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IT'S NOT ABOUT HAVING IDEAS – IT'S ABOUT MAKING IDEAS HAPPEN!

FOSTERING EXPLORATORY INNOVATION WITH THE INTRAPRENEUR ACCELERATOR

Research in Progress

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Abstract

Organizations usually strive for innovation to achieve economic growth. Thereby, incremental innovation of e.g., existing products is often the most attractive way because it is plannable to a certain extent and often reveals short-term success. However, many markets change due to new competitive structures caused by the rise of digital services, which facilitates market entries of new companies. For an incumbent firm trying to cope with these competitors, exploitation of existing ideas and technologies (i.e., incremental innovation) is not enough. Although these firms usually pay minor attention to it, they need to additionally explore how to establish disruptive innovation that complements or even changes their traditional business model before competitors do. In this contribution, we present a novel structure to foster exploratory innovation within incumbent organizations by unleashing the innovative potential of intrapreneurs as peripheral innovators: the Intrapreneur Accelerator. We consider this novel structure a service system for supporting intrapreneurs to develop and implement extraordinary ideas and thus fostering exploratory innovation for the organization. Using a design science approach, we will further present our methodology and our preliminary results, since we have already conducted two of four design iterations.

Keywords: intrapreneurship, service system, ambidexterity, design science research

1 Introduction

In recent years, many incumbent companies have seen themselves threatened by a new competitive environment consisting of radically innovating digital start-ups that attack traditional business models. One prominent example is the US ride sharing company Uber. Founded in 2009, Uber is expected to generate revenue of 10 billion US dollars in 2015 and thus is the world leading person-to-person taxi service broker (Business Insider, 2014). With its novel approach to provide mobility as a service, the company now competes with leading traditional car manufacturers specialized in producing and selling cars. Although both business models aim at providing the same customer value, i.e., mobility, Uber achieved to deliver it in a cheaper, more convenient, innovative and environment-friendly way which attracts many customer segments. Hence, traditional car manufacturers, and in general traditional companies, need to retain a competitive position which includes fundamentally questioning and possibly reinventing their own business model. However, large and historically established corporations tend to have rigid innovation processes due to complex hierarchical structures (Brown, 2014). In addition, traditional manufacturing firms like car companies usually strive for both perfection of product quality and reduction of process expenses, which in turn fosters incremental rather than disruptive innovation (He and Wong, 2004). Thus, breaking out of traditional cost and quality-oriented structures increasingly becomes a major problem for many incumbent firms across various industries

According to ambidexterity theory, a company's capability to innovate comprises the ability to both exploit existing and explore new assets for innovation (Tushman and O'Reilly, III, 1996). Whereas

exploitation entails maintaining and continuously developing the existing business using prevalent technologies, exploration means to discover new, innovative technologies and ideas (O'Reilly and Tushman, 2013; Tushman and O'Reilly, III, 1996; Gibson and Birkinshaw, 2004). Related to innovation capabilities, exploitation is most likely to produce incremental innovation, whereas exploration aims at generating radical, disruptive innovation (He and Wong, 2004). While especially large, non-digital organizations focus on exploiting existing technologies and capabilities due to short-term success, they often neglect exploration as it is considered risky, long-winded and expensive compared to exploitation. However, ambidexterity literature stresses that for successful innovation both approaches have to be established (O'Reilly and Tushman, 2013). This theory-based assertion is underpinned by the observation of new competitive structures in the field. Organizations often already expend a certain effort to strive for exploratory innovation with the support of externals, e.g., by designing and implementing open innovation processes (Chesbrough, 2003), operating corporate accelerators to cooperate with startups (Cohen, 2013; Hallen *et al.*, 2014) or performing mergers and acquisitions to benefit from other firms' innovative potential (Toppenberg, 2015). Usually, these 'top-down' approaches are partially sufficient but face several boundaries regarding innovation speed or technology integration which are essential for technology-based innovation (Toppenberg, 2015; Neyer *et al.*, 2009). However, since the essence of value creation and innovation remains a core process of organizations (Chesbrough, 2003), we argue that endogenously performing exploratory innovation should become a core capability of organizations and complement existing approaches. Conclusively, incumbent firms need to find a way to establish exploration of disruptive innovation that may comprehend, change or even substitute current business models in addition to existing structures for exploitation. Existing research, however, elaborates on the importance of structural ambidexterity without specifying how structures for exploratory innovation may be designed (Birkinshaw and Gibson, 2004).

In this research-in-progress paper, we aim at answering the following research question: *How can a structure for exploratory innovation be implemented within an existing company?* We therefore conceptualize a novel approach to pursue exploratory innovation and implement and evaluate it within an incumbent firm. Following a design science approach, we build a novel service system that relies on intrapreneurs as performers of exploratory innovation: the Intrapreneur Accelerator. Within this system, intrapreneurs can unleash their innovative potential by autonomously developing ideas apart of the organizations core business. The purpose of the service system is to enable intrapreneurs to develop products and services as well as respective business models that would otherwise be referred to as incongruous with strategy, brand, culture or existing structures of the incumbent organization. Hence, we suppose this approach will lead to exploratory innovation.

The paper is structured as follows. In section 2, we introduce the service system lens as well as the theoretical principles of intrapreneurship and organizational ambidexterity. Section 3 provides a brief overview on the design science research (DSR) methodology as well as the respective project setting. We give insights on our current design results as well as how we plan to proceed in section 4. Concluding in section 5, we close with our expected contribution and provide a future research outlook.

2 Theoretical Framework

2.1 Service systems

A service system is a network of people, technology as well as internal and external factors, that use common information or information structures (e.g., a common language, rules and principles, processes and metrics) to collaboratively create value (Spohrer *et al.*, 2007). It consists of a service consumer and a service provider system that interact to co-create a specific value (Leimeister, 2012). According to (Maglio *et al.*, 2010), a key focus for service research using a systems theory lens is interaction in and with service systems. Value is thereby created via contextualization and collaboration (Karmarkar, 2004). Hence, Glushko (2010) introduces seven contexts for service design, from which

our scenario mainly involves person-to-person and tech-enhanced person-to-person services. He also stresses that service systems ‘combine and integrate the value created in different design contexts’ (Glushko, 2010). More recent contributions elaborate on the importance of systematic design and development of service systems according to evidence-based design knowledge (Böhmman *et al.*, 2014). Following a service systems engineering (SSE) approach, we will describe the design of the system’s functional components and their interactions to perform value creation (i.e., idea and business model co-development) with intrapreneurs as company-internal innovators.

2.2 Intrapreneurship and Organizational Ambidexterity

Entrepreneurship as a research field seeks to explore interdisciplinary phenomena such as innovation and venture creation in relation to entrepreneurs and entrepreneurial organizations (Bruyat and Julien, 2001). Intrapreneurship as a subfield of entrepreneurship research has emerged in the past two decades and investigates entrepreneurship within existing organizations (Antonicic and Hisrich, 2003). Neyer *et al.* (2009) conducted a comparative case-study analysis in 15 medium-sized firms to explore how innovation practices and social interactions influence the integration of particular types of innovators. They found intrapreneurship is typically used to integrate what they define as peripheral inside innovators. These are employees across all business units within an organization not directly responsible for innovation activities by their daily work, but, however, knowledgeable experts that are interested in and have the potential to contribute to the innovation process by producing innovative ideas and suggesting, supporting or refining innovative concepts (Neyer *et al.*, 2009).

Ambidexterity theory (Gibson and Birkinshaw, 2004; March, 1991; Tushman and O’Reilly, III, 1996) promotes the need for organizations to develop both skills for maintaining and continuously developing the existing business (exploitation) and entrepreneurial skills to strive for reinvention of incumbent business models, services and technologies (exploration). Therein, two major approaches exist: *structural ambidexterity* refers to physically separated organizational units for exploration and exploitation (McDonough and Leifer, 1983; Tushman and O’Reilly, III, 1996), whereas in *contextual ambidexterity* every organizational unit (and even every individual) is capable to both explore and exploit (Gibson and Birkinshaw, 2004; Jansen *et al.*, 2008). This, however, does not mean both structural and contextual approaches are mutually exclusive. Building structural ambidexterity may rather lay the foundation for changes within organizational culture and, thus, for contextual ambidexterity (Birkinshaw and Gibson, 2004). IS research investigated ambidexterity on a conceptual level either in relation to software development (e.g., Napier *et al.*, 2011; Ramesh *et al.*, 2012; Temizkan and Kumar, 2015), IT outsourcing and transformation (e.g., Gregory *et al.*, 2015; Cao *et al.*, 2013) or organizational agility (e.g., Lee *et al.*, 2015). However, there is very few research done that builds up on the concept of ambidexterity by conducting a design science approach to iteratively build and evaluate respective innovation structures. Thus, we follow the approach of structural ambidexterity and aim at designing and evaluating a service system for intrapreneurial innovation to foster explorative innovation capabilities.

3 Method

3.1 Design Science Research

In order to achieve structural ambidexterity by establishing a structure for exploratory innovation, we use a design science approach. Compared to classical design and development approaches, DSR is well-acknowledged in IS and describes a systematic process of artifact development and evaluation that relies heavily on continuous problem (re-)definition and artifact validation within the problem context as well as knowledge acquisition and artifact validation against existing research (Hevner, 2007; Hevner *et al.*, 2004). Since our research topic is most likely to be informed by adjacent research fields such as innovation management and entrepreneurship, DSR is appropriate to answer our re-

search question. Following Hevner *et al.* (2004), our goal is to design a service system, which enables intrapreneurs to develop innovative ideas to profitable and scalable business models. The design is guided by three instrumental goals: (1) attract peripheral inside innovators, i.e., intrapreneurs, (2) support intrapreneurs to turn their ideas into profitable, scalable business models and (3) improve explorative innovation capabilities. Hence, our design artifact is a service system that we call the Intrapreneur Accelerator. We conduct four complementary design iterations, consecutively addressing requirements that emerge during the design process. In status quo, we already accomplished to conduct the first two iterations, whereas we are currently completing the evaluation of design iteration 2. In the following, we provide an overview of our results and elaborate on how we intend to proceed.

3.2 Project Setting

To apply our design science approach to an in-field scenario, we currently conduct a research project with a large German car manufacturer which started in December 2014. The company is affected by market entries of new digital competitors such as Uber and Tesla and thus needs to fundamentally question its current production-focused business model. The company performs incremental (exploitative) product innovation very well and strives for high quality, which, however, was considered to impede disruptive innovation. In order to establish a structure for exploratory innovation, especially for digital services, apart from existing organizational structures, an interdisciplinary project team consisting of researchers specialized in innovation management, intrapreneurship and service engineering as well as executives specialized in innovation management, digital services and organizational development was put together.

4 Design Science Project Iterations

4.1 Overview

To build our artifact, i.e., the Intrapreneur Accelerator as a service system to foster exploratory innovation as an essential part of structural ambidexterity, we conduct four design iterations, consecutively reacting on emerging requirements during the design process. We have already designed problem-solution patterns (iteration 1) and services within the system (iteration 2). However, next steps include completing the design evaluation of iteration 2, modularizing services in iteration 3 and implementing the service system, i.e., the Intrapreneur Accelerator, within the incumbent organization (iteration 4). Each design iteration consists of three interdependent cycles (Hevner, 2007): the *relevance cycle* entails the process of problem identification and elicitation of design requirements by interacting with the organization. After designing and evaluating the artifact, it is in turn field tested in the respective organization. The *rigor cycle* aims at identifying and utilizing past knowledge relevant to solve the specific problem and proof the innovativeness of the design artifact. However, the artifact should in turn aim at enhancing existing design science knowledge. In the *design cycle*, the actual design of an artifact is conducted with the goal to achieve a satisfactory design, meaning it fulfills design requirements and evaluation reveals positive results. It thus draws on input but also contributes to both the environment and the design science knowledge base.

4.2 Iteration 1 – Problem-solution patterns

Relevance Cycle: The focus of the first loop is to elicit specific problems and demands concerning innovation within the incumbent organization. We therefore conducted 12 semi-structured interviews on-site and via phone with employees that are either operationally or managerially involved in innovation activities – as either internal or peripheral inside innovators – to elicit and specify problems and demands for exploratory innovation in their company. Participants were asked whether and why they believe the company could not compete with digital competitors and what hinders disruptive innova-

tion. Interviewees ranged from many different domains such as digital business models, information management and financial and mobile services. Interviews were conducted from January to March 2015 and lasted from 60 to 90 minutes. We analyzed, condensed and clustered the statements into five problem areas. Furthermore, we conducted a workshop with all interviewees to consolidate our findings and agree on which problems should be addressed. Results reveal that the company does not provide a *trial-and-error culture*, because it is renowned for high quality standards. This leads to rigid innovation structures since only ‘perfect’ solutions are provided to customers. Making mistakes in turn may harm internal career chances. This also negatively affects employees’ *flexibility*, which is displayed in rigid budgeting and support processes and limited access to test devices for development. This problem is caused by cost-driven management and is followed an increasing amount of non-official innovation activities by individual intrapreneurs (also known as ‘bootlegging’). *Networking* within the organization was deemed as insufficient and is characterized by managerial thinking in business units instead of collaborative value creation. Innovation is usually injected top-down by high-level management, whereas bottom-up approaches have to go a path of trial and tribulation through the hierarchic organization. This also leads to neglected *customer integration* in innovation activities, meaning that innovation is usually technology-driven. Employees are not free to think and act like entrepreneurs because they (have to) concentrate on their daily business, which causes the company to still appear as a car manufacturer instead of as a provider of mobility services. Interviewees emphasized that customers are not even known because sales and distribution is transacted by local car dealerships and thus there is little direct customer interaction. Compared to startups, low innovation *speed* is another critical problem, since it is common practice to apply rigid product development structures to any kind of innovation project.

Rigor Cycle: In order to find existing solutions for our problem space, we conducted an informal literature search in the fields of innovation management, entrepreneurship, intrapreneurship and ambidexterity theory. Existing innovation and entrepreneurship scholarship stresses both corporate culture and management as a main impact factor for a company’s ability to foster disruptive innovation (Dess and Lumpkin, 2005; Tellis *et al.*, 2009). An organization’s innovation capabilities, thus, among others, refer to employees’ individual attitude towards innovation and willingness to change. However, ambidexterity literature describes individuals that are able to both explore and exploit as early alert to opportunities, cooperative and collaborative, extrovert and able to multitask (Birkinshaw and Gibson, 2004). Since companies often focus on exploitation due to short-term success (O’Reilly and Tushman, 2013), this obviously also affects (and in turn is affected by) employees’ innovation behavior. Since in our specific project setting exploitation capabilities overwhelm exploration efforts by far, we decided to build a structure to foster exploratory innovation by intrapreneurs as peripheral innovators.

Design Cycle: As shown in our first relevance cycle, problems are manifold and so the variety of possible solutions is. Combining insights from the relevance and the rigor cycle, our goal is to establish a structure in which intrapreneurs are able to develop exceptional ideas. We thus referred to a structural ambidexterity approach (McDonough and Leifer, 1983). Hence, we planned an entirely new system for the purpose of exploratory innovation apart from the company’s exploitative innovation activities. Since we aim at establishing a structure that is mostly independent from existing organizational boundaries, we have a specific demand for reusability in other organizational contexts. Thus, we use a pattern-logic for initially structuring our solution approach. A pattern refers to a recurring problem as well as the core of the solution to solve it (Alexander, 1979). Thus, for a group of similar problems, a pattern provides a generic solution. Based on our findings in relevance and rigor cycle 1, we developed a portfolio of ten coherent, as we call it, problem-solution patterns for establishing exploratory innovation by intrapreneurs (see table 1). From a design science perspective, these patterns help to integrate the problem and the solution space.

Problem-solution pattern: Promoting	
Goal	Ideas and Intrapreneurs need to be promoted by a high-level management representative
Description	Since the process of developing exceptional ideas may face several barriers such as missing strategic fit and long-winded decision processes, a high-level promoter should support the intrapreneur to overcome such barriers. A sponsor shall provide further input for idea development and enable networking among intrapreneurs.
Problem-solution pattern: Financing	
Goal	Sufficient financial backing needs to be provided to develop exploratory innovation.
Description	Intrapreneurs should receive sufficient financial support to develop exceptional ideas. Financial support should cover intrapreneurs' wages, idea development, business model development and prototyping. In addition, establishing internal crowdfunding for intrapreneur projects should be considered.
Problem-solution pattern: Workspace	
Goal	Establish both a physical and virtual working environment for idea development
Description	Both a physical and a virtual working environment has to be established to cover intrapreneurs' requirements for idea development. This includes office space, tools, test devices, hard- and software. Coaching in prototype development, (lean) business model creation and start-up economics needs to be conducted.
Problem-solution pattern: Community	
Goal	Foster internal and external networking of intrapreneurs
Description	Internal and external networking with domain and methodological experts is necessary for profound idea development by intrapreneurs. In addition, contacts relevant for later operational business should be approached.
Problem-solution pattern: Rewarding	
Goal	Provide both monetary and non-monetary incentives for intrapreneurs
Description	Keep up intrapreneurs' motivation using rewards. Monetary incentives include shares, bonuses and one-time-rewards. Non-monetary incentives include acknowledgement within and outside of the organization and opportunities for self-development.
Problem-solution pattern: Transfer	
Goal	Support transfer of business models into an operating structure
Description	After developing the idea to a 'ready-to-invest' state, the business model has to be transferred to either a new externally founded startup or an internal product, service or business unit. Thus, support in business development, legal and tax affairs has to be provided. In case of founding an external venture, ownership and shareholder structure must be defined

Table 1. Problem-solution patterns (excerpt)

To establish a continuous build-and-evaluate loop, we conducted three workshops with 11 cross-organizational participants related to innovation activities. Therein, we demonstrated our current design state, collected both feedback and solution alternatives until our design was satisfactory for the workshop participants and valued to fulfill its purpose.

4.3 Iteration 2 – Intrapreneur Services

Relevance Cycle: After completing design iteration 1, we conducted three focus group workshops with six innovators per workshop to proof our concept and detect possible shortcomings. Although all participants valued our basic approach necessary to embed explorative innovation activities in the organization, the major critique on the result of our first design iteration was the absence of specific service offerings that enable intrapreneurs to innovate. Our results display the need of and how to struc-

ture a separated organizational unit for explorative innovation but, however, it remained unclear, which actual services should be offered to these peripheral inside innovators. Thus, we decided to apply a service system perspective wherein value in forms of idea development to profitable and scalable business models is co-created by intrapreneurs and other actors depending on the respective service (e.g., technical experts). Further findings from the focus group workshops revealed that safety to return to the old job in case of failure, cooperative development of a business model with the help of experts, pre-final valuation of the implemented idea and teambuilding support are desired.

Rigor Cycle: Since we now obtain a service system perspective, we reflected upcoming problems against scholarly literature on service systems and intrapreneurship. Our results revealed that intrapreneurship has not yet been considered applying a service lens, meaning that no literature exists on establishing a service logic to foster intrapreneurship. Reflecting the design of iteration 1, we ‘only’ built a back-stage logic showing necessary requirements for such a novel structure, but neglected the actual role of the individual intrapreneur. Applying a service system lens, establishing a configuration to perform value co-creation means specifying services for intrapreneurs, i.e., front-stage logic. We thus elicited demands of intrapreneurs to conduct idea implementation activities. Gemünden *et al.* (2007) highlighted the role of a power promoter for radical innovation which ‘has the necessary hierarchical power to drive the project, to provide needed resources, and to help to overcome any obstacles that might arise during the course of the project.’ Further, intrapreneurs usually develop in teams, which should be considered in our approach (Gapp and Fisher, 2007). Budget flexibility and adequate rewards were also considered to positively influence intrapreneurial innovation (Rule and Irwin, 1988).

Design Cycle: In order to unleash the service system’s potential, in iteration 2 we build on our preliminary artifact enhancing it by a front-stage logic in which we design specific services for intrapreneurs. Based on the latest relevance and rigor cycles, we built 10 specific services: (1) identification of an adequate promotor for the respective idea, (2) support in collecting and developing an interdisciplinary team, (3) allocation of sufficient innovation budget, (4) negotiation with intrapreneurs’ managers to warrant slack time, (5) monetary and qualitative valuation of idea and business model, (6) co-development of business model with experts, (7) provision of workspace, tools and methodical coaching, (8) warranty of job safety, (9) promotion of internal and external networking and (10) support of transfer from business model to operational business activities. The improved concept is currently being evaluated. However, we revealed first results from a workshop with a team of intrapreneurs that pursued to establish a product innovation but failed due to organizational restrictions. Although the team valued our approach sufficient for their specific project, we recognized that team building, coaching and joint business model development seem to be the most important services to them.

4.4 Iteration 3 and 4 – Service Modularization and Service system implementation

Table 2 summarizes the planned design activities. First, we aim to complete the evaluation of iteration 2 conducting more potential projects. Iteration 3 focuses on modularizing the holistic services we previously built. We plan to implement and evaluate the service system in design science iteration 4.

Design Evaluation of Iteration 2

To complete the evaluation of design iteration 2, more workshops will be conducted with intrapreneurs. We thereby focus on diversity regarding the innovation object, meaning that we will elicit requirements of various specific project scopes covering a broad range of innovative digital services. This will most probably affect our current design, which, however, is necessary to perform a continuous build-evaluate cycle resulting in an artifact that matches with intrapreneurs’ individual demands.

<p>Iteration 3 – Service Modularization</p> <p>Prior meetings already indicated, that the services designed in iteration 2 (i.e., ‘front-stage’) does not perfectly correlate with the modularized view obtained while building problem-solution patterns in iteration 1 (i.e., ‘back-stage’). To regard both intrapreneurs’ and companies’ individual requirements, service modularization (Leseure <i>et al.</i>, 2010; Peters, 2014) is a necessary step towards integration. Results are expected to be service modules that can be composed to establish a service system for exploratory innovation depending on individual requirements. Evaluation will be conducted by focus group workshops with the Intrapreneur Accelerator future managers as well as project teams entering the system to examine both the cohesion of module elements and loose coupling as well as expected value creation for various service module constellations.</p>
<p>Iteration 4 – Service system implementation</p> <p>The fourth design iteration focuses on implementing the intrapreneur accelerator. We will thus operationalize conceptual structures and implement them loosely tied to the existing organization by combining service modules designed in the prior phase. Herein, we are able to evaluate based on our initial goals, that the Intrapreneur Accelerator should (1) attract peripheral inside innovators, i.e., intrapreneurs, (2) support intrapreneurs to turn their ideas into profitable, scalable business models and (3) improve explorative innovation capabilities. However, this iteration will especially focus on observing the impact on organizational ambidexterity and, more specifically, the organization’s capability to establish exploratory innovation. Evaluation will be conducted applying the instantiated service system to intrapreneurs and observing both the innovators’ abilities to turn ideas into innovation and the organization’s ability to perform exploration in the sense of structural ambidexterity.</p>

Table 2. *Planned design science project actions*

5 Expected Contribution and Future Work

With our work, we expect to provide three contributions: First, we develop an instantiated artifact, the Intrapreneur Accelerator, which is a service system comprising of modularized services. In so doing, we contribute to the ambidexterity literature as, to the best of our knowledge, this study is the first attempt to apply a service system lens to the field of ambidexterity. Given the known problem of missing explorative innovation capabilities and especially design guidance for structural ambidexterity, we develop a new solution which thus can be considered an improvement (Gregor and Hevner 2013). Since they determine artifact design, both the patterns and the service modules can be considered as design principles. Further, our instantiation satisfies many criteria for nascent theory of design and action (Gregor and Hevner, 2013). Thus, we contribute to both descriptive and prescriptive knowledge in ambidexterity design. In order to strive for a design theory, future research should take up on our approach by establishing more instantiations of the service system. Furthermore, we followed calls in the field of service systems engineering for evidence-based design knowledge rooted in the design, implementation and evaluation of real-world service systems (Böhmman *et al.*, 2014).

Second, we elicited specific requirements for intrapreneurs to strive for exploratory innovation. We thus consolidated and enhanced the knowledge base on intrapreneurship by patterns and service modules that help foster intrapreneurship. Since research in entrepreneurship and intrapreneurship is located either on an individual, project or organizational level (Bryat and Julien, 2001), we contribute to this stream of research by introducing a service system lens which may lead to new perspectives.

Third, as an expected practical contribution, we introduce a modular service structure to foster exploratory innovation by intrapreneurs as peripheral inside innovators. It can be configured and implemented as separate organizational unit or structural program to tackle the peculiarities of digital innovation. Our approach may help incumbent organizations that have focused on incremental, exploitative innovation and now see their business model disrupted by digital competitors to configure individual services in order to establish a dedicated structure for exploratory innovation. This structure should complement existing ‘top-down’ or ‘exogenous’ innovation approaches like technology-focused strategic mergers and acquisitions in order to avoid e.g., post-merger technology integration problems by endogenously developing digital innovation in a ‘bottom-up’ approach.

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