>

### *3.1 Strategy Level*

A business strategy is a set of higher order choices about how to position a firm in an industry. It describes a formula for how a business competes and what policies are needed to ensure that all elements of the business fit together and reinforce each other (Porter, 1980; 1996). Strategy is the result of trade-off decisions about where to compete (market selection, competition selection), the way to compete (technology, timing), and the basis (resources, capabilities) for competition (Aaker, 1989). As a result, organizations choose to compete where internal strengths meet external opportunities, neutralizing external threats and avoiding areas where internal weaknesses may cause harm (Porter, 1980). These choices refer to the goals, resources, capabilities, and operational policies required to achieve the desired position; they guide the entire organization in its activities (Porter, 1980; Caves, 1984; Ghemawat, 1991). The strategy is strongly focused on positioning the firm in the competitive environment and achieving a sustainable competitive advantage. It considers the resources and capabilities necessary to achieve this superior position and assesses which of these are already available and which need to be developed or acquired. The strategy is therefore future oriented and usually applies a long-term perspective. Capabilities and assets require time to develop, and a strategic position requires continuity to gain credibility among customers, employees, and other stakeholders to ensure the viability of a firm's business (Haslam et al., 2015). Consequently, these higher order choices are not easily reversible. The strategy, however, also needs to anticipate future changes in the industry and the economy and to plan actions for different scenarios, such as competitive moves, the entry of imitators, shifts in the suppliers or customer base, new technologies, fiscal politics, stakeholder concerns, and economic slowdown. For minor exogenous changes, small adaptations at lower levels may suffice, but major exogenous changes in the environment require even the fundamental strategic choices to adapt. In particular, regulatory authorities and institutional stakeholders often exert a strong influence on the whole industry and may require the organization to redefine its strategy and, with it, its business model (Haslam et al., 2013). Thus, the strategy is a contingency-based plan of action to remain competitive, which provides guidance for a range of contingencies that may arise from factors that are beyond the organization's control (Casadesus-Masanell & Ricart, 2010; DaSilva & Trkman, 2014).

From the control theory perspective, a formal strategic planning process ensures that changes in the environment are monitored, opportunities are uncovered, and strategic choices are made. A formal strategic planning process results in clear strategic positioning and a definition of the resource base. The control loop at the strategy level addresses the appropriateness of the strategy and resources in the given environment, and the result of this loop determines the goals for the next lower level – the business model portfolio – by prescribing where and how to compete.

### ***3.2 Business Model Portfolio Level***

The business model is a concept at the intermediate level between the strategy and its tactical and operational realization (Magretta, 2002). A business model represents the logic of the operations with which the organization actually competes in the market. Therefore, the business model reflects the organization's realized strategy in the form of an activity system explaining how all activities work together (Shafer, Smith, & Linder, 2005; Richardson, 2008; Johnson et al., 2008; Casadesus-Masanell & Ricart, 2010). The business model details the specific transactions with customers and other value network partners (Chesbrough & Rosenbloom, 2002; Zott et al., 2011) and coordinates the necessary resources and capabilities. The business model is centered on the exchange with customers regarding value proposition and value capture, and it considers the mechanisms and interactions within the organization and with external partners to create and deliver that value (Staehler, 2002; Johnson et al., 2008). Therefore, business model management is essentially also about stakeholder management. It is concerned with the alignment and coordination of the interests of the various stakeholders that are internal and external to the firm and their contribution and involvement in value proposition, value creation, and value capture (Haslam et al., 2015). The business model defines the overall value of an offer and negotiates each stakeholder's contribution to and share in creating and capturing value. Tauscher and Laudien (2018) empirically show that there is no one-size-fits-all approach in creating, delivering, and capturing value.

The term *business model portfolio* emphasizes that this level considers not only one but also several business model alternatives and that multiple business models might be required to fully pursue one

strategy (Sabatier et al., 2010; Snihur & Tarzijan 2018). This portfolio view is applied in the conceptualization stage (i.e., when a change in the strategy requires finding a new business model(s) that enacts the new strategy) and in the implementation stage (i.e., when the interdependencies and resource allocation between different realized business models are managed).

In the conceptualization stage, the business model portfolio perspective allows us to explicitly consider, evaluate, and select a set of alternative business models that are appropriate for realizing strategy. The higher level choices made in the strategy can be translated into different alternatives of business models that are better or worse for realizing the strategic decision about “where and how to compete” (Casadesus-Masanell & Ricart, 2010). The approach of actively seeking alternative business models ensures that new and disruptive business models are actually considered as possible alternatives to existing models (Voelpel et al., 2005). Generating alternative business models can be performed by applying the business model canvas or similar methods (e.g., Osterwalder & Pigneur, 2010; Johnson et al., 2008). For example, the strategic choice to position the organization as a cost leader can be achieved in a number of ways: an economy-of-scale model defining the elements necessary to enable high-volume production and turnaround of goods, a build-to-order model defining the elements necessary for just-in-time supply and production that reduces stock costs and avoids clearance sales, or a minimum-viable-product model defining a trimmed value proposition element by cutting features of value proposition and delivery. The resulting business model alternatives can then be evaluated and prioritized according to their suitability to achieve the strategic goals. Thus, business models compete internally against each other in the conceptual stage to become the model that is finally applied.

In many cases, however, the strategy requires the realization of multiple business models in parallel to be fully implemented. For instance, a portfolio of different business models can be found in highly diversified firms with strategic presences in different markets. Furthermore, firms with a broad market coverage strategy realize business model portfolios. Business model portfolios account for their core market’s heterogeneity, and they outperform competitors by serving different customer segments with segment-specific business models that consider the differences in need, price elasticity, or geographical location. In the implementation stage, the business model portfolio management, therefore, has additional tasks because the portfolio view enables the organization to proactively

manage the interdependencies between business models (Meifort, 2016; Snihur & Tarzijan 2018) regarding resource allocation and potential synergies. A portfolio approach identifies those resources and capabilities that are especially critical because they are required by several business models in the portfolio. This reduces the likelihood of underresourcing business models and increases the timely recognition of potential capacity shortages. This also applies to the management of different stakeholders involved in different business models of a portfolio. It allows for effective and efficient coordination of stakeholders and the potential cross-fertilization of their involvement in different business models. Different business models may use, for example, the same sales channel, build on the same brand reputation, or share the same value network partners. Identifying and deploying these synergies then increases the overall portfolio performance. In this way, increased complexity and redundancies arising from the involvement of too many stakeholders can be avoided.

The business model portfolio level can redesign existing business models, replace existing models with new ones, or shift resources between models to achieve a firm's goals, which are determined by the strategy. It is constrained by the available resources and capabilities, but within these boundaries, a change in the business model can be realized relatively quickly without changes to the strategy (Casadesus-Masanell & Ricart, 2010; DaSilva & Trkman, 2014). If the business model portfolio fails to realize the strategy, this is fed back to the strategy level through the higher level control loop. The strategy level has to reconsider its strategic goals or develop the additional resources and capabilities necessary to implement the intended business model portfolio.

Summarizing from the control theory perspective, a formal business model portfolio process ensures that multiple business model alternatives to implement the strategy are considered, that appropriate resources and capabilities are available for the selected business models, and that synergies between business models are fully exploited. As the strategic goals determine the activities at the business model portfolio level, the higher level control loop monitors whether the portfolio actually implements the strategy in terms of the defined target markets, technologies, etc. The lower level control loop monitors whether all the selected business models are provided with the appropriate resources and capabilities, make use of all synergies, and exhibit no redundancies. The goals of the portfolio also determine the objectives for the higher level control loop of the next level, i.e., the business model tactics.



#### *Illustration of business model portfolio management*

*Factors of the external environment, such as the increasing costs of possessing a car in an urban environment, more green-minded customers, the incentives of communities for providers of alternative mobility concepts, and the decreasing motivation of Millennials to express their status through car ownership, triggered the car manufacturer Daimler to pursue a new strategic direction to monetize their car business. Daimler made the strategic decision to enter the market for free floating car sharing, which makes a case for business model portfolio management. Whereas the existing business model is focused on manufacturing cars, the new car2go platform required a new service business model to realize this strategic choice: Instead of creating revenue with asset sales through a retail network, customers are charged by the minute for using a provided car; they access the service through the web and an app. This new mobility-as-a-service business model required Daimler to master new core activities, such as logistics, fleet management and maintenance, a user membership platform for booking and billing, and to provide the core resources in the current form of 14 thousand cars across 23 inner cities in eight countries. The business model portfolio management also needs to coordinate the interactions between the two business models, for example, production capacities to ensure that a sufficient number of cars are available for the traditional asset sale and the car sharing business model; the financial assets to invest in the growth of both business models; and the development of new onboard features of a car that are of value for both buying customers and short-term rental customer segments. In addition, business model portfolio management must also evaluate whether new stakeholders are created, for example, those brought about by agreements with communities or parking services.*

### **3.3 Business Model Tactics Level**

Business model tactics refer to the plan of actions for the specific configuration of each business model element and its corresponding resources. Tactics are unique to each business model and aim to optimize the business model's efficiency by operationalizing all elements and their interactions. The scope of available tactics is predefined for specific business models at the portfolio level. Thus, at this level, only residual choices can be made about the specific configuration of each element (Casadesus-Masanell & Ricart, 2010). For instance, at the higher portfolio level, consumer electronics manufacturers define indirect sales through wholesale and retail as their method of delivering their product to customers. The tactical level has to determine which inventory and logistic option (central stock vs. local stock, own fleet vs. outsourced transportation, direct delivery vs. logistic hubs, ordered vs. automated replenishment, logistic units, etc.) to choose and configure the infrastructure to ensure a steady flow of goods. The tactical level plays a vital role in the performance of the business model, as it determines its actual operations. In addition to the business model's own effectiveness, tactical choices also impact the related stakeholders. Tactical choices determine in detail the interactions and

exchanges with customers and value network partners and how well the business model actually performs in comparison to competitors (Casadesus-Masanell & Ricart, 2010).

For a new business model, the tactics level involves the translation of the higher order choices made at the portfolio level into specific configurations of each element and the resources necessary to run operations. For existing business models, tactical changes may also be required to increase effectiveness. Therefore, the operative performance of the business model needs to be monitored. When gaps are identified, tactical changes must be initiated. Potential measures at this level may be product modifications, channel extensions, contracting with long-term suppliers, or shifting brand messages. Tactical changes need to be in line with the portfolio goals, and tactical decisions need to be tested at the portfolio level to ensure their compatibility with other business models in the portfolio. However, when tactical changes do not suffice to make the business model work or the tactics are incompatible with other business models in the portfolio, feedback from this level triggers significant changes in existing or even introducing new business models at the portfolio level. For existing business models, the responsibilities at the tactical level may be best labeled business-model life-cycle management that focuses on the performance optimizations of the existing model and not on reinventing.

From the control theory perspective, a formal business model tactics process ensures that each business model element is configured and that appropriate resources are provided. As the business model portfolio goals determine the activities at the tactical level, the higher level control loop monitors whether the specific design of the business model elements realize the portfolio goals and fit with the other business models in the portfolio. The lower level control loop monitors the specific business model's effectiveness. The tactical level determines the goal for the higher level control loop of the next level, the business model operations.

*Illustration of business model tactics*

*A hotel chain defines at the business portfolio level that yield pricing is its value capture mechanism. The lower tactical level is now responsible for specifying the yield pricing formula, for instance, deciding whether to apply a reservation time-based, season time-based, capacity-based, or another form of nonstatic pricing. The tactical level also has to determine the necessary infrastructure to realize the specific yield price formula. To achieve both customer satisfaction and competitive advantage, the tactical level has to create these alternatives, test their acceptance, assess the required*

*infrastructure and the corresponding costs, and evaluate their performance in maximizing profits. The selected specific yield price formula then determines the activities at the operational level that are responsible for its installation and smooth operations.*

### ***3.4 Business Model Operations Level***

Operations describe the activity system required to execute all actions associated with value creation, delivery, and capture (Zott & Amit, 2010). Operations draw on the residual choices made by tactics, which limits the decisions made at this level to the means by which specific predefined tactics are realized. This level concerns the efficiency of the operative execution of the business model, i.e., the interactions and transactions with all stakeholders in the ecosystem to create, deliver, and capture the value. For instance, at the business model portfolio level, a hotel chain may define the requirement to apply a multichannel approach, which the tactics level specifies to be realized through the organization's website, third-party booking platforms, and travel agencies. Finally, this operational level selects the specific booking platforms and agencies, sets up the contracts and infrastructure, and then executes the actions needed to conduct the business.

For a new business model, the defined tactics must be translated into operational business processes before actual execution can begin. This involves decomposing the main business processes into separate steps, decision points, and control mechanisms to ensure efficient execution (Recker et al., 2009). Furthermore, the organization must set up the operational infrastructure to deploy resources, install exchange mechanisms with value network partners and customers, and establish organizational structures. For existing business models, operations incorporate all operative activities – procurement, production, advertising, ordering, product distribution, invoicing, etc. – and execute tactics to run all elements of the business model and coordinate their interactions.

In cases of operative inefficiencies, the organization initiates operative adaptations. Measures may include increasing sales staff, replacing production equipment, changing promotional materials, negotiating payment conditions, or changing delivery routes. However, if measures at this level do not suffice, feedback at this level triggers changes at the higher order tactical level. Operative adaptations are normally

the most frequent changes in the business model but with very little to no impact on the choices made at the strategy level, the business model portfolio level, and the tactical level. In contrast, changes at higher levels will have a significant impact on operations as (at least parts of) the organization will likely need to change established business processes and structures to realign appropriately with new higher order decisions to execute the new business model(s).

From a control theory perspective, a formal business model operations process ensures that all the operational activities of a business model element are defined, committed resources are deployed, and activities are executed. As the goals of business model tactics determine the activities at the operational level, the higher level control loop monitors whether the specific business processes realize the tactical goals. The lower level control loop monitors the efficiency of business process operations.

*Illustration of business model operations*

*An airline decides, at the business model portfolio level, to sell its seats through a multichannel approach, which the tactics level specifies should be realized through the airline's own flight portal, third-party web platforms, and selected travel agencies. The operational level now has to assess which third-party platforms and travel agencies are most attractive to cooperate with based on their customer base, conditions, and territorial coverage. After selecting the most attractive web platforms and agencies, they have to approach the channel partners to negotiate commissions and to define the interfaces and protocols to exchange flight information, booking data, and revenue streams, etc. After the installation of these channels, the level is responsible for smooth and efficient transaction operations.*

## 4. Managing Dynamics

Business models are inherently dynamic because they must adapt to maintain optimal competitiveness (Voelpel et al., 2004). The most important source of dynamic forces affecting strategy and business models is the organization's environment. Depending on the extent of change in the organizational environment, the strategy and the business models may require simple modification, extension, revision, or termination (Cavalcante et al., 2011). Organizational growth and transition also require the adaptation of strategy and business models. To manage these dynamics, the control theory proposes that formal mechanisms regulate the information and knowledge flow within organizations by specifying the tasks and responsibilities (Turner & Makhija, 2006; Jaworski & Macinnis, 1989). The defined tasks and responsibilities of each level of the integrated management framework help to clarify which level gathers and acts based on what kind of information. We subsequently discuss three types of dynamics that may trigger change and adaptation at various levels of the integrated management framework: (i) dynamics caused by changes in the environment, (ii) organizational growth, and (iii) organizational transition processes.

### *4.1 Managing the Dynamics of the Environment*

Major dynamics are induced by the internal and external environments of organizations (Osiyevskyy & Dewald, 2018). The internal environment refers to factors and stakeholders within the organizational boundaries, such as resources, cost structure, production capacities, intellectual property, knowledge, or management decisions. Changes or deviations in these factors (e.g., increasing labor costs, underutilized or insufficient capacities, and unused inventions) should provoke reactions. The external environment refers to factors and stakeholders outside the organization, such as technologies, customers, competitors, laws and regulations, society, and the economy. Changes or deviations (e.g., the introduction of new technologies, underserved customer needs, moves of competitors, and changes in laws and societal values) can trigger organizational responses (Demil & Lecocq, 2010; Bucherer et al., 2012). Therefore, the organization has to monitor all relevant stakeholders of its ecosystem.

Changes in both environments differ in their *time horizon*, ranging from imminent change, which occurs, for example, when a new competitor enters the market or when capacities are unused, to anticipated change

likely to occur in the future (e.g., the potential introduction of new technologies in the future or expected large-scale retirements of key personnel). The *degree of change* can range from minor developments (e.g., small increases in material costs) to major shocks (e.g., price explosions in material costs or a widespread economic crisis). Each defined level in the integrated management framework monitors and responds to different types of change in the environment, which is also depicted in Figure 1. If a level identifies changes in the environment that it cannot handle, the issue is moved to higher levels that can initiate appropriate action. Two formal mechanisms are proposed to ensure that the organization manages environmental dynamics:

*Monitoring and response mechanism:* Both the strategy level and the business model portfolio level focus on monitoring the opportunities and threats in the environment to ensure that existing business models will still be valid in the future and that no opportunities are missed. Consequently, these higher levels monitor rather major changes in the environment, such as new technologies or inventions, with the potential to create new markets or priorities for institutional stakeholders and regulatory authorities that impact the overall business or even the entire industry. At the lower level, the tactics level focuses on the configuration of a business model's elements and the resource allocation. Further, the operational level focuses on actions taken to reconfigure resources under current operations. Both lower levels monitor environmental changes and stakeholder concerns that impact the operating business efficiency and effectiveness, such as the availability and configuration of the organization's resources, newly available technological applications that could improve existing business processes, or changes in the network of value creation partners.

This differentiated focus of each level on different degrees of changes in the environment allows for an efficient response of the organization because the level observing the change is also the first one acting on it with its available resources. If the level is capable of addressing the change, activities are planned, and its successful implementation is monitored with its lower level control loop. For example, if the business model operations level of a hotel chain observes an additional booking platform provider that can be used to reach new customers, it can decide whether to establish a relationship with this new sales partner and then implement it. There is no need for a higher level discussion at the tactical level when this level has already decided to sell through third-party booking platforms.

*Higher order feedback loops:* There are two escalation scenarios in which the changes observed by a lower level are not addressed by the same level but trigger a feedback loop to a higher level. First, if one level is confronted with environmental changes that result in poor performance and cannot be resolved with the targets level's available resources, the bottom-up feedback mechanism transfers the issue to the next higher level until it reaches one that can make appropriate decisions. For instance, emerging overcapacities may cause inefficiencies that the operative level tries to address with advertising to increase demand. If the underutilization is prolonged, the issue is forwarded to the tactical level, which may either assess the possibility of downsizing as a measure to reconfigure the resource base or push it to the business model portfolio level. The business model portfolio level can decide to adapt the existing business model by outsourcing the entire process to new external partners or to initiate a new business model to commercialize overcapacities with new industry customers. The bank Maerki Baumann provides a real-world example. Increasing costs and the underutilization of resources for transaction-oriented tasks caused high fixed costs and lowered profitability. The problem could not be resolved with measures at the operational level and was therefore transferred bottom-up until reaching the highest decision-making level, i.e., strategy. At this level, the bank decided to build a separate unit and to extend the strategic target market to commercialize the permanent overcapacities independently from the existing business. The new business model, named InCore Bank, now also sells its services as an outsourcing partner to other banks and security dealers.

The second scenario triggering a higher level feedback loop applies when a level is confronted with environmental developments that the observing level can manage with its available resources, but the response will not fit the choices made at higher levels. To ensure consistency and goal congruence, the higher level has to assess whether to revise its former choices and goals to enable the lower level to respond to the observed change or to rely on former decisions and thereby inhibit a response at the lower level. For instance, the availability of a new technology can provide the business model portfolio level with an opportunity to extend an existing business model so that it can be applied in a new market that is currently out of the strategic scope. This triggers a decision at the strategic level because technology adoption implies a significant shift in areas where the organization wants to compete. This feedback loop ensures that the intended business model change is acceptable at the strategy level and obtains the necessary resources. The

feedback loop also ensures that the adapted business model still supports the organization's overall goals, positioning, and competitiveness. In the case of Amazon, the initial and established business model was focused on books and e-books. E-books require substantial IT infrastructure, significantly changing the internal environment. Furthermore, the newly available cloud technology was used to extend the established business model by providing cloud services (Amazon Drive). Thus, the internal technology created the opportunity to expand the business to provide music and video using the existing software and cloud technology. With the strategic decision at higher levels to pursue this opportunity, a new business model to enter this market with Amazon Music and Videos was created and expanded the existing portfolio of the company.

#### ***4.2 Managing Growth Dynamics***

Organizational growth also represents a source for dynamics that must be managed. With regard to business models, this refers to situations in which a sequence of business models is required to fully exploit a growth strategy. This means that an initial business model is introduced to enter the market, and it serves as the basis for a subsequent business model. Sometimes the first model is not even profitable, but it creates a strategic outcome that is a precondition for the business model in the next growth stage. For instance, many community platforms start with freemium models to gain a critical user mass and generate profile data before switching to the different business models the founders actually want to establish, such as a multisided platform model that serves their user base and generates additional advertising customers (e.g., Facebook) or a franchise business model that draws on the brand value built with the first business model to commercialize the established brand in totally different markets (e.g., Angry Birds with a first business model aimed at commercializing the app while building a strong brand and then adding a franchise business for movies and merchandizing products serving demands on brand experience).

This business model sequence for stepwise growth may be explicitly planned at the beginning, or it may emerge implicitly in an evolutionary process as new opportunities in the internal and external environment arise. However, the business models in a growth sequence are not independent of each other and cannot be managed separately. Their interdependencies, timing, and contribution to the overall strategic goals need to



be coordinated, which implies the need for business model portfolio management. When a model of sequence growth is explicitly planned, the strategic goals determine the activities at the portfolio level. This, in turn, is responsible for configuring and managing the sequence of the different business models. The optimal design and timing of the models is then monitored by a lower level control loop at the portfolio level. In the case of an evolutionary process, it is likely that the portfolio level recognized the opportunity for expanding with a new business model that draws on an existing one. The portfolio level then triggers a higher order feedback loop that requires the strategy level to consider this new opportunity and to decide whether or not to change the strategy. If the strategy is adapted, new goals determine the portfolio level to act. Otherwise, there are no strategic goals that can trigger the portfolio level to act on the opportunity by extending the set of business models. In the case of Amazon, before it opened its first physical store, it opened drop-off and pick-up locations at several universities. Amazon found that a physical location is attractive for a considerably large group of customers. This led to the decision to expand into a brick-and-mortar business model.

#### ***4.3 Managing Transition Dynamics***

Dynamics also emerge when an organization renews a business model. The impulse may emerge at the strategic level, e.g., based on observed technological trends, or at the tactical level that is not able to achieve the desired business effectiveness. The new business model may coexist with the established model for a period of time or may replace it instantly. When the success of the new business model is uncertain, operating both models in parallel for a period of time gives the new model time to prove its value and retains the option of returning to the established model in case the new model fails (Bucherer et al., 2012). Netflix, for instance, experienced several transition processes, starting with the transition from a physical to a virtual video rental service, followed by the (still ongoing) transition from a content distributor to a content producer, broadcasting only original content to retain a competitive advantage.

The transition from one business model to another must be managed. From a resource perspective, the organization needs to ensure that the new business model receives sufficient resources to enter the market and grow, even if it is not initially as profitable as the established model. Again, the potential new

stakeholders needed for the new business model must be identified and coordinated. For Netflix, for example, a main stakeholder in the initial business model was the postal services for delivering the DVDs through mail to its customers; with the new business model, this partner became obsolete; instead, the need for stakeholders in the creative industries arose to produce original content for its own series. If an existing business model is replaced by a new one, a portfolio view ensures that existing customers can be transitioned from the old to the new business model (e.g., when Adobe moved from software sales to software as a service). The lower level control loop, with its focus on the portfolio performance and the higher level feedback loop that links to the strategic goals, ensures that short-term performance considerations at the tactical level of an existing business model do not inhibit the transition toward a new model. This is why the business model portfolio level is the appropriate level to manage the dynamics of business model transition.

## **5. The Case of Nespresso**

Following prior business model research (e.g., Snihur & Tarzijan, 2018) to use cases to illustrate the developed framework (Siggelkow, 2007) with the levels and mechanisms of the integrated management approach, we apply the case of Nespresso (Kashani & Miller, 2003; Matzler et al., 2013). The well-documented development of this company provides a good foundation to analyze what the company did, the environmental response, and what decision was triggered at which level of the proposed framework.

*Nespresso's first attempt:* Drawing on the commercialization rights for a capsule-based espresso system acquired from the Battelle Research Institute, Nestlé decided to expand its coffee business in this direction under the brand Nespresso. At the strategic level, first considerations led Nespresso to target restaurants and offices with a coffee system, including the coffee machine and the individually portioned coffee capsules. Because the existing ready-to-drink coffee beverage business at Nestlé was not capable of realizing this new strategic direction due to the additional machine hardware and the food retail focus of its current distribution channel, a new additional business model had to be designed (business model portfolio level). Early tests of the business model with restaurants revealed that the Nespresso system lacked sufficient competitive advantages to enter this market. As changes in the product, price, or distribution could not

resolve this issue, the strategy was revised (strategy feedback loop) to focus on the office market only. In the new business model, the capsules were produced by Nespresso. The coffee machines were also designed by Nespresso but were manufactured by an outsourcing partner (business model portfolio level). Specifically, the machines were produced under license by the strategic partner Turmix (business model tactics level). To distribute the system to offices, the business model relied on sales partners that were already in this market (business model portfolio level). In particular, contracts were established with Sobal and several vending machine distributors who had to buy the machines from Turmix and the capsules from Nespresso (business model tactics level). Although the system was introduced successfully in the office market (operational level), sales developed slowly, and machine defects were experienced frequently. Because further improvements in the business processes, tactics, and business model itself were not able to resolve the poor market performance, another strategy shift was necessary (escalation through feedback loop from business model operations up to strategy).

*Nespresso's first success:* The new strategy determined that Nespresso should target a new market, i.e. private affluent households. To realize this strategy, the new business model fully outsourced the machine business and defined partnerships with leading manufacturers of espresso machines who sold their Nespresso-compatible machines through household appliance retailers and electrical outlets (business model portfolio level). Regarding the capsules, Nespresso tried to use synergies with Nestlé's existing sales channels for ready-to-drink coffee beverages and decided to sell Nespresso through supermarket chains (business model portfolio level). At the tactical level, Nespresso introduced financial incentives and special training to retail sales clerks to motivate them to demonstrate and sell the system to customers. While the customers liked the product, the channel for the capsules produced operational problems: the capsules had a too short expiration date to allow for a typical shelf cycle. Neither additional promotion (operational level) nor different logistic concepts (tactical level) could solve the problem; therefore, the sales channel was switched from retail to direct sales through the Internet with the Nespresso Club to strengthen customer relationships. Later, flagship stores in major cities were established as a second direct sales channel (business model portfolio level).

*Nespresso's growth:* With the increasing diffusion of the Nespresso system into private households and broader brand recognition, the firm saw another opportunity to further grow in the office market (strategy

level). To realize this strategic market expansion, a new business model was created that coexisted with the private consumer model (business model portfolio level). The two models shared some synergies (e.g., coffee production, web-based order platform); however, many parts of the business model were modified to account for the different market access (e.g., sales representatives) and needs (e.g., different tabs incompatible with the home-use version). Thus, Nespresso established a portfolio of two business models to realize its broad market coverage strategy, which is how the company still operates today.

*Nespresso's current challenges:* Currently, Nespresso faces several threats due to the expiration of the patent and the resulting competition in the profitable capsule business due to third-party capsules and other low-priced capsule systems. As a result, sales in the private household market are declining. Currently, operative measures (e.g., increased promotion) and tactical measures (e.g., attempts to establish product modifications that destroy third-party capsules) have failed. According to the proposed integrated management approach, considerations at the business model portfolio level and, if this fails, at the strategic level are now required to prevent further revenue decline.

## **6. Discussion**

In this study, we developed an integrated management model that can serve managers and future research as a conceptual model of organizational activities that link strategy and business model management. Based on evidence of the benefits of formal planning and the perspective of formal control theory, our goal was to decompose the complex management task into different levels with activities and objectives and elaborate on how the levels are interrelated and can be aligned in dynamic environments. We thereby contribute to the fragmented literature on the relations between business model management and strategic planning, and the effective alignment of internal activities (Foss & Saebi, 2018) and adaption to external dynamics (Fjeldstad & Snow, 2018). Furthermore, organizational control theory has been demonstrated to be a valuable approach for addressing the challenges of business model management, which extends the theoretical foundation of business model research (Ritter & Lettl, 2018).

In this last section, we discuss important questions concerning the use and applicability of our model; we apply a question – answer format for illustrative purposes.

**Is this integrated management approach a top-down approach, and how can it ensure sufficient flexibility in adapting?** Our management approach is a top-down approach proposing a structure and mechanisms that enable the organization to translate the strategy into operating business processes and to respond flexibly to changes in dynamic environments. With regard to the latter, the framework helps firms to reduce complexity and manage information flows more efficiently by specifying what degree of change in the environment triggers action at which specific levels. Only a few fundamental changes will require a direct response at the highest strategic level, whereas many effective modifications and extensions can be made on the business model portfolio or lower levels without undermining the underlying strategic choices. This should essentially free organizations from frequent and harmful questioning about the appropriateness of the strategy by shifting the focus towards the business model portfolio and subsequent levels. As a result, organizations can avoid inefficient and less effective “strategy hopping” conditions.

However, the feedback loops at each level also actively request bottom-up information of necessary adaptations. As a result, organizations should be able to respond even more quickly to changes because monitoring and disseminating relevant changes to the respective decision levels is a required task at all levels. As one might recognize, a substantial prerequisite for the full implementation of this approach is an appropriate communication structure and organizational will. This also implies the need to dissolve hierarchically bounded communication structures in favor of more open, transparent, and democratized information flows across hierarchies. Information processing and sharing play significant roles in the implementation.

**How are the levels of the integrated management approach related to managerial hierarchy?** Our integrated management approach describes a hierarchy of goals, tasks, and mechanisms to ensure congruency across levels. It provides guidance from a top-down perspective about how to realize a strategy from defining the strategic direction to implementing operational business processes. The control and feedback mechanisms ensure that the organizational response to changes in the environment happens at the lowest level possible, and the issue rises, bottom-up, to the next higher level with the appropriate means to respond only if a lower level lacks the means to do so.

This implies that the organizational members responsible for each level differ in the power required to make decisions at their level. Therefore, the levels of our integrated management approach are closely related to managerial hierarchy, but the organizational size needs to be considered. In large, diversified firms with various layers running multiple business models in parallel, it is likely that each level of our framework is managed at a different managerial hierarchy layer with different degrees of power. For instance, the executive board is responsible for the strategy level, board support positions for portfolio management or control are responsible for the business model portfolio management, the business unit leadership team is responsible for business model tactics, and the functional departments within each business unit are responsible for the business model operations. In the context of small and medium enterprises (SMEs), the proposed activities, goals, and control loops of our integrated management approach still apply to achieve the desired implementation of the strategy in its business processes. However, the power distribution in SMEs usually looks different due to the tendency to have leaner organizational structures, fewer hierarchical layers, and lower diversification. In SMEs, the same organizational members might be responsible for tasks and decisions at two or more different levels of our integrated management approach. For instance, in an SME with only three managerial hierarchy layers, the leadership team or owners are responsible for both the strategy and business model portfolio, and the functional department heads are responsible for business model tactics and operations.

**Is this integrated management model also useful for start-ups?** Simply stated, no. As outlined in the theoretical background section, studies show that, for start-ups, the strategy and business model formulation is an iterative process of trial and error in sensing and validating the opportunity and trying to find the right business model for exploiting the opportunity. Therefore, we do not see an immediate value of our approach for founders; instead, at a later point, when growth and transition of the business take place, new segments are targeted, or new technologies and markets become relevant, this approach will have value.

**How does this integrated management framework account for potentially disruptive business model changes in the competitive environment?** A fundamental question is whether and how this approach can provide action strategies to new entrants that use fundamentally different business models, such as Uber and Airbnb, than their corresponding industries. First, we think that, through strategic monitoring of the

environment, many of these seemingly disruptive new business models did not come as a truly large surprise. For example, music sharing took place as early as the late 1990s on Napster, which was then closed for legal reasons. One could anticipate the demand of users wanting to share music and the technological possibilities to do so. Similarly, a forerunner of Airbnb was couch surfing. It was not so widely distributed because people had low trust in their potential hosts. Airbnb brought flat sharing to the professional level. Therefore, the feedback loops in our model should account for adequate monitoring of the environment. Furthermore, our model encourages active experimentation and the design of different business models that could provide alternatives to the currently existing model. Additionally, the option to include external network partners in business model alternatives is more visible through our approach.

## **7. Limitations and Future Research**

Our work is conceptual because, thus far, researchers have not offered an integrated management approach to combine and explain organizational strategy and business model dynamics. We encourage further research through empirical studies designed to test and verify this framework in practice. It is likely that a retrospective case study approach will not produce sufficiently detailed information. Instead, we recommend an observant longitudinal study to gain insights into the challenges organizations encounter while pursuing such an integrated management approach. It would also be interesting to see how the different management levels of our model translate more broadly into the organizational structures of firms and other organizations. Another investigation area is the information processing between levels. Research needs to explore whether the effectiveness of the proposed framework is associated with information processing between levels. Further, research may explore decision support systems based on information from all levels that allow rapid assessment and decision making.

Organizations of different sizes may encounter different challenges while implementing the proposed integrated management approach. As research about the organizational manifestation of business models in general is still in its infancy, we encourage an intervention-related study of the implementation of this approach. This would allow for simultaneous observation of changes in the strategy and business model planning and the organization's structure.

Whereas this research applied a rationalist view and focused on formal management practices, the control theory also mentions social (or clan) control (Ouchi, 1979; Turner & Makhija, 2006) as a means of aligning the organization. Hierarchical social control may take the form of senior managers who become actively involved at lower levels to stress the importance of higher level goals and thereby align organizational behavior. Lateral social control affects the coordination and alignment of employees at the same level, e.g., through shared norms or peer pressure (Kirsch et al., 2010). Future research might also explore these social control mechanisms to link strategy with business model management and investigate whether they complement or cannibalize formal control mechanisms with the same purpose.



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