

Innovation through IT Outsourcing – Evidence from a Care Home

Completed Research Paper

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Abstract

The difficulty of extracting innovation from information technology (IT) outsourcing engagements poses an important managerial problem as client firms, more often than not, fail to harness the innovative capacity of their IT service providers. This study aims to contribute to a better understanding of how such engagements can be managed more effectively. Based on empirical evidence collected at a long-term care home, our qualitative case study unearths influences on the innovation potential of four observed innovation through IT outsourcing initiatives. Organisational change readiness theory adapted to an innovation context is used as theoretical lens. Notable influences on the collective willingness and perceived ability to support an innovation initiative are found to spring from the outsourcing project, organisational and market context. The receptivity of these contextual influences is highly content-specific to the particular innovation initiative. Corrupting influences may emerge unexpectedly that need to be proactively responded to with correcting influences.

Keywords: outsourcing, innovation, readiness, healthcare, care home, qualitative, case study

Introduction

There is growing evidence that IT outsourcing can be successfully leveraged for innovations on the client firm's behalf (Kotlarsky et al. 2016; Su et al. 2016; Weeks and Feeny 2008; Whitley and Willcocks 2011). This is explained by IT service providers having a rich reservoir of specialised capabilities at their disposal by virtue of their focus on IT service delivery (Levina and Ross 2003). Through IT outsourcing engagements, this unique provider-specific reservoir can be tapped into to develop innovative, IT-enabled solutions that meet the client firm's needs (Weeks and Feeny 2008). However, as innovation expectations rise, there are more and more cases showing failed efforts (Tadelis 2007; Veltri et al. 2008). This development leads to the question: *how can IT outsourcing engagements be more optimally organised to effectively leverage their inherent innovation potential?* Our study responds to this question by examining influential factors within and outside the boundaries of an IT outsourcing engagement, that promote or inhibit the successful completion of the pursued innovation.

This qualitative case study investigates four IT outsourcing engagements at an Austrian elderly care home (hereafter CareHome). Our contribution to the innovation through information systems (IS) sourcing literature (Lacity et al. 2016) is twofold. First, prior research suggested that a holistic approach to managing innovation through outsourcing is essential to better exploit its vast potential for crafting innovative solutions (Linder et al. 2003). Our study adds empirical evidence to this notion. By using

organisational change readiness theory (Weiner 2009), adapted to the innovation context, as guiding theory, we are able to pinpoint how readiness is established in such engagements. We identify project-specific, firm-specific and market-specific influences that shape the innovation readiness state of CareHome. The impacts of these influences on the readiness state are investigated, and underlying root causes that lead to these impacts. We argue this theoretical perspective offers a better way to assess inter- and intra-organisational influence linkages. Second, we show that the initial state of readiness for an innovation initiative is exposed to unpredictable negative, corrupting influences that may only emerge with the commencement of innovation activities, and require corrective action through project-specific interventions. These observations may be relevant for client sourcing managers in particular, who are bounded by their limited experience in managing such complex engagements. Likewise, service provider practitioners may view such engagements from the client perspective, and devise action plans to mitigate similar corrupting influences that jeopardise the success of innovation initiatives.

Theoretical Foundations

Innovation through Outsourcing

Innovation through outsourcing research has been increasing in popularity, as reflected in the continuously growing number of theoretical and empirical studies (Gambal and Asatiani 2019; Lacity et al. 2016). The research showcases a wide spectrum of innovative solutions for a client firm, that are diverse both in their type and impact.

With type, we distinguish between the specific forms innovations take a shape of. Empirical research has examined a variety of innovative IT applications that were developed through IT outsourcing engagements, ranging from the introduction of new operating systems (Weeks and Feeny 2008) to custom digital platform solutions for human resource activities (Holweg and Pil 2012), social media marketing (Kotlarsky et al. 2016) and key banking functions (Su et al. 2016; Weigelt 2013), to new supply chain forecasting systems (Kotlarsky et al. 2016; Lacity and Willcocks 2013) and enterprise resource planning systems (Weeks and Feeny 2008).

With impact, we refer to an innovation's magnitude of transformation on the client firm's existing business structure. A categorisation in that respect is proposed by Weeks and Feeny (2008) which has found increasing resonance in the research community (Kotlarsky et al. 2016; Oshri et al. 2015, 2018). Weeks and Feeny (2008) differentiate between (a) IT operation innovations that involve technology changes but do not impact the client firm's business processes, (b) business process innovations, that change the way the client firm operates in some important ways, and (c) strategic innovations, that significantly enhance the client firm's product or service offerings for its existing target customers, or enables the client firm to enter new markets.

In light of this conceptual diversity, we discern some common characteristics of innovations pursued through IT outsourcing, including (i) their enablement by IT, (ii) their novelty to the client firm, but not necessarily to the service provider, (iii) usually higher levels of uncertainty, and (iv) a focus on solving immediate, rather than long-term business problems of the client firm. Our observed innovations, which are introduced in greater detail in a later section, reflect these characteristics.

Earlier research has investigated the multifaceted intricacies of innovation-focused IT outsourcing relationships from various angles. The compatibility of IT outsourcing with innovation has been debated intensively (Weeks and Feeny 2008). At the core of the debate lies the common observation that such business relationships would traditionally be set up for the purpose of realising cost savings (Su et al. 2016; Whitley and Willcocks 2011). Rethinking the IT outsourcing concept to cater to innovation thus raises questions pertaining to its yet largely unexplored requirements. Recent advancements (e.g. Su et al. 2016; Weeks and Feeny 2008; Whitley and Willcocks 2011) contributed to a deeper understanding by revealing a range of contextual factors that tend to enable or inhibit innovation. They were identified at the outsourcing project, organisational and at the market level. How these enablers and inhibitors actually influence the readiness to engage in innovation however remains unclear.

Prior studies suggest that, at the project level, the type of formal contract can have a key influence on an innovation potential of IT outsourcing engagement (Oshri et al. 2015; Sumo et al. 2016).

Traditionally, desired efficiencies and associated costs are clearly specified upfront in fee-for-service contracts that are governed at an arm's length (Holweg and Pil 2012). A common finding in innovation through outsourcing research however indicates that more incomplete formal contracts give service providers the much needed autonomy to embark on greater risk-reward innovation initiatives (Aubert et al. 2015; Oshri et al. 2015; Sumo et al. 2016). The logic underlying this insight is that innovation itself is uncertain by nature; its outcomes are frequently unknown and therefore difficult to specify in advance (Miranda and Kavan 2005). It follows that more complete formal contracts and innovation are at odds with each other (Aubert et al. 2015; Kotlarsky et al. 2016). Innovation requires a high degree of flexibility, which a more complete formal contract restricts (Aubert et al. 2015; Miozzo and Grimshaw 2005). The role of relational governance is also highlighted, especially in form of trust, which is suggested to be beneficial when high for the mutual commitment to a common innovation objective (Goo et al. 2009). Further revealed project level enablers include the client firm acting as project leader to better steer the innovation initiative (Willcocks et al. 2011), and an extensive history of successful collaboration, which promotes informal communication patterns about new business needs in particular (Oshri et al. 2018; Su and Levina 2011).

At the organisational level, the literature highlights that client firms cannot be passive recipients of innovation (Lacity and Willcocks 2013). In particular, internal leadership support has been emphasised on as an instrumental enabling factor at the client firm (Kedia and Lahiri 2007; Lacity and Willcocks 2013; Weeks and Feeny 2008; Willcocks et al. 2006), especially for facilitating the complex and interdependent activities which innovation initiatives entail (Mani et al. 2010). Besides leadership commitment, retaining IT capabilities at the client firm was identified as critical. Such capabilities help to understand which digital solutions are required to address existing business problems (Hoecht and Trott 2006; Oshri et al. 2018; Weeks and Feeny 2008). A notable consequence of poor IT capabilities is a reduced ability to identify potentially impactful innovations (Weeks and Feeny 2008) and increased tendency to be locked into a specific service provider's IT systems (Shi 2007). Excessive internal IT capabilities on the other hand not only cannibalise main activities of the service provider, but also stifle the innovation potential due to micro-management urges (Weeks and Feeny 2008).

At the market level, the continuous commoditisation of increasingly sophisticated IT services incites IT service providers to offer even more complex services and make even more client-specific investments, to grow and maintain client relationships (Manning et al. 2018). Recent research indicates that this market pressure greatly plays into the hands of the client firm, which can leverage its service provider's fear of competition for innovation (Lacity and Willcocks 2013). Here, the client firm may threaten to end the outsourcing engagement prematurely if it does not receive desired outcomes (Veltri et al. 2008). Such market conditions however were revealed to be a breeding ground for business risks that may jeopardise the innovation potential of IT outsourcing engagements. For one, IT service providers may be inclined to perform self-protective manoeuvres, by for instance not disclosing all the strides they have made in developing the innovation (Aubert et al. 2015). As a consequence, they may be more willing to steer innovation efforts towards outcomes that are more beneficial for them than for the client firm, or delivering the innovation but for a greatly escalated price (Aubert et al. 2015; Shi 2007). For another, IT service providers are independent market participants. Their own business objectives may thus naturally conflict with those of the client firm at the outset of the engagement, or gradually stray away from initially harmonised objectives (Miozzo et al. 2016; Miozzo and Grimshaw 2005).

Change Readiness Theory

For this study, we adopted organisational change readiness theory, adapted to the innovation context. This theory proposes that an organisation is more likely to successfully complete an innovation initiative when its organisational members, as a collective, perceive to be ready, that is, they are *willing* and believe to be *able* to adequately support the innovation initiative (Lokuge et al. 2019; Weiner 2009). Readiness theory acts as a helpful cognitive precursor to supportive or resistive behaviour of organisational members that may arise in reaction to a planned innovation initiative (Holt et al. 2007; Weiner 2009). In the context of this study, readiness for innovation theory allows us to explore innovation through IT outsourcing initiatives at an organisational level. In doing so, we are able to examine enabling and inhibiting influences prior research has identified from a holistic perspective.

This helps pinpoint which influences need to be prioritised, strengthened or neutralised to ensure that the client firm is sufficiently ready for innovation through IT outsourcing.

Recent research on readiness theory suggests that the complexity of organisational readiness for change can be approximated by examining two of its central facets, namely change commitment and change efficacy (Weiner 2009). Change commitment describes the organisational members' shared resolve to pursue the courses of action involved in change implementation, it thus principally reflects their willingness. Change efficacy refers to the organisational members' shared beliefs in their collective capabilities to organise and execute the courses of action involved in change implementation, in essence reflecting their perceived abilities (Holt and Vardaman 2013; Rafferty et al. 2013; Weiner 2009). Contextual factors flow into these two facets. They refer to cues in the broader environment that are not specific to a particular change initiative. Weiner (2009) did not discuss these extensively, but indicated that they may include the organisational culture, policies and procedures, past experience with change, the organisation's resource endowments in general and the overall organisational structure.

The key premise of the theory is that high organisational readiness for change is assumed to lead to more effective implementation efforts. The focus of change readiness research is on how this degree of high readiness can be established. Notably, outcomes may still fall short of expectations despite high readiness. Organisational members could have misjudged the benefits a change initiative may bring, or overestimate their implementation capabilities (Weiner 2009), or the very need for change the change initiative is supposed to address may turn out to be arbitrary (Armenakis et al. 2007).

The logic underlying change readiness theory, including Weiner's (2009) approach, has been transposed to an innovation context in prior empirical observations, resulting in the development of a relatively new branch of research focused on innovation readiness. Herein, organisational change initiatives are manifested in form of specific innovations which an organisation expects to implement. Recent research closely associated with our study adapts change readiness theory to digital innovation from an organisational perspective (Lokuge et al. 2019; Nylén and Holmström 2015), in a business services provider context (Tsou and Hsu 2015), and in a healthcare context (Johnston 2017). These studies demonstrate the usefulness of readiness theory in an innovation context. Accordingly, we apply this theory in an innovation through outsourcing context from the client's organisational perspective.

Methodology

Research design

This study is concerned with the effective organisation of IT outsourcing engagements for innovation initiatives, as perceived collectively by the organisational members of the client firm. We opted-in for an exploratory, qualitative case study (Yin 2014) as the phenomenon is deeply embedded in the client firm's existing organisational practices. In accordance with Yin's (2014) suggestions, the suitability of this approach is justified by pointing out its effectiveness in addressing our formulated 'how' research question, and in examining a contemporary phenomenon within its real-life context, especially when the boundaries between a phenomenon and context are not clear, and the researcher has little control over the phenomenon and context.

Empirical setting

CareHome specialises in the provision of inter-disciplinary long-term care for the elderly, adults with dementia, and younger, chronically ill people. Counting more than 450 employees, CareHome offers assisted living facilities for 350 residents. It also features an in-home hospital to provide immediate medical support when necessary. CareHome is spearheaded by a large private, non-profit care institution that operates a chain of other care homes across the country.

To stay abreast of the latest technological developments in the long-term care sector, the parent care institution has set up a subsidiary that is structurally separate to its care home facilities in the early 2000s with a concentrated focus on research and the transfer of knowledge in the fields of geriatrics,

gerontology and ambient assisted living. To allow for close collaboration with the CareHome’s staff and residents, the headquarters of the subsidiary is located directly at the premises of CareHome.

The research subsidiary’s ultimate raison d’être departs from that of a typical R&D department. It is not so much constituted by a pursuit to commercialise the technologies it develops, but rather by acting as a radar for the identification of high-potential innovations that could be useful for the CareHome. The research subsidiary therefore does not have the necessary funds at its disposal to afford substantial internal IT capabilities. External IT service providers thus play a pivotal role for the realisation of targeted innovations. The research subsidiary intends to develop innovative IT-enabled solutions for CareHome by tapping into innovative capabilities of IT outsourcing providers.

Data collection and analysis

Data was collected in May 2019 at CareHome and the research subsidiary via semi-structured interviews, which constitute the majority of the data, archival records and documentary information. The first author also had the opportunity to accompany one manager to an international conference on nursing where additional relevant data could be collected in the course of the conference proceedings.

The interviewees were told that the focus of the study was on understanding innovation initiatives undertaken through IT outsourcing engagements, wherein CareHome or research subsidiary currently acts or has recently acted as a client firm. Seven semi-structured interviews were conducted face-to-face that lasted from 40 minutes to one hour. The interviewees all hold different senior positions in CareHome and/or research subsidiary and were involved in one or more innovation initiatives.

The analysis of data proceeded iteratively on four broad levels following Gioia et al.'s (2013) guiding principles. Prior studies in the IS sourcing domain implementing Gioia et al.'s (2013) techniques for the analysis of qualitative data have repeatedly highlighted the systematic and structured development of insights this approach enables, particularly when the dataset is disordered and voluminous (Gozman and Willcocks 2019; Klus et al. 2019). By an iterative process of reviewing data segments, the cluster of information could be broken down into 54 themes. In the course of this analytical step, similarities and differences were identified, which led to the development of 19 germane categories. We then examined the analysed data from a more abstract, theoretical perspective to identify a set of concepts that could explain the multi-faceted phenomenon under study. This allowed us to develop five aggregate dimensions of influences, which we weaved together in an inductive model presented in the discussion.

Overview of the observed Innovation through IT Outsourcing Initiatives

The advent of digital technologies opens the door to new opportunities that may not only increase the efficiency and quality of services the CareHome’s staff delivers on a daily basis, but also to innovative quality-of-life improvements on the residents’ behalf. The innovation initiatives this study examines feature four sophisticated, innovations developed through IT outsourcing (presented in Table 1).

Table 1. Overview of observed innovation through IT outsourcing initiatives

Label	Initiative	Purpose	Overview
(#1)	Custom functionalities for the internal electronic nursing documentation system (eNDS)	Bundle of staff-centric digital solutions intended to accelerate and enable a more accurate nursing documentation process and closely related activities, such as care planning, patient transport and patient relocation documentation.	This is a CareHome-led initiative. The transition from a paper-based documentation system to the eNDS in 2009 enabled the development of additional connected solutions. The eNDS has since grown into a complex IS to cover CareHome’s planning and documentation activities in the areas of care, medicine, therapy and accounting.

<p>(#2)</p>	<p>Smart compass navigation device</p>	<p>A mobility assistant in form of a smart compass developed for people suffering from early-stage dementia who might get lost when going outdoors. The pocket-sized device is supposed to guide them back to a prespecified address.</p>	<p>This initiative involved the care institution’s research subsidiary as evaluator and CareHome as potential consumer. It was fraught with managerial challenges, including unrealistic user scenarios, as well as diverging outsourcing partner interests and an inadequate outsourcing governance regime. The initiative was led by an external university and completed between 2016 and 2018 with the development of a smart compass device. The device was neither adopted in the CareHome nor brought to private consumers.</p>
<p>(#3)</p>	<p>Mobile robot assistant</p>	<p>An autonomous robot which roams around the care home’s ground floor by learning about its environment. There, it regularly accompanied walking-based therapy groups, navigated visitors to conference rooms, and provided general information on demand via its back-mounted tablet.</p>	<p>This initiative similarly involved the research subsidiary as evaluator and CareHome as potential consumer. It was part of a Europe-wide, university-led initiative with a focus on gaining new technological insights, rather than on developing a ready-to-use robot for the mass market. The initiative was completed between 2013 and 2017 after which the deployed robot was retired.</p>
<p>(#4)</p>	<p>Virtual reality (VR) journey simulator</p>	<p>This innovation is intended for therapeutic purposes. It should allow residents to visit a virtual environment of their choosing, such as a popular travel destination, unspoilt landscapes or everyday sceneries. By sharing their experiences with a therapist in real-time, negative feelings like loneliness and boredom should be mitigated.</p>	<p>This is the newest, yet to be completed initiative, launched 2018, and involving the research subsidiary as project leader and CareHome as potential user. A custom software is in development that should allow the therapist to view what the user sees through the VR headset on an external display. It should further allow the therapist to navigate through the virtual world by interacting with virtual features on the user’s behalf.</p>

Research findings

Our research findings unveil a multifaceted picture of organisational readiness for an innovation through IT outsourcing initiative. We capture a holistic perspective of contextual factors (a) within the immediate environment of the particular outsourcing project, (b) within the organisational environment of CareHome and (c) within the external market environment, that influence the organisational members’ collective willingness and perceived ability to complete an innovation initiative.

Project Context Influences

Our observations shine a new light on characteristics of IT outsourcing engagements leveraged for innovation. Specifically, we point to four central influences stemming from the outsourcing project context that shape collective beliefs about the potential benefits of an innovation initiative, and perceptions about associated implementation capabilities. They include objective-based, experience-based, governance-based and role-based influences.

Objective-based influences focus on the content of an initiative. The targeted innovation objectives are found to be influential on collective willingness and ability judgements in the dimensions of impact and

level of complexity. The low impact associated with custom functionalities for the eNDS is viewed with ambivalence. On the one hand, small but predictable solutions are associated with high specificity and believed to require only little user training. On the other, the integration of these solutions into the complex eNDS is very demanding. This raises concerns about realised benefits compared to the costs and effort. The research subsidiary's smart compass and mobile robot initiatives tell a similar story. Even though they are associated with a greater impact on CareHome, their benefits upon a potential introduction are perceived to be minimal. Only the VR initiative is found to be associated with high shared willingness and ability. Its immediate relevance for CareHome and its intended purposes are seen as beneficial, yet without notable downsides.

IT outsourcing was seen as important in relation to technical complexity. With the transfer of IT-related activities in all observed initiatives, the critical question of whether the solution can be created with the given IT capabilities becomes the responsibility of a service provider. Thus, efforts can be focused on managerial and evaluative aspects of an innovation initiative.

Experience-based influences derive from prior histories of collaboration with a service provider. In the eNDS engagement, a long-standing partnership has been established based on the legacy of exclusivity and a common strategic orientation. Two faces of exclusivity are recognised. First, CareHome values the appeal of new initiatives for its closed eNDS, especially from an operational perspective. A key benefit is increased efficiency, because documentation processes can be digitally recorded in one information system. A significant drawback is posed by the inevitable lock-in situation that would only be reinforced with the continued introduction of custom solutions. As for the common strategic orientation towards innovation, a business relationship has been cultivated wherein CareHome is willing to actively involve itself in innovation activities rather than act as a passive recipient. It does so by capitalising on its access to its staff, the eNDS's main users.

The research subsidiary adopts a cautious mentality. It intends to curb the initial euphoria of the engaged with service providers. A downside of this approach is a blinkered view of available options in relation to an innovation initiative's potential. A research subsidiary manager states in relation to VR project:

'Here one could also add videos and there one could add sounds, and there one could simulate life experiences where one would join a birthday party, and, and, and.' I mean, sure, those are all good ideas, but we tend to say: 'But let's first stick with the simple things and ensure that they function. If those function, then we can still create new additions.'

Governance-based influences describe beliefs surrounding the formal governance regime and the informal governance structure. We find that the contract was viewed as a formal necessity in all four observed initiatives, largely perceived as a reference point for the collaboration. Hence, instead of fixing desired outcomes and restricting outputs to specific obligations, CareHome and the research subsidiary favour a certain degree of incompleteness in their contracts. This is perceived to give their outsourcing partners enough room to perform undocumented minor adjustments whenever needed.

Flexibility of the contract regarding the anticipated innovation implies the presence of trust. Even in the smart compass, robot and VR initiative, the outsourcing partners, unbeknownst to the research subsidiary, would not be contractually tied down. The long-standing eNDS engagement reveals a noticeable benefit of high and sustained trust, as the focus of the engagement shifted from initial uncertainty with respect to the service provider's domain expertise and innovative capacity, to the speed with which the service provider is perceived to actually be able to deliver innovative solutions. As one eNDS project manager notes:

When we need something that has not been defined in the contract then it parallels the idea of telling a heating engineer: 'I need a new boiler.' He will do it happily because it is part of his core business. With our service provider, the question rather is with what speed they can meet our requests, because they naturally have many other projects.

The remuneration model presents another considerable influence according to prior literature (Lacity and Willcocks 2013). The eNDS engagement features a traditional fixed-price model with hourly rates. The absence of formal additional financial incentives for innovative solutions is said to be trivial for the ability to innovate. It is expected that the service provider is naturally inclined to increase its scope of

work. In the research subsidiary's projects this ability-related belief is shared. The partners divide incoming funding among themselves. No additional financial incentives are offered.

Role-based influences refer to the self-perceived roles that CareHome and the research subsidiary believes to play in the innovation initiatives, and construed images of their outsourcing partners. Prior successes with the service provider in terms of expanding the eNDS, together with CareHome's self-perception as a development partner, propel CareHome's willingness to proactively support innovation activities. The research subsidiary construes a similar image of its partners and itself as development partners, but only engages in innovation initiatives that aim to support care activities, rather than in ones with an ulterior motive of workforce reduction or other forms of cost-cutting measures.

Organisational Context Influences

Organisational context influences refer to cues in CareHome's internal organisational environment that shape collective beliefs about the necessity of a particular innovation initiative and the perceived ability to successfully complete related activities. Here, we found three main areas of influence, namely CareHome's leadership, the nursing staff as a targeted user group and the organisational structure.

Leadership-based influences relate to CareHome's executive support for the innovation initiatives. CareHome's executive leadership is strongly interested in supporting digital solutions that are perceived to improve the efficiency of easily automatable care activities. To this end, the eNDS is perceived as an exemplary information system. Associated initiatives are thus greatly appreciated and contribute to a greater shared willingness. The executives however show a more reluctant attitude towards initiatives that promise an extensive impact on CareHome's core business. The touted value proposition of such solutions is mostly met with doubt. One executive argues on strategy fit more transformational digital innovation initiatives:

As of yet, I don't see it, because the work centres on the provision of meals, incontinence care, prescription of medicine, describing vital states, playing cards, reading out the newspaper, taking them [residents] for a walk, celebrate birthdays together, taking away the fear that emerges with dementia – to calm these people down. All these areas are not easy to solve with technologies.

While the CareHome's leaders define innovation as one key priority, they emphasise the provision of care services being the core mission. A notable tension surfaces as more digitally advanced initiatives increasingly drive a wedge between these complementary foci. Operating in the long-term care domain is perceived as a restriction that hinders the leadership to branch out and commit more extensively to innovation initiatives. At the same time, the executives argued to have little interest in being among the first movers to unite digital innovations with care-related activities.

Development of digital strategy is perceived as an inevitable necessity. Yet, the leadership finds it difficult to anticipate the best strategy to yield the most effective digital solutions to support CareHome's core business areas. This results in the shared willingness to mainly support those initiatives that create an immediate tangible value for CareHome.

User-based (staff) influences highlight the unique peculiarities of the care domain from the nursing staff perspective. Our findings indicate the importance of user expectations and requirements. We differ between nurses and residents as target user groups. The eNDS and its custom functionalities are mostly tailored to staff needs.

Nursing staff expectations brings light to a set of conflicting beliefs. For one, engaging in more advanced innovation activities, such as those related to the mobile robot initiative, diffuses a sense of pride. This leads to a common portrayal of CareHome as a modern, technologically advanced organisation in the care industry. As a result, the collective willingness to contribute to such innovation initiatives increases. At the same time, innovation initiatives may engender concerns about increased workload and thus suppress support for them. Such concerns weaken the enthusiasm for interacting with new developments.

Our findings indicate a low perceived urgency for new digital solutions that support care-related activities. Here, the eNDS contributes to the common belief that CareHome is already well-equipped in

terms of digital technologies. The perceived ability of the nursing staff to properly use new functionalities acts as a notable constraining influence. As of yet, the care concept and the digital realm are viewed as two separate worlds that are difficult to unite in daily nursing activities.

Organisational structure-based influences highlight financial constraints that CareHome faces as a publicly funded organisation and the research subsidiary due to its formally separate budget. Regarding the former, the leadership has allocated some funds of the annual budget for expenditures related to new digital solutions. However, there is a certain risk-averseness due to public interest, backed by taxpayer money. The research subsidiary has an independent budget which means that public funds that flow into CareHome are not shared with the subsidiary. The research subsidiary cannot fully fund its innovation initiatives on its own. This requires the research subsidiary to apply for funding at external institutions to ensure the remuneration of corporate partners. This restricts its ability to engage in the development of innovation not funded externally, even if it would be beneficial for CareHome.

Market Context Influences

We further identified market influences in CareHome context that shape the collective willingness and perceived ability to complete the observed innovation through outsourcing initiatives. These include user-based (residents), partner-based, and domain-based influences.

Resident-based influences feature a similar pattern to staff-based influences. One example is resident expectations related to the VR initiative. Here, one user has been said to argue that she is not interested in virtually visiting places she has been to in her past, because she wants to keep her memories of these places the way she has experienced them. As for the residents' requirements profile, health-related aspects, such as cognitive and physical impairments, need to be considered, but also little overall interest in digital advancements for the care domain and low familiarity with IT. The research subsidiary's initiatives tend to be strongly influenced by these features, to ensure an intuitive and safe user experience of the developed solution. In the VR initiative for instance, only static rather than motion pictures could be displayed to avoid dizziness among the users.

Partner-based influences play an important role in the innovation initiatives, since neither CareHome, nor the research subsidiary, have extensive IT capabilities. They therefore fully rely on IT capabilities of their outsourcing partners to develop innovation. We find that the way CareHome interprets partners' willingness and ability has a significant influence on their shared willingness and ability, and thus organisational readiness.

In terms of perceived partner willingness, the partner's strategic intent is an influence that can take many forms. In the eNDS engagement, the provider's strategic intent is believed to be geared towards organic growth through a fruitful IT outsourcing engagement with CareHome. This is viewed in a positive light, because CareHome can benefit from an increasingly sophisticated eNDS. Helping its provider to consolidate its market position by helping develop and use new solutions is perceived to be mutually beneficial, and contributes to a greater willingness on both sides. The strategic intents of the research subsidiary's corporate partners seem to only play a secondary role, as long as their initiative-specific intents are in harmony for the duration of the project.

The partner's perceived adequacy of IT capabilities, their familiarity with the care domain and prior experience with innovation through outsourcing are identified as influential partner abilities. While CareHome has experience to evaluate eNDS provider's abilities, the research subsidiary assesses its partner's abilities mainly by relying on public information. In all of the observed initiatives, the corporate partners are collectively portrayed as very competent in the IT domain they are active in, but are believed to understand the specificities of the care domain only to a limited extent, with the exception of the eNDS service provider. As for prior experience, a partner with a proven track record of successful initiatives, and familiarity with associated operative and administrative tasks, heightens a shared sense of confidence in the ability to successfully develop a desired innovation.

Domain-based influences centre on pressures from the healthcare industry. They relate to competitive pressures and the perceived future industry outlook. CareHome is perceived to be a leading organisation with regard to digital, care-related solutions. A different picture is conjured up when looking beyond

the care domain borders. Here, several larger healthcare organisations are thought to be far more ahead with the development of health-related innovations. This is widely understood as an opportunity for the transfer of adaptable solutions. In addition, and linking to the future industry outlook, the application of digital technologies from other domains is believed to be potentially advantageous to CareHome.

Corrupting influences on the state of organisational readiness

A retrospective view on the four innovation initiatives helped to identify unforeseeable influences that only emerged after the initiatives commenced. They are found to corrupt the initial degree of readiness by reducing the willingness of CareHome’s organisational members to support an innovation initiative, or by engendering negative beliefs about their ability to successfully complete it. The majority of corrupting influences are found in the smart compass initiative, which involved several unexpected complications. We identified contractual freedom, strategic intent shifts and a misconstrued user requirement profile as corrupting influences.

In the immediate project environment, we discovered a notable corrupting influence stemming from the loosely specified, incomplete outsourcing contract of the smart compass initiative. Herein, the contract gave the project-leading university and research subsidiary a false sense of security. The two IT service providers who were brought on board turned out to be in a competitive relationship. As one project manager recalled:

There were different members which effectively did the same work and were almost in competition with each other. You have to imagine going to different supermarkets like Penny and Hofer [rivalling supermarket chains in Austria] which offer the same things, have similar concepts. And then asking Penny to do something to which Penny responds: ‘I can, but Hofer must not learn about what I’m doing.’ This was roughly the situation which made it difficult.

This deterred either service provider from prioritising the initiative, due to the belief that the other would benefit from one’s efforts. The service providers carried out their allocated duties to fulfil minimum requirements, but their developments did not match with the predefined scope. In response to the initiative leader’s laissez faire leadership by an overreliance on loose contractual specifications, concerns emerged at the research subsidiary, which however found itself to be a powerless bystander. Ultimately, the contract served as a reference point for the innovation initiative, but did not fully protect the research subsidiary from the service providers’ undutiful behaviour.

Another identified corrupting influence involves unexpected changes in the outsourcing partner’s strategic intent. In the smart compass initiative, the widely perceived shift from initial willingness to reluctance by the service providers to fully engage in innovation activities led to their hesitancy to share relevant digital technologies. This constituted a major setback to the development of smart compass prototypes. It was perceived to be a particular nuisance, given the belief that one of the service providers already had a relevant technology at its disposal. The perceived ability to realise the full potential of this initiative was thereby weakened. As one project manager noted:

We had a meeting where it was said: ‘okay, we need a configuration for the GPS-detection or guide.’ And one of these technological organisations said: ‘yes, we already have this in use for five years.’ We could never apply this technology which they had at their disposal for five years, it was never passed on to us.

Lastly, the smart compass initiative allows the identification of a misconstrued user requirement profile as a corrupting influence that led to shared discouragement, as well as damaged perceptions related to the collective ability to fulfil user needs. It was found that the application scenario is flawed. People suffering from dementia are unlikely to use a device they are not familiar with when lost. As a result, it was early acknowledged that the developed innovation would not adequately serve its intended purposes. Given the already granted subsidies from external funding organisations, the initiative was nonetheless completed. As a project manager argued:

It is so unrealistic, that someone who already suffers from such confusion and who is not used to this, who has not taken his smartphone or whatever device with him when leaving [his home] over the last 20 years, to bring this along with him, let alone use it in a panic situation.

Corrective influences on the state of organisational readiness

Our observations also point to corrective influences that are intended to raise and sustain organisational readiness for innovation through outsourcing initiatives. They include proactive interventions at the project-level that act as a precaution against potential corrupting influences, and reactive adjustments, likewise at the project-level, which neutralise negative consequences resulting from occurred corrupting influences. Uncovered corrective influences include relational interventions, staff-focused interventions, objective readjustment, leadership reorientation and partner restructuring.

Concerning relational interventions, to safeguard initiatives from creative inputs that digress too far off course, the research subsidiary would stress its proximity to the resident user group at the outset of the initiatives. Thereby, its service providers are supposed to be made aware of the research subsidiary's ability to realistically assess the true utility of the proposed ideas. Its deep expertise in the care domain would be highlighted in an unequivocal manner. In practice, it allows the research subsidiary to effectively step on the brake once innovation activities would reach technological depths that diverge too far from originally pursued purposes. As one research subsidiary manager mentioned:

We always insist on being the actual intersection [with the residents], when someone comes to us with a project proposal or idea. [...] Since we can accurately see how patients are doing [with the prototypes], it may be perhaps the case that we often are the ones who step on the brake, so to speak, with what would be possible, what would be feasible."

User-focused interventions describe precautionary measures that are intended to regulate collective perceptions of user expectations and to thereby ensure and preserve a high degree of shared willingness. The issue at hand is the dispersion of unrealistic expectations and negative impressions associated with an innovation initiative. A widely shared belief is that such impressions can gain momentum very quickly and, if unfulfilled, lead to organisation-wide disappointment. To this end, user-focused interventions aim to raise awareness in a controlled internal environment by designing initiatives as pilot projects, rather than by informing the entire organisation about its launch at once. As one project manager noted:

We should be careful that the excitement must not hit the ceiling, but to rather keep it low. [...] One should not inform the entire organisation about this, but rather launch the initiative as a pilot project. I find that to be good. And I continuously experience this, and this is tried and tested. Naturally one can say that one would like to know everything as an employee. However this can cause a lot of upsets. So it can go both ways, really high expectations, but also great disappointment.

Objective readjustment refers to reactive adjustments that occurred in the smart compass initiative in response to the misconstrued user requirement profile. A range of concepts were developed and targeted throughout the initiative to prevent the development of an unsuitable navigation device. For example, the idea of geofencing a predetermined area based on the location that was planned to be visited by the user. This however would easily trigger a chain of false alarms when the user would take a detour.

The research subsidiary found itself powerless to enforce additional reactive adjustments it perceived to be appropriate for neutralising the other two corrupted influences that affected the smart compass initiative, due to its project role as evaluator. To suppress the negative consequences arising from the incomplete contract, it perceived a more top-down style of governance to be suitable. The project leader, however, did not act in such a manner. As for the rivalry among the service providers, a different composition of partner organisations was believed to be a reasonable alternative to mitigate the conflict potential. This was similarly not followed up on by the project leader.

Discussion

Change readiness theory posits that an organisation is more likely to successfully complete an innovation initiative if its organisational members, as a collective, are willing and able, and thus ready, to execute the related courses of action (Holt and Vardaman 2013; Weiner 2009). Our study suggests that the innovation potential of an outsourcing engagement can be realised to a greater extent when organisational readiness for the corresponding innovation initiative is high. The empirical examination

of four innovation through IT outsourcing initiatives from the perspective of a care home led us to discover a variety of influences on the perceived collective willingness and ability to engage in related innovation activities. The influences are found to spring from the outsourcing project context, the internal organisational context, and the market context. Organising an outsourcing engagement for innovation requires considering all influences individually, since each influence may vary in conduciveness to realising an initiative’s innovation potential, and in the aggregate.

We identify the presence of a series of states of organisational readiness for the observed innovation through outsourcing initiatives (visualised in Figure 1). We distinguish between initial, corrupted and corrected states of readiness. The initial state of readiness refers to the shared willingness and perceived ability to engage in related innovation activities at the outset of the respective initiative. The corrupted state of readiness relates to unforeseen incidents that occur with the commencement of innovation activities. They tend to negatively influence the initial state. The corrected state of readiness includes initiative-specific interventions and adjustments that play a preventive or alleviating role for mitigating corrupting influences. They are intended to help reach and sustain a sufficiently high degree of organisational readiness that is needed to complete an innovation through outsourcing initiative.

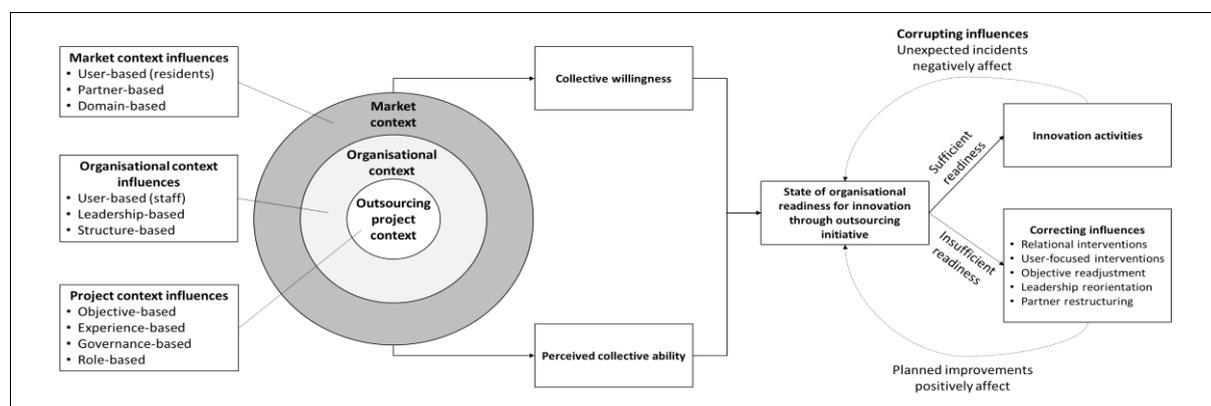


Figure 1. Organisational readiness for innovation through IS outsourcing initiatives

Our key theoretical contributions are twofold. Firstly, with regards to prior innovation through IS sourcing research, we contribute to the growing body of literature by providing deep insights into a seemingly understudied domain, namely that of long-term care. We show how readiness is established by revealing a rich variety of influences located within and outside the boundaries of an IT outsourcing engagement. In line with organisational readiness theory (Weiner 2009), the properties of each contextual influence, and thus their receptivity, are found to strongly vary depending on the specific content of an innovation initiative. This accentuates the salience of researching the innovation content and its context at a similar level of granularity, rather than neglecting one in favour of a deeper examination of another. Secondly, we show how already established readiness can increase or decrease ex post. Here, we identified influences only emerging with the commencement of innovation activities that may jeopardise (corrupting influences) or improve and stabilise (correcting influences) the initial state of organisational readiness. These influences indicate the precariousness of readiness states and the necessity to sustain high degrees of willingness and perceived ability throughout an innovation through IT outsourcing initiative.

Our study is subject to limitations. The content-specific insights our case study provides may only be reflected to a minor extent in other long-term care and healthcare organisations, and even less in organisations that similarly pursue innovations through IT outsourcing but operate in unrelated industries. A promising research avenue can be identified in this respect. An investigation of client firms in other domains could complement our identified set of influences, especially corruptive and correcting influences, or even shed light on new influences that did not emerge in our empirical setting.

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