**HOW INNOVATORS REFRAME RESOURCES IN THE STRATEGY-MAKING PROCESS TO GAIN INNOVATION ADOPTION**

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### ABSTRACT

Research summary: This multi-company qualitative field study combines strategy process and strategy-as-practice perspectives to show how innovators successfully gain adoption for their autonomous innovations by re-framing the meaning and potential of the associated internal resources to create fit with their organization's strategy. Mapping the five steps involved in the resource reframing process onto the different parts of the Bower-Burgelman process model of strategic change shows that innovators can shape the strategic context for their autonomous innovations before external market validation is available. These findings confirm the unique potential and importance of different forms of discourse in shaping the strategic innovation process.

Managerial summary: How do innovators from lower levels of an organization gain approval for their innovations especially when their ideas do not readily fit their organization's strategy? To explore this question, we conducted 138 interviews with innovators and their decision makers in 14 firms based in Silicon Valley. We find that successful innovators shape a story supporting their innovation by rethinking their firm's current and potential resources. They then use this story to convince decision makers that their innovation creates unique competitive advantage. Contrary to conventional wisdom, decision makers approved such innovations even without external validation, solely based on the innovators' success in depicting their reorganization of the firm's resources.

## INTRODUCTION

Organizational decision-makers traditionally desire innovative products but, at the same time, resist autonomous innovations. This paradox is not surprising. Autonomous innovations—innovations that propose new categories of products and solutions—by definition are ill-fitting and challenge the organization's concept of strategy, i.e., the way in which it currently creates unique value for its customers (Burgelman, 1983a; Dougherty and Heller, 1994; van Dijk, Berends, Jelinek, Romme, and Weggeman, 2011). This study explores how innovators successfully gain adoption for nascent autonomous innovations. Success is defined by whether or not such ill-fitting innovations are adopted by the decision-makers in organizations they originate in, regardless of their future commercial success. Our phenomenon of interest is adoption of autonomous innovations by decision makers. The adoption process will be understood by exploring how innovators frame their autonomous innovations by re-conceptualizing their organizational resources, thus gaining internal support from decision-makers. As a result of this process, decision makers transform their corporate strategy to adopt the innovation, independent of and prior to external market validation.

Decision-makers signal support for proposed innovations by allocating resources to absorb them into the organization (Cohen and Levinthal, 1990; Meyer and Goes, 1988; Reid and Brentani, 2004).

These resources include *technological resources*, such as manufacturing facilities, equipment, and engineering know-how, and *customer resources*, such as knowledge of customer needs, sales channels, and brand reputation (Danneels, 2002). Less immediately relevant to nascent innovations are other resources, such as organizational structures, planning and control systems, and geographic location (Barney, 1991).

One of the seminal frameworks that explains how innovators successfully gain formal adoption for autonomous innovations is Bower and Burgelman's process model of strategy (B-B model) (Bower, 1970; Burgelman, 1983a, 1983c; Noda and Bower, 1996). The B-B model states that innovators navigate autonomous innovations through two sequential processes: core and overlaying. Key core process activities include defining the innovation and impetus, which is characterized by resource mobilization activities (See Figure 1a). Overlaying processes, on the other hand, involve convincing decision-makers to expand the organization's strategy to include the innovation.[1] The central undertaking during this latter stage is strategic context determination. The B-B model suggests that, if they are to achieve successful adoption, innovators must link the core and overlaying processes by negotiating the connection between resource mobilization and strategic context determination. However, subsequent research on how innovators gain adoption typically focuses on *either* resource mobilization activities *or* strategic context determination activities, and hence we know little about the link between the two.

*** Figure 1a About Here ***

Studies that focus on resource mobilization activities address how innovators scavenge, bootleg, and pilfer resources to demonstrate their innovation's feasibility to decision-makers (e.g., Burgelman, 1983b; Jelinek and Schoonhoven, 1991; Kannan-Narasimhan, 2014). For example, in Burgelman's (1983b) study innovators mobilized their organization's resources to demonstrate their innovation's (ANA's) market feasibility through bootstrapping. Innovators built their own service group in the test

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[1] The B-B model also discusses structural context determination as a part of the overlaying process. However, this activity is carried out by decision-makers rather than innovators. The focus of our study is the practices innovators use to make explicit links between their organization's requisite resources and its strategy. We therefore do not discuss activities of decision-makers in this study.

marketing phase with 20-25 installations because the decision makers were unsure about their

organization's marketing capability and there was a lot of resistance from them. However, the focus of the

study was not exploring *how* successful resource mobilization by innovators compelled decision-makers

to incorporate the innovation into their organization's strategy. By contrast, studies that focus on strategic

context determination activities suggest that successful innovators conform to or reframe their

organization's strategy, structure, identity, etc. (Dougherty and Heller, 1994; van Dijk et al., 2011). In van

Dijk et al.'s study (2011), decision-makers opposed a diagnostic technology innovation they saw as

irrelevant to their firm's imaging strategy until innovators convinced them that the innovation "belonged"

by reframing it. The study thus identified how innovators addressed decision-makers' concerns about

strategic fit, but did not explain how innovators linked their organization's resource base to its strategy.

One of the central reasons that researchers fail to make the connection between the B-B model's

resource mobilization and strategic context determination stages is because this model typically treats

organizational resources as having innate properties and predetermined applications. For example

Burgelman (1983b) shows how innovators mobilized old pumps for their SURF innovation. However, the

innovators still used old pumps as pumps instead of changing their potential use. Although some previous

research suggests that innovators transform resources for alternate uses (e.g. Burgelman, 1994, 1996), it

remains unclear how resource transformations convince decision-makers to change their organization's

strategy, rather than as ex-post explanations of the process. For example, Burgelman (1994, 1996)

documents how Intel re-conceptualized its fabrication sites, a technological resource, to transition from a

memory company to a microcomputer company. Intel had moved from a silicon-based competence to a

competence in implementing design architectures in logic products (Burgelman, 1996). However,

reframing the technology was not what drove the transformation, rather it was used as an ex-post

explanation. The focus was not to explain how resource re-conceptualization created new meanings for

decision-makers to subsequently change Intel's strategy.

However, recent developments in Strategy–as-Practice (SAP) literature, specifically resourcing

theory (Feldman, 2004; Feldman and Worline, 2011; Feldman and Worline, 2016; Howard-Grenville,

2007), suggests that resources can be re-conceptualized to create new meanings. Resourcing theory suggests that assets hold meanings, and that solely focusing on assets' innate properties hinders how we understand them (Feldman, 2004; Feldman and Worline, 2011; Feldman and Worline, 2016; Howard-Grenville, 2007). As Feldman and Worline note, assets' innate qualities (e.g. rocks are heavy) imbue them with their potential as resources (rocks can be sturdy building material) (Feldman, 2004; Feldman and Worline; 2011). However, until individuals use these qualities to create something of value, the asset does not fulfill its potential as a resource (a rock's sturdiness is valued only when viewed as construction material) (Feldman, 2004; Feldman and Worline; 2011). The potential to re-conceive the relationship between assets and their potential uses generates opportunities for innovators to create new meanings regarding their value (Jarzabkowski and Kaplan, 2015; Leonardi and Barley, 2008).

Adopting a practice approach, we focus on the agency of individual innovators and the situated nature of their action in the firm's context (Jarzabkowski 2005; Kaplan, 2008; Vaara and Whittington, 2012; Whittington 1996). Our analytic focus is at an activity level, and on the situated practices of how innovators construct their organization's strategy (Feldman and Orlikowski, 2011; Jabrakowski, 2005; Vaara and Whittington, 2012) such that decision-makers will expand their current strategy to accommodate the innovation.

We use two SAP concepts: resourcing (Feldman, 2004; Feldman and Quick, 2009; Feldman and Worline, 2011; Feldman and Worline, 2016; Howard-Grenville, 2007); the relationship between the asset and what it helps create; and framing (Benford and Snow, 2000; Kaplan, 2008), as the *mechanism* for changing the relationship between the asset and its potential uses to connect their organization's resources to its strategy, and thereby gain adoption.

Our study is based on 138 interviews (with 34 senior managers and 38 innovators), archival documents, and observations in 14 large high-technology organizations based primarily in Silicon Valley. We find that innovators use a five-step process to reframe resources and reshape decision-makers' perceptions of strategy, thus moving their innovation from core processes to overlaying processes (See Figure 1b).

We use the B-B model of strategic change as a conceptual lens to illuminate the five steps of the resourcing process, which correspond to B-B model's definition, impetus, and strategic context determination stages. Our study's key contributions lie in steps 4 and 5, in which innovators reframe organizational resources to connect to its strategy, as well in showing how the different steps of the framing process map onto the B-B model. We show how resourcing illuminates the mostly internally-oriented B-B activities associated with "technical and need linking," "product championing" and "organizational championing." Furthermore, we show that effective resource-based framing enables the adoption of an autonomous innovation largely independent of the more externally-oriented B-B activities associated with "strategic forcing" and "strategic building."

In Steps 1 and 2, which correspond to the definition stage of the B-B model in which technical and need linking are critical, innovators appraise how decision-makers understand their innovation's fit or lack of fit with the organization's strategy and resources. The next three steps involve resourcing; that is, re-conceptualizing how decision-makers understand their organization's current resources as they relate to their innovation, as well as how these and additional new resources position their organization to provide unique value to customers. Step 3 corresponds to product championing activities in the B-B model's impetus stage. In this step, innovators select assets whose current applications decision-makers both widely understand and perceive as organizational strengths. Steps 4 and 5 correspond to the organizational championing efforts in the strategic context determination stage of the B-B model. In Step 4, innovators use framing practices (Benford and Snow, 2000; Kaplan, 2008) to transform the meaning of these assets, providing decision-makers with new possibilities. We draw upon four types of framing practices from the literature: frame extension, frame bridging, frame amplification, and frame transformation (Benford and Snow, 2000; Kaplan, 2008). In Step 5, innovators convince decision-makers to reconstruct their organizational strategy to include the autonomous innovation. They show that their reframed resources, alongside additional new resources, enable their organization to provide unique value for customers (Barney, 1991).

Our study's most important contribution is that it combines two prominent strategy research traditions: the B-B model from the strategy as process tradition and SAP concepts of resourcing and framing. We contribute to strategy process research by highlighting the situated framing practices innovators use to imbue assets with meanings and move their innovation from the resource mobilization stage to the strategic context determination stage. Our contribution to resourcing and SAP literature lies in identifying framing as a political resourcing mechanism when one set of actors intend to impose meaning on another. We open future research opportunities by combining strategy as process research with a SAP perspective.

Secondly, by underscoring the importance of successful internal resourcing practices for gaining adoption when external market validation is not forthcoming, our study turns on its head the idea of where innovators should focus their framing. In contrast to existing studies that highlight the importance of framing external opportunities, we underscore the importance of framing internal resources in addition to, and sometimes in lieu of framing external opportunities for adoption. The B-B model (Burgelman, 1983b) suggests that, if they are to overcome decision makers' inertia, innovators must engage in externally-oriented, market-based activities that show proof of success, such as strategic forcing; a narrow short term focus on market penetration, and strategic building; articulating a master strategy for the organization to gain new business through the innovation. In contrast, we show that innovators' internally-oriented resourcing practices (steps three, four, and five) effectively substituted external market validation to gain adoption. These internal resourcing steps convinced decision-makers of the innovation's ability to provide unique value to customers, given their organization's idiosyncratic resource base.

Our view of resources as dynamic entities subject to conceptualization and re-conceptualization in the framing process significantly departs from traditional approach in current strategy research. When current theories define resources by their innate qualities, they downplay their potential for alternative applications that depend on how actors use them. We demonstrate that resources' potential for re-

conceptualization remains latent until manifest through the framing practices of strategic actors: innovators.

Our final contribution lies in highlighting the actual practices through which an organization's resources drive its strategy. Although organizations presumably acquire resources to drive their strategy (Barney, 1986), over time the evolution of an organization's resources transforms its strategy (Burgelman, 1988; 1996). Driving this change are innovators in lower levels of an organization's hierarchy, who perceive new opportunities based on resources that decision-makers have not yet recognized as distinct to the firm (Burgelman, 1988). In this study we focus on the practices of innovators in transforming their organization's resources to change their organization's strategic trajectory.

**WHY DECISION-MAKERS RESIST AUTONOMOUS INNOVATIONS**

Innovators pursuing the early stages of autonomous innovations face a critical challenge: How do they convince decision-makers to adopt unconventional innovations that do not easily fit their organization's strategy, especially when they require new investments? Decision-makers likely resist nascent autonomous innovations for two key reasons. The first is co-evolutionary lock-in (Burgelman, 2002), in which decision-makers typically prefer to create value for customers according to current strategy, particularly if existing customer demands and profits provide positive feedback (Benner and Tushman, 2002; Gupta, Smith, and Shalley, 2006; O'Reilly and Tushman, 2007). Decision-makers in large established firms are subject to the tyranny of success; that is, they tend to focus on what is working now, rather than face the uncertainties of a new direction (Dougherty, 2008; March, 1991; Tushman and O'Reilly, 1997). Thus, they tend to select projects consistent with current strategy (Burgelman, 1983a, 1983b, 1983c). Secondly, decision-makers can be unsure of an innovation's feasibility given their firm's resource constraints. Decision-makers generally view innovation feasibility in terms of whether their technological and market resources justify pursuing the opportunity and whether it will provide unique value to customers (Day, 2007; Dougherty, 1992). Technological resources include design and

engineering know-how, product and process design equipment, and manufacturing and quality control facilities (Burgelman, 1983b; Danneels, 2002). Customer resources include knowledge of customer needs, preferences, purchasing procedures, distribution and sales access to customers, and brand reputation (Burgelman, 1983b; Danneels, 2002).

Since decision-makers typically prefer pursuing existing opportunities over investing in new customer or technological resources (Christensen, Kaufman, and Shih, 2008; Peteraf, 1993; Strough, Mehta, McFall, and Schuller, 2008), how can innovators encourage decision-makers to invest in their innovation and expand their current value creation strategy to accommodate it?

## GAINING ADOPTION FOR NASCENT AUTONOMOUS INNOVATIONS: THE BOWER-BURGELMAN MODEL

The B-B model offers a process approach, which begins at the project level, and if successful, end at the corporate level, on how innovators acquire decision-makers' support for their autonomous innovations. The model explains how innovators address decision-makers' two key concerns: innovation feasibility and co-evolutionary lock-in. To address innovation feasibility, innovators use core processes in the first two key stages: in the definition stage innovators define the innovation in terms of technical and market needs, whereas in the impetus stage they engage in resource mobilization through project championing. To address co-evolutionary lock-in, they use overlaying processes, particularly helping determine the organization's strategic context through organizational championing efforts. Although we know that successful innovators advance their innovations from the core process to the overlaying processes stage, we know little about the specific practices they use to do so.

### RESOURCING AND FRAMING

The SAP literature, specifically the concept of resourcing (e.g., Feldman, 2004; Feldman and Worline, 2011; Feldman and Worline, 2016; Howard-Grenville, 2007) suggests that instead of viewing resources as assets with fixed applications, they should be viewed as assets whose applications vary based

on how actors bring them into use. Thus, the meanings that resources hold for decision-makers and the opportunity to transform these meanings provides innovators an opportunity to connect across core and overlaying process stages.

Resourcing literature identifies three mechanisms actors use to encourage others to transform their understandings of existing resources: mutual adjusting, juxtaposing the familiar with the unfamiliar, and narrating. In mutual adjusting, the actors alter the resource while the resource simultaneously alters the application (Feldman and Worline, 2011).  In a study of instructional resources, Jacquith (2009) shows how teachers randomly draw "equity sticks," marked with student names, to encourage class participation and create 'safety and support' as a resource. Feldman and Worline (2011) suggest that once teachers foster safety and support, the same sticks can then be used to for alternate uses, such as asking the student questions to encourage critical thinking. With safety, support, and critical thinking available as resources, teachers can then use equity sticks to create discussion groups (Feldman and Worline, 2011). Thus, while the same sticks can be used for multiple applications, they can also be used to create new resources and produce further applications. In juxtaposing, another resourcing mechanism, actors use events such as workshops to encourage organizational participants to try out different possibilities by comparing and contrasting new ideas with everyday events. In a study of organization culture change in an athletic firm (Howard-Grenville, Golden-Biddle, Irwin and Mao, 2011), a change agent used a business planning workshop as a forum for juxtaposing everyday business issues such as branding and supply chain management with newer sustainability issues such carbon scenarios and oil use (Feldman and Worline, 2011). Similarly Quinn and Worline (2008) use the hijacking of United Flight 93 to show how passengers used narratives, a third resourcing mechanism to tap into existing resources such as identity and emotion, as well as to create new resources, such as trust among passengers, to mobilize action (Feldman and Worline, 2011).

While resourcing literature identifies mechanisms that describe how participants collectively engage in resourcing, they do not address how resourcing occurs when one set of actors seek try to actively impose their frame on another. Since we aimed to find out how our innovators succeeded in

imposing their view of resources on decision-makers to reconstruct the firm's strategy, we turn to strategic framing literature (Benford and Snow, 2000; Goffman, 1974; Kaplan, 2008). In line with Kaplan (2008), we view framing as a purposive and political act of meaning construction through which one set of actors imposes their frames on others (Kaplan, 2008). Frames are guides to interpretation that are constructed through interaction and influence how actors recognize reality (Kaplan, 2008). When assets are reframed through practices, it alters how actors understand and interact with them. For example, children are reframed as students when in school settings before they are taught (Feldman, 2004). Framing children as students versus guests at a kids' theme park or at a movie implies different ways of engaging with them.

Organizational resources hold several meanings, providing an opportunity for innovators to change how decision-makers understand them. In contrast to decision-makers, innovators understand their innovation from a close, in-depth perspective (Burgelman, 1988).They think creatively about how existing resources can be leveraged for their innovations. However, because they are so close to their innovation, they might not understand why its fit is not obvious to decision-makers. Thus innovators and decision-makers differ in how they understand and value their organization's resources. Successful innovators help decision-makers rethink resource feasibility and strategic fit; they sell their innovation by translating the connection between existing organizational resources and strategic fit, thereby altering the taken-for-granted components of resources into something new.

Strategic framing literature suggests that there are four types of framing activities: frame bridging, frame amplification, frame extension, and frame transformation (Benford and Snow, 2000; Kaplan, 2008). Frame bridging involves linking two or more ideologically congruent, but structurally unconnected frames (Benford and Snow, 2000). For example, in Dougherty and Heller's (1994) study, innovators in a heavy equipment firm followed the applicable procedure for customized machinery. Although the innovations were structurally unconnected, the logic behind the processes was similar. Thus, innovators showed that they were following existing processes and framing their innovation following an existing idea. Frame amplification is the idealization, embellishment, and clarification of existing ideas

(Benford and Snow, 2000). For instance, innovators in van Dijk et al.'s (2011) study suggested developing a novelty in fluids, though their organization's focus was hardware. Innovators in this study clarified that their organization had worked in fluids for many years in other technologies. Frame extension involves extending the scope of the innovation beyond its primary stakeholders to include priorities important to different groups of organizational stakeholders. In one example, innovators described "Reflactone's" potential to contribute to their firm's specialty chemicals area. At the outset, this argument did not gain traction with their decision-makers (van Dijk et al., 2011). However, once the innovators extended their innovation's frame to explain that Reflactone could support all kinds of functional coating systems, decision-makers were convinced. The final frame alignment activity, frame transformation, describes the process of changing old understandings about the organization and generating new ones (Benford and Snow, 2000). Also in van Dijk et al.'s (2011) study, when the innovation "Treemax" did not align with the organization's current markets, innovators gained legitimacy with their decision-makers by positioning it as an exemplar of future business models.

## METHODS

### Sample

To explore the process through which innovators gain adoption for their nascent ideas, we targeted Silicon Valley's information technology and computing sector. High-tech organizations in Silicon Valley are known for their innovations (e.g., Hamel, 1998; Saxenian, 1991), which are critical to the fast-cycle market in which they perform and survive (Hitt, Ireland, and Hoskisson, 2015; Jespersen, 2007). We target the high-technology industry because focusing on a single sector enables comparisons of the processes innovators use to introduce innovations (Hallen and Eisenhardt, 2012).

Fourteen organizations granted us access, ranging in age from 10 to 112 years, with annual revenues of approximately $1.34 billion to $118 billion, and between 13,000 and 170,000 employees. All organization and innovation names are fictional due to confidentiality and intellectual property agreements. To connect subjects to organizations, each interview quote provides a subject's fictitious name, followed by his or her fictitious organizational affiliation in parentheses.

We first interviewed senior-level managers, because we wanted to understand innovation from their perspective, and we identified target managers using snowball sampling. Although this method limits a sample to specific networks (Erickson, 1979; Heckathorn, 1997), we mitigated the risk by identifying target managers through several different sources, including our University's Entrepreneurship Center, alumni networks, and personal contacts. On average, we used one source for each organization and two sources for some of the larger organizations. When we used more than one source, the primary sources did not know one another. After we identified one senior manager in a given organization and conducted our first interview, we asked for names and contacts of other senior managers and innovators within that organization.

**Interviewees**

Interviews were conducted with 72 individuals: 34 senior-level managers and 38 innovators. We interviewed most managers and innovators twice. On average, managers were 43 years old with 18 years of work experience (range = 5 years to 32 years) and 12 years of organizational tenure (range = 3 months to 30 years). Their titles included senior vice president, vice president, director, general manager, distinguished engineer, fellow, senior engineer, or engineering manager. On average, innovators were 44 years old with 20 years of work experience (range = 4 years to 38 years) and an average organizational tenure of 15 years (range = 1.5 years to 32 years). They held titles such as general manager, fellow, vice president, director, software consultant, senior engineer, or engineering manager. Of a total of 138 interviews, 34 were first interviews with senior managers and 38 were first interviews with innovators. The remaining 66 were second interviews. Of these, 28 were second interviews with senior managers and 38 were second interviews with innovators. The average interview time was 60 minutes. Interviews were taped, with permission, and transcribed. The transcription documents comprise over 3,000 pages.

Eliciting organizational decision-makers' definitions and perspectives on who they considered successful in gaining adoption is important. This study focuses on how successful innovators understand their organization's resources, aiming to convince decision-makers to expand their strategy and thereby gain adoption for their autonomous innovations. It is important to note that, although these individuals'

managers saw them as successful innovators, not all of their innovations were successful. We also decided to approach several organizations instead of asking for all the successful innovators from within one organization. Finding similar adoption patterns across, rather than within, organizations is likely to increase the generalizability of our findings.

During our interviews, managers were asked questions such as, "Whom do you consider an innovator within your organization and why?" In response to this question, managers typically mentioned an innovator and the innovation in which he or she was involved. Innovators were interviewed separately. Innovator interviews involved a series of semi-structured questions focusing on the innovation that their managers mentioned, the challenges they faced, and the strategies they used for adoption. We also asked them to discuss their organization's internal environment and the support they received for their innovation. Finally, we asked them to describe other current projects.

One of the key challenges of collecting data from interviews with successful innovators is that innovators may engage in impression management in their retrospective story construction (Eisenhardt and Graebner, 2007). To reduce this risk, we followed two guidelines suggested by Eisenhardt and Graebner (2007). Firstly, as explained above, we asked both the senior manager and the innovator to discuss the innovation. If other innovators or senior managers were identified within the same organization, we asked them if they were familiar with the innovation and for their recollections of it. Varied informants are less likely than single informants to converge on retrospective sensemaking or impression management, thereby reducing retrospective biases (Eisenhardt and Graebner, 2007). Secondly, researchers suggest that data from multiple sources helps reduce retrospective bias (Cardinal, Sitkin, and Long, 2004; Eisenhardt and Graebner, 2007; Jick, 1979). Therefore, in addition to interviews, we collected documents from multiple archival sources on both retrospective and in-progress innovations. The data include innovators' presentations to their companies, white papers on the innovation, organizations' websites, blogs written by innovators and by other individuals about the innovation, presentations made by innovators at conferences, and reviews of the innovation published in technological journals and on websites. Although some public documents appeared only for innovations

that had already been adopted, they provided context for the innovation when it was initially proposed. For example, one of our innovators wrote in a blog post, "We are building platforms that fundamentally changes [sic] how Yeti works." This enabled us to confirm that his current perception—that his innovation was a mis-fit that transformed Yeti—was consistent with his past perception.

Most of the interviews were conducted onsite, which allowed us to observe the organization and take extensive field notes. Some interviewees extended invitations to see innovation prototypes on the shop floor, and we were even able to experience several of the innovations. For instance, our interview with the innovator of Hello, a virtual teleconferencing innovation, was conducted using Hello, so that we could understand the virtual reality experience.

**DATA ANALYSIS**

We used an open-ended inductive approach for coding (Corbin and Strauss, 2008). Our unit of analysis was the innovation. Our data consisted of 154 innovations, of which 119 were *adopted*, 29 *failed*, and 6 were *works-in-progress*. While some successful *adopted* innovations produced billion-dollar businesses, others led to small, but significant changes within the organization.

We use the extended case study method, which focuses on using empirical data through case studies and extending or re-conceptualizing theory. The focus of the extended case method is not to build new theory, but to extend existing theory. Our analytical approach was to use the two-stage "running exchange method" (Burawoy, 1991; p.11). The first stage involves iterating among literature reviews, data collection, and data analysis (Burawoy, 1991; Danneels, 2010). Data analysis uncovers concepts and theories, while literature reviews assist in data interpretation (Danneels, 2010). The second stage involves further iteration between data collection and analysis.

Given our research question, in the first stage our initial *in vivo* codes identified how innovations fit and mis-fit the organization's strategy for creating customer value and resources. For example, when Gary summarized the problem he faced with his innovation, it the first time the notion of resources surfaced in our interviews; he said, "My problem is we don't have the resource; we don't have the story, someone's already there." He continued to describe the issues he faced when trying to gain a new

salesforce to market his innovation: "everyone's complaining…, people [in the industry] don't get our service so I need a special salesforce." The decision-makers were not convinced that they had the customer resources; specifically, that their salesforce could support this innovation. Gary then convinced his organization by demonstrating that its salesforce could be easily retrained with new knowledge and skillsets. Furthermore, Gary showed how his innovation could "piggy-back" on their other resources, allowing the organization to create unique value.

At this stage, when returned to theory, we found an anomaly: innovators' key activities, such as convincing decision-makers that their sales force could be retrained, did not map onto activities identified by previous adoption studies (e.g., Dougherty and Heller,1994; van Dijk et al., 2011). These studies found how innovators reframe existing strategy administrative structures and organizational identity (e.g., Dougherty and Heller, 1994; van Dijk et al., 2011), but not specifically innovation resources; that is, technological and customer resources. We therefore had to extend innovators' activities to include reframing resources. This stage of data analysis, the "substantive grounded theory" (Burgelman, 2011, p.593), is a recommended first step in formulating theories in qualitative research.

In the second stage, we iterated between data collection and data analysis. For example, we found that some innovations fit an organization's current resources and customer value-creation strategy without modifications. Innovations that used existing resources and adhered to the organization's current customer value-creation strategy did not face any obstacles toward gaining adoption. For example, Brenda, an innovator at GIX, had an idea to create an integrated platform to fight spam across her organization's different service offerings, such as emails, videos, search engines, etc. Before Brenda suggested her innovation, every service in the organization used its own unique spam-fighting tools. The company's overall customer value-creation strategy was to make the search experience enjoyable for the users. Since GIX had the existing resources to launch Brenda's innovation, and it fit with their strategy for creating customer value, Brenda smoothly gained adoption.

In the third and final stage, we started focusing on innovations that the innovators identified as a mis-fit with the organization's existing resources and current strategy for creating customer value, thereby

making it harder to gain adoption. We dubbed these six innovations "focal innovations," and subsequently interviewed several other people in these organizations to gain additional information. Methodologically, by focusing on six focal cases we follow previous researchers' use of a theoretical sampling approach, wherein four to ten extreme cases are used as exemplars that clearly highlight the phenomenon of interest (Corbin and Strauss, 2008; Eisenhardt, 1989; Zott and Huy, 2007). Using a finite number of cases helps researchers find a balance for theory-building between adequate data and data overload (Brown and Eisenhardt, 1997; Zott and Huy, 2007).

At this stage, we were also curious whether some autonomous innovations failed if they were a misfit with the organization's strategy and resources. We were interested in assessing whether the process varied between ill-fitting innovations that succeeded versus those that failed. Therefore, during the second interviews, we asked innovators to elaborate upon their failed innovations as well as others' failed innovations. Due to confidentiality issues, intellectual property concerns, and the hope of launching their innovations in the future, innovators did not provide as many details about unsuccessful innovations as they did about successful innovations. During our interviews, we gained information about 29 failed innovations, compared to 119 successful innovations. However, innovators addressed why an innovation was a misfit with their organization, the process they followed to gain adoption, and how it failed to gain adoption. In some cases, they discussed ill-fitting projects in which they were involved but were not the main innovator. Previous studies of failed innovations (e.g., Mirabeau and Maguire, 2014; Van de Ven, Angle, and Poole, 2000) also report less information about failed innovations. As with our successful innovations, we applied the same codes to failed innovations. We did not find any new concepts, and concluded that we reached a satisfactory level of theoretical saturation (Eisenhardt, 1989; Glaser and Strauss, 1967). Table 1 lists both successful and failed autonomous innovations from focal organizations.

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Table 1 About Here

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Although we focused on six successful and six failed cases, we use data from the remaining innovations to validate our findings (Kaplan, 2008). After analyzing the focal cases, we analyzed innovations launched by different innovators within the same organization, and those launched in different organizations. During data analysis, we subjected our emerging interpretations to member checks (Lincoln and Guba, 1985). We presented our emerging findings to our informants during second interviews and requested feedback. We also discussed these findings with other members of participating firms in Silicon Valley through our formal and informal networks. The member checks helped us refine our findings.

**RESULTS**

We find that innovators' actions to convince decision-makers to expand their organizational strategy fall into roughly five steps (See Figure 1b). Our study's key contributions lie in steps 4 and 5. These five steps are not mutually exclusive, nor do they always occur in order. Innovators' actual actions may move back and forth from one step to another. During the first two steps, innovators assess how decision-makers likely perceive their innovation's fit or lack of fit with organizational resources and strategy. These steps map on to the definition stage of the B-B framework, which focuses on technical and need linking. The next three steps involve resourcing; identifying key resources, framing selected resources to convince decision-makers of their innovation's feasibility, and demonstrating strategic fit. Thus, in Step 3, innovators emphasize extant technological and customer resources, selecting resources that decision-makers perceive as organizational strengths and whose use is well understood. Step 3 corresponds to the impetus stage, especially the B-B framework's project championing efforts.

*** Figure 1b About Here ***

Steps 4 and 5 correspond to organizational championing activities in the B-B model's strategic context determination stage. In the fourth step, innovators reframe common understandings of existing resources identified in Step 3 to show how these can be adapted to new uses. In Step 5, innovators

convince decision-makers to reconstruct their organizational strategy to include their autonomous innovation, focusing on persuading decision-makers that their innovation leverages pre-existing investments. This is consistent with theories of sunk costs and resource fungibility, which suggest that decision-makers are more likely to approve innovations that leverage pre-existing investments (Peteraf, 1993; Strough et al., 2008). They show decision-makers that acquiring these additional resources is economically possible and that the resulting innovation will provide a unique value to customers that competitors cannot easily imitate. Innovators use this five-step process to convince decision-makers to expand their strategy to accommodate the innovation. Table 2 lists the focal innovations examined in this study. It includes both set of innovations: those that successfully gained adoption, as well as those that failed to gain adoption, and elaborates on this process for each.

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Table 2 About Here

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### *Steps 1 and 2: Assessing innovation's fit with the organization's strategy and resources*

In the first two steps, innovators assess whether their innovation fits their decision-makers' concept of the organization's strategy and resources. Innovators know this assessment is necessary because decision-makers likely consider fit first, and innovations that do not fit are likely seen as disruptive. For example, Alan, decision-maker at SYNX, said:

> "The ones that are successful are the ones that fit in much better and much closer to the existing product line of the company or are very adjacent to it. In terms of business model, it causes the least amount of interruption, so it's very easy for the company to take that innovation and productize it and get some kind of value for it, in terms of its either monetary or it can be just the leadership, market leadership recognition. The ones that— … I see more of the latter, unfortunately….. The ones that don't make it … is—[are] they're disruptive to the existing product line of the company and to the business model. From the technology side, just because they're disruptive, the cost of deploying that innovation is high. …And teams are usually busy with backlog of work that needs to be done, so there's pushback from there. And even if that's not the case, then the business model of the company's not supportive for that innovation to get the potential value that it can extract from the customers."

Several of our innovators decided their innovations were either complete or partial misfits with organizational strategy. For example, Amit, who works for (Yeti,) perceived his Search Gorilla innovation as a misfit with Yeti's concept of strategy. Yeti's main product is a web search engine. Thus,

its strategy for creating customer value is unstructured search—searches in which comparisons between two or more search results are not necessarily identical. Amit's innovation called for structured data, i.e., data that is organized into relationships. Experts typically consider structured and unstructured as the "two worlds of data" (Weglarz, 2004), and Yeti was no exception. Structured data were inconsistent with Yeti's strategic vision. Amit stated:

> "There was a lot of disinterest and unwillingness to say: Should we really think about structured data? ... Look, our private competitor in this market is about unstructured data, we are about unstructured data, and the major tectonic shift that you could sort of do is talk about structured data. They [decision-makers at Yeti] came from a highly unstructured data background. While the folks at Yeti, the examples that I have, did deal with highly structured data, didn't understand structured data. So it was a huge chasm."

A blog created by developers at Yeti added: "Search Gorilla is fundamentally about *transforming* the way search results are displayed," (italics added).

Similarly, when David and Arik at Intelligex tried to develop Upgrade Service, a new anti-theft software, they realized it did not fit with their organization's strategy of manufacturing integrated circuits, since Upgrade Service involved software services. As noted in *The New York Times,* Intelligex had worked to shape its image as a company that makes computer chips smaller, faster, and cheaper. David elaborated on the conflict between Intelligex's customer value-creation strategy and the Upgrade Services proposal:

> "Intelligex doesn't make any money on software today. Not a dollar. So even though it's so close to our heart, and we even do write a ton of software that we give away for free, it's just for a corporation that's $40 billion, that's a big move. So you run into that inertia."

At this point, innovators also assess where their innovation fits with their organization's existing resources and what additional resources are needed. Successful innovators often intuitively know the types of resources that their organization has and how they can be leveraged to execute the innovation. Paul's (Helion) interview gave us some insight into how innovators think about their firm's resources.

> "So … it gives me characteristics of the market opportunity. And then, and then coming back and assessing what our assets were to go after that opportunity, and that sort of what I call the 'deconstruction phase' is really deconstructing our assets to see how we can attack that opportunity and then, and then you know kind of evaluating you know our likelihood for success against that opportunity and then making a proposal, business case, and going through that normal process."

For the Gaming Solution, Paul elaborated on how he assessed Helion's technological and customer

resources. Regarding technological capabilities, Paul said:

> "So we looked at it from a technical feasibility standpoint and realized it was very easy for us to make the PC gaming product. Yeah it was very simple to make the prototype, to show feasibility that we could make it great—a great product. It was one engineer sort of putting the pieces together and showing the, you know, the basic feasibility. Yeah and that's why I'm kind of saying that the product was actually easy, the engineering of the product and the prototype was pretty fast and easy in this case."

Paul realized that Helion had the resources to execute the technological aspects of the innovation;

customer resources posed the problem. Paul said:

> "…then came the hard part … Helion didn't have a big brand in gaming, Helion didn't have a good go-to-market motion, we sold through retail and most gamers didn't want to buy off the shelf products through retail—they wanted to configure their own, online, buy direct, right. So we didn't have a good go-to-market motion, didn't have a good brand….No... It was—it was really for frankly for the gaming opportunity it was more the biggest challenge was: Did we have the brand and the go-to-market function to be successful?"

David and Arik also realized that Intelligex had partial technological resources, but did not have

the complete set of both technological and customer resources for their innovation to come to fruition.

Intelligex had the software they put on platforms, yet they needed partners to provide the go-to-market.

Arik added:

> "Because for the solution to work, you need … an OEM, which is the original equipment manufacturer, like a Dell or an HP or a Lenovo . These guys… who actually make the mobile boxes. You need the secret software Intelligex has put together in those platforms, which is why we are involved. And then you need an independent software vendor that takes the platforms, takes the Intelligex's goodness and exploits it in a certain way. So, we needed all three partners to play in this eco-system."

Arik (Intelligex) also mentioned that the original equipment manufacturer (OEM) manufacturers had the

customer resources: "Some of these OEMs already had relationships in the marketplace."

### Step 3: Selecting commonly understood organizational resources that are perceived as strengths

In this step, innovators select certain technological and market resources whose uses are well-understood

by everyone and that decision-makers perceive as organizational strengths. These choices are critical for

success. In Step 4, they reframe their organization's understandings to introduce new understandings of

these resources' uses. Innovators also deliberately choose not to highlight resources that are not widely perceived as their organization' strengths, although they might be just as important for their innovation.

For example, both technological and marketing resources are important for innovation. However, Paul chose to highlight the technological competences of Helion and downplay its customer resources, such as its brand name. Paul perceived that he could make a stronger case for his gaming innovation through the technological resources route. When asked how he made that choice, he said:

> "What we didn't have was just brand or presence in really kind of hard core gaming where it really mattered because that is where you win the influence game, that is where you win the brand game of who you are as a company. If I had tried to present it as a branding and a sales opportunity or marketing opportunity or a strategy opportunity it may have fallen short because you can't guarantee a brand equity outcome, you can't guarantee revenue, you can't guarantee sales, but we could say that from a technology stand point we make the most powerful computers in the world with most powerful workstations in the world, we make the most powerful servers in the world, we should make the powerful PCs in the world and that resonated, so we finally made the argument that resonated with the decision-makers."

Sometimes innovators evoked names of resources that decision-makers perceived as strengths, even though their innovation did not use them. For example, Amit indicated that he was building on the strengths of a technology (Grease Gorilla) in which his organization had expertise, although the actual technology Amit used was different. The technology's name (Grease Gorilla) provided a familiar connection for decision-makers, so Amit used it for his innovation (Search Gorilla) regardless of the underlying technology. Amit said: "… even at the first implementation it [Search Gorilla] had nothing to do with Grease Gorilla [another analogous technology] …The technical analogy held up but the underlying technology was different."

Notably, sometimes decision-makers encouraged innovators to use certain commonly understood resources to help gain eventual adoption. Amit reported:

> "[Search Gorilla] was what we were conceptually trying to some notion of web browsers and web plugins and that plug in will change search results on the page, it is a very complicated concept … information takes a long time to use and if we are rushing from meeting to meeting it takes even longer-it is an example of something we did not use. The fact … we tried something like rich results, rich abstracts rich summaries—things that would evoke more literal that people would understand it, the reason we used Search Gorilla was because one of the Senior VP discovered that we were about to rename Search Gorilla into something else to make it more

accessible and he jokingly told us that he would withdraw his support from the project if we renamed it, because Search Gorilla was such a cool name."

Employees at Yeti were familiar with Grease Gorilla, so using the term Search Gorilla as a technological analogy helped decision-makers and others intuitively understand the innovative technology and perceive that innovators were using a resource in which their organization had expertise.

The selection of certain resources is important, then, because it can simplify the innovators' framing activities in Step 4. When selecting familiar resources that are perceived as tapping existing organizational strengths, innovators do not need to convince decision-makers about feasibility. Moreover, innovators capitalize on a shared understanding to create common ground for framing their innovation, allowing them the flexibility to reinterpret the resource's uses to show fit in Step 4.

### Step 4: Reframing organizational resources

In the fourth step, innovators reframe organizational resources identified in Step 3. This is critical, because the connection between these resources and their innovation is not always obvious. Decision-makers are conditioned to view their resources as they always have. At Helion, decision-makers thought their technology resources enabled them to make high-quality printers, but they were unable to visualize how this competence could be transformed and leveraged for other applications, such as virtual reality or gaming. Innovators help decision-makers make this connection by using one or more of the aforementioned reframing processes (Benford and Snow, 2000): frame bridging, frame extension, frame amplification, and frame transformation.

*Frame bridging* connects existing, congruent organizational resources; i.e., those that perform similar functions, but that decision-makers generally see as disconnected. In Amit's innovation, Yeti decision-makers believed that its resources enabled it to provide search results based on unstructured search. However, search results can be presented as the result of either unstructured or structured searches—that is, two technological resources seen as disconnected and diametrically opposite, but that perform similar functions. Amit's challenge was to highlight how his innovation used existing technological resources (Grease Gorilla) that led to search results based on structured searches. He thus

identified other divisions within the organization that extensively dealt in structured searches. As Amit

says:

> "So, for example, if you look at Yeti Shopping, the way they get access to those product listings in the first place is by getting structured data from the participating merchants. So there was already units in the company that were dealing with structured information, then conversing with outside the company.. And they had systems and mechanisms to manage that loads of structured data internally. But they were thinking of it in terms of silos, in the sense that they were like, Yeti Shopping needs all this data, so they would get it and show it. Yeti Real Estate needs to get listing data from people in MLS and so on. They will get it, they would display it, that's it. There's very little structured data being connected together, right? Structured data was used as a transport mechanism. This is the only way we can get information from MLS listings where it's not crap. Like, you can't send us a Word document. You have to send it to us in a very structured way. But people hadn't realized that that might be—and if you put all structured data from everywhere in the context of web search, it might have a significant impact. So I started talking and participating in all conversations to do with structured data internally."

Through conversations, Amit directed decision-makers' attention to how the organization already used

structured data, thereby demonstrating that although his innovation Search Gorilla used a seemingly

different search type than Yeti, it in fact leveraged existing technological resources.

*Frame extension* expands the boundaries of the decision-makers' primary framework to

encompass interests or points of view incidental to the organization's primary objectives (Benford and

Snow, 2000). In the context of resources, this refers to extending the firm's resources to include those that

are secondary, but closely related, to its primary resources. Arik and David used frame extension to show

that their software innovation Platform Extension Services extended Intelligex's technological resources.

As David explains:

> "One of the dangerous things for a company like Intelligex is like we did something in the past … and you can say they're adjacent, right, because they're things that used PC technology, but there wasn't anything special in our silicon … that drove those two businesses, right. And like this Intellegix, this online ... thing, it doesn't work without Intelligex silicon, it doesn't work."

Thus, although Intelligex's primary framework included silicon, David and Arik extended the framework

to include software as part of their silicon narrative.

*Frame amplification* is the idealization, clarification, or embellishment of existing values or

beliefs (Benford and Snow, 2000). In the context of resources, frame amplification refers to clarifying the

possible applications for a given resource. While frame extension extends decision-makers' attention to

include incidental resources into their primary framework, frame amplification highlights certain features of an existing resource. For example, Gary amplified Infieon's existing technological process resources for his new innovation, Learning Solutions. Gary stated:

> "So what we had decided was to de-risk ourselves. We would … ride on the coattails of what's already being sold … for example process change, well guess who does process change for a living? Infieon. We do four billion dollars' worth of new process implementation."

Thus, although Infieon had several other technological resources, Gary amplified the process change aspect of Infieon's technological resources.

*Frame transformation* refers to changing old understandings and creating new ones (Benford and Snow, 2000). In the context of resources, this refers to how innovators transform their generally understood functionality. An example of frame transformation can be seen in Ken's (Helion) videoconferencing innovation. Ken reinforced Helion's technological resources in color printing technology so that his innovation, videoconferencing, would be seen as leveraging existing organizational resources. As Ken said:

> "When you're inside of a printing business, you say, 'Look, we're printing with pixels of light. There are engineers who do that kind of thing,' and it's just dynamic instead of static. And those technologies are there and it makes sense and people like it."

Ken acknowledged that video, which he described as printing with light, was in fact nothing like printing on paper, but that the connection made sense to decision-makers:

> "In my mind it was simply an influence technique, how the hell do you get people who don't think about this business, to think about it … I was trying to make a connection."

### Step 5: Showing that their innovation creates unique value for customers

In the final step, if innovators are to convince decision-makers to commit additional resources for their innovation, they must demonstrate that their innovation will provide a unique advantage. Innovators begin this step by downplaying the significance of this addition to their narrative, emphasizing that the new resources are simply a missing piece that complements existing resources (reframed in the previous step, Step 4). This approach reduces resistance, because most required resources are already available and thus the innovation merits investment. For example, since Paul (Helion) needed additional resources for his

videogaming innovation, he reframed Helion's technological resources to show that they would only

produce an average prototype; additional technological and customer resources were necessary to creating

a stellar solution. Paul describes how he was able to persuade decision-makers:

> "… I think the hardest part was trying to get everyone to agree that what we were doing was on the right path. … This prototype wasn't what they were hoping for, basically … I had one more slide on my presentation which said, 'Well, if you want to accelerate this and really do a "wow" point then we should go buy a company who really understands … the market,' and half the room stood up and said, 'That's what we should do.'"

He stressed that Helion was manufacturing all the required components of a PC, but lacked a customer

interactive solution—a strategic gap in the firm's portfolio. He thus demonstrated how his innovation

addressed this weakness and would take Helion to a new level. Paul described:

> "We had to make a connection to Helion's gaming business … the biggest online games like World of Warcraft were all using Helion hardware and so, you know, we were winning that business … but we didn't have this consumer-facing game PC product so it looked like we didn't have a gaming strategy. So part of my strategy pitch in this business was, you know, we've got this whole business that's at risk because we don't have this one piece. And so that helped sell it to everybody."

Paul made a case for the gap in the firm's strategic portfolio and framed Helion's technological and

customer resources for the decision-makers, aiming to show that his innovation could provide unique

value to customers. A review of the product indicated that it successfully did so: "Gaming is the first

product from the collaborative design and production minds of [Helion and its partner] … The result is a

system that makes an unexpectedly large dent in what we expect from high-end gaming PCs."[2] The article

went on to explain how Gaming Solutions' unique appearance and superior interior design delivered

value at significantly lower costs as compared to competitors.

Similarly, David and Arik reframed Intelligex's technological resources to launch their

innovation, and gained additional market resources by reaching out to potential customers through their

ecosystem vendors. As David describes:

> "We started testing it with some of our PC customers, but …it was back and forth a little bit. So we decided that we would do our own pilot where we would work with some very small customers relative to some of the big guys. And you know, when you talk about a multi-hundred unit PC market, these are fairly small companies. They're very innovative and so we decided to

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[2] Citation not provided to preserve anonymity of companies involved.

do a program where we worked with five of them and we put out one particular upgrade with them and we, uh, tested it to see how well it would be accepted by their customers, whether the value proposition would work, whether they thought it would just be effective."

David and Arik had extended Intelligex's technological platforms into a new realm. They argued that the new customer resources obtained through ecosystem partnerships would allow their innovation to provide unique value. Arik explained how their "platform [or product] extension service:"

"reduces the available size of the opportunity enormously … but it gives you high confidence that A) if the surface works, it actually sells more silicon. It's reinforcing."

Similarly, while Ken reframed Helion's resources through frame transformation (to suggest that they were printing pixels on screen instead of paper), he still needed to fill his innovation's need for resources for "creating social connections across distance with video." Ken described how partnering with the company MovieMagic fulfilled this need:

"…[its] entire job is to have you sit in a chair, look at a screen, and forget that there's any other experience going on. You're just totally immersed in that screen … they win when you sit down and get completely absorbed in that. So what we wanted to do, from a design perspective, is have a video collaboration resource, where people get absolutely absorbed and forget that they're 3,000 miles away..."

Ken demonstrated how Hello could integrate Helion's and MovieMagic's resources to create a unique solution that other companies could not match. A white paper published at Helion demonstrated the unique technological resources that the organization brought to the table and how it synchronized with MovieMagic's resources to create a unique social collaboration tool: "MovieMagic's detailed attention to audio and visual created a unique social environment. Helion brought an end-to-end solution from signal acquisition to signal presentation." The selling point for Hello was that no other company would be able to effectively compete to provide this solution to customers.

These innovators successfully expanded their firms' strategy after demonstrating that the firm had the necessary resources to execute the innovation and that doing so would provide a unique competitive advantage. Although their innovation was not completely compatible with the decision-makers' original perceptions of organizational strategy or existing resources, innovators reframed resources and acquired additional ones through their actions, ultimately gaining adoption for their innovation.

**Successful versus failed innovations: Differences in practices**

Innovators did not always successfully gain firm adoption of their innovations. In contrast to existing theories on the importance of market validation for innovation adoption (e.g. Burgelman, 1983b), we found no discernable relationship between external validation and success (see Table 3). For example, Amit had no market validation for the Search Gorilla or the Bumblebee project at Yeti. While Search Gorilla succeeded in gaining adoption, Bumblebee failed. Similarly, Ken, the innovator at Helion, had customers for his project by the time he gained adoption, while Paul, another innovator at Helion, had no customers for the gaming innovation when he successfully gained adoption. Similarly, Gary from Infieon and Mike from IXI had no customers for their successful and failed innovations. David and Arik from Intelligex had customers for both successful and failed innovations. Thus, external validation did not necessarily distinguish between successful and failed innovations.

When we contrasted how innovators succeeded versus failed to gain adoption, we found that innovators performed similarly in Steps 1 and 2 (see Table 3) for both successful and failed innovations. They assessed whether their innovation was a fit or a misfit with their organization's strategy and existing resources. However, they performed differently in Steps 3, 4, and 5. Thus, the key to success or failure lay in the nuances of resourcing.

In Step 3, unsuccessful innovators were sometimes unable to identify organizational resources commonly understood and perceived by their decision-makers as strengths. This was a roadblock to effective framing. In some cases, even if they identified these resources, they ineffectively reframed them. Finally, some effectively reframed the resources, yet failed to show how their innovation used their firm's resource base to create value. Decision-makers therefore did not feel the need to change their concept of strategy to fit the innovation and declined adoption.

Notably, innovators narrated their innovation accounts differently during their interviews when describing failed versus successful innovations. When innovators discussed failed innovations, they transitioned directly from describing the market opportunity to narrating how their innovation addressed market opportunity. They skipped over an important narrative that they unconsciously used when

describing their successful innovations: they did not explain how their organization's resources positioned them to create unique value for customers. We had to probe. In contrast, for successful innovations, the natural progressions of their interviews went from market opportunity to their organization's resources, and then to how their innovation could create unique value for customers.

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Table 3 About Here

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For example, Gary, who was successful in launching Learning Solutions, failed to launch Compliance Solutions. The unsuccessful innovation was a compliance platform that would track the regulatory environment and the employee base of client organizations to determine where they needed to train employees to manage compliance. Gary performed similarly in Steps 1 and 2. In the first step, he highlighted whether the innovation would be perceived by decision-makers as a fit or a mis-fit with the organization's strategy, just as he was able to make this assessment with his successful innovation: Learning Solutions. Infieon's strategy, as outlined in its annual reports, was to become the world's leading technology services company. The company focused on consulting with client organizations on business process management, systems integration, and infrastructure management. Thus, their current strategy was to help client firms streamline within firm operations; however, both Learning Solutions and Compliance Solutions focused on training employees in client organizations, and was therefore a mis-fit with their strategy. As Gary described, "it's an offering which … has legs, and there's no question about it. The question is: can we make money in it?"

In the second step, Gary was also able to assess that, although Infieon had some technological resources, it needed additional technological and customer resources to execute the innovation, which would invite resistance from decision-makers. Gary assessed additional resources that this innovation needed:

> "Each simple problem, even one-line statement, breaks up into this extremely complex uh set of issues: Who will create the content? How will we track the users? How will we deliver this knowledge? What about one year from now—are we still going to do trainings? What about five

years from now when we are still using this application and 80% of our workforce has changed from now to then?"

Gary hit a wall in the third step, when he tried to identify resources that comprised well-recognized organizational strengths. In his successful innovation on Learning Solutions, which was similar to Compliance Solutions in terms of technological and market needs, he successfully demonstrated how the sales force could be reframed. For Compliance Solutions, he could reframe technological resources, but could not make the same argument regarding their sales force; that is, their customer resources. When talking about the sales force in this context Gary said:

> "[The salesforce] didn't know those companies, they weren't having those conversations around compliance. It is not an IT issue, compliance, and compliance supporting and training it is not something that IT teams deal with in client organizations these are not people we could talk to so the sales team, the sales team I can train them to convey my message but I can't train them to go find a new guy because their data is meeting their goals which are revenue goals, those revenue goals needed certain amount of efforts and for that they needed to one learn something to find a new customer and then go through a protracted sales cycle for essentially a miniscule payoff they have no incentive, nothing in terms of payoff."

When asked about other ways to reach these customers, Gary responded that they could use their marketing capabilities in channel partnerships, yet decision-makers did not perceive channel partnerships as their organization's strength:

> "We could have created an offering, either stand up a separate sales team which is one part, you know some companies have tried doing that and the other is to explore a channel partnership where we could have gone to any existing compliance product for example in the health care industry or international services go to any compliance technology product vendor and become the training arm for that that was our closest choice. We finally decided against that for the same reason that these were not natural to our swing. That is important, if people need to relearn their swing, then it becomes so much more difficult for the entire company, Infieon was still figuring out this whole partnership game, going to market with a partner."

In the fourth step, Gary reframed Infieon's existing technological resources to show that Infieon had some of the technological resources to execute Compliance Solutions. Infieon had the hardware and software resources, which, when combined, could create the platform that had the potential to create a new industry.

> "We could create a platform, or we could create an offering which involved hardware and software capital altogether, and there we were able to create a completely new industry almost,

and then dominate it … So platform-based IT services, or platform-based services in general, is a big idea."

However, even though he succeeded in making an argument for reframing technological resources, it was difficult for him to make an argument for go-to-market for reaching customers. The decision-makers did not perceive channel partnerships as a strong customer resource, so it was not effectively reframed. Thus, he only partially succeeded in Step 4.

Gary was unable to succeed in Step 5, as he was unable to convince Infieon's decision-makers that his innovation enabled the company to deliver unique value to customers. Thus, he could not get buy-in from decision-makers to invest in additional resources to bring the innovation to fruition, as he did for Learning Solutions. As Gary put it:

"….this is a heavily oversold industry. There's a lot of small players. For the—for even the smallest training, you can find hundreds of windows—hundreds of windows because plant-level buying so you buy one module here, one module there. So it's a very fragmented industry."

Thus, Compliance Solutions did not gain adoption.

Similarly, Arik, who was successful in gaining adoption for Platform Extension Services, did not gain traction for his innovation Connect. Connect would enable Intelligex to connect multiple product offerings that used its embedded integrated circuits, such as connecting notebooks with handsets. As previously mentioned, Intelligex's strategy focused on manufacturing integrated circuits. Arik performed similarly in Steps 1 and 2 for both Platform Extension Services and Connect, yet he was unsuccessful in Steps 3, 4, and 5. Thus, Arik accurately assessed that Connect did not fit with Intelligex's strategy or its resources (Steps 1 and 2), just as Platform Extension Services had not. Arik also knew that Intelligex did not have the entire set of resources to launch Connect. It had the technological resources, however it needed customer resources from its ecosystem, similar to what Arik faced with his successful innovation.

For Step 3, Arik made the connection between his innovation and his organization's technological strengths in manufacturing integrated circuits. As Arik said, "You know we had the technology to connect the handset with the notebook, and we called it one plus one equals three." He identified partnerships with

independent software vendors that they could identify through their current customer base; however, these partnerships were perceived as complicated to acquire and not one of Intelligex's existing strengths.

Arik used frame bridging in Step 4 to show that Intelligex had the technological resources to execute the prototype for the innovation. As Arik described:

> "…I think we had enough sense in doing the technology—we knew that we were able to do the technology just fine. Intelligex is a technology company; I'm not concerned about that … We have technologies that are independent on two different machines, but if you combine them together the benefit that you get is significantly larger."

Arik failed to convince Intelligex decision-makers that these partnerships could be accomplished through any of the reframing techniques, and decision-makers did not perceive this innovation as providing unique value to their customers. He relayed the decision-makers' response:

> "… he killed the project because he said, 'Look, we don't have sustainable differentiation here, and what we are trying to do is basically resell somebody else's product. So this is not interesting to me.'"

Although the innovation was based on the organization's reframed resources, and despite the fact that Connect had external market validation, Arik lacked an effective unique value proposition for the organization to consider expanding its strategy to include the innovation.

When managers at Helion discussed innovations that failed, the projects mentioned were similar to Ken's and Paul's successful innovations. Paul discussed a failed project led by another innovator—the "e-Doc Project," a reader similar to Amazon's Kindle. The innovators identified that the e-Doc Project was a mis-fit with Helion's concept of strategy and resources (Steps 1 and 2), which focused on printing. In Step 3, in which the innovators selected commonly understood resources to make a connection, they chose Helion's technological competences as well as marketing competences. For the e-Doc Project, just as with Gaming Solution, the technological prototype was easy to make. The challenge was in addressing the marketing channels: the "go-to-market" for the product—a customer resource. The innovation required a strong brand and marketing channels. Helion's decision-makers were not convinced by the technological argument. Other innovations at Helion that had succeeded in gaining adoption, such as Hello and Gaming Solution, had the same resource fit issues. However, both Ken (Hello) and Paul

(Gaming Solution) found channel partners whose strengths could complement Helion's. Paul stated that unlike Gaming Solution and Hello, e-Doc Project innovators could not find a partner whose brand name and marketing capabilities could leverage Helion's technological resources. The innovators identified a strong brand name that would provide content and take the product to market, however, they weren't effectively partnering with Helion. The content providers would have taken the product to market on their own brand strength and customer base, and Helion's role in the partnerships as well as subsequent revenues would have been minimal. Paul said:

> "… I guess if we had done it right we would have said now we know what we can do, now let us figure how to fill the gap out you pay us a revenue share you make us whole again but we can't …so what is different in that case is we had no control, it was a hardware play to our buyer who would then in turn sell it to customer they had control over the customers, they had control over the revenue, they had control over everything and we didn't. In the e-Doc case it was brand and it go-to market …. they would get the revenue for the upgrades, they control the customer experience itself, …  we couldn't do that on the e-reader we couldn't convert. "

Thus, even though the innovators found a strong resource in Step 3, they were not offering Helion the customer resources it needed to go-to-market as a partnership. In Step 4, they failed to reframe their resources to show that their organization's strengths could be leveraged for reframing. Finally, although the innovators were able to create the technological prototype, their unique value proposition to customers was not defined. Paul said:

> "They couldn't define how it would make money at this device because the device by itself is not going to make any money. The real money comes from the books downloaded and the service, the service fees that you get from it and we couldn't structure a deal that was … really going to work."

Comparing it to his Gaming Solution, the difference was in linking the innovation to the organization's value-creation strategy and demonstrating how other organizations could not easily imitate Helion's offerings to provide unique value to customers.

Paul argued that experienced innovators are unlikely to proceed with proposing an innovation unless they can foresee how it creates unique value for customers. Paul stated:

> "If you had given me the e-Doc Project and said, 'Okay go see if you can make this work,' and I ran into that question of how we were going to form a content provider partnership that works for us, I might have said, 'I don't want that project,' because I knew that's a risk … There's some

intuition and knowledge about what is likely to fly and not likely to fly … So you assess the landscape, and then you, if you have a choice you pick the projects that are going to work for you and just don't do the others."

In sum, failure to gain adoption primarily seemed to arise when innovators failed in any of the three resourcing steps: Steps 3, 4, and 5. Innovators failed when they were unable to find a strong common point of contact between their organization's resources and their innovation, when they were unable to reframe resources, or when they failed to show how their organization's reframed and newly acquired resources would enable the firm to create unique value for its customers. The decision-makers did not therefore feel compelled to change organizational strategy to accommodate the ill-fitting innovation.

## DISCUSSION

In this study, we apply the Bower-Burgelman strategy process model to understand how innovators engage strategy construction practices to gain adoption for their nascent autonomous innovations. The B-B model shows that innovators must move their innovation from resource mobilization to strategic context determination through three stages: definition, impetus, and strategic context determination. Employing SAP concepts of resourcing and framing we describe how innovators' practices activate the adoption process. Innovators navigate through the B-B framework by manipulating the meaning that resources hold for decision-makers. Successful navigation impacts the firm's strategic trajectory. Examining actual resourcing practices illuminates why some practices and not others succeed. Our primary contribution lies in integrating two prominent strategy research traditions: strategy as process, and strategy as practice. This combination suggests several future research possibilities.

Our contribution to resourcing literature lies in identifying framing as a mechanism for accomplishing resourcing. While previous resourcing research has identified mutual adjusting (Jaquith, 2009), juxtaposing (Howard- Grenville et al., 2011), and narrating (Quinn and Worline, 2008) as resourcing mechanisms, the focus was on how individuals engaged in resourcing by themselves or through a collective co-creation of the resources' meanings. Previous studies did not consider political

aspects in which interests differed between sets of actors, especially in cases in which one set of actors sought to impose meaning on another. We used the B-B model, a political process model of strategy making, as our strategic framework, since our focus was to understand how innovators imposed their meanings on decision-makers to gain adoption. We used framing because it is seen in the literature as a political practice specifically focused on how one set of actors give sense to another (Kaplan, 2008; Quinn and Worline, 2008). Previous studies on resourcing have not focused on the political aspects of meaning creation. In this study, we suggest that framing is an appropriate mechanism when political interests are involved in resourcing practices.

Similarly, in contrast to current strategic framing research, which primarily focuses on how actors frame *external* technological and market opportunities to navigate strategic change (e.g. Gurses and Ozcan, 2015; Hargadon and Douglas, 2001; Kaplan, 2008), we show how actors must frame *internal* organizational resources to morph their organization' strategy. For example, Kaplan (2008) discusses a "Last Mile" project, in which the decision-makers had to decide whether to invest in Optical Access technologies. Economics of the business had not initially supported expansion, but innovators (Hugh Collins and his team) believed that the solution to the glut of bandwidth in the core was to install high bandwidth, fiber-based connection to access points. Kaplan's study discusses how innovators engaged in framing contests for this project centered around market based opportunities, such as future value of optics (pro-optical versus anti-optical), future market demand ("market opportunities" versus "market pessimism"), and appropriateness of different optical technologies. Hugh focused on showing how it would be a competitive disaster if their firm did not invest in optics and how the project supported the needs of a particular business unit. One of the key pushbacks from opponents was that carriers would not invest in new infrastructure, which involves digging underground to install these fiber optic lines. Applying the results of our study to Kaplan's study would provide additional insights into how Hugh could have reframed their company's existing technological and market resources to convince carriers to partner with them for additional complementary technological resources. In addition, Hugh might have had to show how their firm could use their technological resources along with their partners, and how

they could create unique value for customers that their competitors could not. Thus, we contribute to strategic framing literature by showing how innovators must identify and reframe idiosyncratic firm resources along with framing external opportunities to gain successful adoption.

Furthermore, it is important to note that the B-B model emphasizes that in addition to internally oriented activities, innovators must focus on externally oriented activities such as strategic forcing and strategic building to overcome decision makers' inertia to innovation. Similarly framing literature has also emphasized framing external opportunities. Thus current strategy research would guide our innovators to focus on framing external opportunities and validate such opportunities through strategic forcing and strategic building to gain adoption. In contrast, we show that when innovators cannot show externally-oriented success, internally-oriented resourcing through resourcing practices (Steps three, four, and five) enables innovators to overcome decision-makers' inertia. Additionally, we highlight that differences in adoption success and failure stem from subtle nuances in resourcing practices, despite similar market validation for both successful and failed attempts. The choices that innovators make in selecting, reframing, and connecting resources to their organization's unique value-creation strategy determined the difference between success and failure. We offer additional insights into the B-B model for understanding how innovators can leverage internal resources to gain adoption when external validation is not forthcoming.

Our findings underscore the importance of viewing resources as dynamic entities subject to conceptualization and re-conceptualization in the framing process. We thus contribute to the larger strategy by emphasizing how practitioners accomplish resource re-conceptualizations through their practices. Although dominant theories in strategy, such as the resource-based view and dynamic capabilities (Barney, 1991; Eisenhardt and Martin, 2000; Helfat, 2007; Peteraf, 1993; Teece, 2012; Teece, Pisano, and Shuen, 1997; Wernerfelt, 1984), emphasize resource recombinations, they do not outline how these are accomplished through practice. For example, Burgelman (1996) highlights how Intel re-conceptualized its fabrication sites as capable of not only producing DRAMs, but also EPROM and microprocessors. This enabled Intel to make the transition in its strategy from a memory (DRAM) to a

microcomputer (EPROM and microprocessors) company. However this study's focus was not on explaining how innovators re-conceptualized meanings for decision makers regarding the fabrication site's capabilities that enabled Intel to subsequently morph its strategy. This reflects the general state of the field in strategy, because there is minimal theory in strategy that explores how decision-makers transform their resource base to create value for customers (Danneels, 2010; Sirmon, Hitt, and Ireland, 2007). The lack of theory on how resource transformations happen is understandable, because it mirrors how organizational decision-makers' understand them: assets have innate properties that can be taken-for-granted. However, a firm's resources only represent the potential value it can create for customers. Decision-makers must understand organizational resources and their alterative combinations differently to deploy them effectively (Danneels, 2010; Laamanen and Wallin, 2009). In this study, we show how innovators at the lower levels of the organization framed alternative re-combinations of resources and thus enabled decision-makers to visualize their strategy in a new way.

The five steps that we identified innovators use also provides a formal theory (Burgelman, 2011), offering interesting insights into the relationship between firm strategy and resources. Traditional strategy research proposes that resources follow strategy, and that after receiving market feedback regarding their strategy, decision-makers develop further their resources (Barney, 1986; Sirmon, Hitt, and Ireland, 2007). In this study, we find a subtle but important difference: a firm's resources likely influence a firm's strategy. In line with Burgelman (1988), we find that innovators at the lower levels of an organization's hierarchy perceive these opportunities based on their firm's idiosyncratic resources before they are perceived by decision-makers. Innovators then alter the resource base to expand the firm's strategy *before* market feedback, or sometimes irrespective of market feedback. This suggests an interesting and important avenue for future research; i.e., to explore how decision-makers' understanding of firm's resources directly influences strategy formulation, instead of through a feedback loop from the market, which is the current dominant assumption (Burgelman, 1988; Feldman and Worline; 2011, Sirmon et al., 2007).

Results of our study expand as well as challenge the findings from previous studies on how innovators gain adoption. For example, in a recent study Mirabeau and Maguire (2014) showed that certain autonomous innovations remain "ephemeral" (p. 35) because the innovators could not adapt the organization's strategy to accommodate the innovation. In their study, one innovation (Customer Advocacy Project) failed, despite market interest, because the innovators failed to show that the notion of service recovery (an established practice in their organization) could be extended to include customer-advocacy services (the innovation). Thus innovators were unsuccessful in their efforts at strategic context determination. We found similar instances in our study with Amit's innovation, in which the notion of unstructured search (an established practice in the organization) could not be initially extended to include structured search (Amit's innovation Search Gorilla). However, Amit was able to use frame bridging to connect his innovation to existing technological resources in his organization. Findings of our study indicate that if innovators in Mirabeau and Maguire's study had demonstrated how select technological or customer resources used in service recovery were actually a good fit with certain aspects of customer-advocacy services, they might have succeeded. Thus, innovators' skills in identifying and transforming appropriate resources might be the key to understanding why some innovations remain ephemeral instead of achieving incorporation into the organization's strategy. This involves creative re-conceptualizations of how resources can be used; i.e., effective reframing activities of firm's resources.

One key avenue for future research is to further explore combining process models with practice models. For example, in this study we used the B-B process framework, which is a political model of resource allocation, by using resourcing as a lens, and framing as the political practice mechanism for creating meaning for decision-makers. Future research in this vein could look at the initial frames innovators used and how they iterated through the process to arrive at the final frame they used to influence decision makers. As innovators begin to conceptualize innovation opportunities and internal resources, they speak to several other actors, such as their immediate decision-makers, team mates, and external entities such as suppliers and customers. Similarly, as they progress through the different stages of the B-B framework, they interact with different levels of decision-makers. It is reasonable to assume

that innovators' frames undergo a variety of iterations, given the multitude of resource frames that exist in an organization. Finding out more about the different frames that exist in organizations, and how innovators integrate different frames as they move through the B-B framework at each step, will enhance our understanding of how framing evolves as the innovation moves through different levels of the organization's hierarchy. Another potential area research avenue involves exploring how framing contests between decision-makers and innovators at different levels enables a collective evolution of resource frames.

**Limitations**

As with any qualitative study, our exploration of how innovators gain adoption from their decision-makers is limited in its generalizability. We focused on large corporations in Silicon Valley's technology industry, which is well-known for its culture of openness and innovation. However, we found similar patterns across organizations, even though their year of founding and size differed. Furthermore, restricting our sample size to the technology sector helped us explore numerous innovations, given the technology sector's high innovation productivity. Focusing on large firms in one industry helped us constrain variations due to size differences between firms and environmental variations between industries (Eisenhardt, 1989; Eisenhardt and Graebner, 2007).

Another limitation of our study is the method by which we identified innovators. We asked senior managers to identify whom they considered to be successful innovators. As a result, it is likely that we missed others who launched innovations, but were unsuccessful in their efforts, or who were just starting out as innovators. However, identifying innovators through this method enabled us to collect data for cases in which the phenomena of interest are clearly observable (Eisenhardt, 1989). Given the time and resource constraints that limit the number of cases that can be studied in any field setting, our goal was to maximize extreme cases to understand contrasting patterns in data so that we could understand the process in more depth (Eisenhardt and Graebner, 2007).

A related limitation of the study is that although we use B-B model as our theoretical lens, which includes several interlocking activities of multiple levels of management, we focus solely on innovators'

activities. The B-B model suggests that different levels of management such as scientists, R&D managers, group leaders, directors, personnel managers and operation managers of New Venture Division, and managers from business research and business development all perform different key activities as the innovation moves through different stages and different levels of the organization's hierarchy. In this study, we exclusively focus on the practices employed by innovators and do not consider the different roles that several key organizational personnel play to gain innovation adoption. Future studies might consider the practices of different personnel at several levels within the organization and the role they play in assisting innovators to gain adoption.

The number of failed projects is low compared to the number of successful projects, as data were unavailable. Therefore, the results regarding failed versus successful projects should be interpreted with caution. However, in many cases, innovators who had launched successful innovations had also launched failed ones. Since data from managers and archival sources suggests that innovators' perceptions were accurate in terms of their successful projects, there is reason to believe that their perceptions of failed projects were also relatively accurate. Unsurprisingly, other studies on autonomous innovations also have a lower number of failed innovations as compared to successful ones (e.g., Daft, 1978; Mirabeau and Maguire, 2014; Van de Ven, Angle, and Poole, 2000). Our interviews revealed that, apart from intellectual property issues, innovators were reluctant to discuss their failures, because they hoped to launch those innovations again.

Another limitation is that we could not observe focal innovations when they were in progress. Thus, there is undoubtedly some retrospective bias and memory loss in the interviews. However, as previous researchers have suggested (e.g., Danneels, 2010), talking about past innovations also enables innovators to be more open about their efforts, because their statements do not affect innovation outcomes or their career, as they would have if innovations were still in progress. For example, Ken from Helion reported that this study's first author was the first person outside his immediate team to whom he confessed about how "printing on pixels" was in fact nothing like printing on video, despite the fact that he used that as the key argument to gain adoption. However, he remarked that enough time had passed for

him to be honest about it. We also attempted to mitigate retrospective bias, to the extent possible, by gathering data from multiple sources (Eisenhardt, 1989; Eisenhardt and Graebner, 2007). Future research should observe innovations in progress, providing the opportunity to see how decision-makers perceive and respond to each reframing step proposed by the innovators. It would have been helpful to observe how innovators modified their strategies based on feedback from different constituents. Future studies that look deeper into these practices will help us disentangle how framing strategies used by innovators change over the course of their launch attempts.

Finally, during our interviews, we found that some innovators reported having an intuitive sense of the autonomous innovations likely to succeed in their organization's context. The average tenure of our innovators was 15 years. It is therefore likely that their experience in their organization's context gave them insights into several aspects of resourcing, such as what resources to select and frame. They are also likely to know what innovations had a better chance of being accepted by their decision-makers. Similarly, their reputation within their organizations might have helped decision-makers buy into their framing more readily. Thus, future researchers should explore how innovators' experience and reputation enables them to succeed with their issue-selling efforts when attempting adoption.

**Managerial Implications**

Firstly, while a majority of extant research would suggest that organizational innovators should focus on framing external market opportunities to gain adoption, the results of our study suggest that internal framing is just as critical. In addition, we delineate specific steps that innovators can use to select and reframe the meanings that resources hold for decision-makers, as opposed to solely focusing on resources' physical nature. We suggest that innovators be selective in choosing which resources to highlight to their decision-makers, and which resources to deliberately downplay when trying to gain adoption. Innovators must highlight resources that their firm is perceived as having strengths in, and are readily understood as such by decision-makers. They must reframe resources in such a way that decision-makers can envision their firm's unique value-creation proposition through this new view of resources.

Our study highlights that organizations must not only create supporting structures, but also train innovators and decision-makers to think creatively about their organization's resources. A majority of research on corporate entrepreneurship that emphasizes nurturing innovation in large organizations focuses on creating supportive organizational systems and structures (e.g., Hornsby, Kuratko, and Montagno, 1999; Hornsby, Kuratko, and Zahra, 2002). Reframing firm resources to convince decision-makers implies that a key skill innovators need to succeed is cognition about firm resources, as well as reframing skills (e.g., Danneels, 2002). Recent research suggests that shifts in decision makers' cognitions regarding firm resources influences a firm's capability development (Laamanen and Wallin, 2009). Innovators must be creative in understanding, selecting, reframing, and recreating the organization's concept of its own resources, and convince decision-makers of what these re-conceptualizations look like. This will enable the firm to succeed in developing appropriate resources to succeed in its innovation efforts.

**CONCLUSION**

Innovators bring value to their organization through the autonomous ill-fitting innovations they propose. Often, because, the value of such innovations is not apparent to decision-makers, they are reluctant to change their current successful strategy based on an unknown, ill-fitting innovation. The onus is on innovators to not only develop a successful idea, but also persuade decision-makers about the innovation's value. In this study, we emphasize organizational resources as a potential source of power that provide innovators with the capacity to influence their decision-makers and ultimately lead to successful adoption of their innovation. Previous innovation researchers have suggested for several years that "For large, mature organizations to become innovative, they must reconfigure the power embedded in the organizational system in its resources, processes, and meanings."(Dougherty and Hardy, 1996; page 1146).

Yet, while traditional strategy research neglected to offer a lens to understand *how* individuals could reconfigure the power and meaning embedded in organizational resources, the recent emergence of

SAP as a theoretical lens opens this immense possibility. Using recent developments in SAP, we suggest some practices through which low-powered individuals in organizations can utilize the power of resources to reconfigure the meanings they hold and transform an organization's strategy.

While the B-B process model of strategy-making focuses on how innovators gain adoption, we imbue this process model with a practice perspective, using resourcing and framing as practices through which innovators gain adoption. We focus on the continuity of organizational resources as a source of change, which is typical of a practice perspective (Whittington, 2007), and highlight what makes resourcing effective in a given context. While innovators in lower levels of an organization's hierarchy cannot force their views on decision-makers, they can use the situated nature of their organization's resources to construct meaning and craft a persuasive argument. Our work provides the theoretical foundations for incorporating resourcing as a potent lens in the realm of strategy-making and possibilities for creating cumulative knowledge by combining process research with a practice perspective. We encourage future researchers to combine a practice perspective with influential process theories for the next phase of rich theory-building in the strategy literature, as well as to guide practitioners in their day-to-day strategy making.

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**Figure 1a: Bower-Burgelman framework original model**

| | | CORE PROCESSES | | OVERLAYING PROCESSES | |
|---|---|---|---|---|---|
| | | Definition | Impetus | Strategic Context | Structural Context |
| Levels | Corporate Management | MONITORING | AUTHORIZING | RATIONALIZING | STRUCTURING |
| | NVD Management | COACHING STEWARDSHIP | STRATEGIC BUILDING | **ORGANIZATIONAL CHAMPIONING** SELECTING DELINEATING | NEGOTIATING |
| | Group Leader/ Venture Manager | **TECHNICAL AND NEED LINKING** PRODUCT CHAMPIONING | STRATEGIC FORCING | GATEKEEPING IDEA GENERATING BOOTLEGGING | QUESTIONING |

*Bolded statements refer to key activities from the Bower-Burgelman's (1983b) original model that we use in this study.

**Figure 1b: Resourcing and Framing Steps for Gaining Innovation Adoption through the lens of the Bower-Burgelman framework**

| Levels | | CORE PROCESSES | | OVERLAYING PROCESSES | |
| --- | --- | --- | --- | --- | --- |
| | | Definition | Impetus | Strategic Context | Structural Context |
| | Corporate Management | | | | |
| | NVD Management | | | **Step 4 :** **Reframing key resources to show resource fit** | |
| | Group Leader/ Venture Manager | **Steps 1 & 2 :** **Assessing innovation's fit with organization's strategy and technical and market resources** | **Step 3: Selecting key commonly understood resources** | **Step 5: Showing that the innovation combines organizational resources with new ones to create unique value for customers** | |

Table 1: Ill-fitting innovations from focal organizations

| Ill-fitting innovations that succeeded in gaining adoption | | | Ill-fitting innovations that failed in gaining adoption | | |
|---|---|---|---|---|---|
| **Organization name** | **Innovation name** | **Innovation description** | **Organization name** | **Innovation name** | **Innovation description** |
| Intelligex | 1.Platform Extension Services | Upgrade service offers individuals the ability to purchase software upgrades for their hardware after they have purchased the hardware. A part of upgrade services is an antitheft deterrent service that shuts down the computer once it is stolen. | Intelligex | 7.Connect | A technological innovation that would enable Intelligex to connect multiple product offerings through a particular technology. |
| Yeti | 2.Search Gorilla | Search Gorilla, or search using structured data, was a new concept at Yeti. Yeti had traditionally been focused on unstructured search and this was a new strategic trajectory for the organization. Initially the organization could not figure out the revenue model for this type of search and it did not find traction within internal business units. The resources required for this product were readily available within the organization. | Yeti | 8.Bumblebee | Bumblebee project focused on embedding structured real-time information directly from the web into the search results. This did not fit directly into presenting unstructured search results, which was Yeti's strategic trajectory. The resources required for this product were readily available within the organization. |
| Helion | 3.Hello | Hello is a videoconferencing solution that provides a virtual reality experience of a meeting. This innovation was proposed in the printer division of an engineering organization that specializes in printers, computers, hardware, and software services. | Helion | 9.e-Doc Project | The e-Doc Project was an e-reader similar to Kindle that was manufactured by Helion that would enable readers to read books on the e-doc device instead of a book. |
| Helion | 4.Gaming Solution | The Gaming Solution was to create a front end solution to Helion's range of products such as notebooks, PCs etc. Helion had traditionally produced the backend hardware. The purpose of Gaming was to create a front end solution to enter the gaming market—a completely new business for Helion. | Helion | 10.LifeScience | This was a series of front-end projects focusing on a home health sensing system that utilized Helion's resources in printing and hardware. |
| Infieon | 5.Learning Solutions | Learning Solutions enables learning for global companies. The focus is to help organizations learn and transfer learning through traditional tools such as training, knowledge management, and performance management combined with new tools such as collaboration, social networking, simulation, and games. | Infieon | 11.Compliance Solutions | Compliance Solutions tracks the regulatory environment and then looks at the client employee base to determine where the organization needs to train its employees to make them compliant. |
| IXI | 6.Tools Programs | Tools Programs enables organizations to reduce the costs of running a database. The costs of using tools for running their database were expensive. Customers of IXI wanted solutions so that they could reduce their costs. | IXI | 12.Database Languages | The Database Languages project would help would help the two database languages, R database and H database, to communicate with each other. There was a significant business opportunity to monetize the tool. |

Table 2: Resourcing and framing steps for successful versus failed innovations

| Organization | Name Innovation | Steps 1 and 2 Assessing innovation's fit with the organization's strategy and resources | Step 3 Selecting commonly understood organizational resources that are perceived as strengths | Step 4 Reframing key resources to show resource fit (examples) | Step 5 Showing that their innovation creates unique value for customers with minimal additional resources | Market Validation |
|---|---|---|---|---|---|---|
| **Resourcing and framing steps in innovations that succeeded in gaining adoption** | | | | | | |
| Intelligex | 1. Platform Extension Services | Intelligex's strategy was focused on making silicon chips. Being in the hardware manufacturing space, a software innovation was not a ready fit with Intelligex's strategy and resources. | **Technological resources:** Intelligex's expertise in platforms<br><br>**Customer resources:** Intelligex's current customer resources, who could help Intelligex create partnerships with those who have the ability to exploit Intelligex's expertise in microprocessors | **Frame extension:** Intelligex's core resources in hardware—its current platforms could be extended and tweaked to work on Platform Extension Services.<br><br>**Frame extension:** Using structurally similar customer resources by showing that Intelligex's current customer base could be used to access additional partners who would test Intelligex's products for them. | **Unique Value:** The innovators' narrative focused on showing that the software service innovation works only with Intelligex's chip, thus uniquely positioning Intelligex to deliver value to customers. | Yes |
| Yeti | 2.Search Gorilla | Yeti's strategy was focused on unstructured search. Being in the unstructured search space, a structured search innovation was not a ready fit with Yeti's strategy and resources. | **Technological resources:** Grease Gorilla was a well understood successful technology at Yeti<br><br>**Customer resources:** Internal customers who use structured data | **Frame bridging:** Linking separate existing issues under one frame, e.g., real estate and Yeti Shopping were handling structured data. Yeti currently had the capability to get structured data from both these properties.<br><br>**Frame extension:** Using structurally similar customer resources by showing that pockets of internal customers were using structured data. | **Unique Value:** The innovator's narratives focused on showing that Yeti with a brand name that suggested a fun playful company was in a better position to play in the market as compared to other competitors that provided more sterile search results. | No |

| Organization | Name Innovation | Steps 1 and 2 Assessing innovation's fit with the organization's strategy and resources | Step 3 Selecting commonly understood organizational resources that are perceived as strengths | Step 4 Reframing key resources to show resource fit (examples) | Step 5 Showing that their innovation creates unique value for customers with minimal additional resources | Market Validation |
|---|---|---|---|---|---|---|
| Helion | 3.Hello | Helion's strategy was focused on manufacturing printers and computers. Being in the hardware space, virtual reality experience was not a ready fit with Helion's strategy and resources. | **Technological resources:** Expertise in color printing and backend hardware for Hello.<br><br>**Customer resources:** Partnerships with a well known movie company "MovieMagic," which had the brand resources to go to market. | **Frame transformation:** Transforming Helion's resources in paper printing to online printing for video conferencing by depicting Helion's expertise from printing pixels on paper to printing pixels on screen.<br><br>**Frame amplification:** Enhancing MovieMagic's expertise in gaming to show that it provides a unique virtual reality experience for customers. | **Unique Value:** The innovator's narratives focused on showing that Helion's unique technological resources with MovieMagic's brand and experience in creating movie experiences enabled Helion to provide unique customer value through Hello. | Yes |
| Helion | 4.Gaming Solution | Helion's strategy was focused on manufacturing printers and computers. Being in the hardware space, Gaming Solution was not a ready fit with Helion's strategy and resources. | **Technological resources:** Expertise in the technology that is required to create the gaming prototype.<br><br>**Customer resources:** Partnerships with a well-known gaming company Voodoo that has the brand resources. | **Frame transformation:** Transforming Helion's technological resources in desktop and notebook manufacturing in a gaming context to show that they had all of the components to create a videogaming experience, except a customer-facing solution.<br><br>**Frame amplification:** Enhancing Voodoo's expertise in gaming to show that it provides a unique gaming experience for customers. | **Unique value:** The innovator's narratives focused on showing that Helion's unique back-end technological resources with Voodoo's customer-facing gaming expertise provided unique value. | No |

| Organization | Name Innovation | Steps 1 and 2 Assessing innovation's fit with the organization's strategy and resources | Step 3 Selecting commonly understood organizational resources that are perceived as strengths | Step 4 Reframing key resources to show resource fit (examples) | Step 5 Showing that their innovation creates unique value for customers with minimal additional resources | Market Validation |
|---|---|---|---|---|---|---|
| Infieon | 5.Learning Solutions | Infieon's strategy was focused on process improvements. Being in the process improvements space, decision-makers did not perceive Learning Solutions to be a ready fit with their organization's strategy and resources. | **Technological resources:** Expertise in process improvement technologies. **Customer resources:** Infieon's sales force. | **Frame bridging:** Linking Infieon's technological expertise in process improvements as adaptable for Learning Solutions. **Frame transformation:** Transforming Infieon's sales force's competences in selling process improvements to competences for selling Learning Solutions. | **Unique value:** The innovator's narratives focused on showing clients that their customers cannot effectively benefit from the results of the process change implemented by Infieon unless they were taught how to use it effectively. | No |
| IXI | 6.Tools Programs | IXI's value creation strategy was focused on creating databases for customers. Being in the database space, decision-makers did not perceive Tools Programs to be a ready fit with their organization's strategy and resources. | **Technological resources:** Expertise in a current program that could be generalized so that it applied across multiple customers. **Customer resources:** Technical line managers' expertise to understand customer needs for the first set of products. | **Frame extension:** Using current products to write new programs. **Frame transformation:** Transforming IXI's technical line managers competences in databases for selling database Tools. | **Unique value:** The innovator's narratives focused on showing that IXI could improve the sales of their main product—databases—by increasing the sales of the aligned tools. Customers that were buying expensive tools from competitors would be able to buy them from IXI and use the money that they saved to buy more IXI databases. | No |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Resourcing and framing steps in innovations that failed in gaining adoption** | | | | | | |
| **Organization** | **Name Innovation** | **Steps 1 and 2 Assessing innovation's fit with the organization's strategy and resources** | **Step 3 Selecting commonly understood organizational resources that are perceived as strengths** | **Step 4 Reframing key resources to show resource fit (examples)** | **Step 5 Showing that their innovation creates unique value for customers with minimal additional resources** | **Market Validation** |
| Intelligex | 7.Connect | Intelligex's strategy was focused on making silicon chips. Being in the hardware manufacturing space, a software innovation was not a ready fit with Intelligex's strategy and resources. | **Technological resources:** Intelligex had the best hardware technology to implement Connect across machine types. **Customer resources:** Intelligex's capabilities to create partnerships with independent software vendors based on their current customer base. This was not perceived as a strength by decision-makers. | **Frame extension:** Intelligex's core resources in hardware—its current platforms could be extended and tweaked to work on Connect technology. **Frame extension:** Using structurally similar customer resources by showing that Intelligex's current customer base could be used to access additional partners. This was perceived as too complicated to accomplish by decision-makers. | **Unique value:** The innovators' narratives about reframed resources for did not show unique differentiation for Connect for Intelligex from other players in the market place. One of the key reasons was that although the technological resources were strong, the customer resources were not seen as Intelligex's strengths. | Yes |
| Yeti | 8.Bumblebee | Yeti's strategy was focused on unstructured search. Being in the unstructured search space, a structured search with embedded real time results was not a ready fit with Yeti's strategy and resources. | **Technological resources:** Yeti's technological resources could be leveraged to make a prototype. It was not as strong as their expertise in Grease Gorilla technology, which was used for the successful innovation Platform Extension Services. **Customer resources:** Real-time connections with data providers who would provide real-time data for display. | **Frame extension:** Yeti's expertise in technology could be extended to build a prototype for Bumblebee. **Frame extension:** Using structurally similar but new customers to show that they were willing to share real-time data. | **Unique value:** The innovators' narratives by reframing technological and customer resources that were not perceived as Yeti's strengths did not convince decision-makers that they could reach out to customers. Therefore they did not change their strategy to accommodate Bumblebee. | No |

| Organization | Name Innovation | Steps 1 and 2 Assessing innovation's fit with the organization's strategy and resources | Step 3 Selecting commonly understood organizational resources that are perceived as strengths | Step 4 Reframing key resources to show resource fit (examples) | Step 5 Showing that their innovation creates unique value for customers with minimal additional resources | Market Validation |
|---|---|---|---|---|---|---|
| Helion | 9.e-Doc Project | Helion's strategy was focused on manufacturing printers and computers. Being in the hardware space, e-Doc was not a ready fit with Helion's strategy and resources. | **Technological resources:** Expertise in the technology that is required to create the gaming prototype. **Customer resources:** Helion had a strong partnership with a content provider who was interested in partnering with Helion to reach customers. | **Frame extension:** Extending Helion's technological resources in printing and hardware to capabilities for creating a successful prototype for the e-Doc product. **Frame amplification:** Enhancing Aragon's expertise in content that will enable Helion to have the necessary "go–to-market." This bridging was not successful because it was not seen as a true partnership between Aragon and Helion. Aragon would "own" the product, while Helion would just supply the hardware. | **Unique value:** Innovators' narratives could not show how Helion was uniquely positioned to provide value to customers as compared to competing content providers. Helion's role would be to just build the hardware. This did not seem like it was providing enough unique value to customers to justify a change in strategy. | Yes |
| Helion | 10.LifeScience | Helion's strategy was focused on manufacturing printers and computers. Being in the hardware space, LifeScience was not a ready fit with Helion's strategy and resources. | **Technological resources:** Technological expertise that is required to create the prototype for LifeScience project. **Customer resources:** They had one lead customer to test prototypes but it was not perceived as Helion's strengths. | **Frame bridging:**. Linking Helion's expertise in technology especially chip based technologies to a completely new industry. LifeScience was a consumer product that leveraged Helion's resources in technology as well as in consumer markets such as marketing channels. **Frame extension:** Helion's current customer resources could be extended and integrated with the new lead customer. | **Unique value:** Innovators could not show how Helion could provide unique value to customers as compared to other organizations in the life sciences space. They could also not justify longer times for returns on Lifescience products, which is typical of such projects as compared to their usual products. | Yes |

| Organization | Name Innovation | Steps 1 and 2 Assessing innovation's fit with the organization's strategy and resources | Step 3 Selecting commonly understood organizational resources that are perceived as strengths | Step 4 Reframing key resources to show resource fit (examples) | Step 5 Showing that their innovation creates unique value for customers with minimal additional resources | Market Validation |
|---|---|---|---|---|---|---|
| Infieon | 11.Compliance Solutions | Infieon's strategy was focused on process improvements. Being in the process improvements space, decision-makers did not perceive Compliance Solutions to be a ready fit with their organization's strategy and resources. | **Technological resources:** Expertise in process improvement technologies. <br><br> **Customer resources:** Channel partnerships with content providers. Forming and leveraging channel partnerships was not Infieon's strength. | **Frame bridging:** Linking Infieon's expertise in process improvements to launch Compliance Solutions. <br><br> **Frame amplification:** Highlighting Infieon's channel partnerships to reach customers for Compliance. | **Unique value:** Decision-makers did not see how Infieon was uniquely placed as compared to other content providers in the compliance space to provide unique value especially when their sales force could not sell the service as an "add-on" to process improvements. | No |
| IXI | 12.Database Languages | IXI's value-creation strategy was focused on creating databases for customers. Being in the database space, decision-makers did not perceive Database Languages to be a ready fit with their organization's strategy and resources. | **Technological resources:** IXI had the technological resources in two different languages and the innovation was proposing a program to interface the two languages. <br> **Customer resources:** IXI needed additional customer resources to find needs of customers who might use database languages. | **Frame bridging:** IXI's resources in the two existing database languages could be leveraged to create the new product. <br><br> *the innovator did not mention customer resources because he was focusing primarily on getting buy in for technological resources to implement languages which was an anathema to "purists" of the language. | **Unique value:** The technical teams of both languages were "purists" and did not see how IXI could create value by having the two languages communicate with each other. | No |

Table 3: Contrasting resourcing and framing steps in successful versus failed innovations

| | | Innovations that successfully gained adoption | | | | | Innovations that failed to gain adoption | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Organization** | **Innovation** | **Steps 1 and 2** Assessing innovation's fit with the organization's strategy and resources | **Step 3** Selecting commonly understood organizational resources that are perceived as strengths | **Step 4** Reframing key resources to show resource fit (examples) | **Step 5** Showing that their innovation creates unique value for customers with minimal additional resources | **External Validation** | **Innovation** | **Steps 1 and 2** Assessing innovation's fit with the organization's strategy and resources | **Step 3** Selecting commonly understood organizational resources that are perceived as strengths | **Step 4** Reframing key resources to show resource fit (examples) | **Step 5** Showing that their innovation creates unique value for customers with minimal additional resources | **External Validation** |
| Intelligex | 1.Platform Extension Services | √ | **TR** **CR** | **TR** √ **CR** √ | √ | Yes | 7.Connect | √ | **TR** CR | **TR** √ CR X | X | Yes |
| Yen | 2.Search Gorilla | √ | **TR** **CR** | **TR** √ **CR** √ | √ | No | 8.Bumblebee | √ | TR **CR** | TR √ CR X | X | No |
| Helion | 3.Hello | √ | **TR** **CR** | **TR** √ **CR** √ | √ | Yes | 9.e-Doc | √ | **TR** **CR** | **TR** √ **CR** X | X | Yes |
| Helion | 4.Gaming Solution | √ | **TR** **CR** | **TR** √ **CR** √ | √ | No | 10.Life Science | √ | **TR** **CR** | **TR** √ **CR** √ | X | Yes |
| Infeon | 5.Learning Solutions | √ | **TR** **CR** | **TR** √ **CR** √ | √ | No | 11.Compliance Solutions | √ | **TR** CR | **TR** √ CR X | X | No |
| IXI | 6.Tools Programs | √ | **TR** **CR** | **TR** √ **CR** √ | √ | No | 12.Database Languages | √ | **TR** CR n/a*** | **TR** √ CR-n/a | X | No |

*TR refers to technological resources, CR refers to customer resources.  **In Step 3 only resources that are commonly understood and perceived as strong by decision -makers are bolded. Resources are commonly understood but not perceived as strong resources are not bolded.*** The innovator did not talk about customer resources for this innovation.