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Integrating Structural IT Ambidexterity: A Multiple Case Study

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INTEGRATING STRUCTURAL IT AMBIDEXTERITY: A MULTIPLE CASE STUDY

Research in Progress

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Abstract

To enhance their capability for innovation, many established organizations are setting up IT units, referred to as agile IT, dedicated to exploring new technologies and the development of innovative solutions (IT exploration). These units may be structurally separated from the established IT function, referred to as traditional IT, which retains responsibility for the exploitation of the existing IT assets (IT exploitation). Pursuing IT exploration and IT exploitation with such separation is commonly referred to as structural IT ambidexterity. The two organizational units, agile IT and traditional IT, are differentiated in their objectives, management approaches, cultures and ways of working, but are however interdependent. With the features of differentiation and interdependence in mind, we draw on organizational literature to formulate five propositions relating to the integration of differentiated agile IT and traditional IT units whose ultimate aim is the achievement of the organization's goals. We aim to validate these propositions with a multiple case study.

Keywords: IT ambidexterity, IT exploration, IT exploitation, integration mechanisms, organizational structure

1 Introduction

Digital transformation is placing new demands on the information technology (IT) functions of established organizations. In addition to the long-standing expectation of maintaining and exploiting the existing system landscape, IT functions are now faced with the expectation of simultaneously exploring new technologies and driving the development of innovative solutions (Urbach, Drews and Ross, 2017). Many organizations have thus chosen to dedicate structurally separate organizational units to each of these activities (Urbach *et al.*, 2018), an organizational set-up referred to as structural IT ambidexterity. Firstly, the traditional IT unit, dedicated to IT exploitation, ensures operational stability and efficiency using the existing IT assets (Jöhnk *et al.*, 2017; Leonhardt *et al.*, 2017). Secondly, the agile IT unit, dedicated to IT exploration, searches, selects and implements new technologies and methodologies that are most likely to add value to the organization (Leonhardt *et al.*, 2017). However, due to interdependence between traditional and agile IT, implementing such a clear separation of responsibilities may not be advantageous on its own, without effective integration of the two units (Leonhardt *et al.*, 2017).

Although the technologies managed by the two units may appear distinct and are often treated as almost fully separate in the literature, an interdependence exists between them (Bygstad, 2017; Sebastian *et al.*, 2017). For instance, a customer-facing digital application, developed by agile IT, may rely on data held in an operational system owned by traditional IT (Bygstad, 2017). Integration between agile and traditional IT is therefore required. We view integration as the "process of achieving unity of effort among the various subsystems in the accomplishment of the organization's task" (Lawrence and Lorsch, 1967, p. 4), with one of its key features being the interdependence between subsystems (Castañer and Ketokivi,

2018). Integration in this case therefore refers to organizational integration of differentiated organizational units or teams, rather than technical integration.

Whilst IT ambidexterity is still a relatively new topic in information systems (IS) research, IS scholars have so far uncovered how companies are implementing IT ambidexterity (Haffke, Kalgovas and Benlian, 2017; Horlach *et al.*, 2017; Jöhnk *et al.*, 2017), associated governance mechanisms (Jöhnk *et al.*, 2019) and outcomes (Lee *et al.*, 2015; Leonhardt *et al.*, 2017; Sebastian *et al.*, 2017). However, despite calls for research into the interaction points of the two activities (Bygstad, 2017; Gregory *et al.*, 2018) the integration of ambidextrous IT has yet received little attention in the IS research community.

We therefore pose the following research question: How is integration achieved in structural IT ambidexterity? By posing this question, we aim to shed light on how interdependent agile and traditional IT units may be integrated, and as a result enabled to work towards higher organizational goals. More broadly, we wish to increase understanding on the impact digital transformation is having on the organization of the IT function and its strategic implications (Baptista *et al.*, 2017; Gerster, 2017; Urbach, Drews and Ross, 2017; Urbach *et al.*, 2018).

For a theoretical grounding, we provide an overview of organizational theory and IS literature on ambidexterity and its different forms. We further describe the interdependence present in a structural IT ambidexterity set-up and possible integration mechanisms for differentiated but interdependent organizational units. We then formulate five propositions on the integration mechanisms we expect to observe in a structural IT ambidexterity set-up and propose a qualitative research methodology to empirically investigate these propositions. We conclude with a brief discussion on expected contributions to IS scholars and practitioners.

2 Background

2.1 Organizational theory literature – ambidexterity

The organizational learning framework by March (1991) posits that in order for a firm to remain successful and survive, it needs to be able to carry out two types of activities: exploitation of its existing assets and capabilities, and exploration of new operational solutions and technologies (O'Reilly III and Tushman, 2013). Exploitation is characterized by "refinement, choice, production, efficiency, selection, implementation, execution", whereas exploration is characterized by "search, variation, risk taking, experimentation, play, flexibility, discovery, innovation" (March, 1991, p. 71). Given the relative security of returns of exploitation, firms are often biased to favor it at the cost of exploration, which may prove risky or even lead to failure. Instead, firms should strive to dedicate sufficient resources to both activities, with ambidexterity as one of the potential mechanisms to do so (Gupta, Smith and Shalley, 2006).

Organizational theory literature recognizes three different modes of ambidexterity: temporal, contextual and structural (e.g. Lavie, Stettner and Tushman, 2010; Stadler, Rajwani and Karaba, 2014). Temporal ambidexterity refers to the separation of exploration and exploitation activities over time, so that cycles of the two activities take place sequentially at organizational level (Lavie, Stettner and Tushman, 2010). In turn, contextual ambidexterity refers to a scenario where the two activities are pursued by the same business unit, but with staff members or teams adjusting their way of working according to the task or project they are currently working on (Napier, Mathiassen and Robey, 2011; Stadler, Rajwani and Karaba, 2014). Finally, structural ambidexterity refers to an organizational set-up where the activities of exploration and exploitation are pursued by separate organizational units or teams (Lavie, Stettner and Tushman, 2010). Structural ambidexterity therefore denotes the spatial separation of the two activities at the organizational level, whereas contextual ambidexterity denotes behavioral separation at the individual or team level (Stadler, Rajwani and Karaba, 2014).

Despite integration being inherently more complex in structural ambidexterity, it is often the preferred solution over temporal or contextual ambidexterity. In temporal ambidexterity, transitions from one activity to the other are not trivial to manage and may be costly to implement (Lavie, Stettner and Tushman, 2010). They may require an overhaul of several aspects within an organization, from changing

individual mindsets to team restructures. Structural ambidexterity does away with these transitions by establishing differentiated organizational units that remain dedicated to exploration or exploitation for long periods of time. In turn, organizational scholars have raised concerns regarding the feasibility of contextual ambidexterity due to the bounded rationality of individuals and the vastly distinct approaches required for the two activities (Stadler, Rajwani and Karaba, 2014). In order for individuals to be able to switch between the two activities, they would need to be familiar with the ways of working for each, and their incentives and performance evaluation measures would need to be aligned with whichever activity they are working on at any one time (O'Reilly III and Tushman, 2013). Structural ambidexterity addresses this by dedicating individuals to only one activity, allowing them to continuously work in the same way and to be incentivized and evaluated accordingly.

On the whole, structural ambidexterity is seen to alleviate and manage tensions that may be arise due to the differing characteristics and objectives of the two activities of exploration and exploitation (March, 1991; Lavie, Stettner and Tushman, 2010). In structural ambidexterity, the management approaches, tasks, culture, and incentive structures can be differentiated between the two organizational units and designed appropriately for each (Benner and Tushman, 2003; Stadler, Rajwani and Karaba, 2014). More concretely, splitting exploration activities into a separate structural unit enables the new unit to put in place more flexible processes and ways of working specific to exploration, as the ones that already exist in the organization may be more appropriate for exploitation (Burgelman, 1985; Turner, Swart and Maylor, 2013). However, spatial separation and high differentiation of organizational units require integration to ensure that the units work towards overarching organizational objectives, rather than solely towards their own local objectives (Lawrence and Lorsch, 1967).

2.2 IS literature – IT ambidexterity

Applying March's (1991) framework to an IT context, IT exploitation can be understood as the IT function's ability to maintain the existing system landscape effectively and efficiently (Leonhardt *et al.*, 2017). In turn, IT exploration can be understood as the IT function's ability to explore new technologies, methodologies and skills, consequently driving the development and implementation of innovative IT solutions (Leonhardt *et al.*, 2017). The two differ in their project management styles, cultures and ways of working. IT exploitation is characterized by sequential development cycles, standardized ways of working and risk aversion (Haffke, Kalgovas and Benlian, 2017). In contrast, IT exploration is characterized by its tendency to use short development cycles, experimentation and a culture that encourages creativity and is more accepting of failure (Haffke, Kalgovas and Benlian, 2017). Bygstad (2017) further expands on these differences by highlighting that IT exploration is often characterized by cheap and easy to use technologies which also enable non-IT staff members of an organization to experiment with and develop new solutions. This is in contrast with IT exploitation which involves complex technologies requiring specialist skills and a systematic software engineering approach.

Horlach *et al.* (2017) and Haffke, Kalgovas and Benlian (2017) have provided IS scholars insight into the different ways in which organizations are implementing IT ambidexterity. For instance, Haffke, Kalgovas and Benlian (2017) distinguish between four IT ambidexterity archetypes. These range from contextual IT ambidexterity, where an IT team switches its ways of working depending on the project at hand (archetype A) to structural IT ambidexterity, where agile and traditional IT have been separated into distinct subdivisions or divisions (archetypes B and C). In the final archetype (D), traditional and agile IT have been reintegrated, allowing for both effective IT exploration and digital transformation to take place, with IT exploitation handled in the background. Jöhnk *et al.* (2017) and Fuchs *et al.* (2019) delve deeper into the distinct characteristics of separated traditional and agile IT units. While these studies highlight the differentiation of agile and traditional IT, notably in terms of their methodologies (sequential, waterfall vs. iterative, agile), technologies (operational, legacy vs. new, digital) and fundamental objectives (reliability and stability vs. innovation and learning by trial-and-error), they provide few practical details on the strategic integration of the two. We therefore see an opportunity to further investigate how agile and traditional IT units can be integrated to work towards common organizational goals, rather than only those of their unit.

Structural IT ambidexterity has recently been the subject of strong criticism from the IS practitioner community (e.g. Poindexter, Padmanabhan and Berez, 2015; Ketterer *et al.*, 2016; McCarthy and Leaver, 2016), with the view that organizations should go fully agile instead. However, for established organizations, realizing such a transformation will require significant effort and investment and may not even be desirable in all situations (Pettey, 2016). Consequently, it is likely that the dichotomy between IT exploration and exploitation will exist for years to come. In line with this, Sebastian *et al.* (2017) investigate digital transformation in large, old organizations where "the operational backbone supports efficiency and operational excellence, while the digital services platform supports business agility and rapid innovation" (p. 201). They highlight how it is the effective, well-coordinated use of the two platforms which enables business success in the digital world, rather than either type of technology on their own. Similar observations about the distinction between existing operational technologies platforms and digital technologies in established organizations have also been made for instance by Gregory *et al.* (2018) and Uludağ, Reiter and Matthes (2019). These studies however provide little detail on how the integration of the organizational units dedicated to each type of technology and associated activity is achieved to pursue higher level organizational objectives.

Until now, IS scholars have studied structural IT ambidexterity and the dynamics between organizational units dedicated to IT exploration and IT exploitation in distinct ways. A case study by Jöhnk *et al.* (2019) focuses on the governance of IT ambidexterity and provides initial insight into the structural, procedural and relational governance mechanisms used to manage structural IT ambidexterity implementations and operations. In turn, the case study by Holotiuk and Beimborn (2019) investigates the role of digital innovation labs in a structural IT ambidexterity context. In particular, the study demonstrates how individuals who move between a digital innovation unit and the organization may integrate exploration and exploitation activities. More recently, Jöhnk *et al.* (2020) find that concurrent contextual and structural initiatives may facilitate integration in an IT ambidexterity context.

2.3 Research gap

While these insights are highly valuable, research into integration of structural IT ambidexterity is still nascent and a holistic view is missing. Additionally, given the recent calls to study integration of IT ambidexterity (Bygstad, 2017; Gregory *et al.*, 2018), we propose that structural IT ambidexterity may be regarded as an instance of differentiated but interdependent organizational units. This inspired us to look into organizational theory literature where the integration of differentiated units within organizations has been the topic of extensive research (Castañer and Ketokivi, 2018). In particular, we were interested in exploring potential conceptual foundations for the integration of differentiated organizational units, and how they can be brought together to work towards overall organizational objectives rather than only those of their unit. To this end, we review next an integration framework put forward by Castañer and Ketokivi (2018) which we will use as a foundational framework in our empirical study.

3 Interdependence and integration mechanisms

Drawing on Thompson's (1967) typology of interdependence in an organizational task environment, Castañer and Ketokivi (2018) focus on three types of interdependence: pooled, sequential and reciprocal. Pooled interdependence refers to a situation where each unit works independently, generating their distinct type of output, autonomously contributing to the whole. With sequential interdependence, the outputs of units are generated in a sequential manner, with the output of one unit being the input of another. In turn, with reciprocal interdependence the units "depend reciprocally on one another's outputs as inputs" (Castañer and Ketokivi, 2018, p. 64). In contrast to pooled interdependence, with reciprocal interdependence the units are aware of this dependence. We regard a structural IT ambidexterity set-up reciprocal interdependence in that the two units depend on each other's outputs to ultimately provide value-adding IT solutions for the organization. As an example, one can envisage the development of a new customer-facing application. Agile IT will depend on the customer master data which is held in the operational systems owned by traditional IT. In turn, the technologies the traditional IT team own are unlikely to be suitable for rapid development of easy to use, mobile device friendly applications.

Ultimately, any customer data gathered in the new application may need to be fed back into other systems within the system landscape for analytics. Integration mechanisms between the units should be chosen bearing in mind the reciprocal nature of interdependence between them.

Drawing on distinct theoretical perspectives, Castañer and Ketokivi (2018) examine seven integration mechanisms for managing interdependencies between organizational units: authority, cross-unit structure, multi-skilling, communication, socialization, formalization and collective incentives (summarized in Table 1). *Authority* refers to the formal power embedded in organizational positions. It can be used to manage reciprocal interdependence by associating formal responsibility of integration with a particular position or role. *Communication* facilitates integration by exchanging information on the work and objectives of the differentiated units of the organization. It thus allows members of the organization to grasp how their work fits into the wider organizational context. *Cross-unit structures* are formal, lateral structures which enable collaboration by bringing together members from distinct vertical structures and providing them with a forum for idea exchange, negotiation and decision-making. In an IT ambidexterity context, such structures typically take the form of dedicated governance forums, such as steering or architectural committees (Jöhnk *et al.*, 2019). *Socialization* can be understood as the ways in which members of the organization come to identify with their organization and adopt the organization's culture. Having a common set of values and norms within an organization may facilitate integration by getting the differentiated subunits to focus on the organizational objectives over their own subunit objectives. *Formalization* refers to the establishment of standard operating procedures that are to be followed in response to a certain stimulus. In the case of structural IT ambidexterity, such standard operating procedures would provide guidance for how agile and traditional IT collaborate together in given scenarios. *Multi-skilling* distinguishes between generalists and specialists and refers to the formation of a generalist role filled by an individual with the skills and knowledge that allows them to liaise with specialists within differentiated organizational units. Such a generalist might be externally recruited with the relevant skills or internally trained into the role through cross-training or job rotations. Whereas cross-unit structures refer to formal groups, multi-skilling refers to formal individual roles (Brown, 1999). *Collective incentives* aim to align potentially disparate motivations by assigning collective rewards to the achievement of objectives that go across organizational units.

Integration mechanism	Description
Authority	Association of integration tasks with a particular position or role
Communication	Exchange of information between differentiated units
Cross-unit structures	Establishment of lateral structures and provision of forums
Socialization	Familiarization of individuals to organizational culture
Formalization	Establishment of standard operating procedures
Multi-skilling	Establishment of generalists to liaise with specialists
Collective incentives	Assignment of incentives to collective goals

Table 1 Integration mechanisms for differentiated units (adapted from Castañer and Ketokivi, 2018)

4 Propositions

Having examined ambidexterity literature and integration mechanisms for differentiated organizational units, we now formulate five propositions on the integration mechanisms we expect to observe in a structural IT ambidexterity set-up, with IT exploration and exploitation performed in agile IT and traditional IT units respectively. Four of the propositions relate to the integration mechanisms used, whereas the final proposition takes a broader, temporal view of integration.

We expect authority to be a useful integration mechanism at a strategic level, but less useful at an operational level. Organizational theory and IS literature highlight the role of the senior management team in relation to structural ambidexterity (Vinekar, Slinkman and Nerur, 2006; Lavie, Stettner and Tushman, 2010; Stadler, Rajwani and Karaba, 2014). The senior management team shares common aspirations in terms of the organization's overall objectives and thus is better placed to make decisions

on topics such as resource allocations between the two activities (Benner and Tushman, 2003). More recently, Haffke, Kalgovas and Benlian (2016) suggest that the Chief Digital Officer (CDO) role has emerged to alleviate contextual ambidexterity demands that would be placed on Chief Information Officers (CIO) were they to manage both agile and traditional IT. A clear split of agile and traditional IT is achieved by making the former part of the CDOs remit, whereas the CIO continues to take responsibility for the latter. Integration is then achieved through the interaction between the CDO and the CIO.

Whether integration at the senior management level is sufficient to coordinate daily tasks at the operational level has however been questioned (Lavie, Stettner and Tushman, 2010; Stadler, Rajwani and Karaba, 2014). Stadler, Rajwani and Karaba (2014) suggest that with reciprocal interdependence in particular, managers would have to engage in frequent knowledge exchange, discussions and joint decision-making which might prove challenging. Taking this idea further into an IS context, where knowledge exchange between managers would involve a combination of tacit knowledge regarding the functionalities, underlying logic and content of legacy systems on the one hand and explicit knowledge regarding new technologies on the other, it seems unlikely that top management would be able to act as an enabler for integration. Additionally, it is common for unforeseen problems to come up during the development of new solutions whose solving requires proactive communication. Put together, due to the intricate type of knowledge involved in integrating technology applications and potential number of unexpected issues, we expect communication to act as the fundamental integration mechanism at the operational level. In turn, authority will be more useful at the senior management level in the form of making budget or resource allocation decisions and ensuring that the two IT units operate in conjunction working towards common organizational goals. We thus formulate our first proposition as follows:

P1: Authority is used to provide strategic direction and decision-making to the agile and traditional IT units. Communication is however the main integrative mechanism used between the units on a daily basis.

We expect formal cross-unit structures to act as one of the key formal integration mechanisms in structural IT ambidexterity. Such cross-unit structures could include for instance architectural forums or steering groups who meet regularly for joint decision-making on interdependent projects. These forums would provide a platform for more formalized communication and decision-making, and they would facilitate the resolution of any potential conflicts and adherence to organizational strategic objectives (Burgelman, 1985; Jöhnk *et al.*, 2019). By providing a mechanism for vetting ideas (Ram, 2017), they would also reduce the risk of duplicate applications being developed in different parts of the organization. Finally, they would raise awareness in both units on the type of technologies and applications that are being considered or implemented by the other.

Closely related to cross-unit structures, we expect to observe multi-skilling and using generalist individuals for liaison tasks between agile and traditional IT. These individuals may perform for instance roles related to project coordination or project management (Horlach *et al.*, 2017). We do not expect these individuals to be full-time members of an agile IT team working on a specific innovation, but rather to have oversight into a team's activities, which enables them to ensure appropriate activities are pursued for organizational goals. These individuals may also play a key role in selling and reintegrating successful innovations back into the rest of the organization for exploitation (Galbraith, 1982).

Socialization can be seen be a useful integration mechanism to address the different natures of IT exploration and exploitation. As discussed earlier, whereas IT exploration relies on experimentation and is oriented towards innovation, IT exploitation relies on standardization and is focused on quality and security (Bygstad and Iden, 2017). Socialization would raise awareness of the other unit's work and highlight the role each unit's outputs play in relation to achieving higher level organizational goals. Furthermore, it would help avoid the cultures drifting too far apart from each other (Ram, 2017). Socialization might take place in the form of interdepartmental events and providing other informal networking opportunities to build interpersonal networks within the organization (Brown, 1999). Our second proposition is therefore:

P2: Cross-unit structures, multi-skilling and socialization complement communication as the main integration mechanisms.

We expect formalization to be used to a lesser extent in a structural IT ambidexterity set-up. The reasons for this are threefold. First, formal and mechanistic processes are traditionally discouraged for innovative activities to allow for creativity and free testing of ideas (Galbraith, 1974; Burgelman, 1985). Second, by definition, exploration activities depart from existing knowledge and ways of doing things (March, 1991; Levinthal and March, 1993), with exact activity patterns difficult to predict, making the implementation of standard operating procedures unlikely to be successful. Third, exploration requires a certain degree of autonomy from the existing organization to allow for creativity and free testing of ideas, making tight integration via standardized processes unlikely (Krüp, Kranz and Kolbe, 2014; Jöhnk *et al.*, 2019). We therefore expect to see relatively less formalization between agile and traditional IT units, with our third proposition as:

P3: Relative to other integration mechanisms, formalization is used to a lesser extent.

We do not expect to observe collective incentives across agile and traditional IT units. The literature is unanimous in establishing differentiated incentive structures for the units dedicated to exploration and exploitation. This is to reflect the differences in their characteristics and expected returns (Benner and Tushman, 2003; Boehm and Turner, 2005; Haffke, Kalgovas and Benlian, 2017). More specifically, the incentive structures for exploitation should encourage risk minimization and incremental improvements, whose returns are more certain and closer in time, whereas the incentive structures for exploration should encourage some level of risk and entrepreneurial behavior, whose returns are less certain and further away in time (March, 1991; Levinthal and March, 1993; Krüp, Kranz and Kolbe, 2014). Our fourth proposition consequently reads:

P4: Collective incentives are not used across agile IT and traditional IT units.

Taking a temporal perspective on integration, we expect more integration effort between the agile and traditional IT teams as the development of a new solution progresses. We draw inspiration for this proposition from product development literature where Adler (1995) puts forward a temporal framework for integration between differentiated departments. He suggests that more integration effort is required over the course of the development process, as a new product advances from a pre-project phase into its design and manufacturing phases. This integration occurs between the design and manufacturing departments and aims to "ensure an acceptable fit between product design and manufacturing process parameters" (Adler, 1995, p. 147). Also taking a product-oriented view, Kohli and Melville (2019) propose a process for digital innovation, as depicted in Figure 1.

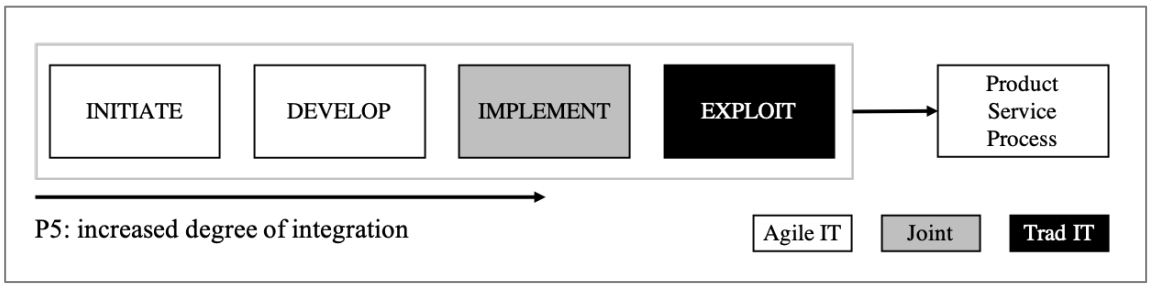

Figure 1 – P5 increased degree of integration (adapted from Kohli and Melville, 2019)

The process includes four activity phases: initiate, develop, implement and exploit, with an innovative product, service or process as output. We expect the scope of an agile IT team to include the 'initiate' and 'develop' phases, 'implement' to be a joint effort between agile IT and traditional IT and the latter taking responsibility for 'exploit'. In line with the framework put forward by Adler (1995), we expect integration efforts between agile and traditional IT to be relatively low in the 'initiate' and 'develop' phases as a new solution is still under development, with its feasibility still being evaluated and functionalities refined. As the solution however matures and its value to the organization becomes clearer, more integration efforts are likely to be needed in preparation for its implementation into the existing system landscape. This is required to ensure the solution's technical fit into the existing technology landscape and its adherence to the relevant technology policies (e.g. security and data protection standards, back-up and disaster recovery policies) and to establish any support processes. This, in turn, will

enable the solution to be rolled out to a wider set of users within the organization and to be exploited more effectively in the future. Our final proposition thus reads:

P5: The degree of integration between the agile and traditional IT units increases as the development of a new solution advances and gets closer to being to implemented into the existing system landscape for exploitation.

5 Method

We propose to carry out a multiple case study to validate our integration propositions. As noted by Bhattacherjee (2012): "this method is well-suited for studying complex organisational processes that involve multiple participants and interacting sequences of events" (p. 94). As case sites, we propose to use large, established organizations with a structurally separated agile IT unit dedicated to IT exploration activities, and a traditional IT unit with well-established processes dedicated to IT exploitation (as for instance archetypes B and C in Haffke, Kalgovas and Benlian (2017)). Furthermore, we aim to choose our case sites so that they include distinct characteristics of structural IT ambidexterity in order for us to observe potential differences in the integration mechanisms used (for instance as per the characteristics by Jöhnk *et al.* (2017)). As such, the case sites will enable us to examine the differentiation of objectives and ways of working between agile IT and traditional IT and more importantly examine the integration mechanisms that have been deployed to manage this differentiation. Our unit of analysis will be organizational units or groups as they are organized by their activities of IT exploration and exploitation. To capture the rich descriptions of the structural IT ambidexterity context, we will use qualitative data collection and analysis methods with semi-structured interviews as our primary means of data gathering, complemented by document review for triangulation (Yin, 2014). For a holistic view, we will interview members from agile and traditional IT units, both on managerial and operational levels (Eisenhardt and Graebner, 2007). For data analysis, we will perform deductive coding with the seven integration mechanisms put forward by Castañer and Ketokivi (2018) as our overarching, initial code set. As research in this area is however still nascent, and to put together a full and rich picture of integration in a structural IT ambidexterity context, we also expect to do open coding. In other words, we will remain flexible and open to adding to our initial code set if it no longer seems comprehensive enough as the data coding and analysis process advances (Hsieh and Shannon, 2015).

6 Discussion

We expect our findings to be of two broad types. First, our focus on the integration mechanisms between IT exploration and IT exploitation activities will allow us to understand how established organizations enable agile and traditional IT to work towards higher organizational goals. This will allow us to start formulating practical advice for practitioners and managers of structural IT ambidexterity. As per our propositions, we expect to observe authority at the managerial level, together with communication, cross-unit structures, multi-skilling and socialization as key integration mechanisms used regularly between agile and traditional IT. Second, by studying our fifth proposition, we will provide rich insight into the integration of agile and traditional IT during the development process of an innovative IT solution. This will provide insight into how the outputs of IT exploration, such as new technologies, can be smoothly transferred into the organization for exploitation.

We expect to contribute to IS literature on the topic of IS organization. Given the pressure modern organizations are under to come up with innovative and value-adding digital applications, increasing our understanding on how to effectively manage this innovation in association with new organizational structures, processes and technologies is highly relevant. Furthermore, we aim to enrich IS theory by applying concepts from organizational theory into an IS context, where research on the integration of structural IT ambidexterity is as of yet nascent. As such, we aim to provide an initial conceptual foundation which may be used for further research.

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