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How to innovate towards an ambidextrous business model?:

The role of dynamic capabilities and market orientation

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How to innovate toward an ambidextrous business model?

The role of dynamic capabilities and market orientation

Abstract

Designing a business model is not a one-off process; adjustments are often required. To create such adjustments and realize business model innovation, firms require the deployment of dynamic capabilities. Yet, we know little about the role of dynamic capabilities in fostering business model innovation, particularly in SMEs. This research, designed as an in-depth longitudinal case study, investigates how an SME's market orientation and its deployment of dynamic capabilities are related to business model innovation. By developing a process framework of an SME's business model innovation from start-up to scale-up, this paper contributes to the literatures on business model (innovation), small business, and dynamic capabilities. It clarifies how an SME's market orientation, through the fitting deployment of its dynamic capabilities, drives its business model innovation. More specifically, this study characterizes market-driving, market-driven, and ambidextrous business models in the SME context, and reveals the exact dynamic capability processes necessary for transforming a business model from market-driving to market-driven, and ultimately to a model reflecting an ambidextrous market orientation. These insights outline how SMEs can deploy dynamic capabilities that align with the SME's market orientation to innovate the design and architecture of their business models.

Keywords: Business model innovation; dynamic capability; market orientation; SME

How to innovate toward an ambidextrous business model?

The role of dynamic capabilities and market orientation

1. Introduction

A firm's business model design has significant performance implications (Kulins et al., 2016; Teece, 2010) and requires important strategic decisions about its value components, including value proposition, target segments, value chain configuration, and revenue/value capture mechanisms (Foss & Saebi, 2017; Spieth & Schneider, 2016). These components are shaped by a firm's market orientation (Morris et al., 2005; Zott et al., 2011), defined as the philosophy of how to conduct business through a deeply rooted set of values and beliefs (Kara et al., 2005). Market orientation plays an essential role in generating value for customers and driving firm performance (Herhausen, 2016). It is thus crucial for aligning the value components in the firm's business model (Zott & Amit, 2008). Value can be created by adopting a market-driven or market-driving approach to market stakeholders' needs and market conditions (Jaworski et al., 2000; Wilden et al., 2016), particularly in the context of Small- and Medium-Sized Enterprises (SMEs) (Keh et al., 2007; Schindehutte et al., 2008).

And yet, little research has investigated how a firm's business model and market orientation relate, particularly in the SME context (e.g., Alpkan et al., 2007; Schindehutte et al., 2008). This is surprising as firms need to act in a market-oriented manner (Grewal & Tansuhaj, 2001) to exploit or create market opportunities (Chesbrough, 2010). Given that changing market conditions often require firms to innovate their business model (Ferreira et al., 2013), we need to better understand how firms innovate to be more market-driving, market-driven or ambidextrous (Spieth et al., 2016).

Our longitudinal case study investigates how an SME's market orientation and its deployment of dynamic capabilities relate to business model innovation (BMI). BMI entails changes within a firm's business model components and architecture (Zott & Amit, 2010; Teece, 2010). We build on previous research that has conceptualized the ability to generate such BMI in response to changes in

the external environment as an outcome of dynamic capability deployment (Achtenhagen et al., 2013; Zott et al., 2011). Teece (2007, p. 1320) states that dynamic capabilities "embrace the enterprise's capacity to shape the ecosystem it occupies, develop new products and processes, and design and implement viable business models." However, our understanding of the role of dynamic capabilities in producing BMI is limited (Foss & Saebi, 2017). Although research has started linking market orientation to dynamic capabilities, two aspects remain unclear. First, the works of Fischer et al. (2010) and Holsapple and Oh (2014) suggest that firms with a market-driven orientation tend to engage in a dynamic capability deployment that is exploitative. Firms with a market-driving orientation engage in an explorative deployment. These studies, however, are silent on how this market orientation shapes BMI, especially with an ambidextrous business model. Second, while previous research on BMI has focused on its usefulness for large firms (Chesbrough & Rosenbloom, 2002; Sosna et al., 2010) or entrepreneurial ventures (Rindova & Kotha, 2001), it does not clarify how changing market orientations shape dynamic capability deployment and BMI in SMEs. This gap is echoed by Zott and Amit who call for further research into "the dynamics of business model design change" (2007, p. 195) and "how business models evolve" (2008, p. 20).

Our contributions are four-fold. First, we respond to the call to investigate drivers of BMI (Foss & Saebi, 2017), focusing on dynamic capabilities as internal drivers (Teece, 2007). We analyze the notion of fit and the importance of aligning focal elements, including dynamic capabilities, market orientation, and market-driving, market-driven, or ambidextrous business models in SMEs. The alignment across these three elements has not been explained in any relevant literature.

Second, we advance research on market orientation and BMI. We analyze how firms can balance explorative and exploitative phases in BMI, thus addressing the call of Spieth et al. (2016). More specifically, we show that an SME's market orientation and business model can be market-driving, market-driven, or combine both aspects and, hence, be ambidextrous.

Third, we clarify the central role that dynamic capabilities play in BMI (Foss & Saebi, 2017; Schneider et al., 2013). We find that market orientation drives the use of specific dynamic capability processes, which in turn drive BMI and lead to market-driving, market-driven, and ambidextrous business models. This finding contrasts research about the impact of market orientation on dynamic capabilities and BMI (Foss & Saebi, 2017). Importantly, we address the need for research on ambidexterity and dynamic capabilities (Wilden et al., 2018) and reveal that dynamic capabilities can be deployed ambidextrously, combining explorative, proactive and exploitative, reactive elements.

Fourth, we highlight the suitability of the dynamic capabilities framework to explain BMI. We show that as an SME's market orientation changes, it purposefully engages in dynamic capability deployment to innovate its business model. Contrary to most of the dynamic capability literature, we reveal that firms can respond to exogenous changes in markets (i.e., be market-driven) and *simultaneously* initiate changes in markets endogenously (i.e., be market-driving). These findings illustrate that the application of the dynamic capabilities framework to clarify BMI should not be constrained to a market-driven orientation (as commonly assumed). Instead, it should allow for market-driving and ambidextrous market orientations, as well as transitions between the three types.

This paper is structured as follows: First, we discuss the theoretical background by reviewing research on BMI, dynamic capabilities, and market orientation. We then outline our methodological approach and report the findings of our empirical case study. Finally, we present our framework of BMI and conclude with a discussion of our study's implications.

2. Theoretical background and preliminary framework

2.1. Business model innovation and its drivers

Business models organize business processes toward driving performance. It articulates a firm's understanding of customer needs, how best to fulfill those needs, and how to draw revenue and profits for doing so (Zott & Amit, 2010; Zott et al., 2011; Osterwalder & Pigneur, 2010). Teece (2010, p.

172) defines the firm's business model as the "design and architecture of the value creation, delivery, and capture mechanisms." Foss and Saebi (2017) identify four central components of many business model definitions: value proposition, target segments, value chain organization, and revenue capture mechanisms. The relationship between these components differs in the degree of interdependence or "complementarity" (Ennen & Richter, 2010), which determines the business model's architecture.

However, as firms mature, they may need to innovate their business model. They may need to rethink their market segments and value propositions and reconfigure existing capabilities to develop new forms of value creation and revenue streams (Chesbrough, 2010). Foss and Saebi (2017, p.216) define BMI as "designed, novel, and nontrivial changes to the key elements of a firm's business model and/or the architecture linking these elements." While the barriers to implementing BMI (Chesbrough, 2010) and the need to manage tensions between new and existing business models (Sund et al., 2016) have been highlighted, only limited studies have examined the process and drivers of BMI (Schneider et al., 2013). For example, Hienerth et al. (2011) emphasize the role of user-centricity (i.e., market orientation). To et al. (2019) identify mastery of technology and business complexity as key drivers of BMI for start-ups.

Previous research has stressed the importance of a firm's capabilities in driving BMI. For example, Demil and Lecocq (2010) point to the importance of developing "dynamic consistency," defined as the capability to build and sustain firm performance while changing the business model. Similarly, Doz and Kosonen (2008) highlight three meta-capabilities (strategic sensitivity, leadership unity, and resource fluidity) for accelerating BMI. Bock et al. (2012) examine the impact of BMI on a firm's strategic flexibility and the role of informal structure elements such as culture. Battistella et al. (2017) identify how three classes of capabilities – strategy innovation, resource capitalization, and networking – act on specific elements of the business model to enable their innovation.

However, while some studies have focused on innovating complex business models (e.g., Smith et al., 2010) or those in large multinational firms (e.g., Bock et al., 2012), research on BMI in SMEs, particularly regarding their development stages, is sparse (Balboni et al., 2019). Studies (e.g., Balboni et al., 2019; Gerdoçi et al., 2018), however, have implied that the enablers of BMI are context dependent and that findings pertaining to large, established firms cannot be generalized to small, young firms. Lindgren (2012), for example, found that most SMEs lack BMI strategy and leadership and often adopt an ad-hoc process. More such research on BMI in SMEs is thus needed.

2.2. Market orientation as a driver of business model innovation

Market orientation supports innovation (e.g., Didonet et al., 2016) and improves firm performance (e.g., Herhausen, 2016). We posit that market orientation may influence how a firm innovates its business model (Saebi et al., 2017). Kohli and Jaworski (1990) define market orientation as observable behaviors, including gathering intelligence, processing information, and coordinating functions. Another conceptualization views market orientation as an aspect of firm culture (Homburg & Pflesser, 2000) that stimulates value creation for customers and the firm (Narver & Slater, 1990). Thus, market-oriented behaviors rest on a firm's values, beliefs, and norms (Tuominen et al., 2004).

Jaworski et al. (2000) widen the scope of market orientation to a strategic level: market-driven versus market-driving. According to Schindehutte et al. (2008), the market-driving approach centers on customers, competitors, and broader market conditions. In this study, we follow Wilden and Gudergan (2017) and Wilden et al. (2019b) and conceptualize an SME's market orientation as its philosophy of how to conduct business through a deeply rooted set of values and beliefs. These values and beliefs are operationalized as dichotomous concepts representing a reactive (market-driven) versus proactive (market-driving) market orientation.

A *market-driven orientation* is based on a firm's understanding and reaction to the preferences and behaviors of customers within a market. It reflects a reactive attitude that accepts market

structures and market player behaviors as given. *Market-driven* firms display more exploitative behavior (e.g., Lisboa et al., 2011), which is refinement-led and entails developing new knowledge about the firm's existing markets, products, and capabilities.

Firms with a *market-driving orientation* aim to proactively change market structures and/or market behaviors to improve their competitiveness (Jaworski et al., 2000). For example, they introduce new products and services into (new or existing) markets, or they create entirely new markets. Associated behaviors are more explorative (e.g., Lisboa et al., 2011) and discovery-led, challenging existing ideas and developing new knowledge about new markets, products, and skills.

The limited research into the role of market orientation in SMEs shows market orientation to drive firm performance (e.g., Alpkan et al., 2007; Appiah-Adu & Singh, 1998; Pelham, 1999); expand sources and intra-firm mechanisms for innovation (Didonet et al., 2016); guide priorities, improve the quality of market knowledge, and increase responsiveness to market conditions (Didonet et al., 2012). Medium-sized firms are more receptive to innovation than small-sized ones (Laforet, 2008), while Renko et al. (2009) show that market orientation relates to the innovativeness of young ventures. However, such studies are scarce, and there is a need to further examine the relationship between market orientation and innovation in SMEs (Blankson et al., 2006; Verhees & Meulenberg, 2004).

2.3. Dynamic capabilities as a driver of business model innovation

Firms rely on their dynamic capabilities to enact their market orientation (Morgan et al., 2009). Different from ordinary capabilities that support the actual operation of a business model, dynamic capabilities, specifically *sensing, seizing,* and *reconfiguring,* enable firms to evolve and respond to changing market requirements (Fischer et al., 2010). A firm must *sense* new opportunities to improve, complement, or substitute components underpinning its business model (Achtenhagen et al., 2013; Gelhard et al., 2016). Through *seizing*, firms evaluate their existing business model architecture (Teece, 2007), including processes about value creation, delivery and/or capture. If a firm then

decides to innovate its business model, the firm needs to *reconfigure* its resource base, comprising the acquisition, redeployment, and release of resources and ordinary capabilities to support an innovated business model (Wollersheim & Heimeriks, 2016).

Dynamic capabilities may be deployed in a more exploitative or explorative way (Fischer et al., 2010; Su & Linderman, 2016) depending on a firm's market orientation. Therefore, firms with a market-driving orientation deploy their dynamic capabilities in a proactive, explorative fashion and those with a market-driven orientation in a reactive, exploitative way (Holsapple & Oh, 2014; Fischer et al., 2010). Missing from such research into market orientation and its influence on dynamic capability deployment is the link to BMI. The potential link between dynamic capabilities and BMI, however, is not well documented in the literature, although Foss and Saebi (2017) stress the need to investigate the role of dynamic capabilities as drivers of BMI. According to Teece (2007, p. 1320), dynamic capabilities "embrace the enterprise's capacity to […] design and implement viable business models." Amit and Zott (2016) highlight a potential connection between dynamic capabilities and BMI with their observation that such capabilities can align new business models with the changing market environments. Their argument that BMI involves the exploration of existing and latent demand and alertness to other opportunities in the broader business environment captures the essence of the sensing process of dynamic capabilities (Amit & Zott, 2016). The seizing process entails changing the content (e.g., activities), structure (e.g., sequencing and linkages among activities), and governance (e.g., partnerships) of the business model (Zott & Amit, 2010) and making the requisite resource investments for strategic adaptation (Teece, 2010). The reconfiguring process in a firm's BMI requires learning about and incorporating new processes (Chesbrough, 2010) but, importantly, also un-learning previously employed processes (Achtenhagen et al., 2013). This un-learning counters the increased learning that eventuates through the path dependencies that a market orientation produces (Sosna et al., 2010). BMI thus involves a process of renewal, aimed at strategically

realigning the business model components, that improves the evolutionary fitness of the firm's business model (Teece, 2018). Similarly, Ricciardi et al. (2016) identify three pairs of paradoxical dimensions (cooperation-competition, exploration-exploitation, and conformity-agency) of firm behavior and dynamic capabilities as key drivers of adaptive BMI. They suggest that these behaviors, coupled with a firm's dynamic capability deployment, form an integrated model of firm dynamism that enables the adaptive (re)generation of the firm's business model.

Regarding SMEs, Arend (2014) discovers that age and size of entrepreneurial ventures condition the dynamic capability-SME performance relationship. Borch and Madsen (2007) identify a specific set of dynamic capabilities for SMEs: internal and external reconfiguration and integration capabilities, resource acquisition capability, learning network capabilities, and strategic path aligning capabilities. The notion of aligning an SME's capabilities with its strategic path is highly relevant to our study because we seek to elucidate the relationship between a firm's market orientation, dynamic capability deployment, and BMI. In particular, we aim to map the impact of changes in an SME's market orientation on BMI.

Figure 1 outlines previously established links between the constructs under investigation here, serving as a starting point for our empirical analysis. In summary, these linkages show that a firm's dynamic capabilities enable the performance impact of a firm's market orientation (e.g., Naidoo, 2010), which fosters changes to dynamic capabilities if complemented by innovativeness (e.g., Menguc & Auh, 2006). The deployment of dynamic capabilities supports BMI (e.g., Achtenhagen et al., 2013). Although separate studies have examined market orientation (e.g., Didonet et al., 2016; Renko et al., 2009), dynamic capability deployment (e.g., Arend, 2014; Borch & Madsen, 2007), and BMI (e.g., Balboni et al., 2019; Lindgren, 2012), the relationship between these three concepts in the SME context has not been investigated.

Insert Figure 1 here

3. Methodology

We aim to investigate how an SME's market orientation and its deployment of dynamic capabilities relate to BMI. To develop a theory of the process-character of this under-researched phenomenon, we use a longitudinal case study design (Eisenhardt, 1989). Our research design is abductive (Dubois & Gadde, 2002) and embedded in a broader study aimed at understanding SMEs that provide open innovation intermediary services (Randhawa et al., 2017, 2018). While the SME in this case study transformed from an early-stage start-up into a more established service provider, changes to its business model remained unexplained. Intrigued by this question, we collected additional data to clarify the SME's market orientation, its dynamic capability deployment, and the transformation of its business model.

3.1. Case selection

We followed Eisenhardt's (1989, p. 537) recommendation and chose a case where the focal phenomenon is "transparently observable." The SME studied is an online innovation intermediary that we label Nexus. Launched in Australia in 2007, Nexus provides digital platform services to over 500 clients located in Australia, New Zealand, North America, and the United Kingdom (UK) to help them implement crowdsourcing – a phenomenon where organizations engage a community of contributors via online intermediary platforms to co-create services (Lauritzen, 2017; Randhawa & Scerri, 2015). In particular, Nexus specializes in online crowdsourcing services to public service organizations, helping them engage with online communities to implement crowdsourcing (Randhawa et al., 2019). With a revenue of around AUD 10 million and 80 employees in 2019, this case organization is well-suited to address our research question on the role of the SME's market orientation and dynamic capabilities in transforming its business model.

3.2. Data collection

The data for this study stems from three rounds of fieldwork between 2015-2019. The initial eight interviews with senior executives and operations managers were focused on Nexus' strategic and operational activities. The second round interviews with 11 Nexus managers focused on the evolution of the SME – its mission, vision, strategy; organizational structure and design; target market, value proposition, product/service offerings, and other client-side activities; and key supply-side activities and internal operations. The interviews were supplemented by online observations of the SME's client projects and archival data. According to this initial data, the SME had significantly transformed its market approach and business conduct from start-up to scale-up, revealing a transition in its business model over time. Given these emerging insights, we launched a third round of data collection through 22 follow-up interviews with Nexus representatives.

These latter interviews covered critical events in the SME's evolution from 2007 to 2019, as well as key components and architecture of the SME's business model and their transformation over 12 years. Guiding the interviews were the six key questions developed by Morris et al. (2005) that center on a business model's key components and changes over time: (1) value offering and value proposition; (2) market – customer segments, their industry sector, and geographic dispersion; (3) a firms' core competency, supply chain systems, and processes; (4) market positioning and points of difference; (5) revenue model and pricing; and (6) founders' goals and ambitions, firm's vision, mission and strategies, and growth and investment model.

The interviewees included managers familiar with operational aspects of projects (e.g., client engagement manager, sales manager) and those engaged on a strategic level such as the Chief Technology Officer and Chief Practice Officer, given the relevance of both levels of management in dynamic capability deployment (Peters et al., 2019). We also reviewed archival data, such as the Nexus' website and internal documents, and gathered outcome and performance data to triangulate findings. This provided complementary perspectives on the SME's market orientation, dynamic

capability deployment and BMI – both in terms of processes and outcomes – strengthening the validity of our findings (Yin, 2003). We spent a prolonged time in the field to better understand changes in the SME and the external context before analyzing the final-phase data (Creswell, 2003). Across all phases, interviews were semi-structured, led as guided rather than structured conversations (Yin, 2003), lasted an average of one hour, and were recorded and transcribed. Table 1 provides the data inventory, including the break-up of the 41 interviews, and other primary and secondary data.

Insert Table 1 here

3.3. Data analysis

In our analysis, we followed the principles of abductive research (Dubois & Gadde, 2002). We sought to connect phenomena not related to each other previously (Reichertz, 2007). To do so, we brought together concepts from previous research to break "free from the constraints associated with taking a single paradigmatic stance, and […] to produce new understandings with multiparadigmatic theories" (Aarikka-Stenroos & Jaakkola, 2012). Through a review of existing literature, we arrived at a preliminary framework of how an SME's BMI relates to market orientation and dynamic capability deployment (Figure 1). We evaluated this logic against our empirical data and iterated between data and theory to anchor emergent themes in extant literature (Eisenhardt, 1989). In our data, we identified descriptions about dynamic capabilities (sensing, seizing, and reconfiguring processes) (Teece, 2007) and market orientation (market-driving, market-driven, and ambidextrous) (Herhausen, 2016), as well as their influence on business model components (Foss & Saebi, 2017).

We followed a longitudinal case study analysis approach (Eisenhardt, 1989). We used insights from each interview to confirm or refute inferences drawn from the others. Multiple informants described the concepts studied in the SME, suggesting a collective relevance beyond an individual's specific context. Patterns of regularity in the data led to first-level themes, which we aggregated into theoretical constructs. We analyzed data relating to each theoretical construct across three phases of

the SME's evolution (early, establishing, and maturing) (Xiao, 2011). In a second step, we inferred linkages between the constructs to build our final theoretical framework (Figure 2), demonstrating how market orientation and dynamic capability deployment relate to an SME's BMI. Tables 3-6 provide the data structure showing our thematic coding of the core theoretical concepts and their definition, along with our case findings and illustrative evidence.

We triangulated our interview data with secondary data on the organizational context, performance, and BMI outcomes (Table 2). We informed interviewees of our results to ascertain agreement on our interpretations. This process enabled us to establish a detailed understanding of the phenomena and to improve the internal validity of our findings (Denzin & Lincoln, 2000; Yin, 2003).

4. Findings

We found some variance in Nexus' *market orientation,* its *dynamic capability deployment,* and its *BMI* across all three phases of the SME's evolution (early, establishing, and maturing). Our theoretical framework (Figure 2) reveals that the dynamic capabilities deployed to realize BMI led the SME to transition as follows: from a market-driving business model during the early phase, to a market-driven business model in the establishing phase, to an ambidextrous business model during the maturing phase. The different deployment of dynamic capabilities drove different levels and types of change to the key components of the SME's business model: *target segment, value proposition, value chain organization,* and *revenue capture mechanisms* (Foss & Saebi, 2017). We explain these findings below and relate them to key BMI outcomes (Table 2).

Insert Table 2 & Figure 2 here

4.1. SME early phase: founding and early growth

4.1.1. Market orientation

Nexus was the first firm in the country to sense a market opportunity for public sector organizations to crowdsource. In its early phase, the SME focused on developing the digital platform

and technology options to address this market need, and create value for clients and the communities they serve (Tuominen et al., 2004). This was enabled by the SME's *market-driving orientation,* defined by its proactive, forward-looking values and beliefs that were shaped by the owners' vision to tap unexplored opportunities for market value creation (Schindehutte et al., 2008) (Table 3).

Insert Table 3 here

4.1.2. Dynamic capability deployment

Nexus sought to create a business model that would leverage the new market opportunity presented by digital technologies. It deployed *explorative dynamic capabilities,* in line with its market-driving orientation, to develop key components of the business model.

Explorative sensing processes: First, Nexus identified the opportunity to create a market for online crowdsourcing for public sector organizations. Information-gathering processes helped identify latent customer needs and detect possibilities for creating new customer value (Table 4). The founders adopted a learning-by-doing approach informed by their prior experience within the public sector. Through this *generative sensing* (Dong et al., 2016), they drew associations between situational facts and precedence to interpret a schema on the market opportunity (Gavetti & Rivkin, 2005). The founders further used *entrepreneurial vision* and *judgment* to sense the impact of the market opportunity and make choices to address it. These insights correspond with research that highlights how business models in start-ups are shaped by founders and senior management's hypotheses about market needs, value creation, delivery, and capture (Foss & Saebi, 2017; Teece, 2010). Besides these inward-focused sensing processes, the founders also used *relationship management* and *networking* with clients and industry stakeholders to learn about (potential) clients' needs.

Explorative seizing processes: To seize the created opportunity, Nexus took an explorative approach in developing and implementing its core value proposition through proactive and forward-looking decision-making (Table 5). As passionate advocates of online community engagement, the co-

founders positioned Nexus as a trusted provider of digital platform services, building a movement for crowdsourcing in the public sector.

This value proposition was achieved through *strategic investing* in both marketing and technology. First, Nexus had to raise awareness within the public sector about itself as a digital platform provider and about the new offering. Nexus engaged in *strategic investing in marketing*, which helped target the value proposition for particular market segments (Wilden & Gudergan, 2015). Simultaneously, Nexus undertook *strategic investing in technology*, starting with the recruitment of a technology expert as a co-founder, and dedicating significant resources to developing and deploying its core technology—the digital platform – to create value (e.g., Afuah, 2002).

While the seizing processes helped deliver the value proposition, Nexus' full commercial potential could only be realized if it made the right *revenue model choice* (Teece, 2007, 2010). Having sensed that clients needed to develop and host their own online communities, Nexus decided to become a software-as-a-service (SaaS) firm, with licensing as its key revenue model. The SaaS model allowed Nexus' clients to access a user-friendly, web-based platform (Randhawa et al., 2018), freeing them from complex software and hardware maintenance, and offering Nexus an efficient and effective way to create, deliver, and capture value (Teece, 2010).

Explorative reconfiguring processes: Next, the SME needed to configure the key value chain components and internal resources, capabilities, and structure to enable the implementation of the business model (Teece, 2007, 2010) (Table 6). This entailed *proactive re-designing* at both the value chain and organizational level. First, the SME aligned its value chain with the SaaS value proposition. Second, it designed the organizational structure based on the chosen SaaS-based model. This corresponds with previous research on the role of organizational structures as an important aspect of BMI (George & Bock, 2011; Foss & Saebi, 2017) and as a key microfoundation of dynamic capability that supports the enactment of a commercial market opportunity (Day & Schoemaker, 2016).

Insert Tables 4-6 here

4.1.3. Business model

As with any start-up, Nexus first designed and developed the components and architecture of its business model (Day & Schoemaker, 2016; Foss & Saebi, 2017). Nexus established a *market-driving business model*, resulting from the deployment of explorative dynamic capabilities that were shaped by its market-driving orientation. More specifically, the explorative sensing processes helped identify unmet market needs. Through explorative seizing Nexus developed a value proposition to address these market needs, organized the value chain accordingly, and determined the revenue capture mechanism to leverage commercial value. Finally, Nexus (re-)designed the value chain organization and organizational structure through explorative reconfiguring.

4.2. SME establishing phase: scaling of business

4.2.1. Market orientation

To scale its market, Nexus had to innovate its business model. Consequently, the SME adopted a *market-driven orientation* (Narver et al., 2004), characterized by reactive, exploitative beliefs and values. The SME's owners and senior management displayed an innate focus on driving customer service and efficiency aimed at delivering value to its expanding customer base and staying ahead of the competition (Table 3). Accordingly, Nexus' strategic vision articulated the need to respond swiftly to customer needs and competitors' offerings.

4.2.2. Dynamic capability deployment

The market-driven orientation triggered the deployment of a set of *exploitative dynamic capabilities* that would ultimately lead Nexus to transition into a market-driven business model. These dynamic capabilities were underpinned by exploitative sensing, seizing, and reconfiguring processes, modifying Nexus' business model to meet (new) clients' needs for online engagement (Table 2).

Exploitative sensing processes*:* Nexus focused on generating intelligence about the expressed needs of its increasing customer base (Narver et al., 2004) and their internal barriers to using the platform. These *customer-oriented learning* processes, driven by closer interaction with clients in existing target segments (Table 2), offered Nexus more refined information about value and benefit for their clients (Table 4). For example, Nexus sensed the need to address a lack of technical skills and workforce capacity among the client project teams, which prevented them from realizing the full potential of the platform. Further, Nexus identified the need to overcome the scepticism among senior leaders in client organizations to embrace online engagement (Randhawa et al., 2018).

Exploitative seizing processes*:* The founding team and senior management adopted a reactive approach in refining the value proposition in response to insights from customer-oriented learning (Table 5). Its customer centricity helped transform Nexus from a technology platform provider to an integrated service provider. However, the SME was so busy reacting to customer needs that there was no time or capacity to focus on the unmet needs of the end user, the community members.

Nexus' *agile investing* efforts, mainly through informal decision-making processes, aimed to build resources and capabilities to respond quickly to customer needs and requests. One such investment supported *customer co-creation* (Lusch & Nambisan, 2015; Perks et al., 2012) through relational processes (Payne et al., 2008). Co-creation capability bolsters the deployment of existing marketing and technological capabilities, making them more client engagement-focused (Randhawa et al., 2018; Wilden et al., 2019) (Table 6). For example, in response to client feedback, the Sales Manager swiftly launched client roundtables to keep clients abreast of platform features and best practices. Simultaneously, the client roundtables served to capture product feedback, which led to the development of a more sophisticated and customizable platform. As the client base increased, remote and online technical support were enhanced to help clients use the platform. The aim was to enable

clients to overcome their internal staff capacity issues, resulting from a lack of skills and experience, to use the technologies for online community engagement (Randhawa et al., 2018).

Overall, the SME's lack of resources and capacity to pursue a deliberate strategy and formal decision-making processes forced it to use *emergent strategy-making* to scale up. Thus, to deliver the envisaged value proposition, team members were encouraged to act quickly upon client feedback and design products and services that matched individual client requirements. Such personalized services were integrated into the product price (note Table 2 shows limited paid services offered during this phase). There was no significant change to revenue streams and the value capture mechanism.

Exploitative reconfiguring processes: Although the culture of customer co-creation did not call for changes to the dominant technology or product design, the new value proposition led to a *reactive re-design* of the SME's value chain and, in turn, to an organizational re-design. Nexus recruited a sales manager to secure new clients and to provide advice to existing client teams. A newly formed product development team addressed upgrades to the technological platform, and a dedicated client experience team provided online technical support. These reconfiguration efforts aided customer-oriented learning, which resulted in a better alignment of the technology with market needs. However, along with technological advancements, client project teams had to be upskilled on new technical features. This triggered a progressive organizational re-design, including the expansion of the online client support team. Overall, these exploitative efforts were geared toward reactively and efficiently solving client problems during this scale-up phase. As a result, the SME could not focus as much on delivering proactive value offerings, unlike in the early start-up phase.

4.2.3. Business model

Business models are rarely successful "out of the box" and must be innovated before they can become scalable (Schoemaker et al., 2018). This stage in Nexus' evolution was largely characterized by a responsive market-driven orientation and use of exploitative dynamic capabilities, resulting in a

market-driven business model. Exploitative sensing and seizing enabled the development of a refined value proposition for existing segments (see Table 2). Related reconfiguring processes entailed the (re-)design of the SME's value chain and structure. However, target customers and revenue capture mechanisms in Nexus' business model remained largely unaltered.

4.3. SME maturing phase: consolidating business and expanding into new markets

4.3.1. Market orientation

During its maturing phase, Nexus displayed an *ambidextrous market orientation,* exhibiting *market-driven* and *market-driving* characteristics. It engaged simultaneously in *exploitative* and *explorative* activities. Two main objectives exemplify this ambidexterity: Nexus had to grow its existing value offering to the expanding customer base (Table 3). Concurrently, it explored new opportunities in new markets (in terms of geography and industry) (Table 2).

Ambidexterity is a firm's capacity to simultaneously manage today's business operations and remain adaptive to changing markets (March, 1991; Wilden et al., 2018). According to Herhausen (2016), ambidexterity is an organization's ability to address clients' current and expressed, as well as future and latent, needs. We adopt a broader definition of ambidextrous market orientation. We define it as investing efforts in responding to client preferences and behaviors within existing markets as well as proactively changing market structures and/or behaviors. Core to Nexus' existence was sustainable value creation across the service ecosystem for existing clients and the communities they serve. Consequently, Nexus focused on completing jobs for clients and advocating overall best practice in online community engagement. This strategy encapsulated the logic that client value is not a product or service but a utility. Nexus also nurtured a heightened entrepreneurial mindset and risk-taking approach in exploring new opportunities for value creation, thus demonstrating values and beliefs with proactive, explorative as well as reactive, exploitative characteristics.

4.3.2. Dynamic capability deployment

SMEs with an ambidextrous market orientation require *ambidextrous dynamic capabilities,* as our results show. The SME adopted exploitative dynamic capability processes to create BMI. Service efficiency, client satisfaction, and retention in existing markets were a priority. Conversely, the SME's explorative dynamic capability processes were proactive, forward-looking, and geared toward driving and shaping new markets and technological products. Together, the deployment of such dynamic capabilities led to the transition into an *ambidextrous business model.*

Ambidextrous sensing processes*:* Nexus continued gathering information about how to offer utility to existing clients (Table 4). Managers sensed, based on *customer-oriented learning* processes, that existing clients' use of the platform did not always follow good practice. This was often due to clients' resistance to embrace online engagement fully. However, Nexus recognized that the personalized client services to help clients overcome this resistance were unsustainable, mainly due to a steep increase in the client base. The platform uptake and license renewals began to suffer as clients were not deriving sufficient value. Nexus' strategic response was geared toward exploiting existing markets by better satisfying clients' expressed needs and addressing their frustrations.

Beyond this, Nexus adopted explorative *peripheral enquiry* to identify signals of potential new market segments (Day & Schoemaker, 2016). Senior managers emphasized the wider analysis of client needs (Jaworski et al., 2000), past blind spots, and present trends in other industries. They also sought to recognize opportunities to enter new geographic markets in the US, the UK, and Canada, as well as new industry markets, such as healthcare and utilities (Table 2). Initially, board members questioned Nexus' capacity to act upon such expansion opportunities. Its owners, however, overcame these doubts through analogical reasoning and expansive scenario thinking (Gavetti & Rivkin, 2005; Martins et al., 2015), which underlines the role of managerial cognition in driving decisions related to BMI (e.g., Doz & Kosonen, 2010; Chesbrough, 2010).

Vigilant learning further enabled such exploratory sensing, allowing Nexus to interpret market signals and act on information about new market segments. Crucially, vigilant learning triggered overall changes to client segments, value propositions, and value chain organization, reinforcing previous research that emphasized the role of learning as a source of BMI (Foss & Saebi, 2017). This not only aided sensing opportunities in adjacent markets but was also crucial to keep up with industry trends in product development and to transfer key insights for enhancements to the platform.

Ambidextrous seizing processes: Nexus made crucial *strategic investing* choices to leverage identified opportunities (Table 5). Unlike the tactical responses to client feedback in the previous phase, Nexus designed more strategic services to support existing clients in overcoming their competence gaps and workforce capacity limitations so that they could use the platform more effectively. These services became core to Nexus' refined value proposition and helped carve out its market positioning as a holistic solutions provider within known market segments. As part of its *strategic investing into existing markets*, Nexus deliberately built distinct client service capabilities. These efforts comprised a clear articulation of planned strategies, focused management attention, and a disciplined approach to execute service business development.

These service-oriented investments further aided efforts in *customer co-creation* with deliberate initiatives aimed at working closely with (potential) clients. The focus of client conversations went beyond Nexus's technological offering. It included advocacy around broader online engagement practice and associated benefits for their communities. Further, Nexus created learning resources to support client training, helped promote best practice, and co-developed the product with (prospective) clients to make the platform more user-friendly. Ultimately, these efforts fed into the design and delivery of bundled and customized solutions, which enhanced client capacity to deliver online community engagement. Our findings align with earlier research on the role of value co-creation in BMI (Schneider et al., 2013; Spieth et al., 2016).

Nexus expanded its revenue capture mechanisms to capture value from its new service-led value proposition. It now charged clients for previously free services and designed product/service packages with a focus on *commercializing services* that were originally included in the product price (see Table 2). Nexus sought to minimize costs to achieve service profits. Thus, the decision to separate its product and services and to turn service activities into a business unit, allowed Nexus to expand its revenue capture mechanisms and exploit service profit opportunities (Teece, 2007, 2010).

Along with a focus on enhanced service business operations in existing markets, Nexus committed resources to implement *strategic investing into new markets* (see Table 2). Nexus commissioned market research on prospective industries, such as healthcare and utilities, in the Australian market and dedicated personnel toward business development in these emerging market segments. Further, a decision was made to expand into international markets.

Nexus also focused on *strategic investing into new technology* by building assets and capability to develop API platform architecture. This architecture enabled the Nexus platform to plug into external applications and software. Simultaneously, it could be accessed and used by other external developers and thus serve as an added revenue capture mechanism. Leveraging such open ecosystem architecture made product development and platform useability more efficient and effective, opening up new avenues for value creation and capture.

Crucial in this phase was the formulation and articulation of "*umbrella strategies*" (Mintzberg & Waters, 1985): the founders provided only guidelines to achieve new value proposition and let strategy emerge through bottom-up, trial-and-error learning. They actively cultivated an open culture and an experimental mindset across the organization. The founders also promoted interactions with customers and industry partners and emphasized cross-functional knowledge-sharing. All team members were encouraged to feed into a business intelligence system to develop a codified bank of market knowledge. Further, teams were provided with resources and flexible timeframes to try out

new ideas. Such *probe-and-learn experimentation* led to new staff-designed initiatives being tested (Day & Schoemaker, 2016) and resulting discussions facilitated managerial cognition of a broad array of opportunities. This observation aligns with previous research on how experimentation and learning can help firms renew business models (e.g., Andries et al., 2013; Achtenhagen et al., 2013).

Ambidextrous reconfiguring processes: Ambidexterity in sensing and seizing called for the reconfiguration of the SME's value chain (Table 6). Development of the new platform architecture required the reconfiguration of technical assets and relationships with clients, suppliers, and partners to achieve value delivery across a collaborative ecosystem. A newly appointed senior product development manager spearheaded this reconfiguration. In terms of *organizational re-design*, Nexus ensured that explorative and exploitative activities were pursued in demarcated structural units (Tushman & O'Reilly, 1996; Raisch, 2008). Nexus applied structural separation as a mode of adaptation to achieve partitional ambidexterity (Birkinshaw et al., 2016).

Newly established product development units and distinct client services were tasked with separating product and service activities and designing and commercializing services originally offered along with the product (see rise in new paid services offered – Table 2). In another initiative, three client engagement managers, led by a territory manager, were recruited to work closely with clients and customize the newly designed services. Nexus deliberately recruited past clients from the public sector as they were best positioned to sense and respond to client needs in existing markets. These initiatives established Nexus' capacity to run a separate service business unit.

Nexus also demonstrated a deliberate focus on international market expansion with the establishment of separate territorial units in each geographical market. The international territory managers created and leveraged new market opportunities. In contrast, the Australian territory manager explored opportunities in emerging industry sectors such as healthcare and utilities.

Each structural unit in Nexus contained a distinct management team, organization structure, culture, control systems, and incentive structures (Benner & Tushman, 2003). The lack of capacity and resources in the SME meant, however, that unit members, despite demarcated roles, continued to simultaneously perform explorative and exploitative tasks, demonstrating elements of contextual ambidexterity (Gibson & Birkinshaw, 2004). Each unit operated independently. However, where they strived for ambidexterity, they were interdependent and required the coordination of exploitation and exploration activities. Accordingly, client service and engagement managers kept track of how clients use the platform and developed, based on this knowledge, case studies in the form of testimonials and best practice material. The territorial business development team shared these with potential clients in new markets. Further, client feedback was relayed to the product development manager, in turn, feeding into the strategic technology roadmap and translating into a better platform for both clients and community participants. Likewise, the product development team regularly updated the territory teams and engagement managers on the newly developed platform features so clients could be informed and upskilled. The aim to explore and exploit simultaneously enabled Nexus to maximize the creation, delivery, and capture of value through its ambidextrous business model.

Reconfiguring also meant dedicating resources for *external* shaping, that is, reshaping the industry ecosystem (Day & Schoemaker, 2016). Expanding into new markets creates long-term, sustainable market value. Teams were talking to potential clients about the platform, promoting it as adding value to clients' operational efficiency and their community engagement. Nexus also hosted events for industry professionals, focusing on improving industry-wide online engagement practice.

4.3.3. Business model

Nexus' ambidextrous dynamic capabilities, fostered through its ambidextrous market orientation, helped establish its *ambidextrous business model*. During this phase, the SME's sensing and seizing processes enabled both exploitation (to consolidate its business in existing markets) and exploration

(to seek new markets and technologies). This resulted in the expansion of Nexus' markets and revenue capture mechanisms (see Table 2) and a value proposition designed to address both the latent and expressed needs of clients across its segments. The reconfiguring processes, in turn, helped (re-)design the architecture of the SME's value chain as well as organizational structure to promote ambidexterity. This led to Nexus' transformation from a market-driven integrated service provider to an ambidextrous service solutions provider.

5. Discussion

The theoretical framework developed in this study (Figure 2) encapsulates four key contributions. First, we clarify the drivers of BMI, as called for by Foss and Saebi (2017), and we elucidate the relationships between market orientation, dynamic capability deployment, and BMI (Schneider et al., 2013). Contrary to previous work where market orientation is seen to condition the dynamic capability–BMI relationship (Foss & Saebi, 2017), we find that market orientation and dynamic capabilities shape the BMI of the SME. We observed the evolution of an SME's business model, an online open innovation intermediary providing SaaS, from a market-driving technological platform provider to a market-driven integrated service provider and to an ambidextrous solutions provider.

Our results indicate that SMEs engage in different types of BMI over time. Establishing a market-driving business model is a 'focused BMI' that centers on modular changes to specific aspects of the business model (Foss & Saebi, 2017). In our study, the SME's founders and senior management were actively engaged in shaping a business model that was new to the industry. This process of BMI was driven by an explorative dynamic capability deployment and a market-driving orientation. Then, to scale the business, the SME engaged in 'evolutionary BMI,' the result of a market-driven orientation and exploitative dynamic capabilities. This second process involved making progressive changes to components of the business model in response to the expressed needs of the growing customer base in existing target segments (Narver et al., 2004). Simultaneously, this process was

characteristic for an 'adaptive BMI,' defined by Foss and Saebi (2017) as making changes in the architecture of the business model over time in response to changes in the external environment (e.g., Teece, 2010). We found in our case study that these approaches to BMI helped cater to evolving customer needs and competitor activities and resulted in value creation, delivery, and capture mechanisms that were new to the firm but not necessarily new to the industry (e.g., Bock et al., 2012). Finally, the transition to an ambidextrous business model represents a 'complex BMI' process. The SME management focused on changes to the components and architecture of their firm's business model and developed innovations that were new to the industry (Foss & Saebi, 2017).

In sum, our findings show that along the BMI process innovations expand from relating to only one or few components (e.g., Amit & Zott, 2012; Bock et al., 2012; Schneider & Spieth, 2013) to all components of the business model and the architecture that links those components (Velamuri et al., 2013). Overall, the process toward becoming an ambidextrous market-oriented SME implies changes to the firm's value offering (e.g., core offering, customer segments, value proposition), value architecture (e.g., core competencies and resources, internal and external value creation, distribution), and revenue model (the logic of earnings and costs) (Spieth et al., 2016). Such change is characterized by a progressive sophistication and shift toward complex BMI (Foss & Saebi, 2017) with differences in the novelty and scope of the change to the components and architecture of the business model.

SMEs align their deployment of dynamic capabilities with their market orientation to pursue innovations to their business model, highlighting the notion of fit. We find that an SME with a market-driving orientation deploys dynamic capabilities in an explorative, proactive fashion, resulting in a market-driving business model. In contrast, an SME with a market-driven orientation deploys its dynamic capabilities in an exploitative, reactive fashion, resulting in a market-driven business model. Finally, an SME with an ambidextrous market orientation deploys its dynamic capabilities in an ambidextrous fashion, resulting in an ambidextrous business model. These insights extend the work

of Osiyevskyy and Dewald (2015), who distinguish between explorative and exploitative BMI, and of Saebi et al. (2017, p. 8), who discuss the proactive "market development orientation" that similarly aligns with our findings from Phase One of this study.

Second, we respond to recent calls to connect marketing strategy with ambidexterity research more explicitly (Wilden et al., 2018). We find that market-driving and market-driven orientations trigger different exploration and exploitation activities, which characterize how the SME's dynamic capabilities are deployed. This finding adds to previous research (Vorhies et al. 2011) about positive relationships between exploration and exploitation and a firm's capacity to enhance its customer-focused marketing. Vorhies et al. (2011), however, questioned whether firms benefit from maximizing both capabilities simultaneously. We find that doing so and developing an ambidextrous market orientation is important for SMEs to grow their business simultaneously in existing and new markets. Thus, we confirm the need to distinguish between market-driving and market-driven orientations in the SME context. We also show that an SME's market orientation and its business model can combine both aspects and, hence, be ambidextrous. The explicit focus on an SME's ambidextrous market orientation and business model, with a dynamic capability deployment that combines explorative and exploitative elements, has not yet been clarified in the existing literature. We, therefore, add support to previous findings that ambidextrous market orientation (Herhausen, 2016) can be positive for SMEs. Consequently, our findings are in line with what strategy scholars call an "analyzer orientation" (Miles & Snow, 1986; Miles et al., 1978).

Further, our findings correspond with previous research that SMEs have limited resources. Different from Markides (2013), who refers to a firm's ambidextrous running of a new business model alongside an existing one, our findings illustrate that an SME can develop a business model that is ambidextrous. Research on ambidexterity has differentiated between contextual and structural ambidexterity. Gibson and Birkinshaw (2004) describe structural ambidexterity as firms creating dual

structures through, for example, separate business units or teams, each focusing exclusively on one task. Contextual ambidexterity, conversely, "is the behavioral capacity to simultaneously demonstrate alignment and adaptability across an entire business unit [..] coherence among all the patterns of activities in the business unit; they are working together toward the same goal" (p. 209). In the final phase, despite structurally separating the client services, product development, and geographic territories into business units with distinct explorative and exploitative goals, we find that the case firm, given its small size, could not demarcate the roles of the unit managers completely. Although the managers had a clear focus on exploration versus exploitation, they still had to combine explorative and exploitative tasks in their daily routine. Thus, while structural and contextual ambidexterity have often been considered as being mutually exclusive, we find that SMEs with limited resources may benefit from implementing a dual approach to ambidexterity.

Third, we provide novel insights into the link between BMI and dynamic capability deployment (Foss & Saebi, 2017) and respond to the call for more research on ambidexterity and dynamic capabilities (Eisenhardt et al., 2010; Wilden et al., 2018). Specifically, we discuss which dynamic capabilities lead to different business models. We highlight the role of achieving fit by describing how different dynamic capabilities are necessary to enable the development of market-driving, market-driven, and ambidextrous business models. Our findings confirm that "…successful implementation of BMI may require corresponding changes in the organizational design—that is, the structuring, coordination, and motivation of work, as well as the setting of objectives and the allocation of resources" (Foss & Saebi, 2017, p. 219). We confirm the key role of (re-)design in BMI – an aspect that is currently under-researched (Foss & Saebi, 2017). Importantly, we show that dynamic capability deployment can combine exploitative, reactive and explorative, proactive elements. We extend Fischer et al.'s (2010) and Holsapple and Oh's (2014) insights by identifying a dynamic capability deployment that can be ambidextrous. In doing so, we also show that

ambidexterity is not a dynamic capability per se but that dynamic capabilities can be deployed in different ways, including ambidextrously.

Fourth, when facing changing market conditions, SMEs, given their limited resources, tend to respond to opportunities in a way that is consistent with the existing knowledge, resources and capabilities, and business model (Wilden et al., 2018). We uncover that in deploying dynamic capabilities, firms have to overcome existing mental models about what business model is appropriate for a market (Tripsas & Gavetti, 2000; Chesbrough, 2010). We find that to reposition its market orientation and to realize BMI, an SME needs to change its mental model through a conscious cognitive shift in dominant values and beliefs (Martins et al., 2015). We demonstrate the importance of managerial cognition such as peripheral enquiry, generative sensing, and visioning that draw upon the entrepreneurial capabilities to explore new value creation logic in the process of BMI. We also add to the research that examines BMI as a dynamic, evolutionary process, identifying the different capabilities and processes required to support this innovation (e.g., Achtenhagen et al., 2013; Demil & Lecocq, 2010; Doz & Kosonen, 2010).

Our findings substantiate the usefulness of the dynamic capability framework to explain BMI. We clarify that as an SME's market orientation changes, it also deploys its dynamic capabilities to innovate its business model. Our findings provide support for Schindehutte et al.'s (2008) reasoning that SMEs switch from a market-driving to a market-driven orientation. We extend their views, however, and suggest that SMEs can exhibit both market-driven and market-driving orientations simultaneously (Jaworski et al., 2000). Most dynamic capability literature emphasizes that firms react to changes in their environment (i.e., be market-driven), and some recent literature contends that firms proactively shape markets (i.e., be market-driving). We observe, however, that firms can endogenously and proactively initiate changes in markets and *simultaneously* react to exogenous changes in markets. Thus, the application of the dynamic capability framework to clarify BMI should

not be restricted to the commonly assumed market-driven orientation of firms, but should account for the market-driving and ambidextrous market orientations, as well as transitions between the three types. Furthermore, our findings align with previous research that identifies the value of dynamic capabilities for internationalization processes of multinational enterprises (e.g., Teece, 2014; Pitelis & Teece, 2018) as well as SMEs compared to large firms (Tang & Gudergan, 2018).

6. Conclusion

This paper's contributions lie in advancing our knowledge of the role of dynamic capabilities in enabling BMI of an SME from start-up to scale-up. We study the dynamic capability processes for producing BMI, transitioning from a market-driving to market-driven, and ultimately to an ambidextrous market-oriented business model. In doing so, we demonstrate that SMEs can develop and deploy 'fitting' dynamic capabilities to introduce innovations into the design and architecture of their business models. As with any research, our study is subject to limitations, which may provide avenues for future research. First, our insights draw on an in-depth, longitudinal analysis of a single SME. Further research could study additional SMEs by drawing either on a qualitative study of multiple case firms or a wider quantitative study of SMEs. Second, beyond examining the process through which SMEs produce innovations to their business models, further research could focus on explaining additional context-dependencies (e.g., specific industrial or organizational contexts that condition the deployment of dynamic capabilities) or path dependencies (e.g., while our insights pertain to how dynamic capability deployment assists in dealing with path dependencies, the specific capabilities required to adapting established business models can be further unpacked) (Spieth et al., 2016). Despite these limitations, our study improves knowledge of how an SME's market orientation and deployment of dynamic capabilities may drive BMI; we show how, ultimately, SMEs can realize an ambidextrous business model that enables the simultaneous exploitation of the SME's business model while engaging in exploration.

Figure 1: Conceptual relationships between market orientation, dynamic capabilities, and BMI in previous research

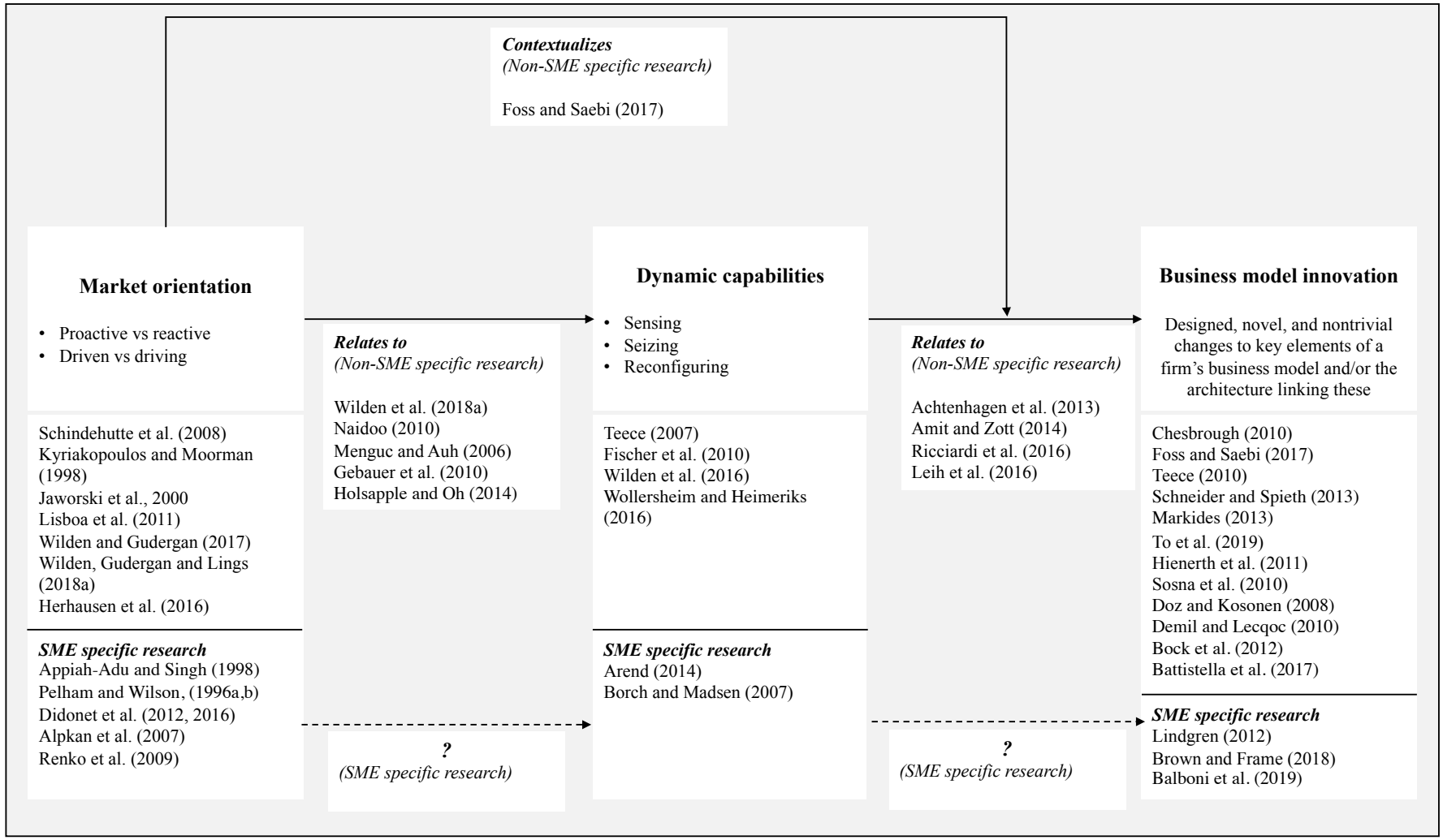

Figure 2: Evolution of market orientation and dynamic capability processes leading to innovation in business models

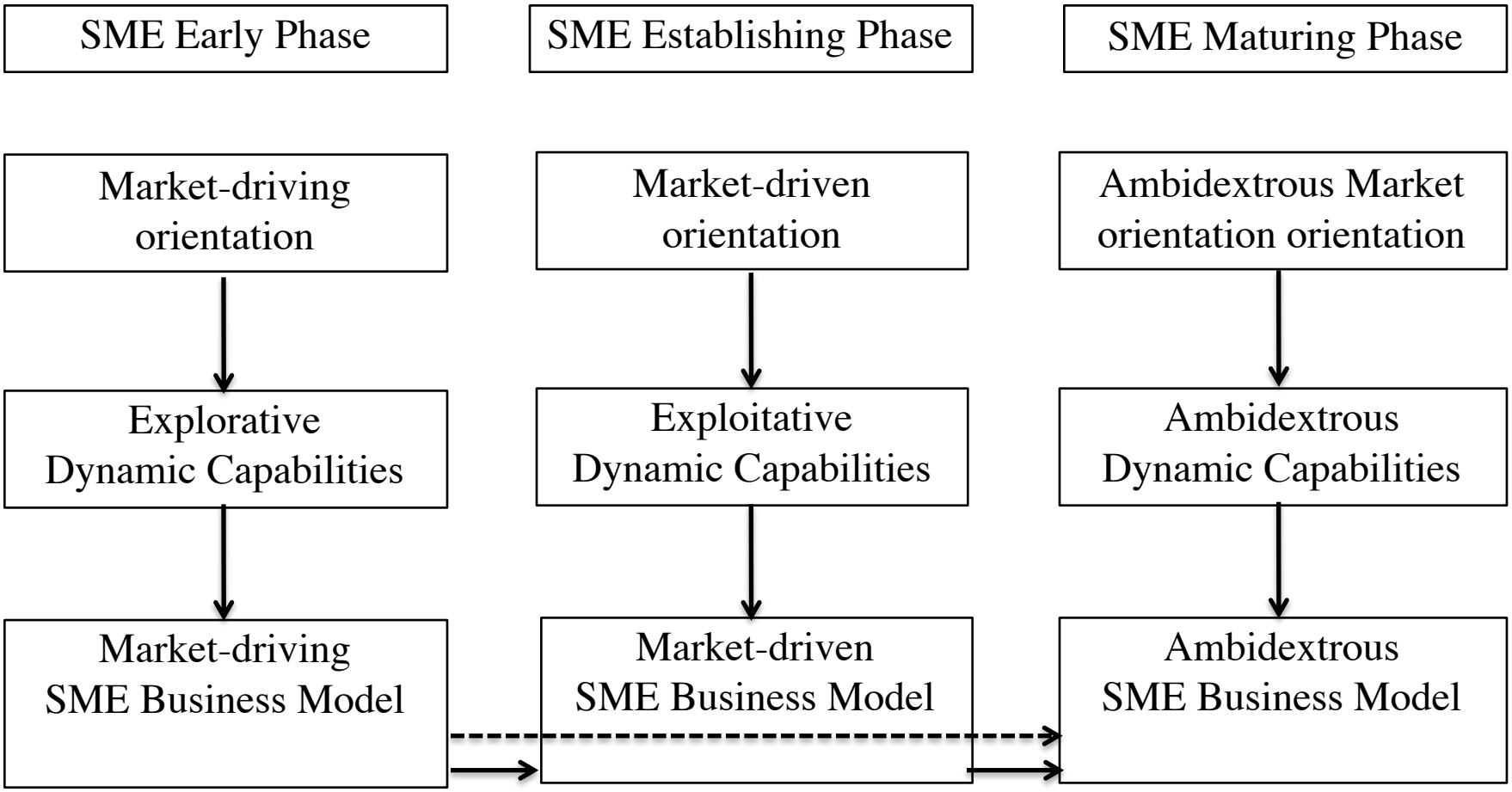

Table 1: Data collection and Data inventory

	Phase 1	Phase 2	Phase 3
Interviews	8 interviews with Nexus managers	11 follow-up interviews with Nexus manager	22 follow-up + additional interviews with Nexus managers
	Co-founder/Chief Practice Officer (2)	*Co-founder/Chief Practice Officer (2)*	*Co-founder/Chief Practice Officer (3)*
	Chief Technology Officer	*Chief Technology Officer (2)*	*Chief Technology Officer (2)*
	Sales Manager	*Sales Manager*	*Sales Manager (2)*
	Client Experience Manager	*Client Experience Manager*	*Client Services Manager (3)*
	Head - Product Development	*Head - Product Development*	*Business Development Manager (2)*
	Operations Manager	*Operations Manager*	*Product Development Manager*
	Learning & Practice Manager	*Learning & Practice Manager (2)*	*Client Engagement Manager I (2)*
		Business Development Manager	*Client Engagement Manager II (2)*
			Client Engagement Manager III
			Territory Manager (3)
			Senior Product Manager
Observational data	Online crowdsourcing sites/projects	Past and ongoing crowdsourcing projects	Past and ongoing crowdsourcing projects
Archival data	Internal policy documents	Internal policy documents	Internal policy documents
	Website	Website	Website
		Media articles	Media articles
			Outcome and performance data
Other data	Follow-up emails	Follow-up emails	Follow-up emails
	Informal conversations	Informal conversations	Informal conversations

Table 2: Outcomes of BMI across the three phases

	SME Early Phase	SME Establishing Phase	SME Maturing Phase
Number of employees	5	50	80
Revenue	AUD $1M	AUD $6M	AUD $10m
Number of new clients	50	200	245
Total number of clients	50	250	495
Ratio (Number of new clients: Total number of clients)	1:1	0.8:1	0.5:1
Number of paid services offered	2	2	26
Number of geographical markets	1	2	5
Number of sectors/industries	5	5	10

Table 3: Market Orientation for BMI

	Phase One	Phase Two	Phase Three
Concept	**Market-driving orientation**	**Market-driven orientation**	**Ambidextrous market orientation**
Concept Nature	*Proactive, explorative nature*	*Reactive, exploitative nature*	*Intertwined proactive, explorative and reactive, exploitative nature*
Concept Definition	*The owners and/or senior management's proactive, explorative focused beliefs shape approaches, activities, and behaviors within the SME.*	*The owners and/or senior management's reactive, exploitative focused beliefs shape approaches, activities, and behaviors within the SME.*	*The owner and/or senior management's beliefs that incorporate both proactive, explorative focused and reactive, exploitative focused elements; shape approaches, activities and behaviors in the SME.*
Insights from Case Firm	• SME founders' vision to create sustainable value for clients, and ultimately the communities they serve • SME founders' belief in the potential of digital technologies to address opportunities for market (and societal) value creation • Driving and shaping the market demand for online engagement in the public sector • Identifying and addressing hitherto unmet, latent client needs in the public sector market	• SME founders' strategic vision to scale the business within existing public sector markets by increasing market demand for online community engagement • Innate emphasis on client retention by driving customer service and efficiency, and staying ahead of the competition • Managerial focus on responding swiftly to customer needs and competitors' offerings • Focus on catering to the expressed needs of clients in its growing customer base in the public sector market	• SME owners regard for sustainable value creation across the ecosystem as the core mission • Innate logic that customer value is not a product or service but utility • Strategic focus on balancing two goals: (1) growing current value offering in its existing target market, and (2) exploring new opportunities in new markets (both geographic and industry) • Heightened entrepreneurial mindset among SME owners and managers to explore new opportunities for value creation • Taking risks in exploration and empowerment to drive strategic decisions • Focus on responding to customer needs within existing markets, and proactively shaping future market demand
Illustrative Data from Case Firm	*"[Nexus] was just our desire to do something new. We wanted the community to have a real say and drive change in society. It was entirely driven by [our perception] of the need for change in the way community engagement was practiced in the industry. We knew that it would be a big, big challenge…we were ready to take the risk." (Co-founder/Chief Practice Officer)* *"I was enthusiastic about [starting Nexus], I guess, because of the entrepreneurial challenge of it as much as anything. I thought it would be really fascinating and interesting. It will be a real challenge; it requires an entrepreneurial flair to do that kind of thing" (Co-founder/CEO)*	*"At that time, we made a decision -- Okay, we don't need a strategic CEO, particularly. We need a scale-up CEO. That was quite important, I think, as a realization for us"(Co-founder/Chief Practice Officer)* *"Quite a few years ago now, in Australia, particularly, we realized we'd gone past the early adopters, well past them, and we were into the kind of the middle ground of the people who are not as values-driven, and it's more about efficiencies and about compliance, And so they're actually after a different kind of product."(Territory Manager, Australia)*	*"And you have to remember that the company, originally, was my idea. And so, I've kind of felt for about four years, that I was losing my reason for being in the company. Because it was all about delivering on the minutiae of client needs around efficiencies. If you're putting all of your efforts into building a product for them, then you're not building anything for the leading-edge people, which is actually where the [societal] mission statement is completed. I wanted to deliver on that mission statement." (Co-founder/Chief Practice Officer)*

Table 4: Dynamic Capabilities – Sensing for BMI

	Phase One	**Phase Two**	**Phase Three**
Concept	**Explorative Sensing**	**Exploitative Sensing**	**Ambidextrous Sensing**
Concept Nature	*Proactive nature*	*Reactive nature*	*Proactive, explorative and reactive, exploitative nature*
'Target Segment' focused sensing	*Search approaches and activities [that are proactive and forward-looking] aimed at collecting information about latent client needs, how clients differ in what they value, and how clients can be grouped into segments.*	*Search approaches and activities [that are reactive and retrospective] aimed at collecting information about expressed client needs, how clients differ in what they value and how clients can be grouped into segments.*	*Search approaches and activities [both proactive and forward-looking, and reactive and retrospective] aimed at collecting information about latent client needs, how clients differ in what they value and how clients can be grouped into segments.*
Insights from Case Firm	• Founders' *learning-by-doing* through prior immersive experience in public sector market to detect latent client need • *Generative sensing* as a cognitive approach to perceive market opportunity for online community engagement in the public sector • *Entrepreneurial vision and judgment* to sense the impact of this market opportunity • *Relationship management and networking* with clients and industry stakeholders	• Informal *customer-oriented learning:* informal processes to detect evolving, expressed client needs in existing target markets • Informal *competitor-oriented learning:* informal processes to gather and process information about competitors' customer offerings and behavior towards customers	Exploitative sensing: • *Customer-oriented learning:* formal processes to detect client needs and pain points in existing markets • *Competitor-oriented learning:* formal processes for information-gathering on competitors' offerings Explorative sensing: • *Peripheral enquiry* through expansive market scanning and analogical thinking, to look beyond current target segments, and identify new opportunities in global markets and alternative industries • *Vigilant learning* to (1) interpret market signals with alertness and act actively on emerging information about new markets, and (2) keep up with industry and competitor trends to address market needs.
Illustrative Evidence from Case Firm	*"We realized there was a need for online platforms that allow public sector organizations to invite feedback to co-create public services… allowing the end user, the citizen, to contribute to innovation in public services"(Co-founder/Chief Practice Officer)* *"The founders started out by identifying that there was a problem in traditional engagement methods, where certain sections of the community were being excluded, and their voices were not heard, and Nexus wanted to give them an opportunity to do that." (Operations Manager).* *"We were very focused on government – we're looking at other areas now – very focused areas. We could have used our platform for online collaboration in different markets, but that would have just been dilution" (Chief Technology Officer)*	*"We didn't have a deliberate way by which we kept track of what our customers have to say or what other industry players were doing. That's all been done by feel. So, definitely, we keep an eye on our competitors, but we didn't do it in a very structured way" (Engagement Manager)* *"Nexus' focus is now to involve clients a lot more and manage client relationships…clients have been immersed in the design process." (Client Services Manager)* *"[We] need to use data to track how our clients are performing, but we've just not had the capacity or the budget to do it. We've always felt that we're flying blind and what we did was by gut instinct [..] we need to start growing out of that small business mode and start looking at the numbers a bit more than we have in the past."(Chief Technology Officer)*	*"It was that realization which last year made me go, okay, then we need to have a conversation with our clients from the methodology point of view. So [it] is about methodological innovation rather than about technical innovation. There's already a whole bunch of tools there that they can use, and if they use them well, then they can be innovative. If they use them poorly, then they won't be innovative."(Client Services Manager)* *"We share everything that comes up with our competitors, so there's some internal learning. [The product manager] has her eye on all the stuff that comes through. We look at what the competitors are doing to see whether or not there's something specific that we need to do. We keep an eye on when those competitors are making announcements about new feature releases and new strategic moves. In terms of our attitude to competitors, I think, in general, we're being proactive." (Co-founder/Chief Practice Officer)*

Table 5: Dynamic Capabilities – Seizing for BMI

	Phase One	**Phase Two**	**Phase Three**
Concept	**Explorative Seizing**	**Exploitative Seizing**	**Ambidextrous Seizing**
Concept Nature	*Proactive nature*	*Reactive nature*	*Proactive, explorative nature* *Reactive, exploitative nature*
'Value Proposition' focused seizing	*Evaluative and decision-making approaches and activities [that are proactive and forward-looking] aimed at developing the most suitable value proposition*	*Evaluative and decision-making approaches and activities [that are reactive and retrospective] aimed at comparing alternative value propositions and determining the most suitable value proposition [including possible changes to the SME's existing value proposition]*	*Evaluative and decision-making approaches and activities [that are proactive and forward-looking, and reactive and retrospective] aimed at implementing the most suitable value proposition [including possible changes to the SME's existing value proposition]*
Insights from Case Firm	• *Strategic investing in marketing* to develop and deliver a value proposition aligned with market needs and positioning to serve particular target segments • *Strategic investing in technology* to develop the platform based on emergent market needs, and build capacity to employ digital technology to create value	• *Agile investing* aimed at building resources and capabilities to respond to customer needs and requests quickly, mainly through informal decision-making processes • *Customer co-creation* with an aim to co-create client offerings through relational processes • *Emergent strategy-making* leading to tactical yet timely responses in designing products and services matched to individual client requirements	Exploitative seizing: • *Strategic investing in existing market:* deliberate strategies for service business development, and building distinct client service offerings and capabilities • *Customer co-creation* with deliberate initiatives aimed at working closely with clients for design and delivery of bundled solutions (product/service packages) customized to client needs Explorative seizing: • *Strategic investing in new markets:* resource commitments to explore new geographic (international expansion) and emerging industry markets • *Strategic investing into new technology:* building assets and capability to develop API platform and ecosystem architecture • *Formulation and articulation* of *umbrella strategies* by the founders for achieving new value proposition; strategy-making through bottom-up, trial-and-error learning processes from middle and lower-level managers • *Probe-and-learn experimentation:* experiments to test new strategic initiatives
Illustrative Data from Case Firm	*"We were the first to offer whole-of-government approaches to online consultation and innovation. We are working in this space as an established brand and provider." (Client Services Manager)* *"Two key value-creating aspects for us as a business are that community engagement forms the core value and ideals for the company; brand and positioning as an advocate for online community engagement, which places us in a unique spot for clients*	*"Our clients have just been demanding changes, so they've been driving a lot of the micro-changes to the software for years and years and years. And in order to win those clients back, we basically try to deliver on as many of those demands as possible over the course of the 12-month period. They are worth something from a specific client-retention perspective, but they do work to be able to say to a client, 'See, we've changed that feature, so that works better for you.'" (Client Services Manager)* *The differentiator is that Nexus offers practice expertise in online community engagement…not*	"*We decided at that board meeting that we needed to create a specific services division within the company because in Australia, particularly, our growth rate had leveled off, and so we were looking for ways to get more into the contracts and tacking on services to those contracts, seemed like the logical thing to do"(Chief Technology Officer)* *"[The UK team]is kicking goals really quickly. They're finding the market is a really good fertile market. Normally, new salesmen into new territory -- you don't expect the curve to take off very quickly. But it seems to be outperforming Australia in new business. It's doing really, really well." (Sales Manager, Australia)*

	who are interested in this space." (Operations Manager) *"Another area of emphasis for us is the useability of the platform (user experience)." (Chief Technology Officer)* *"We are focused on building a community around engagement." (Sales Manager)*	*just software provider; other online ideation platform providers emerge from the software firms...these players offer the software to clients not much support."(Co-founder/Chief Practice Officer)* *"The message to clients is – we are going to be there for you and do it for you – this is far more than selling software." (Operations Manager)* *"I would definitely look at this as an area that differentiates us from our competitors. The level of support that we provide is a key differentiator." (Sales Manager)*	*"That was a big thing for me…there are people within the team that need to be given space to flourish… and more incentives to do more, to be more energetic, to be more entrepreneurial, yeah, because we were beginning to be very much about safety and security and consistency."(Co-founder/Chief Practice Officer)* *"We are now introducing a marketplace; essentially, the idea is that we build some tools them outside, why do we have to reinvent the wheel, basically, because somebody else is doing it so much better? Why can't we just build it so that's it's really easy from [the platform] to use these other tools? And that can allow us to then focus on the important bits of [the platform] like making the tools look better, making the workflows better."(Senior Product Manager)* *"Reach, inform, and involve residents in…decisions that affect their lives. The combination of [our product] and [service]is, quite simply, the most powerful end-to-end online participation solution on the market." (Nexus website)*
'Revenue Capture Mechanism' focused seizing	Evaluative and decision-making approaches and activities [that are proactive and forward-looking] aimed at specifying the SME's revenue capture mechanisms	Evaluative and decision-making approaches and activities [that are reactive, externally driven, retrospective] aimed at re-specifying the SME's revenue capture mechanisms	Evaluative and decision-making approaches and activities [that are proactive and forward-looking, and reactive and retrospective] aimed at re-specifying the SME's revenue capture mechanisms
Insights from Case Firm	• Making the *revenue model choice* to adopt a software-as-a-service (SaaS) licensing model to commercialize product and capture value	• No change to the chosen SaaS licensing revenue model	• *Commercializing services* that were originally included in the product price to expand its revenue streams • *Optimizing service costs* to achieve service profits
Illustrative Data from Case Firm	*"We are a B2B SaaS company… the simple focus of our business model has also made our marketing simpler and processes much more well-aligned." (Chief Technology Officer)*	*"Our business model is probably different in terms of our sales cycles, but fundamentally you can take our licensing model and use it in any B2B SaaS environment, and particularly in a B2B space where you have to build the market a little bit – because that's the way we have designed things for the client"(Chief Technology Officer)*	*"We should be able to turn services so that it is worth 20% of revenue if we do it right. So we made a decision to create a services group."(Co-founder/Chief Practice Officer)* *"[Our marketplace] would allow our clients to choose a variety of different software, different integrations, and little add-ons So [clients] get the core packet and then they can pick and choose. Some will be free; others will have to be paid for. And they can build their own platform and really nestle that into their workflows. So, it's quite exciting because there's just so many opportunities." (Senior Product Manager)*

Table 6: Dynamic Capabilities – Reconfiguring for BMI

	Phase One	Phase Two	Phase Three
Concept	**Explorative Reconfiguring**	**Exploitative Reconfiguring**	**Ambidextrous Reconfiguring**
Concept Nature	*Proactive nature*	*Reactive nature*	*Proactive, explorative nature* *Reactive, exploitative nature*
'Value Chain Organization' focused reconfiguring	*Change management approaches and activities [that are proactive and forward-looking] aimed at re-organizing the SME's value chain, and organization design*	*Change management approaches and activities [that are reactive and retrospective] aimed at re-organizing the SME's value chain, and organization design*	*Change management approaches and activities [that are proactive and forward-looking, and reactive and retrospective aimed at re-organizing the SME's value chain and organization design]*
Insights from Case Firm	• *Proactive design* of SME's value chain configuration to deliver the chosen value proposition of a SaaS-based model • *Proactive design* of internal organizational structure, resources and coordinating activities to align with the value chain configuration	• *Reactive re-design* of SME's value chain configuration to deliver renewed client-centric value proposition geared towards increasing efficiency in client service and support • *Reactive re-design* of internal organizational structure, resources and coordinating activities including design of new job roles and recruitment of personnel for client experience and online client support	Exploitative reconfiguring: • *Reactive re-design* of SME's value chain configuration to design and deliver product/service packages for clients • *Reactive re-design* of organizational structure: establishing distinct client services and product development units, activities, job roles and personnel Explorative reconfiguring: • *Proactive re-design* of SME's value chain: reconfiguration of technical assets and relationships with customers, suppliers and partners to develop API platform and ecosystem architecture • *Proactive re-design* of organizational structure: establishing separate units in each (international) geographical market and emerging industry markets • *External shaping:* renegotiating the market environment and the industry ecosystem to create long-term value
Illustrative Data from Case Firm	*"At the start, we only had one sales manager besides the founder [who] single-handedly brought clients to Nexus" (Co-founder/Chief Practice Officer)* *"To begin with, the business was very much community-led, and then went on to find a way to bring the client and the community together in a way that would work for both" (Operations Manager)* *"We functioned in an ad-hoc way, it's all organic…we have a conversation about markets, and we go, let's try this one, no rigid policies and procedures. We have a really flat hierarchy as well"(Sales Manager)*	*"Along with the development of the product [..] we now have a client experience team who look after the support desk which provides technical support and also project planning support – Client Experience team [..] can make suggestions about how the project can be improved"(Sales Manager)* *"To help them overcome these barriers, that's where the Customer Experience guys come in. We recognize when clients need a bit of help – or some clients budget is not an issue, but their issue is the capacity to makes things work well – so we've got [the Learning and Practice Manager] on-board to deliver that kind of service." (Co-founder/Chief Practice Officer)*	*"We created the role of a product manager looking after technical services, product integrations for the marketplace, ecosystem connections for our platform, managing contractors, an internal team, working with our marketing team on actually getting those products to market"(Chief Technology Officer)* *"One of the big decisions we made was that we would recruit territory managers...we were looking for an operations manager [..] that's very disciplined and focused on good process. So, it's been a really big change for the business structurally [..] the real substantive change is [also] around the creation of the services group. [I thought] we should just elevate [XYZ]so that he has genuine carriage of it, report directly to [the CEO]"(Co-founder/Chief Practice Officer)* *"At the technology side of things, we built out our APIs so that we could collaborate with others and have some sharing with partners for our technology integrations" (Senior Product Manager)*

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