

# EXPLORING STRATEGIC INNOVATION IN A BUSINESS SERVICES OUTSOURCING CONTEXT

CLIENT AND PROVIDER PERSPECTIVES

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This thesis is submitted for the degree of Doctor of Philosophy

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### CONTEXT: CLIENT AND PROVIDER PERSPECTIVES

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### THESIS SUMMARY

Business services outsourcing engagements, typically comprising the transfer of information technology and other supporting business functions, are traditionally leveraged for cost savings. Recently, there has been a shift in demands towards strategic innovations that may substantially improve a client's competitive position.

Two research questions are addressed: (1) How has existing research conceptualised the strategic innovation through outsourcing process and how have reference theories been applied?, and (2) how can high degrees of organisational readiness be created for strategic innovation initiatives in outsourcing from a (a) client perspective and (b) provider perspective?

A conceptual study in form of a theoretical literature review is developed to respond to the first research question. The fragmented research landscape is consolidated by capturing insights from 95 papers, published between 1998 and 2020. Thematic analysis findings are integrated in a four-phase framework. Based on the review, the gap tied to the second research question is carved out. Specifically, virtually no research has yet explored the formation of organisational readiness for strategic innovation initiatives in an outsourcing context.

Responding to the second research question requires the exploration of notable factors in the outsourcing project, organisational and market environment, that influence the readiness of organisational members to support the implementation of strategic innovation initiatives. Two qualitative case studies are conducted, one involving a care hospital, the other involving a service provider. Organisational change readiness theory is used as theoretical lens. A framework is developed that accommodates identified readiness-influencing factors. Findings further indicate that readiness levels evolve and may decline during an initiative's implementation due to unforeseen disturbances. Corrective measures are then required.

This thesis offers two major contributions to the Information Systems sourcing research stream, namely a comprehensive theoretical review of existing innovation through outsourcing literature, and the identification of readiness-influencing factors from a client and provider perspective.

**Keywords:** business services outsourcing, organisational readiness, strategic innovation, theoretical review

### Acknowledgement of collaborative work within the thesis

This collaboration statement is based on a template provided by the University of Sheffield (The University Of Sheffield, 2021).

The candidate confirms that the work submitted is their own, except where work that has formed part of jointly authored publications has been included. The contribution of the candidate and the other authors to this work has been explicitly indicated below. The candidate confirms that appropriate credit has been given within the thesis where reference has been made to the work of others.

*A manuscript based on the conceptual study within this thesis, developed by the candidate (first author) in collaboration with Dr Aleksandre Asatiani (co-author 1) and Professor Julia Kotlarsky (co-author 2), is currently (June 2021) under review for publication in the Journal of Strategic Information Systems (current status: conditionally accepted).*

*Author contributions: For the manuscript under review, the candidate produced the paper sample and performed the coding process. The candidate engaged with the co-authors in the analysis of higher-order themes and aggregate dimensions to craft and explain the conceptual framework. The co-authors wrote the introduction and background section of the manuscript. The candidate wrote the methods, findings, and discussion section of the manuscript. The candidate also compiled the appendices. The candidate and co-authors continuously reviewed, revised, and provided comments on each other's contributions. This led to significant alterations and additions, especially in form of a shortened methods section made by co-author 2 and a fifth research direction for the discussion section involving the impact of digital technologies, written by the co-authors.*

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## TABLE OF CONTENTS

THESIS SUMMARY .....	2
Acknowledgement of collaborative work within the thesis .....	3
Professional and personal acknowledgements .....	4
List of Abbreviations .....	8
List of Tables .....	10
List of Figures .....	11
<i>Chapter 1: Introduction</i> .....	13
1.1 Research context.....	13
1.2 Research motivation and questions .....	15
1.3 Contributions to theory and practice.....	19
1.4 Thesis structure .....	21
<i>Chapter 2: Conceptual Background</i> .....	23
2.1 The evolution of the innovation through outsourcing phenomenon.....	23
2.2 The specific angle on innovation through outsourcing under examination.....	27
2.3 Excluded research contexts: Non-IT R&D outsourcing and contract manufacturing ....	39
<i>Chapter 3: Research Approach</i> .....	42
3.1 Approach to conducting the conceptual study.....	42
3.1.1 Defining the research question and scope.....	43
3.1.2 Conducting the literature search – creating an initial article sample.....	47
3.1.3 Selecting relevant papers – creating the final article sample.....	51
3.2 Approach to conducting empirical case studies.....	53
3.2.1 Common concerns and response strategies .....	53
3.2.2 Case selection.....	54
3.2.3 Data collection techniques .....	56
3.3 Data analysis based on the Gioia Methodology .....	60
3.3.1 Gioia Methodology analysis approach overview .....	60
3.3.2 Applied Gioia Methodology analysis techniques.....	61
<i>Chapter 4: Conceptual study findings</i> .....	66
4.1 Descriptive analysis insights .....	66
4.2. Thematic analysis insights .....	70
4.2.1 Framework overview .....	70
4.2.2 Antecedents of strategic innovation through outsourcing decisions .....	72
4.2.3 Arranging outsourcing engagements for strategic innovation.....	80
4.2.4 Generating strategic innovation in outsourcing engagements .....	94
4.2.5 Strategic innovation through outsourcing outcomes .....	100
4.2.6 Thematic analysis insights conclusion .....	105
4.3 Carving out the empirical study research gap .....	107
4.4 Organisational readiness theory adapted to innovation as theoretical lens .....	109
4.4.1 Origins of innovation readiness theory .....	110
4.4.2 Applied version of readiness theory .....	112

4.4.3 Theory-research fit .....	116
<i>Chapter 5: Empirical study findings – client organisational member perspectives ..</i>	<i>118</i>
5.1 Care hospital strategic innovation through outsourcing initiatives.....	118
5.2 Overview of identified strategic innovation readiness factors – client perspective .....	121
5.2.1 Project-level (content-based) influences .....	122
5.2.2 Internal organisational context-based influences .....	126
5.2.3 External market context-based influences .....	129
5.3 Organisational readiness from a client perspective based on thematic linkages .....	131
5.3.1 Readiness influences at the outset of strategic innovation initiatives .....	134
5.3.2 Corruptive influences mid-implementation .....	140
5.3.3 Corrective and pseudo-corrective influences mid-implementation .....	146
<i>Chapter 6: Empirical study findings – provider organisational member perspectives</i> .....	<i>152</i>
6.1 IT multinational strategic innovation through outsourcing initiatives .....	152
6.2 Overview of identified strategic innovation readiness factors – provider perspective.	153
6.2.1 Project-level (content-based) influences .....	154
6.2.2 Internal organisational context-based influences .....	156
6.3 Organisational readiness from a provider perspective based on thematic linkages ...	158
6.3.1 Readiness influences at the outset of strategic innovation initiatives .....	158
6.4 Summary of empirical findings from the client and provider perspective .....	165
6.4.1 Incorporating client and provider perspectives in an inductive framework .....	170
<i>Chapter 7: Discussion .....</i>	<i>173</i>
7.1 Key points of this thesis .....	173
7.2 Theoretical contributions .....	174
7.2.1 A clearer portrayal of the strategic innovation concept .....	175
7.2.2 An integrative framework that shows how innovation unfolds in outsourcing .....	177
7.2.3 Extending organisational readiness to strategic innovation in outsourcing .....	181
7.3 Limitations .....	185
7.4 Directions for future research.....	186
7.5 Practical implications .....	190
<i>Chapter 8: Conclusion.....</i>	<i>194</i>
<i>References.....</i>	<i>197</i>
<i>Appendices .....</i>	<i>226</i>
APPENDIX I: Final sample of reviewed articles .....	226
APPENDIX II: Conceptual study data structure.....	238
APPENDIX III: Key references to 1 <sup>st</sup> -order concepts.....	262
APPENDIX IV: Empirical study client perspective – data structure .....	269
APPENDIX V: Empirical study provider perspective – data structure .....	282

## **List of Abbreviations**

BPO .....	Business Process Outsourcing
BSO .....	Business Services Outsourcing
CABS .....	Chartered Association of Business Schools
CEO .....	Chief Executive Officer
COVID-19 ...	Coronavirus Disease 2019
eNDS .....	electronic Nursing Documentation System
ENP .....	European Nursing care Pathways
EU .....	European Union
GME&SR ....	General Management, Ethics and Social Responsibility
GPS .....	Global Positioning System
HR.....	Human Resources
IP .....	Intellectual Property
IS .....	Information Systems
IT.....	Information Technology
IT multi .....	IT multinational service provider
ITO.....	Information Technology Outsourcing
KBV.....	Knowledge-based view
KIBS.....	Knowledge Intensive Business Services
KRA .....	Key Result Area
NANDA .....	North American Nursing Diagnosis Association
OEM.....	Original Equipment Manufacturer

PACIS ..... Pacific Asia Conference on Information Systems

PC ..... Personal Computer

R&D ..... Research and Development

RBV ..... Resource-based view

RQ ..... Research question

RM ..... Relationship Manager

SCIS ..... Scandinavian Conference on Information Systems

SMS ..... Short Message Service

T&M ..... Time and materials (contracts)

TAK ..... Title, Abstract and Keyword search

TCE ..... Transaction Cost Economics

UK ..... United Kingdom

USA ..... United States of America

VR ..... Virtual Reality

WU Wien ..... Wirtschaftsuniversität Wien, Vienna University of Economics and Business

## List of Tables

<b>Table 1:</b> Strategic innovation output examples.....	31
<b>Table 2:</b> Summary of strategic innovation key characteristics .....	35
<b>Table 3:</b> Inclusion and exclusion criteria.....	45
<b>Table 4:</b> Second stage summary – preliminary article set .....	49
<b>Table 5:</b> Final article set for the theoretical review .....	53
<b>Table 6:</b> Case study research limitations and incorporated response strategies .....	54
<b>Table 7:</b> Interview data details .....	59
<b>Table 8:</b> Excerpts showcasing identified dynamic relationships between 2 <sup>nd</sup> -order themes..	65
<b>Table 9:</b> Summary of thematic analysis insights.....	107
<b>Table 10:</b> At-a-glance overview of care hospital (client) case study innovation initiatives...	119
<b>Table 11:</b> Strategic innovation initiative content-based factors – client perspective .....	126
<b>Table 12:</b> Organisational context-based factors – client perspective .....	129
<b>Table 13:</b> Market context-based factors and brief descriptions – client perspective.....	131
<b>Table 14:</b> Overview of readiness influences at the outset – client perspective .....	134
<b>Table 15:</b> Overview of corruptive influences – client perspective.....	141
<b>Table 16:</b> Overview of corrective influences – client perspective.....	147
<b>Table 17:</b> Project-level content-based factors – provider perspective.....	156
<b>Table 18:</b> Organisational context-based factors – provider perspective.....	158
<b>Table 19:</b> Overview of readiness influences at the outset – provider perspective.....	159
<b>Table 20:</b> Juxtaposition of cost-focused outsourcing against innovation-focused outsourcing .....	181
<b>Table 21:</b> Final paper sample list (Appendix I) .....	226
<b>Table 22:</b> Theoretical review data structure (Appendix II).....	238
<b>Table 23:</b> 1 <sup>st</sup> order concepts, listed alphabetically with key references (Appendix III).....	262
<b>Table 24:</b> Care hospital dataset data structure (Appendix IV) .....	269
<b>Table 25:</b> IT multinational dataset data structure (Appendix V) .....	282

## List of Figures

<b>Figure 1:</b> Examples of innovation in a business services outsourcing context, a typology based on innovation type and impact level. Adapted from Kotlarsky <i>et al.</i> (2015, p. 252). ....	35
<b>Figure 2:</b> Illustration of the five-stage literature review development process.....	43
<b>Figure 3:</b> Number of published strategic innovation through outsourcing papers, sorted by year of publication .....	67
<b>Figure 4:</b> Breakdown of articles by paper type .....	68
<b>Figure 5:</b> Breakdown of articles by stakeholder perspective .....	69
<b>Figure 6:</b> Breakdown of articles per year by outsourcing context .....	70
<b>Figure 7:</b> Strategic innovation through outsourcing: an integrative framework .....	71
<b>Figure 8:</b> Empirical studies research focus visualised in the literature review's integrative framework .....	109
<b>Figure 9:</b> Determinants and outcomes of organisational readiness for change, adapted from Weiner (2009) .....	114
<b>Figure 10:</b> Overview of identified factors influencing organisational readiness for strategic innovation through outsourcing initiatives from the perspective of care hospital (client) organisational members .....	122
<b>Figure 11:</b> Visual overview of content-based readiness factors (client perspective) .....	122
<b>Figure 12:</b> Visual overview of internal organisational context-based readiness factors (client perspective).....	127
<b>Figure 13:</b> Visual overview of external market context-based readiness factors (client perspective).....	129
<b>Figure 14:</b> Overview of identified factors influencing organisational readiness for strategic innovation through outsourcing initiatives from the perspective of IT multinational (provider) organisational members .....	154
<b>Figure 15:</b> Visual overview of content-based readiness factors (provider perspective) .....	154
<b>Figure 16:</b> Visual overview of internal organisational context-based readiness factors (provider perspective).....	157

<b>Figure 17:</b> Organisational readiness for strategic innovation in outsourcing framework .....	171
<b>Figure 18:</b> Four recommended research directions based on the conceptual study framework .....	187

## CHAPTER 1: INTRODUCTION

### 1.1 Research context

Over the years, business services outsourcing (BSO) engagements have slowly but surely become second nature to many organisations. They usually involve a client firm and at least one external business service provider. From small to big players competing in the financial sector, retail, telecommunications and many other industries, relying on third-party specialists for the delivery of information technology (IT) and IT-enabled business process services is common practice nowadays (Whitley and Willcocks, 2011; Manning *et al.*, 2018; Oshri *et al.*, 2019). With the growing importance and volume of outsourcing, prior research has increasingly observed rising demands specifically for innovation (Weeks and Feeny, 2008; Kotlarsky *et al.*, 2015; Dibbern and Hirschheim, 2020).

Innovations may not only lead to incremental operational improvements, but recent empirical evidence gives substance to the idea that they can also enable strategic business outcomes for the client firm (Oshri *et al.*, 2015, 2018). Innovations that enable such outcomes are aptly referred to as *strategic innovations* by Weeks and Feeny (2008). According to their definition, strategic innovations "... significantly enhance the firm's product/service offerings for existing target customers, or enable the firm to enter new markets" (Weeks and Feeny, 2008, p. 131).

Three general characteristics of strategic innovation are reflected in this understanding and are further expanded on in their study. First, the client acts as the main beneficiary. It is the client and not necessarily the provider that can significantly improve its offerings or can access new markets. Second, the development that enables such outcomes only has to be new to the client, but may already be known to the provider or even to other firms competing in different industries (new-to-the-client, but not necessarily new-to-the-world). Third, the innovation's impact is not limited to a specific (peripheral) client function like IT, but stretches across its wider, if not entire business.

A more tangible example from practice is reflected in the strategic innovation initiative involving three key actors: the pharmaceuticals giant Novartis, its provider IBM, and Vodafone (Oshri *et*

*al.*, 2015; Kotlarsky *et al.*, 2016). In response to high stock-outs at rural African health facilities, the partners launched the “SMS for Life” initiative. Herein, they developed a first-of-its-kind supply chain system for anti-malarial drugs based on pervasive and affordable technologies, including a combination of automated SMS (Short Messaging Service) when stock levels are low and mobile phones. It also featured a data management system with a reporting interface, which would provide near-time stock level information for drug-distributing local warehouses and drug-dispensing health facilities to enhance stock supply and forecasting (Kotlarsky *et al.*, 2016).

In accordance with Weeks and Feeny (2008), this supply chain system presents a significant enhancement to the service offerings of Novartis for its customers in rural African locations. It further displays the three general characteristics of a strategic innovation outlined above. First, Novartis, the client, acts as the main beneficiary and can substantially improve its supply of essential medicine in remote areas. Second, the supply chain system itself is new to the client, but may have already been implemented by the project partners in some similar form. Third, introducing the new SMS-based stock management system on a wider scale may have a major impact on multiple core business activities of Novartis, prompting new approaches to its current stock surveillance, forecasting and replenishment activities, as well as to current coordination arrangements with its distributors and customers in rural African regions.

Business services outsourcing did not always go hand in hand with innovation, and much less with strategic innovation. This becomes apparent when tracing outsourcing back to its early incarnations in the 1980s. At that time, the focus was primarily placed on cutting operational costs (Dibbern *et al.*, 2004; Hätönen and Eriksson, 2009). Outsourcing predominantly involved the transfer of the client’s IT function to maximise profits, occurred domestically, and clients kept their providers at an arm’s length, largely attaching importance to the terms enshrined in the contract (Hätönen and Eriksson, 2009).

If any recent development is to challenge this traditional understanding of outsourcing, it is the rising demand for innovation. Recent studies highlight that an orientation towards innovation is often at odds with some conventional principles of successful outsourcing (Aubert *et al.*,

2015; Kotlarsky *et al.*, 2016). Innovation is usually associated with high uncertainty, requiring flexibility and creativity, while outsourcing engagements are associated with low uncertainty, measurability and detailed contracts (Aubert *et al.*, 2015). In light of this seemingly paradoxical picture, scholars dedicating their research endeavours to arrive at a deeper understanding of the (strategic) innovation through business services outsourcing phenomenon are confronted with a difficult problem: attuning outsourcing to innovation.

## **1.2 Research motivation and questions**

The IS sourcing discipline is relatively young, but, much like the business services outsourcing industry, evolves tremendously fast (Lacity *et al.*, 2010, 2016). Accordingly, calls for research have been issued quickly in response to the increasing emergence of innovation demands and to purposefully inform practice about managing the ambiguous relationship between innovation and outsourcing (Lacity *et al.*, 2011; Kotlarsky *et al.*, 2015). This has spawned a vibrant field of research. Related topics of interest continue to proliferate, spreading into various directions, such as the role of advisory services (Oshri *et al.*, 2018), innovation-conducive contract design (Bui *et al.*, 2019; Susarla and Mukhopadhyay, 2019) or the influence of a service provider's competitive strategy (Desyllas *et al.*, 2018).

In its current state however, *the field lacks an integrative perspective* that brings existing research related to innovation through outsourcing together. After conducting a scoping study of IS and wider management literature, relevant insights are evidently not only spread across the body of IS knowledge, but also beyond its borders. In innovation management journals for instance, advances by Roy and Sivakumar (2011, 2012) shed light on the relationship between intellectual property rights and innovation in a business services outsourcing context, as well as on the apparent suitability of more formal or informal governance regimes. In strategy management outlets, the multiple case study conducted by Söderberg *et al.* (2013) enriches the innovation through outsourcing field by exploring the multi-faceted nature of outsourcing relationships that are approached as partnerships.

In a nutshell, innovation through outsourcing research flourishes, but *the research landscape remains fragmented*. This fragmentation complicates future research efforts, because scholars lack a holistic picture of what is already known and what still needs to be known (Webster and Watson, 2002). The lack of *an overall understanding of theoretical perspectives* is a particularly serious concern here. Conventional outsourcing research mainly builds on transaction cost economics (TCE) (Williamson, 1981) perspectives (Dibbern *et al.*, 2004). In contrast to generic outsourced IT services that commonly involve low levels of uncertainty and are thus less likely to incur high transaction costs (Aubert *et al.*, 2004), innovation however is characterised by the opposite, with the final product not being known a priori (Miranda and Kavan, 2005). It is this notable difference in uncertainty and consequent need for close cooperation which calls for a new set of more appropriate theoretical perspectives (Wiener *et al.*, 2019).

Not only does the absence of *an overall understanding of theoretical perspectives* commonly used to study innovation in an IS outsourcing context pose a major gap in modern literature on the phenomenon, but it also leaves existing lines of argumentation entangled in a jungle of disorder. Consequently, contemporary insights remain disconnected from each other, or, in a worse case, are contradictory. These issues culminate in an unresolved *ambiguity in the identification of valuable directions for future research*.

The notable problem of a fragmented research landscape, characterised by a blurred understanding of theoretical foundations and lack of clarity concerning worthwhile areas for future research, motivated the pursuit of the following research question (RQ):

*RQ 1:* How has existing research conceptualised the strategic innovation through outsourcing process and how have reference theories been applied?

Addressing this question aims to provide a solid foundation for future research on innovation through business services outsourcing. It requires a structured approach to scoping out and integrating relevant findings published in IS and non-IS journals. It requires building a framework to organise prior research effectively, discover patterns and commonalities, and guide future research efforts (Webster and Watson, 2002; Paré *et al.*, 2015). In brief, it requires a conceptual study in form of a comprehensive theoretical review.

A literature review loosely based on the main principles of Paré *et al.*'s (2015) theoretical review was conducted. Its findings are presented in Chapter 4: Conceptual study findings. The literature review is based on an article set comprising 95 papers published between 1998 and 2020 in reputable IS and non-IS journals. A conceptual framework was crafted that identifies four phases associated with the strategic innovation through outsourcing process, namely (1) antecedents, or the motivations that drive the decision to leverage an outsourcing engagement for strategic innovation, (2) the arrangement of the outsourcing engagement, (3) the generation of innovations and (4) outcomes of innovation, as assessed in prior literature.

Undoubtedly, practitioners are struggling with emerging innovation demands. Recent empirical research indicates that only the fewest innovation through outsourcing initiatives are crowned by success, while many others fall short of expectations (Su *et al.*, 2016). Studying innovation in a business services outsourcing context is thus of high practical relevance, especially given the growing, but yet limited understanding regarding suitable approaches to harnessing the underutilised innovation potential of outsourcing engagements (Kotlarsky *et al.*, 2015). Earlier research in this vein proposed that outsourcing in itself neither ensures nor negates innovation. The success of innovation initiatives is rather dependent on notable enabling factors within the outsourcing relationship (Weeks and Feeny, 2008). Implicit in this argument is the realisation that *attitudes and behaviours of people in client firms and providers will have to fundamentally change* when leveraging outsourcing for innovations (Whitley and Willcocks, 2011). Hence, it only seems obvious that a more profound understanding of organisational member attitudes and their consequent behaviours will offer actionable insights for practitioners to successfully promote a more innovation-conducive environment.

Organisational member attitudes and their consequent behaviours present an area that, based on the conceptual study findings, remains largely uncharted. From a change management perspective, this is highly problematic. Scholars in this domain suggest that organisational member beliefs play a central role in the ultimate success or failure of organisational change initiatives (Armenakis *et al.*, 2007). It is commonly argued that successfully implementing organisational change, such as strategic innovation initiatives in outsourcing engagements, is

difficult, because organisational members often believe that they are not ready for the change and subsequently engage in resistant behaviour (Holt *et al.*, 2007; Holt and Daspit, 2015). Related research thus seeks to gain a deeper understanding of *factors that notably influence their readiness perceptions*, to develop “managerial influence strategies” (Armenakis and Harris, 2009, p. 133) that help practitioners institutionalise change. In the strategic innovation through outsourcing context, this gives ground for formulating the following research question:

RQ 2: How can high degrees of organisational readiness be created for strategic innovation initiatives in outsourcing from a (a) client perspective and (b) provider perspective?

In Weiner's (2009) organisational change readiness theory, organisational readiness refers to the organisational members' shared resolve to implement an organisational change initiative (change commitment) and shared belief in their collective capability to do so (change efficacy). Change commitment can be colloquially described as *willingness* of organisational members to support a change initiative, while change efficacy relates to their *perceived ability* to perform change-related activities. A high degree of organisational readiness is achieved when organisational members are willing and believe that they are collectively able to implement a change initiative (Weiner, 2009; Lokuge *et al.*, 2019). RQ 2 directs attention to the exploration of factors that influence the willingness of organisational members and their perceived ability to support change initiatives in form of strategic innovation through outsourcing initiatives.

Weiner's (2009) theory serves as guiding theory for an empirical study that is conducted as a response to RQ 2(a) and (b). Client perspective findings are presented in **CHAPTER 5: Empirical study findings – client organisational member perspectives**. Provider perspective findings are reported in **CHAPTER 6: Empirical study findings – provider organisational member perspectives**. The studies are based on an empirical case study approach (Walsham, 1995, 2006). Data collection, primarily in form of interviews, was carried out at two research sites. One involves an Austrian long-term care hospital, that, together with its research subsidiary, has engaged in four observed strategic innovation through outsourcing initiatives as a client firm. The other includes a multinational IT service provider. Data could be collected at one of its branch offices in the UK.

It must be noted that these research sites do not have any shared business relationships. The care hospital and its research subsidiary tend to engage with smaller-sized, local providers. The IT multinational in contrast is largely involved in outsourcing engagements with industry-leading organisations in the UK. The two research sites however offer the opportunity to develop empirically grounded insights from a client and provider perspective. Such bilateral insights are often called for in the IS sourcing field (Dibbern *et al.*, 2004; Kotlarsky *et al.*, 2015), but remain rare, presumably due to practical difficulties with gaining access to both the client and provider side of a business services outsourcing relationship.

### **1.3 Contributions to theory and practice**

Conceptual study (Chapter 4: Conceptual study findings) and empirical study (Chapter 5: Empirical study findings and **CHAPTER 6: Empirical study findings – provider organisational member perspectives**) findings offer three important contributions to the IS sourcing body of knowledge. These include:

1. A refined conceptualisation of the strategic innovation concept,
2. An integrative framework that offers a holistic view of the strategic innovation process in an outsourcing context, based on the research landscape to date,
3. An exploration of organisational member attitudes towards strategic innovation through outsourcing initiatives from a client and provider perspective, with a particular emphasis on their collective readiness.

The first key theoretical contribution involves a refined conceptualisation of the strategic innovation concept. Originally, Weeks and Feeny (2008) conceptualise strategic innovation with a focus on strategic business outcomes for the client. Outsourcing relationships however always involve two sides, the client firm and service provider. In this thesis, it is argued that innovations may also enable strategic business outcomes for providers. Extending strategic innovation to the provider perspective offers a more versatile concept that accounts for innovation effects experienced by both sides of an outsourcing relationship. This contribution

is useful, as it helps reconcile frequently differing views associated with strategic innovation in an outsourcing context.

The second major theoretical contribution is offered in the conceptual study. A theoretical literature review is developed to answer RQ 1. It consolidates insights published between 1998 and 2020, thereby offering a comprehensive snapshot of current advancements in research. A thematic analysis was conducted that provides the basis for a conceptual framework specific to innovation in outsourcing. This framework helps organise prior insights according to their relevance in the innovation process, capture their theoretical foundations, uncover connections to cost-oriented IS sourcing research, and carve out specific directions for future research.

The third theoretical contribution is offered in the empirical studies. Drawing on organisational change readiness theory (Weiner, 2009) as theoretical lens, notable factors are revealed that influence organisational member readiness to support strategic innovation through outsourcing initiatives. Three key patterns could be observed. The “multi-influence evaluation pattern” suggests that readiness-related evaluations are influenced by multiple factors located in the project, organisational and market environment. The “evaluation sequencing pattern” suggests that certain readiness-related evaluations may be more salient at the outset of a strategic innovation initiative than mid-implementation, and vice versa. The “readiness fragility” pattern suggests that high organisational readiness at the outset of an initiative may decline mid-implementation due to unanticipated disturbances. The identified range of factors and key patterns were integrated in a coherent framework.

The conceptual and two empirical studies presented in this thesis also have important practical implications, especially in relation to pricing model decisions, contract design, relationship style, knowledge sharing, and organisational member involvement. First, concerning pricing model decisions, practitioners are strongly advised to turn to flexible pricing models, rather than fixed pricing when leveraging outsourcing for strategic innovation (Oshri *et al.*, 2015). Here, provider case study findings also reveal a considerable motivational effect of outcome-based contracts in particular. As for contract design, practitioners are advised to rely on loose rather than rigid contracts, because these contractual regimes afford the innovating parties with the necessary

flexibility to pivot to new paths to innovate which may have not been specified in the contract ex ante. Regarding relationship style, this thesis presents relatively conclusive evidence of a partnership relationship style being superior to a tactical relationship in terms of conduciveness to strategic innovation in an outsourcing context. With respect to knowledge sharing, client and provider organisational members must be prepared to share firm-specific knowledge with each other in order to facilitate the development of customised solutions. This naturally exacerbates the risk of knowledge leakages, which nevertheless can be mitigated with adequate measures. Lastly, it is paramount to closely involve selected client organisational members from multiple business functions in innovation generation activities to ensure that the development is tailored to their needs, accepted upon introduction, and effectively used. Altogether, practitioners are strongly advised to re-evaluate their current approach to managing strategic innovation in an outsourcing context in light of the findings presented in this thesis, especially when they have predominantly utilised outsourcing as means for cost savings.

#### **1.4 Thesis structure**

This thesis includes eight chapters. Chapter 1: Introduction offered an introduction to the research context and an overview of research problems that are tackled in this thesis. Two research questions were presented and the approaches to answering them. Major theoretical contributions and implications for practice were also discussed.

Chapter 2: Conceptual Background outlines the phenomenon under investigation. It starts by tracking the evolution of innovation in the outsourcing context to its early beginnings in the IS sourcing literature when scholars described outsourcing itself as an innovative business practice. It then offers working definitions for outsourcing and strategic innovation in light of existing literature. Weeks and Feeny's (2008) strategic innovation concept is extended to accommodate strategic business outcomes from a provider perspective. Lastly, noteworthy outsourcing contexts that appear to be similar but were excluded are discussed.

Chapter 3: Research Approach outlines the approach for conducting the conceptual and empirical studies. The chapter begins with outlining the search and selection process for the

conceptual study literature review paper sample (95 papers published between 1998-2020). The approach to conducting case study research for the empirical studies is described next, together with an overview of the selected research sites. The chapter concludes by discussing data analysis techniques borrowed from Gioia *et al.* (2013) that are applied to the conceptual and empirical study datasets.

Chapter 4: Conceptual study findings presents the main findings of the theoretical review. It introduces a four-phase framework that emerged from the analysis of the paper sample and organises prior strategic innovation through outsourcing insights. A comprehensive overview of existing research and theoretical foundations is provided. Based on the analysis of the paper sample, the research gap for the empirical study is carved out. This enables a relatively fluid transition to the empirical study findings presented in the following two chapters.

In **CHAPTER 5:** Empirical study findings – client organisational member perspectives, key findings of the care hospital empirical case study are presented. This chapter starts with an overview of observed strategic innovation through outsourcing initiatives. It then introduces identified factors in the project, organisational and market environment that notably influence care hospital organisational member readiness perceptions at the outset and during strategic innovation through outsourcing initiatives. In the remaining sections, a thoroughly elaborated portrait of these factors and their thematic linkages is provided.

**CHAPTER 6:** Empirical study findings – provider organisational member perspectives presents findings from the IT multinational empirical study. They tie in with the structure of the preceding chapter and similarly include an overview of factors in the immediate project and wider business environment, and related thematic linkages, that are found to notably influence readiness evaluations of IT multinational organisational members. The chapter concludes with a summary that integrates key perspectives from this and the previous empirical chapter.

**CHAPTER 7:** Discussion offers a discussion of findings from the conceptual study and empirical studies. A step is first taken back to provide a high-level overview of the thesis. Afterwards, the major theoretical contributions are discussed in light of existing research. Limitations and four

specific directions, based on the theoretical review conceptual framework, are described next. The last section presents practical implications.

**CHAPTER 8:** Conclusion provides a summary of the thesis and its most important findings.

## **CHAPTER 2: CONCEPTUAL BACKGROUND**

### **Chapter summary**

This chapter sets the scene by describing the phenomenon under study, strategic innovation in a business services outsourcing context. The evolution of the innovation concept in the IS sourcing literature is presented first. The specific angle on strategic innovation through outsourcing under examination is discussed next. The working concepts, outsourcing and strategic innovation, are introduced here, as well as boundaries to neighbouring, but inherently different outsourcing contexts.

### **2.1 The evolution of the innovation through outsourcing phenomenon**

The current understanding of innovation, and more specifically strategic innovation, being one of the potential promises of outsourcing (Weeks and Feeny, 2008; Kotlarsky *et al.*, 2016), evolved over the years. Initially, innovation in the early ITO literature was commonly associated with the outsourcing decision itself. Over time, its reference point has been recasted to client firm business performance. Here, current wisdom holds that strategic advantages can be gained by responding to new business opportunities with the support of specialised providers. This section expands on developments of the business services outsourcing industry in light of innovation as an applied concept.

### **Early role of IT and the growing interest in IT outsourcing**

The innovation through outsourcing phenomenon can be traced back to the turn of the 21<sup>st</sup> century, a notable period in time in which the importance of IT for business activities started to experience a seismic shift. Up to that time, organisations traditionally associated IT with routine activities that were perceived to be essential for day-to-day operations to function, such as the provision and maintenance of a reliable network infrastructure (Venkatraman, 1997). Despite its indispensability, the then still limited possible contributions to significantly drive business performance gave IT an unfavourable image for strategic considerations (Grover *et al.*, 1994). Accordingly, IT activities were commonly viewed as a financial burden and managed as a “cost centre” (Venkatraman, 1997, p. 53). More often than not however, firms experienced bitter

disappointment as they failed to achieve desired cost-efficiency levels (Venkatraman, 1997). This sparked considerable interest in a variety of alternatives to the in-house approach, among which ITO in particular enjoyed a quick rise to prominence (Loh and Venkatraman, 1992).

### **Kodak effect and outsourcing as an administrative innovation**

Widely cited IS sourcing studies (e.g., Grover *et al.*, 1996; Lacity and Willcocks, 1998; Dibbern *et al.*, 2004) generally relate the worldwide ITO boom to the year 1989, a point in time which IS scholars first and foremost associate with what Loh and Venkatraman (1992) coined the “Kodak-effect”. Motivated by projected cost savings of as much as 50%, a landmark \$1 billion outsourcing agreement was announced in July that year which involved IBM and two other providers to build and operate a data centre for Eastman Kodak (Loh and Venkatraman, 1992). As a global watershed event, organisations operating across industry landscapes then started to reconsider the efficiency of keeping data centres in-house and perceived ITO to be a promising strategic alternative, implemented even by the world’s biggest players (Loh and Venkatraman, 1992; Lacity and Hirschheim, 1993).

The extensive outreach of this deal engendered scholarly discussions about the forms of influence that motivate organisations to engage in outsourcing. Consequently, the concept of administrative innovations was applied to examine the diffusion process of the ITO decision (Loh and Venkatraman, 1992; Grover *et al.*, 1994). Administrative innovations were defined as “significant changes in the routines used by the organization to deal with its tasks of internal arrangements and external alignments” (Venkatraman *et al.*, 1994, p. 497). The results of this research era suggest that organisations tend to imitate the outsourcing behaviour of other organisations in the same social system, while also being influenced by external information channels, such as ITO press announcements (Loh and Venkatraman, 1992; Venkatraman *et al.*, 1994; Hu *et al.*, 1997).

After this event, ITO was described as suddenly going from a curious anomaly to a veritable craze (Wilder, 1990). As organisations from diverse industries increasingly jumped on the outsourcing bandwagon (Lacity and Hirschheim, 1993), conceptualising the ITO decision as an administrative innovation lost its intriguing poignancy. Innovation in the outsourcing context

has since predominantly been linked to new IT-enabled business opportunities that arise with the commencement of an outsourcing relationship. In this regard, prevalent views in the research stream essentially dichotomised into realistic and optimistic appraisals of the innovation potential that can be leveraged through outsourcing. Both perspectives support the fundamental idea of achieving innovation through outsourcing, but they diverge in terms of achievable magnitudes of novelty and business outcomes.

### **Pursuing incremental or strategic business outcomes with innovation through ITO**

The realistic perspective suggests that incremental process improvements, usually to garner cost savings, are achievable through outsourcing. Fundamental departures from existing practices are however faced with scepticism and not consciously pursued. This perspective is for instance reflected in findings by Cross (1995) and Hipp and Grupp (2005). In contrast, the optimistic perspective suggests that innovations with a strategic business impact (DiRomualdo and Gurbaxani, 1998; Weeks and Feeny, 2008) can be extracted from outsourcing. They may affect multiple business areas, if not the entire client organisation. This thesis gives credence to the optimistic perspective, which has similarly been advocated by renowned IS scholars such as Kotlarsky *et al.* (2015, 2016), Oshri *et al.* (2015), Weeks and Feeny (2008), Whitley and Willcocks (2011) or, most recently, Dibbern and Hirschheim (2020).

### **The rise of BPO**

The optimistic perspective on innovation through outsourcing gained considerable traction in the late 1990s. In these years, the ITO industry experienced a profound upheaval, stemming from its expansion to IT-enabled business processes and services. This marked the advent of business process outsourcing (BPO) (Fröschl, 1999; Currie, 2000; Gurbaxani and Mooney, 2002; Dibbern *et al.*, 2004; Namasivayam, 2004). Incidentally, while cost efficiencies continued to be an important incentive to any organisation for IT-related make-or-buy decisions, this one-sided orientation was gradually dethroned by an emphasis on utilising IT to exploit business opportunities (Venkatraman, 1997). Scholars increasingly picked up on this notion and started to investigate the strategic potential of outsourcing relationships. Here, the growing tendency

to leverage ITO and BPO for innovations that support the realisation of the client's business opportunities attracted particular interest (DiRomualdo and Gurbaxani, 1998; Quinn, 1999).

### **Setting the focus on relevant publications since 1998**

Pioneering studies examining the growing importance of leveraging outsourcing for business impact planted the seeds for future research by directing attention to the plurality of strategic intents clients often have (DiRomualdo and Gurbaxani, 1998), the set of capabilities necessary to harness the technological prowess of service providers (Feeny and Willcocks, 1998), the benefits and drawbacks of single and multi-sourcing configurations (Currie and Willcocks, 1998) and the quality of an outsourcing relationship (Lacity and Willcocks, 1998). In line with the publication year of these prominent studies, the theoretical review presented in Chapter 4: Conceptual study findings covers a time span of 22 years, starting from 1998 and ending in 2020.

### **Outsourcing today: the advent of business services outsourcing**

As the outsourcing industry continued to grow, IT and IT-enabled business processes are increasingly bundled for outsourcing (Gerbl *et al.*, 2015; Lacity *et al.*, 2016; Manning *et al.*, 2018). As a consequence, ITO and BPO engagements become difficult to clearly distinguish from one another. Contemporary research attempts to capture this trend by referring to pooled ITO and BPO services as “business services sourcing” (Lacity *et al.*, 2016, p. 269) or “global services sourcing” (Manning *et al.*, 2018, p. 2305). Empirical evidence presented in modern studies accordingly often provide innovation-related insights that are based on a mixed ITO and BPO data sample (Lema *et al.*, 2015; Oshri *et al.*, 2015, 2018; Zimmermann *et al.*, 2018).

On the whole, innovation in IS sourcing research experienced a turbulent evolvement. At its inception, innovation was generally associated with the outsourcing decision. With the Kodak deal and the subsequent pervasiveness of outsourcing engagements across industries, this logic was gradually displaced by a focus on developing IT-enabled innovations to realise incremental, or more strategic business outcomes for client firms. Today's innovation through outsourcing research continues to be shaped by the legacy of this pioneering body of

knowledge. While sceptics remain unconvinced that outsourcing can be leveraged for innovations with a strategic impact on client firm business performance, optimistic scholars provide empirical evidence suggesting that resourcefully devised partnerships and business architectures can certainly help achieve this feat (Weeks and Feeny, 2008; Su *et al.*, 2016).

## **2.2 The specific angle on innovation through outsourcing under examination**

In this subchapter, the main working concepts are discussed. Definitions and examples in existing literature are brought together for this purpose. In doing so, the particular angle on the innovation through outsourcing phenomenon this thesis focuses on, namely leveraging business services outsourcing engagements for *strategic innovation*, can be singled out. Before expanding on the strategic innovation concept, an overview of ITO, BPO and business services outsourcing is provided.

### **Defining ITO, BPO and BSO**

Adapting Willcocks and Kern's (1998) definition, ITO involves an inter-firm relationship in which a client firm contracts an external service provider for the provision of some or all assets, resources, and/or activities that would have otherwise been provided by its internal IT function. BPO extends ITO past the boundaries of a client firm's IT function and involves contracting an external service provider for the completion of single information-intensive IT-enabled activities or IT-enabled business processes, such as cheque processing or accounts receivables, or a bundle of IT-enabled business processes that form part of a business function, for instance finance and accounting (Bharadwaj *et al.*, 2010; Barua and Mani, 2014). In both contexts, the provider typically owns and operates the infrastructure, applications, and employs the people (many of these frequently having been transferred from the client) who are necessary to deliver the services specified in the contract in exchange for an agreed on fee (Holweg and Pil, 2012). In today's outsourcing engagements, ITO and BPO services are commonly pooled together. This is referred to as business services outsourcing (Lacity *et al.*, 2016; Lacity and Willcocks, 2017).

## Original definition of strategic innovation

Clearly, the innovation concept increasingly gains popularity in the IS sourcing literature, but remains inconsistently defined. In the early stages of IS sourcing research, innovation refers to the delivery mode – outsourcing (Loh and Venkatraman, 1992). In contemporary IS sourcing research, innovation refers to the content delivered. A definition that most closely captures innovation in a form that is specific to the outsourcing context, and therefore highly relevant for this thesis, is offered by Weeks and Feeny (2008). Based on their empirical observations of four large-scale ITO relationships, they position innovation, in general, as a process that involves “the introduction of strategies, business processes or technologies that are new to a relationship and are intended and expected to lead to new business outcomes” (p.130). They add that such developments are *strategic innovations*, if they “significantly enhance the [client] firm’s product/service offerings for existing target customers, or enable the firm to enter new markets” (p.131). They further acknowledge that their definition of strategic innovation reflects a client rather than service provider orientation and that developments only have to be new to the environment under study, but not necessarily new to the world.

This definition of strategic innovation has found much resonance in the emerging innovation through outsourcing research stream and is adopted in later studies, such as the ones by Burdon and Feeny (2011), Kotlarsky *et al.* (2016) Oshri *et al.* (2011, 2015, 2018) and Whitley and Willcocks (2011). This thesis similarly builds on Weeks and Feeny’s (2008) definition. The lack of well-described, tangible examples in Weeks and Feeny’s (2008) paper however, and the apparent absence of follow-up studies by the scholars that could have provided a deeper examination of strategic innovation through outsourcing, leave their original definition relatively vague. To provide a more fine-grained picture of what constitutes a strategic innovation, the concept will now be broken down into two key dimensions: *output* and *outcome*.

To gain a clearer understanding of strategic innovation outputs and outcomes, five empirical examples in prior IS sourcing literature were extracted, that are explicitly labelled as “strategic

innovation” based on Weeks and Feeny's (2008) concept. **Error! Reference source not found.** provides an overview of these strategic innovations.

Strategic innovation	Description and fit with “strategic innovation” characteristics	Reference
Custom expanded IT infrastructure	<p>The client wanted to transition into a new market and turned to its provider for expanding its existing IT infrastructure to the new locations.</p> <p><i>Technical output properties:</i> The expanded IT infrastructure is new (<i>relative novelty</i>) and customised to the particular client (<i>client specificity</i>). It also facilitates its wider business operations, from product development to after-sales services, specifically in the newly entered marine overhaul market (<i>pervasiveness</i>).</p> <p><i>Enabled business outcomes:</i> The IT infrastructure has been expanded to support the client’s revised strategic direction geared towards new market entry (<i>business strategy alignment</i>) and allowed the client to significantly enhance its offerings by being able to compete with new marine overhaul products (<i>long-term impact on competitiveness</i>).</p>	(Weeks and Feeny, 2008)
IT-enabled supply chain system	<p>A pharmaceuticals client (Novartis) struggled with managing inventory levels of medication in Africa. An SMS-based stock management system was jointly developed with IBM and Vodafone.</p> <p><i>Technical output properties:</i> The stock management system is new to Novartis (<i>relative novelty</i>) and presents a solution that is customised to the specific business conditions in rural African regions (<i>client specificity</i>). It also <i>pervades</i> multiple areas of Novartis’s value chain, particularly warehousing, order management and customer management.</p> <p><i>Enabled business outcomes:</i> The stock management system not only aligned with Novartis’s strategy to establish a stronger presence in African markets, but</p>	(Oshri <i>et al.</i> , 2015; Kotlarsky <i>et al.</i> , 2016)

	also with its mission to promote greater social impacts ( <i>business strategy alignment</i> ).	
Custom social media application	<p>A telecommunications client collaborated with IBM on a custom application that helps the client manage its growing social media traffic.</p> <p><i>Technical output properties:</i> The developed application presents a modification of available products in IBM's R&amp;D centre, but is new (<i>relative novelty</i>) and has been customised to client's needs (<i>client specificity</i>). It also <i>pervades</i> the core business functions of the client.</p> <p><i>Enabled business outcomes:</i> The application helped the client tackle the strategic problem of growing traffic on mobile networks (<i>business strategy alignment</i>) and allowed it to offer a new social media-based service for its customers (<i>long-term impact on competitiveness</i>).</p>	(Kotlarsky et al., 2016)
Dashboard software tool for executives and top managers	<p>Client corporate executives requested IBM (provider) to develop a management information systems dashboard for making more informed decisions.</p> <p><i>Technical output properties:</i> The dashboard was specifically developed in response to a contemporary business problem mentioned by the client's CEO. It is based on existing solutions of IBM, but is new to the client (<i>relative novelty</i>) and fully customised to its business environment (<i>client specificity</i>). In terms of <i>pervasiveness</i>, it allows client managers across the organisation to make more informed decisions.</p> <p><i>Enabled business outcomes:</i> The dashboard aligned with the client's strategic need to "feel the pulse of the business" (p. 7) (<i>business strategy alignment</i>) and promised to enable a shift towards competing on the basis of data-driven rather than heuristic decision-making (<i>long-term impact on competitiveness</i>).</p>	(Kotlarsky et al., 2016)
Custom social media marketing platform	<p>Diageo (client), a major player in the global beverage industry, received a new social media marketing platform from Infosys (provider).</p> <p><i>Technical output properties:</i> The developed marketing platform was new to Diageo (<i>relative novelty</i>) and</p>	(Oshri et al., 2015)

	<p>customised to its multichannel approach (<i>client specificity</i>). It <i>pervaded</i> multiple areas of Diageo's global marketing and sales activities, including digital marketing asset development, global and local campaign launches, customer data analysis and cooperations with local marketing agencies.</p> <p><i>Enabled business outcomes:</i> The marketing platform aligned with Diageo's revised core growth strategy (<i>business strategy alignment</i>) and enabled a centralised approach to managing its many brands through multiple social media channels, thereby greatly mitigating campaign lead times, and reducing the need to repeatedly develop marketing assets from scratch due to the previously decentralised approach (<i>long-term impact on competitiveness</i>).</p>	
<b>Table 1:</b> Strategic innovation output examples		

### Strategic innovation outputs

Following Busse (2010), one can distinguish between innovation outputs and the benefits they enable (outcomes). Outputs refer to the particular *technical form* innovations materialise in. Shared properties of the examples displayed in **Error! Reference source not found.** are reflected in their (1) relative novelty, (2) specificity and (3) pervasiveness.

Concerning strategic innovation output *novelty*, the outputs prior studies have examined are typically new to the client firm, but may already be known to the service provider (Arora *et al.*, 2001; Shi, 2007; Sumo *et al.*, 2016). In one of their cases for instance, Kotlarsky *et al.* (2016) found that IBM (service provider) developed a social media application for a telecom company (client firm), by relying on existing solutions and technologies available within its R&D centre. The exposure of the service provider to multiple industries is therefore of great importance, as it indicates the variety of insights and technologies that can be transferred to the client firm (Weeks and Feeny, 2008). These may already be utilised in other unrelated domains by other provider customers, but can prove to be valuable new additions to the client firm if adequately contextualised. Following Laursen and Salter's (2006) distinction between new-to-the-firm and

new-to-the-world innovations, strategic innovation outputs presented in prior research are thus typically new to the client firm, occasionally new to the client firm's industry, but rarely involve breakthrough technologies that are completely new to the world.

Concerning *specificity*, strategic innovation outputs are usually highly customised to the client firm's business environment (Weeks and Feeny, 2008). The examples in prior literature show that the core of such outputs tends to be an advanced, but general or "vanilla" technology of the provider, which is contextualised to the idiosyncratic business environment of the client. From a service provider perspective, such outputs are often referred to as customised IT-enabled "solutions" (Arora *et al.*, 2001; Chatterjee, 2017; Desyllas *et al.*, 2018). To develop such custom solutions, high levels of domain knowledge that is specific to the client needs to be combined with high levels of technological knowledge, primarily located at the service provider (Weeks and Feeny, 2008; Chatterjee, 2017). Due to their high degrees of client-specific domain knowledge, these outputs usually cannot be fully replicated for a provider's other clients (Chatterjee, 2017).

The empirical examples indicate that strategic innovation outputs can *pervade* the client firm both vertically and horizontally, by acting as a critical input for its other business activities (Mani *et al.*, 2010). They do so by facilitating new ways of producing and delivering business services and enabling new forms of customer interaction, as is for instance the case with the custom social media platforms, or creating new forms of quality control and assurance (Den Hertog, 2000; Miozzo *et al.*, 2016), as for example provided by the dashboard. Following Swanson's (1994) typology of IS innovations, strategic innovation outputs appear to most closely resemble Type III innovations, because they extend beyond the confines of the IT function, potentially impacting the client firm's business in its entirety. Of note are the many diverse user groups for whom strategic innovation outputs have been developed. The output examples presented in **Error! Reference source not found.** show that users directly interacting with the innovation can be located both within the client firm and outside, such as client firm employees in the case of the executive dashboard and the social media marketing platform, or client firm suppliers in the case of the SMS-based supply chain management system.

## Strategic innovation outcomes

Strategic innovation outcomes refer to *competitive performance benefits* enabled by a strategic innovation output.

The “strategic” aspect of strategic innovations really only crystallises when shedding light on the outcomes they enable. Of note is their strong *link to the client’s overall business objectives* and their *direct impact on client competitiveness*. Concerning the former, strategic innovations are commonly regarded as a response to an emerging business opportunity for the client firm (Weeks and Feeny, 2008; Lahiri and Kedia, 2009; Chou *et al.*, 2015). They should therefore not be understood as a quick fix to operational problems, but rather as development initiatives that support the client firm’s corporate strategy and business objectives. Weeks and Feeny’s (2008) observed IT infrastructure expansion provides a case in point. The client firm, a leader in the defence market, revised its strategic direction and wanted to move into the submarine overhaul market. Due to its decoupled IT operations, it required its provider to support its strategic manoeuvre by introducing new IT-enabled products and services that enable the market entry. This case shows that strategic innovations directly support the client firm’s long-term business strategy, rather than short-term strategies that commonly emphasise on quick cost efficiencies (Weeks and Feeny, 2008; Kotlarsky *et al.*, 2016).

Regarding *direct impact on client competitiveness*, the strategic innovation initiatives observed in prior literature promise to enhance a client firm’s competitiveness in multiple dimensions. This closely aligns with DiRomualdo and Gurbaxani’s (1998) finding that outsourcing engagements are increasingly leveraged for business impact. They argue that this involves deploying IT to significantly improve critical aspects of client firm business performance. Relevant research accordingly suggests that strategic innovations can directly and substantially improve client firm competitiveness in the dimensions of business growth, by enabling access to new markets (Weeks and Feeny, 2008), firm-level productivity through enhanced operational excellence (Kotlarsky *et al.*, 2016; Susarla and Mukhopadhyay, 2019), for instance by reducing cost of production delivery (Desyllas *et al.*, 2018) and inventory pools

(Miozzo and Grimshaw, 2005), and product/service offerings (Weeks and Feeny, 2008), by for example improving product introduction success rates and a faster time to market (Miozzo and Grimshaw, 2005; Susarla and Mukhopadhyay, 2019). In some cases, innovation outcomes can even be transformational, in the sense that they enable the introduction of an entirely new business model at the client firm (Linder, 2004; Miozzo and Grimshaw, 2005; Mukherjee *et al.*, 2013). Altogether, these competitive benefits are long-term benefits for the client firm and may be cumulative rather than mutually exclusive. Lacity and Willcocks (2013) underlined this long-term orientation by suggesting that innovations “deliver substantial long-term improvements to the client’s operating efficiency, business-process effectiveness and strategic performance” (p.63).

### **Overview of strategic innovation characteristics**

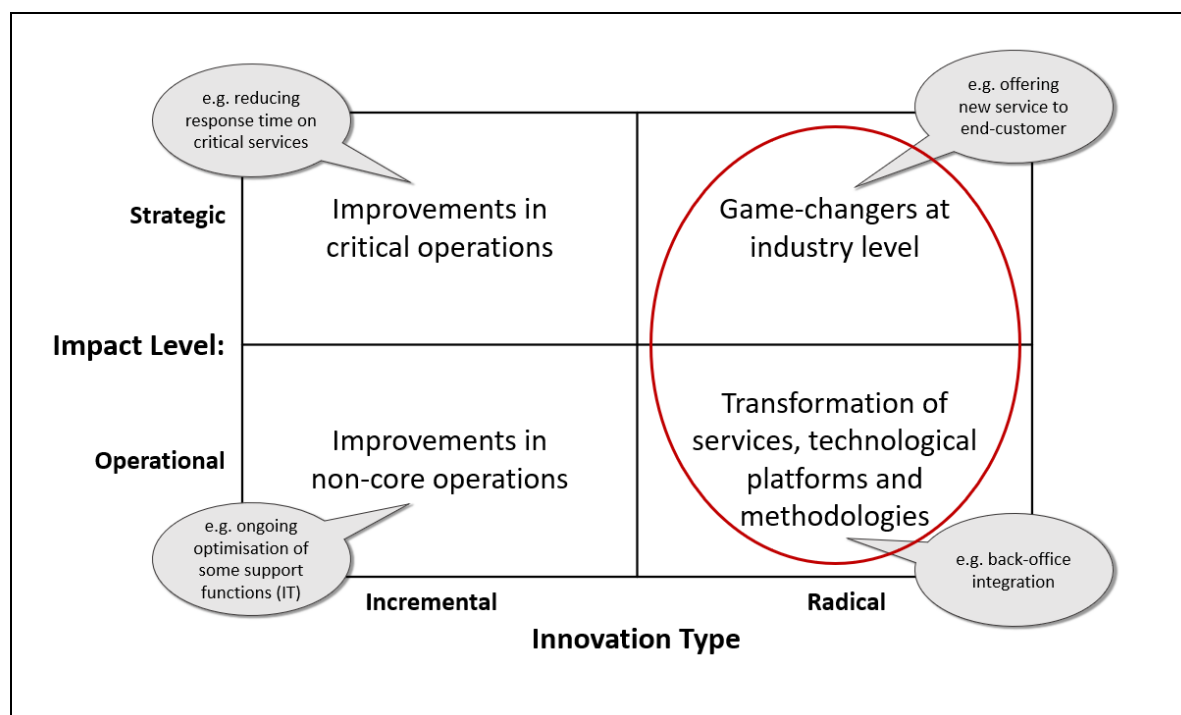
The sections above demonstrate that strategic innovations can be associated with certain key characteristics. They are summarised in **Table 2**. The discussion about strategic innovation outputs provides relatively flexible points of orientation. Strategic innovation outputs may take a variety of forms which are usually enabled by IT. They are however commonly characterised by client firm-oriented properties, including the relative novelty to the client firm’s business environment, client firm-specificity and client business-wide impact. Strategic innovation outcome arguments suggest that innovations may be considered “strategic” when they support the client firm’s overall business strategy and are expected to improve its competitive position over the long-term.

### **Strategic innovation in light of other prominent innovation concepts**

The fairly detailed picture of strategic innovations provided above helps draw connections to established innovation concepts that also started to gain traction in the IS sourcing literature. A first point of orientation for this comparative evaluation can be found in **Figure 1**, adapted from Kotlarsky *et al.* (2015, p. 252). Their intuitive innovation typology highlights the relevance of the radical innovation type with an impact on an organisation’s operational and strategic activities. For this reason, the radical innovation concept will now be discussed and compared

to strategic innovations, before expanding on modular and architectural innovation as two other prominent innovation concepts that have been similarly applied in prior outsourcing research.

Strategic innovation output properties	Strategic innovation outcome properties
<p><i>Novelty:</i></p> <p>New to the client firm, but not necessarily to the service provider, to neighbouring domains, or to the world.</p>	<p><i>Opportunity exploitation:</i></p> <p>Support the client firm's overall business strategy by enabling a response to new business opportunities.</p>
<p><i>Specificity:</i></p> <p>General technology as a basis infused with client-specific domain knowledge results in an output that is customised to the idiosyncratic business environment of the client firm.</p>	<p><i>Enhanced competitiveness:</i></p> <p>Tangible benefits may be realised in improved new product development, productivity, business growth, business transformation, or a combination of these.</p>
<p><i>Pervasiveness:</i></p> <p>Critical input to other business activities of the client firm, thereby usually pervading most, if not the entire organisation.</p>	<p><i>Long-term relevance:</i></p> <p>Enabled business outcomes remain relevant for client firm performance over a long-term period.</p>
<b>Table 2:</b> Summary of strategic innovation key characteristics	



**Figure 1:** Examples of innovation in a business services outsourcing context, a typology based on innovation type and impact level. Adapted from Kotlarsky *et al.* (2015, p. 252).

## Radical innovation

Radical innovation is a technology-centric concept, rooted in the innovation literature (Hopp *et al.*, 2018). It is applied in several innovation through business services outsourcing studies, most notably in the ones by Roy and Sivakumar (2011) and Oshri *et al.* (2015). The concept focuses on the degree of new knowledge embedded in the technology (Dewar and Dutton, 1986) and the magnitude of change the new technology stimulates (Gopalakrishnan and Damanpour, 1997; Crossan and Apaydin, 2010). Radical innovations are understood to incorporate large degrees of new knowledge (Dewar and Dutton, 1986) that can destroy the usefulness of a firm's existing knowledge base (Tushman and Anderson, 1986; Henderson and Clark, 1990). They do so by producing changes in business activities which are so fundamental, that they prompt discontinuances of existing practices (Dewar and Dutton, 1986; Gopalakrishnan and Damanpour, 1997).

Based on Weeks and Feeny's (2008) study, Oshri *et al.* (2015) and Kotlarsky *et al.* (2015, 2016) invoked the notion of reconciling the strategic innovation concept with the radical innovation concept. While the majority of strategic innovation examples listed in **Error! Reference source not found.** involve established technologies that may not be perceived as radical innovations at first glance, their radical degree of newness and high magnitude of change surface when taking the perspective of a client firm.

To clarify the overlap between the strategic innovation and radical innovation concept, Oshri *et al.* (2015) and Kotlarsky *et al.* (2015, 2016) provide an example they observed in practice, namely the joint development of a custom social media marketing platform for Diageo, together with its long-standing provider Infosys. This development would fail to be considered as a radical innovation from Infosys's (provider) perspective. It neither involves large degrees of new technological knowledge, nor does it cause notable discontinuances in the provider's practices.

Nonetheless, from Diageo's perspective, the infused technological knowledge is perceived as entirely new. In terms of change magnitude, Diageo's global marketing management activities could be united across all markets with the platform solution, resulting in the discontinuation of earlier *modi operandi* that were based on a fragmented and decentralised marketing approach.

### **Modular innovation**

Kotlarsky *et al.*'s (2015) comparison between incremental and radical innovation displayed in **Figure 1**, and their interpretation of strategic innovation more closely resembling the latter, may leave attentive scholars wondering about developments that cannot be clearly mapped to the radical end of this spectrum from a client perspective. Indeed, returning to the examples listed in **Error! Reference source not found.**, it could be argued that the introduction of an SMS-based stock management system for Novartis does not necessarily have to result in discontinuances of its existing warehousing and distribution practices.

Henderson and Clark (1990) acknowledge a fundamental incompleteness of the incremental-radical innovation dichotomy and introduce a more granular typology to account for innovations that involve more modest changes to existing technologies, but still offer the potential for notable competitive advantages. In their research, they adopt a technical, product-centric perspective, distinguishing between product components and architectures (the way components interact). They present "modular innovation" as a type of innovation in which product components are substantially changed while the overall architecture remains largely the same.

In this vein, the SMS-based stock management system seems to be more modular than radical in character. From the perspective of Novartis, replacing analogue, paper-based components of the stock management system with SMS-based components led to significant supply chain improvements and minimisation of the "last-mile" problem (Kotlarsky *et al.*, 2016). Of note is that the overall architecture of the stock management system did not require marked changes to integrate SMS-based components. Prior linkages to other parts of the system, for instance to stock level monitoring or reporting, were mostly preserved.

The modular innovation concept appears to have evaded the attention of IS sourcing scholars as of yet. Aubert *et al.* (2015) have briefly touched on its role in an outsourcing context, but did not provide extensive empirically-grounded findings. Prominent IS sourcing literature reviews (Dibbern *et al.*, 2004; Lacity *et al.*, 2010, 2011, 2016) similarly provide no evidence of studies drawing on modular innovation. The concept nonetheless shows that strategic innovations do not necessarily have to be of radical, competence-destroying nature from a client perspective, but can also involve more subtle changes, as long as these match with the strategic innovation characteristics outlined in **Error! Reference source not found.** and **Table 2.**

### **Architectural innovation**

Another innovation concept that enjoys great popularity in mainstream innovation research and started to disperse into the IS sourcing literature is that of architectural innovations (Henderson and Clark, 1990). Notable outsourcing studies that refer to this type of innovation are the ones by Miozzo and Grimshaw (2005) and Aubert *et al.* (2015). Architectural innovation centres on how existing components could work together differently (Volter and Veloso, 2008). Like in the two innovation types presented previously, firms can similarly enjoy substantial competitive advantages with architectural innovations (Henderson and Clark, 1990).

Many of the strategic innovation examples listed in **Error! Reference source not found.** seem to fit to the architectural innovation concept from a service provider perspective. They often involve recombinations of components for existing solution systems which may have been introduced in some other form to the service provider's different clients (Arora *et al.*, 2001).

In Kotlarsky *et al.*'s (2016) observed empirical examples of a social media application for a telecommunications corporation and a dashboard for an automotive corporation, clear parallels to the underlying premise of architectural innovation become evident from a service provider perspective. In both cases, IBM, the provider, relied on technologies and solutions that were already available in its research centres. These were subsequently reconfigured to meet the particular business needs of the two clients. Or in the spirit of Henderson and Clark (1990), IBM created new product architectures by linking existing components together in new ways.

IBM thereby was not only able to strengthen its relationships with the clients, but also expand its scope of services.

### **Strategic innovation as concept with a dual meaning**

Fundamentally, the above arguments suggest that strategic innovation can be conceptualised as an innovation concept that is associated with dual meanings, depending on the adopted perspective. Strategic innovation appears to resemble radical innovations most closely from a client perspective and architectural innovations from a provider perspective. In view of the key characteristics outlined earlier, strategic innovations may be radically new to the client, but already known to the provider. They tend to involve the idiosyncratic combination of largely new components to develop new or substantially improve existing architectures from a client perspective, and the combination of largely known components to develop new architectures from a provider perspective. They may pervade the client's business and thereby replace existing practices, but not necessarily the provider's. They primarily support the client's business objectives and substantially improve its competitiveness. From a provider perspective, they help the provider attract repeat business and foster a long-term relationship with the same client. That perspective matters for the examination of innovations in outsourcing is also pointed out by Weeks and Feeny (2008). It is therefore paramount to clarify which side of an outsourcing relationship is considered as reference point when studying strategic innovation in an outsourcing context.

Weeks and Feeny's (2008) original definition of strategic innovation as an outcome-centric innovation concept can be extended in light of the above. From a client firm perspective, Weeks and Feeny (2008) suggest that strategic innovations significantly enhance the client's product and service offerings for its existing target customers, or enable the client to enter new markets. From a provider perspective, prior research indicates that strategic innovations on behalf of the client allow the provider to secure new business opportunities with the same client. As such, both parties may experience strategic benefits in terms of enabled business outcomes. The client can substantially improve its competitive position, while the provider can expand its scope of services and increase revenues, ultimately producing a win-win situation for both.

### 2.3 Excluded research contexts: Non-IT R&D outsourcing and contract manufacturing

This section offers several arguments for excluding certain adjacent of fields research from the particular angle on the strategic innovation through outsourcing phenomenon under study. The following two inherently different outsourcing contexts fall out of the scope of this thesis: non-IT R&D outsourcing and, more specifically, innovation via contract manufacturing. They are worth mentioning because they appear highly similar. Both contexts are the focus of growing research streams in the innovation discipline (e.g., Hsuan and Mahnke, 2011; Cabigiosu *et al.*, 2013). Choosing to exclude these contexts conforms with prior IS sourcing research (Mani *et al.*, 2010; Lacity *et al.*, 2016). Notably, this should not imply that insights from these research streams are irrelevant. It however falls out of the scope of this thesis to examine how these insights can be transferred to the business services outsourcing context.

R&D outsourcing, also commonly referred to as innovation outsourcing (note the absence of the preposition “in” or “through”), attracted wider attention with Quinn's (1999, 2000) influential works and has evolved into a popular strand of research ever since (Hsuan and Mahnke, 2011; Stanko and Calantone, 2011; Rosenbusch *et al.*, 2019). It needs to be clarified that innovation in an IS sourcing context may fall under the broad umbrella of R&D outsourcing, but much of the research in the R&D outsourcing discipline focuses on *non-IT* contexts. Such contexts may for instance include contract manufacturing which will be discussed below, or pharmaceutical research, where certain activities like clinical trials are routinely outsourced to contract research organisations (Sariola *et al.*, 2015).

Non-IT R&D outsourcing in general is also characterized by three broad aspects that provide a rationale for its exclusion. First, non-IT R&D outsourcing engagements are frequently geared towards innovation as sole contracted performance outcome (Sumo *et al.*, 2016). In contrast, innovation, and strategic innovation in particular, is not necessarily captured in business services outsourcing contracts (Kotlarsky *et al.*, 2015). Second, the R&D function itself is usually considered to be a core competence of the client firm (Stanko and Calantone, 2011). Business processes in a BPO context, such as HR management and payroll, in contrast mostly only play an administrative role and can be separated more easily from a client firm's core

activities (Lee and Kim, 2010). Third, business services outsourcing relationships usually include at least one professional IT service provider, if not more (Su and Levina, 2011; Wiener and Saunders, 2014). In traditional IS sourcing research, the IT provider, also often referred to as IT vendor, is therefore regarded as a central actor in client-vendor outsourcing relationships (Levina and Ross, 2003). Project partners in non-IT R&D outsourcing however do not have to involve IT providers. Rather, they may include public and private research institutes, suppliers, competitors, customers or a combination of these (Cui *et al.*, 2009). This thesis focuses on innovation through ITO and BPO, thereby following recent calls for more research on this particular area of interest (Kotlarsky *et al.*, 2015; Lacity *et al.*, 2016).

Contract manufacturing is the product-centric counterpart to information-intensive business services outsourcing. Innovation in a contract manufacturing context has established itself in a similar fashion to R&D outsourcing as a captivating idea that attracted the keen attention of business management scholars. Studies that concentrate on the innovation potential of contract manufacturing in different settings abound, most notably in the electronics suppliers context (Leiblein *et al.*, 2002; Alcacer and Oxley, 2014), such as Foxconn innovating for Apple (Marion and Friar, 2012), and in the automotive sector, by innovating with original equipment manufacturers (OEMs) (Mikkola, 2003; Zirpoli and Becker, 2011; Wagner, 2012; Cabigiosu *et al.*, 2013). The principal difference between contract manufacturing and business services outsourcing is that the former mainly focuses on the manipulation of physical objects (Mani *et al.*, 2010). Research in this vein for instance studies how product modularity can ease the integration of OEMs as sources of external innovation, by examining air conditioning systems for cars (Cabigiosu *et al.*, 2013). Business services outsourcing in contrast mainly focuses on the manipulation of informational objects, in which IT plays an integral role (Mani *et al.*, 2010).

## CHAPTER 3: RESEARCH APPROACH

### Chapter summary

This chapter outlines the selected research approach for the conceptual study of this thesis as a direct response to RQ 1 in form of a literature review (presented in Chapter 4: Conceptual study findings), and the empirical studies as direct responses to RQ 2 in form of qualitative case studies (presented in Chapter 5: Empirical study findings and **CHAPTER 6**: Empirical study findings – provider organisational member perspectives). This chapter contains three subchapters. In the first subchapter, the scope, search strategy and selection criteria related to the conceptual study are presented. This is followed by a discussion about case study research as preferred approach of empirical enquiry, an overview of selected cases, and incorporated data collection techniques. Lastly, analytical techniques borrowed from Gioia *et al.*'s (2013) “Gioia Methodology” are presented in the final sections of this chapter. They are used to analyse the literature review and empirical case study datasets.

### 3.1 Approach to conducting the conceptual study<sup>1</sup>

The approach to conducting the conceptual study in form of a theoretical literature review is mainly informed by:

- Paré *et al.*'s (2015) main principles for conducting literature reviews of theoretical nature, which include (1) a broad research question, as formulated in RQ 1, (2) a comprehensive search strategy, (3) the consideration of both conceptual and empirical studies, (4) a clear study selection process, and (5) a structured approach to effectively organise prior research with a framework,
- Webster and Watson's (2002) search strategy guidelines, and

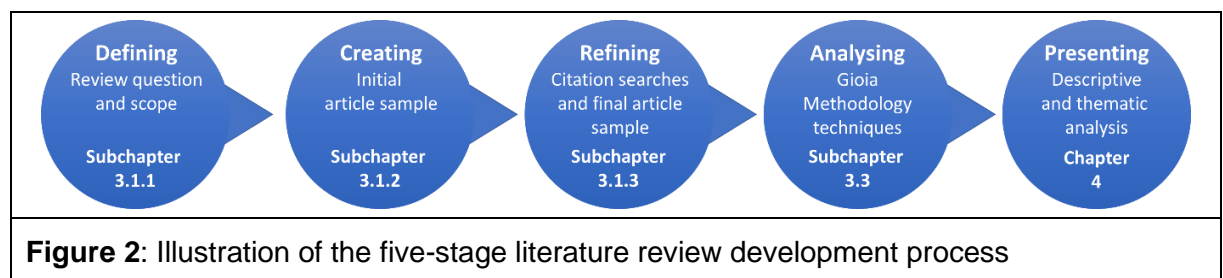
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<sup>1</sup> The approach described in this subchapter corresponds to the one implemented for a co-authored paper to be published in the *Journal of Strategic Information Systems* (see Acknowledgement of collaborative work within the thesis). Subchapter 3.1 thus benefitted from extensive edits by the co-authors (co-author 1 Aleksandre Asatiani, co-author 2 Julia Kotlarsky).

- Tranfield *et al.*'s (2003) suggestion to produce a two-stage review, by first providing a descriptive account of the sample, which is followed by a thematic analysis report.

The theoretical review is structured along an iterative, five-stage process that includes (1) defining the review question and scope, (2) creating an initial article sample, (3) refining the sample by selecting relevant studies for the final article set, (4) analysing papers in the final article set and (5) presenting descriptive and thematic findings.

The first three stages will now be expanded on in greater detail. The fourth stage, data analysis, relies on techniques that are similar to those utilised for the empirical case studies. For this reason, these techniques will be introduced further below in subchapter **3.3** Data analysis based on the Gioia Methodology, after the dataset of the empirical case studies is described. Corresponding to the fifth stage, Chapter 4: Conceptual study findings presents descriptive and thematic analysis insights. **Figure 2** provides an illustration of these five stages and related sections in the thesis.



### **3.1.1 Defining the research question and scope**

The primary aim of the literature review is to provide a theoretical foundation for this thesis that is based on a synthesis of the growing, yet fragmented body of knowledge surrounding the strategic innovation through outsourcing phenomenon. Concisely put, the review should shed more light on what is known and what still needs to be known (Webster and Watson, 2002; Paré *et al.*, 2015). In this regard, the following research question is formulated:

*RQ 1:* How has existing research conceptualised the strategic innovation through outsourcing process and how have reference theories been applied?

Three broad objectives complement this research question. First, a comprehensive account of the research landscape to date should be provided. In this regard, a paper sample including 95 journal articles was created. Second, and in line with the purpose of unearthing what is known, the theoretical review should consolidate prior insights to enable a holistic view of the current strategic innovation through outsourcing body of knowledge. This objective is achieved with the integrative framework presented in the thematic analysis section of Chapter 4: Conceptual study findings. The third objective involves the identification of research areas that are underexplored. Thereby, the research gap relevant for the empirical case studies presented in Chapter 5: Empirical study findings and **CHAPTER 6: Empirical study findings – provider organisational member perspectives** should be clarified.

### **Scoping study**

Now that the research question for the theoretical review and supporting objectives are laid out, boundaries for the phenomenon under study, strategic innovation through outsourcing, need to be drawn by formulating inclusion and exclusion criteria. Doing so requires a deeper understanding of this topic, which was built by scoping out the field (Tranfield *et al.*, 2003; Paré *et al.*, 2015).

The scoping study was approached in an unstructured fashion, starting with title, abstract and keyword (TAK) searches using the terms “innovation” and “outsourcing” in EBSCO’s Business Source Complete database. At this early point in time, I did not differentiate between the type of source (book, theoretical journal, practitioner journal, conference paper, teaching case, industry report), nor the scientific quality of thereby screened publications (journal ranking).

Through subsequent backward and forward reference searches (Webster and Watson, 2002) and backward author searches, I improved my familiarity with the topic, recognised seminal works and influential authors, gained a better impression of the overall research progress in this field, as well as identified concepts that have seemingly attracted considerable scholarly and practical attention.

### **Inclusion and exclusion criteria**

Based on the insights gathered from the scoping study, broad inclusion and exclusion criteria could be formulated, which were iteratively narrowed down as the scoping process continued. The criteria are described in the remainder of this subsection and summarised in **Table 3**.

Criterion type	Description
Quality-based	Only include peer-reviewed journal articles from 3, 4, and 4*-rated journals listed in the CABS Academic Journal Guide 2015. Exclude all journal articles published in lower-rated or non-listed outlets.
	Exclude any other type of publication, such as books, book reviews, conference papers, teaching cases or industry reports.
Content-based	Only include journal articles that discuss innovations which feature common characteristics of strategic innovations, as described in subchapter 2.2 The specific angle on innovation through outsourcing under examination and summarised in <b>Table 2</b> .
	Exclude journal articles that discuss other innovation concepts such as the outsourcing decision as an innovation.
	Only include research that discusses strategic innovation in the IS sourcing context, more specifically in ITO and BPO.
	Exclude research that discusses innovation in other outsourcing contexts, such as contract manufacturing and R&D outsourcing.
Time-based	Include relevant journal articles that have been published between 1998 – 2020.
<b>Table 3:</b> Inclusion and exclusion criteria	

#### *Quality-based criteria*

One criterion type involves quality-based criteria for literature sources. Only peer-reviewed journal articles from 3, 4, and 4\*-rated journals listed in the Chartered Association of Business Schools (CABS) Academic Journal Guide 2015 are included. The CABS is a UK-based institution that represents UK business schools to the public, supports its members to maintain world-class standards of teaching and research, and helps create opportunities through dialogue with business and government (Chartered Association of Business Schools, 2020). Its journal guide is comprehensive in the coverage of research conducted in business schools internationally, listing and rating over 1,400 business journals from core social sciences disciplines. Previous IS research has similarly drawn on this authoritative guide to identify high-grade publications (Nevo and Kotlarsky, 2020). For the purposes of this literature review,

articles published in journals with a rating lower than 3, such as MISQ Executive, are excluded without any exceptions. Articles published in journals that are not listed in the guide are also excluded, such as The Database for Advances in Information Systems. Lastly, works in form of conference papers, teaching cases and book reviews are excluded.

#### *Content-based criteria*

The content-based criteria of the literature review are based on common characteristics of strategic innovation outlined subchapter 2.2 The specific angle on innovation through outsourcing under examination. Hence, studies on innovations that are excluded from this review include, most notably, those that consider the outsourcing decision itself as an innovation (Loh and Venkatraman, 1992; Hu *et al.*, 1997).

Another content-based criterion pertains to the examined type of outsourcing. The focus of this theoretical review is on innovation through ITO and BPO, as mentioned in subchapter 2.2 The specific angle on innovation through outsourcing under examination. Importantly, IT is integral to the execution and management of delegated activities in both of these types of outsourcing (Mani *et al.*, 2010). Furthermore, these activities are usually understood to be knowledge-based (Miozzo and Grimshaw, 2005). The literature therefore occasionally refers to service providers as knowledge intensive business services (KIBS) firms (Miozzo and Grimshaw, 2005; Lema *et al.*, 2015; Miozzo *et al.*, 2016). Lastly, both types of outsourcing are typically characterised by the simultaneous pursuit of multiple performance objectives (Mani and Barua, 2015; Sumo *et al.*, 2016). Other outsourcing contexts, such as innovation through contract manufacturing or R&D outsourcing, are inherently different and therefore excluded. This is in line with prior IS sourcing research, which has repeatedly emphasised on the importance of distinguishing between innovation effects in ITO and BPO and other contexts like R&D outsourcing (Lacity *et al.*, 2011, 2016).

#### *Time-based criteria*

Lastly, a time-based criterion was introduced. This review covers the period from 1998 to 2020. While earlier studies have certainly entertained the notion of obtaining strategic value through

outsourcing, the concept of achieving innovations that drive the client firm's overall business performance in particular only gained considerable traction in the IS sourcing community around the time of the specified starting year. It coincides with the publication year of several pioneering studies inspiring a debate about the idea of leveraging ITO and BPO engagements for innovation. The paper sample thus features works by early thinkers of the field who initiated discussions about the phenomenon from a strategic angle (Currie and Willcocks, 1998; DiRomualdo and Gurbaxani, 1998), with a capability perspective (Feeny and Willcocks, 1998), or with a partnership focus (Willcocks and Kern, 1998).

### ***3.1.2 Conducting the literature search – creating an initial article sample***

In the second stage, a preliminary sample consisting of 133 journal articles was generated. To arrive at this article set, 46 business journals were searched in. A detailed account of the specification of search parameters that led to this sample is discussed in the following. A summary of the screened journals can be found in **Table 4**.

<b>Subject</b>	<b>Journal</b>	<b>Publisher</b>	<b>Searched through database</b>	<b>Hits</b>
Information Management	Information Systems Research***	INFORMS	PubsOnLine*; JSTOR**	0
	MIS Quarterly***	University of Minnesota (AIS affiliated)	AIS eLibrary*	4
	Journal of MIS***	Taylor and Francis	Taylor and Francis Online*; JSTOR**	1
	Journal of AIS***	AIS	AIS eLibrary*	1
	European Journal of Information Systems***	Taylor and Francis	Taylor and Francis Online*; ProQuest**	0
	Information Systems Journal***	Wiley	Wiley Online Library*; Business Source Complete**	3
	Journal of Information Technology***	SAGE Publishing	SAGE Publications*	7
	Journal of Strategic Information Systems***	Elsevier	ScienceDirect*	8
	Computers in Human Behavior	Elsevier	ScienceDirect*	0
	Decision Support Systems	Elsevier	ScienceDirect*	0
	Expert Systems with Applications	Elsevier	ScienceDirect*	0
	Government Information Quarterly	Elsevier	ScienceDirect*	0

	Information and Management	Elsevier	ScienceDirect*	2
	Information and Organization	Elsevier	ScienceDirect*	0
	The Information Society	Taylor and Francis	Taylor and Francis Online*; Business Source Complete**	0
	Information Systems Frontiers	Springer Nature	SpringerLink*; ProQuest**	0
	Information Technology and People	Emerald Group Publishing	EmeraldInsight*; ProQuest**	0
	International Journal of Electronic Commerce	Taylor and Francis	Taylor and Francis Online*; Business Source Complete**	0
	International Journal of Human-Computer Studies	Elsevier	ScienceDirect*	0
	Journal of Computer Mediated Communication	Intl. Communication Association	Intl. Communication Association*	0
	Journal of the ASIST	Wiley	Wiley Online Library*; Business Source Complete**	0
Innovation	Journal of Product Innovation Management	Wiley	Wiley Online Library*; Business Source Complete**	12
	Research Policy	Elsevier	ScienceDirect*	16
	R&D Management	Wiley	Wiley Online Library*; Business Source Complete**	18
	Technovation	Elsevier	ScienceDirect*	13
GME&SR	Academy of Management Journal	Academy of Management	Academy of Management*	0
	Academy of Management Review	Academy of Management	Academy of Management*	0
	Administrative Science Quarterly	SAGE Publishing	SAGE Publications*	0
	Journal of Management	SAGE Publishing	SAGE Publications*	0
	British Journal of Management	Wiley	Wiley Online Library* Business Source Complete**	2
	Business Ethics Quarterly	Cambridge University Press	Cambridge Core* Business Source Complete**	0
	Journal of Management Studies	Wiley	Wiley Online Library* Business Source Complete**	3
	Academy of Management Perspectives	Academy of Management	Academy of Management*	2
	Business and Society	SAGE Publishing	SAGE Publications*	0
	California Management Review	SAGE Publishing	SAGE Publications*	4
	European Management Review	Wiley	Wiley Online Library* Business Source Complete**	0
	Harvard Business Review	Harvard Business Publishing	HBR online database*	10

			EBSCO Business Source**	
	International Journal of Management Reviews	Wiley	Wiley Online Library* Business Source Complete**	0
	Journal of Business Ethics	Springer Nature	SpringerLink* Business Source Complete**	0
	Journal of Business Research	Elsevier	ScienceDirect*	4
	Journal of Management Inquiry	SAGE Publishing	SAGE Publications*	0
	MIT Sloan Management Review	MIT Sloan School of Management	MIT review online database* ProQuest**	10
Strategy	Strategic Management Journal	Wiley	Wiley Online Library* Business Source Complete**	11
	Global Strategy Journal	Wiley	Wiley Online Library* Business Source Complete**	1
	Long Range Planning	Elsevier	ScienceDirect*	1
	Strategic Organization	SAGE Publishing	SAGE Publications*	0
Sum of articles				133
*limited search functions; ** publisher-independent database; *** Senior IS Scholar Basket of Eight				
<b>Table 4:</b> Second stage summary – preliminary article set				

### Search location, terms, and applied criteria for generating the initial article sample

First, the *search location* was specified. Based on insights from the scoping study, relevant research is mainly published in journals categorised in the CABS guide's subject areas 1) general management, ethics and social responsibility (GME&SR), 2) information management, 3) innovation, and 4) strategy. To generate the preliminary sample, the second-stage literature searches were therefore limit to journals listed in these four subject areas. All journals from the CABS guide's other subject areas were excluded for the creation of the initial article repository.

Next, search terms were specified. TAK searches were relied on with the terms "innovation" and "outsourcing". If the scanned database's search function supported wildcards, searches with the terms "innovat\*" and "outsourc\*" were conducted instead. No further terms were added to the TAK searches with the reason being that relevant articles could more accurately be located later by going forwards and backwards through paper citations in the subsequent

stage. This would thereby also enable the identification of studies published in journals from subject areas that were excluded during the second stage search.

Lastly, the previously defined quality-based and time-based criteria were applied. Content-based criteria were added later in the third, sample refinement stage. The initial number of retrieved search results with the TAK queries under these conditions came to 133. 26 of these hits were registered in journals listed in the category information management, out of which 24 are published in Senior IS Scholar Basket of Eight outlets (Association for Information Systems, 2020), 59 in innovation journals, 35 in GME&SR journals, and 13 in strategy journals.

### **Search limitations**

Notably, EBSCO's Business Source Complete database does not index all 46 3, 4 and 4\* journals and is restricted by publication embargoes for others. This is a problem that has also been acknowledged in other recent literature review efforts (Nevo and Kotlarsky, 2020). Hence, to retrieve journal articles, I relied on searches in publisher-specific databases. The majority of searched through journals are published by Elsevier (12), closely followed by Wiley (10) and SAGE Publishing (7).

Some publisher-specific database search functions do not offer the option to conduct comprehensive TAK searches. It had to be differed between publisher database search functions that did *not support any search refinement options*, such as Harvard Business Review, or MIT Sloan Management Review databases, and publisher database search functions that only *supported limited search refinement options*, such as SpringerLink and Taylor and Francis Online.

For the former, the narrow publisher database search functions were entirely disregarded. Instead, ITHAKA's JSTOR, EBSCO's Business Source Complete and ABI/Inform Global's ProQuest database were used for the TAK searches, depending on which publisher-independent database indexed the most articles. In JSTOR, the title, abstract and caption refinement items were used for the queries. In Business Source Complete, title, abstract and

subject terms refinement items were used. In ProQuest, queries were limited to anywhere except full text.

For the latter, publisher database search functions that only support limited search refinement items, search refinement options were still made use of, normally allowing title and keyword, but no abstract searches. In addition, the three publisher-independent digital libraries, JSTOR, Business Source Complete and ProQuest, were used for more comprehensive TAK searches, where appropriate, in a complementary manner, to supplement abstract-absent searches.

### ***3.1.3 Selecting relevant papers – creating the final article sample***

After creating a preliminary article sample consisting of 133 papers, stage three was initiated. It involved a paper selection process involving three rounds of forward and backward citation searches.

The process started with manually reviewing each of the 133 papers in the preliminary sample in its entirety. The number of articles was consequently reduced to 39. The majority of studies were excluded for the reasons of failing to meet content-based criteria. They examined topics that fall out of this literature review's scope, such as R&D outsourcing (49), innovation through contract manufacturing (10), innovation through crowdsourcing (8), impact sourcing (3), innovation activities of manufacturing firms unrelated to outsourcing (3), exogenous innovation shocks (2), energy sourcing (1), business ecosystem setup (1), innovation lifecycle management (1), intellectual property outsourcing (1), internal knowledge exploitation (1), outlicensing (1) and service provider work design innovation (1). The other 12 excluded publications include editorial notes of little relevance (4), book reviews (4), teaching cases (2), calls for papers (1), and a chart-based industry dashboard that lacked discussion.

The greatly condensed sample (39 papers) subsequently served as a basis for three rounds of forward and backward citation searches. Citation searches in papers added after the third round did not yield any new relevant papers.

After identifying relevant articles through citation searches, the number of studies in the final article repository amounts to 95. Interestingly, of these 95 articles, only 40 are published in

mainstream IS journals. This may be viewed as a key indicator pointing towards the need for an integrative perspective this is established in the conceptual study. **Table 5** shows a summary of the final article set. The full list of papers in the article sample can be found in **APPENDIX I**.

CABS Academic Journal Guide 2015 subject categories	Rank	# of articles
<i>Subject category: General Management, Ethics and Social Responsibility</i>		
British Journal of Management	4	1
Academy of Management Perspectives	3	1
California Management Review	3	6
Harvard Business Review	3	3
Journal of Business Research	3	3
MIT Sloan Management Review	3	9
<i>Subject category: Information Management</i>		
Information Systems Research (AIS Basket of Eight)	4*	5
MIS Quarterly (AIS Basket of Eight)	4*	7
Journal of Management Information Systems (AIS Basket of Eight)	4	4
Journal of the Association of Information Systems (AIS Basket of Eight)	4	1
Decision Support Systems	3	1
European Journal of Information Systems (AIS Basket of Eight)	3	1
Information and Management	3	3
Information Systems Frontiers	3	2
Information Systems Journal (AIS Basket of Eight)	3	1
Journal of Information Technology (AIS Basket of Eight)	3	6
Journal of Strategic Information Systems (AIS Basket of Eight)	3	9
<i>Subject category: Innovation</i>		
Journal of Product Innovation Management	4	3
Research Policy	4	5
Technovation	3	2
<i>Subject category: International Business and Area Studies</i>		
Journal of International Management	3	4
<i>Subject category: Marketing</i>		
Industrial Marketing Management	3	2
<i>Subject category: Operations and Technology Management</i>		
Journal of Operations Management	4*	1
IEEE Transactions on Engineering Management	3	2

International Journal of Production Research	3	1
<i>Subject category: Operations Research and Management Science</i>		
Decision Sciences	3	2
<i>Subject category: Organisation Studies</i>		
Organization Science	4*	1
<i>Subject category: Regional Studies, Planning and Environment</i>		
Regional Studies	3	1
<i>Subject category: Strategy</i>		
Strategic Management Journal	4*	7
Global Strategy Journal	3	1
<b>Total number of included articles</b>		<b>95</b>
<b>Table 5:</b> Final article set for the theoretical review		

### 3.2 Approach to conducting empirical case studies

Two empirical case studies are conducted to address RQ 2:

*RQ 2:* How can high degrees of organisational readiness be created for strategic innovation initiatives in outsourcing from a (a) client perspective and (b) provider perspective?

A case study can be described as a versatile mode of enquiry that guides the deep exploration of a contemporary phenomenon within its real-life context (Yin, 2014). Empirical case studies are widespread in the IS discipline (Sarker *et al.*, 2013) and commonly utilised in IS sourcing research (Lacity *et al.*, 2011, 2016). They are especially suitable for answering open-ended “why” and “how” research questions (Yin, 2014). The approach to conducting case studies for this thesis was largely informed by Walsham's (1995a, 2006) well-known practical guidelines.

In the next sections, common concerns of case study research and incorporated response strategies are first described. Afterwards, an overview of the selected cases and employed data collection techniques is provided.

#### 3.2.1 Common concerns and response strategies

Case study research designs are subject to some major caveats, especially in terms of validity, reliability (Darke *et al.*, 1998), and generalisability of findings (Darke *et al.*, 1998; Creswell, 2014). **Table 6** offers a description of these common concerns and countermeasures that were

employed, based on strategies proposed by Walsham (1995a, 2006), Darke *et al.* (1998), Gioia *et al.* (2013), and Creswell (2014). 3.3 Data analysis based on the Gioia Methodology

Common concern	Incorporated response strategies
<p><b>Validity</b></p> <p>Following Creswell (2014), validity in qualitative research contexts refers to the accuracy of findings.</p>	Information was triangulated by converging different data sources, including interviews, field notes and public documents, in order to establish analytical themes.
	Follow-up interviews were conducted with informants in the care hospital case, which will be outlined in the subchapter <b>3.2.2 Case selection</b> below. This opportunity did not present itself in the IT multinational service provider case.
	A rich description of the research setting is provided in the subchapter <b>3.2.2 Case selection</b> and in <b>CHAPTER 5: Empirical study findings</b> and <b>CHAPTER 6: Empirical study findings – provider organisational member perspectives</b> .
	Peer debriefers in my immediate social surroundings, including some of my supervisors and academic colleagues, provided constructive criticism of the empirical study findings detailed in Chapter 5: Empirical study findings and <b>CHAPTER 6: Empirical study findings – provider organisational member perspectives</b> .
<p><b>Reliability</b></p> <p>Creswell (2014) associates qualitative reliability with research approach consistency.</p>	Interview transcripts were checked for obvious mistakes made during transcription. Once corrected and anonymised, the transcripts were sent back to the informants to give them the opportunity to review their statements and remove any commercially sensitive information. No informant exercised this option.
	Codes were continuously compared during the data analysis process presented in subchapter <b>3.3</b> to avoid shifts in meanings. Data structures were compiled that give an overview of the concepts, themes and aggregate dimensions resulting from coding activities. According to Gioia <i>et al.</i> (2013), the data structure is a key component of demonstrating rigour in qualitative research.
<p><b>Generalisability</b></p> <p>Following Walsham (1995a), case studies offer valuable explanations of particular phenomena but</p>	In line with Lee and Baskerville (2003), findings from case studies may generate concepts or principles with generalisability to theory rather than population (Gibbert and Ruigrok, 2010). Gioia <i>et al.</i> 's (2013) analysis techniques are specifically designed to create data-to-

are not wholly predictive for future situations.	theory connections by developing an inductive model grounded in the case data.
<b>Table 6:</b> Case study research limitations and incorporated response strategies	

### **3.2.2 Case selection**

The purpose of this subsection is to present relevant information about people, places, or events in the research setting, as suggested by Creswell (2014) for case study research. My empirical examinations involve two research sites that operate independently of each other. To preserve anonymity, the names of the two organisations, their outsourcing partners and the names of informants are not disclosed. One research site is located in Austria and involves a long-term care hospital. The other research site is a UK-based branch office of a multinational IT service provider.

#### **Long-term care hospital research site**

The Austrian care hospital is an institution that functions both as a residential care home by providing long-term care services, and as a hospital by providing medical services, primarily for its residents. Its core areas of specialisation in geriatric care include, among others, primary care, palliative care, as well as art, music, aroma, and animal-assisted therapy. The care hospital belongs to an umbrella institution that operates additional long-term care hospitals and residential care homes across the country, and a home for handicapped people.

The target group of the care hospital includes the elderly, frequently suffering from physical and cognitive impairments, most notably dementia. With its other facilities, the umbrella institution also accommodates the needs of younger, disabled people. Overall, the umbrella institution has the capacity to offer care services for more than 1,000 geriatric patients and more than 300 younger people suffering from disabilities. The care hospital where I collected data employs around 450 people who help provide care, medical and therapeutic services for roughly 350 patients.

To stay abreast of the latest digital developments in long-term care, the umbrella institution set up a research subsidiary in the early 2000s. The research subsidiary operates directly at the care hospital where I collected data, but as an entity that is structurally separate from the care

business branch. This is a formal precaution to keep budgets separate for the core business, long-term care, and research endeavours in the fields of geriatrics. It should be noted that the research subsidiary's *raison d'être* departs from that of a typical R&D unit. It is not so much constituted by a pursuit of developing commercially valuable technologies, but rather by acting as a radar for the identification of high-potential innovations that could be useful for improving the quality of care services at the care hospital.

This research site was selected for two major reasons. First, the care hospital finds itself at an early stage in introducing IT-enabled solutions with the help of external service providers to support its core business activities. Second, the research site offers insights into four strategic innovation through outsourcing initiatives from the client firm perspective. One initiative was led by the care hospital and involved the customised expansion of its electronic nursing documentation system (eNDS). The research subsidiary was involved in the other three initiatives. Here, the care hospital acted as a potential adopter of the final solution. It must be noted that access to service provider perspectives was not given in these observed initiatives. A more detailed overview of these initiatives will be provided in Chapter 5: Empirical study findings.

### **UK-based branch office of an IT multinational service provider research site**

To examine RQ 2 not just from a client firm, but also from a provider perspective, I collected data at a UK-based branch office of a multinational IT service provider. Corresponding findings are discussed in **CHAPTER 6: Empirical study findings – provider organisational member perspectives**. The service provider is one of the largest players in the global business services outsourcing industry. Like its similar-sized competitors, it offers a variety of service lines, ranging from advanced data analytics to fully managed cloud infrastructure platforms and the development of custom Internet of Things applications. The IT multinational won several contracts with internationally renowned corporations over recent years.

This research site was selected, because it enables access to a service provider vantage point of readiness-influencing factors in strategic innovation through outsourcing initiatives. Notably, confidentiality agreements inhibit the disclosure of client-specific and initiative-specific details

that were acquired during data collection. This was requested by the informants during access negotiations.

### **3.2.3 Data collection techniques**

The case study data collection process is difficult and time-consuming (Darke *et al.*, 1998). Typically, it involves a combination of a variety of qualitative data collection methods, such as interviews, documents, field observations, archival records or physical artefacts (Dubé and Paré, 2003; Yin, 2014). To support novice researchers in successfully carrying out their fieldwork, experienced scholars devised several strategies (Darke *et al.*, 1998; Walsham, 2006). In the following, I will describe which data collection techniques I implemented and which strategies proved fruitful for the process. The employed data collection approach was thoroughly reviewed by the Aston Business School Research Ethics Committee and approved.

#### **Interviews as primary source of data**

Interviews are critical sources of information for case study research (Walsham, 1995; Darke *et al.*, 1998; Yin, 2014).

Interviewees at both the client and provider research site were selected based on their degree of involvement in recent strategic innovation through outsourcing initiatives. All informants had to be able to provide a detailed account of at least one specific initiative they have proactively contributed to. In addition, selected informants held different positions at the research sites. In the client case study, C-level executives, the nursing directress, head nurses, service provider relationship managers and care consultants were interviewed. In the provider case study, client relationship managers from multiple verticals, senior product and service managers, and staffing managers were interviewed. Casting such a wide and mixed net of informants was necessary for two key reasons. First, strategic innovation initiatives can have business-wide impacts and consequently involve organisational members from multiple functions. Second, RQ 2 demands an inclusive approach to data collection, in order to achieve a comprehensive picture of collective valence and efficacy evaluations.

At the care hospital research site, two interview rounds were conducted. Two rounds were considered necessary, because one observed strategic innovation initiative, the virtual reality (VR) initiative was still in progress during the first round. Conducting a second round provided the opportunity to follow up with targeted questions concerning its completion. In the first round, I interviewed seven informants. There was one pair of co-workers who requested to be interviewed together, rather than individually. Many of the informants from the first round were unable to engage in a second interview due to COVID-19 restrictions and related shifts in work routines. Nonetheless, in the second round, three of the same informants, including the co-worker pair, were able to give a follow-up interview. In addition, I interviewed another seven new informants. In total, 15 interviews with 14 informants were conducted at the care hospital. At the IT multinational provider research site, one round of interviews with eight informants was conducted. Informants shared deep insights about recently completed initiatives, which, in contrast to the client case study, rendered a second interview round concerning ongoing initiatives obsolete.

Care hospital interviews were conducted between May 2019 and July 2020 and held in German. IT service provider interviews were conducted in June 2019 and held in English. I used f4transkript's transcription software to transcribe all interviews. **Table 7** provides an overview of interview details.

All interviews were carried out in a semi-structured fashion, which, according to Myers and Newman (2007), is the most used interview type in qualitative IS research. In the IS sourcing research stream, this interview type already proved to be effective in prior case studies, such as the ones conducted by Dibbern *et al.* (2008) and Søderberg *et al.* (2013). In terms of interview style, a balance between over-direction and excessive passivity was pursued, as proposed by Walsham (1995a). This allowed informants to delve deeply into strategic innovation through outsourcing initiative-related topics they experienced, with me intervening once they strayed too far from the subject. Another central topic associated with interviews involves tape-recording (Walsham, 2006). All interviews were voice-recorded with the explicit consent of the informants, except for one interview with an IT multinational interviewee. This

interviewee had close ties with clients in the financial sector and did not want to be recorded.

He allowed me to take written notes during the interview instead.

Site	Informant role	Informant main areas of responsibility	Interview duration
Care hospital	Care consultant 1	Assists care hospital nurses in implementing care concepts	~ 57 minutes
	Care consultant 2	Assists care hospital nurses in implementing care concepts	~ 59 minutes
	Care consultant 3	Assists care hospital nurses in implementing care concepts	~ 40 minutes
	Care consultant 4	Head of care consultant team	~ 45 minutes
	Directress of care	Oversight of care-related operations at the care hospital	~ 41 minutes
	eNDS relationship manager 1	Maintains the business relationship with the eNDS service provider	~ 54 minutes (round 1) and ~ 35 minutes (round 2)*
	eNDS relationship manager 2	Maintains the business relationship with the eNDS service provider	
	Executive-level manager 1	Senior manager at the care hospital, major strategic decision-making	~ 38 minutes
	Executive-level manager 2	Senior manager at the care hospital, major strategic decision-making	~ 62 minutes
	Executive-level manager 3	Senior manager at the research subsidiary, major strategic decision-making	~ 84 minutes
	Head nurse 1	Coordinates and oversees nursing activities of a ward at the care hospital	~ 32 minutes
	Head nurse 2	Coordinates and oversees nursing activities of a ward at the care hospital	~ 35 minutes
	Quality manager	Ensures quality of care processes at the care hospital	~ 57 minutes
	Research subsidiary project manager	Contributed to implementing the observed initiatives in which the research subsidiary was involved	~ 64 minutes (round 1) and 44 minutes (round 2)
IT multinational service provider	IT multi HR sales manager 1	Manages up-selling of HR services in established business relationships	~ 47 minutes
	IT multi product manager 1	Involved in developing an IT-based solution for financial services firms	~ 40 minutes**
	IT multi relationship manager 1	Manages the business relationship with an accounting firm	~ 42 minutes
	IT multi relationship manager 2	Used to manage a business relationship with a technology firm	~ 46 minutes
	IT multi relationship manager 3	Manages the business relationship with a bank	~ 46 minutes

	IT multi relationship manager 4	Manages business relationships with utilities firms	~ 43 minutes
	IT multi staffing manager 1	Staffing manager coordinating deployment of talent across projects	~ 60 minutes
	IT multi technology manager 1	Responsible for managing technological development offerings in the UK	~ 35 minutes
* indicates co-worker pair, ** indicates interview with no consent for audio-recording			
<b>Table 7:</b> Interview data details			

### Supplementary data sources

Walsham (2006) recommends that interviews should be supplemented by additional data in case study research, such as internal and public documents, and direct observations. While I did not have access to relevant internal documents for confidentiality reasons, such as outsourcing contracts, public documents about each observed strategic innovation through outsourcing initiative in the care hospital case study could be located online and collected. They largely involve press and media publications. During field visits, I was further able to interact with some of the care hospital's observed strategic innovation outputs myself. For the IT multinational provider, public documents mainly in form of industry research reports enabled further insights into its approach to strategic innovation in ongoing outsourcing relationships. It should be noted that, similar to prior case studies such as the one conducted by Kiel *et al.* (2017), these supplementary data sources were exclusively used for triangulation purposes and were not coded.

### 3.3 Data analysis based on the Gioia Methodology

For the analysis of both the conceptual study dataset and empirical study dataset, I applied analytical techniques based on the Gioia Methodology (Gioia *et al.*, 2013). In the following, I will first outline what the Gioia Methodology encompasses and why it was deemed suitable for the purposes of analysing the datasets. Afterwards, the completed data analysis process will be discussed.

### **3.3.1 Gioia Methodology analysis approach overview**

The Gioia Methodology was developed as a response to qualitative research facing the frequent criticism of lacking “rigour” and has found increasing resonance in the IS community over recent years (Koppman *et al.*, 2016; Gozman and Willcocks, 2019). Gioia *et al.*'s (2013) approach to data analysis and concept development is heavily inspired by grounded theory principles (Glaser and Strauss, 1967), and is further infused with intuitive methods that Gioia *et al.* (2013) refined over the past two decades. As such, it has also been described as a partial portfolio variation of grounded theory procedures (Wiesche *et al.*, 2017). Hallmarks of the Gioia Methodology data analysis approach are (1) a three-phase process in which researchers incrementally step up in levels of abstraction, (2) a data structure that provides a graphic presentation of how researchers progress from raw data to themes, and (3) informed theorising, by crafting an inductive model that is well-grounded in the data. Its distinguishing strengths lie in enabling a transparent account of the conducted data analysis (Gioia *et al.*, 1994) and a structured procedure that still provides sufficient room for the creative generation of original ideas and concepts (Gioia *et al.*, 2013).

Why the Gioia Methodology was used for the analysis of the conceptual study data sample warrants further attention. After screening the IS body of knowledge, a handful of recently published empirical studies can be found that applied the Gioia Methodology (Kiel *et al.*, 2017; Li *et al.*, 2018; Gozman and Willcocks, 2019), but its application to conceptual studies, especially in form of literature reviews, seems to be uncommon. This comes to little surprise, as Gioia *et al.* (2013) originally designed their techniques for the analysis of qualitative data derived from interviews. Yet, given the strong parallels to central tenets of a grounded theory approach, which Wolfswinkel *et al.* (2013) recommend when conducting literature reviews, it is argued that the core principles of Gioia Methodology data analysis techniques can be transferred to paper sample analysis procedures.

### **3.3.2 Applied Gioia Methodology analysis techniques**

The Gioia Methodology proposes an iterative analytical approach consisting of three steps, namely 1<sup>st</sup>-order analysis, 2<sup>nd</sup>-order analysis and aggregate dimension building (Gioia *et al.*, 2013). The full set of 1<sup>st</sup>-order concepts, 2<sup>nd</sup>-order themes and aggregate dimensions then provides the basis for building a data structure, which Gioia *et al.* (2013) consider a pivotal step in the entire research approach. Once a data structure is established, researchers can proceed with crafting an inductive model that is grounded in the data (Gioia *et al.*, 2013). In the following sections, I will first outline preparatory steps that were made prior to the 1<sup>st</sup>-order analysis. Each of Gioia *et al.*'s (2013) three steps is then discussed in greater detail. Lastly, the data structures for the conceptual and empirical study are presented.

#### **Preparatory steps**

Concerning the conceptual study, before proceeding with 1<sup>st</sup>-order coding of the literature sample, descriptive elements from each paper were documented. This is common practice when conducting literature reviews, and can for instance be seen in the works of Vial (2019) or Nevo and Kotlarsky (2020). Apart from generic information including author, title, year of publication and journal, it was of importance to clarify whether a paper examined strategic innovation through outsourcing from the client firm, service provider, or both perspectives. Information was also extracted about the researched context, namely ITO, BPO or both, as well as descriptions or examples of how innovation is conceptualised. Finally, information about selected theoretical lenses, analysis methods and data samples was documented. These labelled descriptive elements can be viewed in **APPENDIX I: Final sample of reviewed articles**.

As for the empirical study, the interview transcripts had to be anonymised and sent to the corresponding informant before analysis, because they were given the option to redact any sections they consider too sensitive. As mentioned earlier, this option was exercised by no informant. A codebook was developed for each transcript that listed all anonymised names and associated pseudonyms. All pseudonyms were further collected in a master codebook for care hospital and IT provider interviews. For the subsequent analysis steps, I decided to keep

the care hospital and IT provider datasets separate until a solid data structure can be established to reach a deeper understanding about distinct client firm and service provider perspectives of topics related to readiness for strategic innovation through outsourcing. The data structures would then be used in combination to craft an inductive model.

### **First-order concepts analysis**

First-order analysis parallels the idea of open coding (Strauss and Corbin, 1998), an analytical technique rooted in the grounded theory approach (Gioia *et al.*, 2013). During this step, “data are broken down into discrete parts, closely examined, and compared for similarities and differences” (Strauss and Corbin, 1998, p. 102). Those labelled parts of data that are found to be conceptually similar in nature or related in meaning are then categorised into what Gioia *et al.* (2013) refer to as first-order concepts. Main ideas in relevant paragraphs of each collected paper (conceptual study dataset) and interview (empirical study dataset) were coded during this step. The name for each first-order concept was created in vivo with words or phrases the authors of the respective paper, or informants in case of interviews, used themselves (Glaser and Strauss, 1967; Strauss and Corbin, 1998). I developed a list of all prominent first-order concepts and key references for the conceptual study dataset to provide a better overview of notable concepts in each reviewed paper. This list is presented in **APPENDIX III: Key references to 1<sup>st</sup>-order concepts**. I refrained from creating such a list for the empirical study dataset, because pseudonyms offer only limited protection. Insiders, especially other employees at the research sites, may find it particularly easy to identify an organisational member with a list of all key ideas they shared. This poses a risk I wanted to mitigate.

### **Second-order themes analysis**

Second-order analysis represents the rough equivalent of Strauss and Corbin's (1998) notion of axial coding (Gioia *et al.*, 2013). During this stage, first-order concepts that share specific properties and dimensions are grouped to establish more abstract, theory-centric second-order themes. Related activities are highly iterative in nature and require constant comparisons of first-order concepts and emerging second-order themes (Li *et al.*, 2018). Overall, 12 second-order themes were iteratively developed for the conceptual study. As mentioned above, I kept

the care hospital dataset separate from the IT multinational service provider dataset during the three steps. 14 second-order themes thus emerged from care hospital first-order concepts, while 8 partly overlapping second-order themes emerged from IT multinational service provider first-order concepts.

### **Aggregate dimension building**

Aggregate dimension building involves the development of overarching dimensions that are inductively distilled from second-order themes (Gioia *et al.*, 2013). They are akin to Strauss and Corbin's (1998) central categories produced during selective coding. Four aggregate dimensions were delineated for the literature review, namely (1) antecedents of strategic innovation through outsourcing decisions, (2) outsourcing arrangements, (3) collaborative generation of strategic innovations, and (4) the assessment of strategic innovation through outsourcing outcomes. For the empirical studies, three aggregate dimensions were developed. They include (1) readiness factors in the immediate strategic innovation through outsourcing project environment, (2) influential conditions in the organisational context and (3) influential conditions in the external market environment.

### **Crafting a data structure**

A dormant fear in the context of literature reviews with the continuous movement towards more abstract levels is that developed categories can hide the richness of the underlying evidence they help organise from the reader (Vial, 2019). Arguably, this may similarly apply to empirical evidence. An approach that may prove useful for mitigating this issue was found in Gioia *et al.*'s (2013) proposed development of a data structure. The data structure not only allows transforming data into a visual aid, but also provides an easily traceable representation of the analytical process (Gioia *et al.*, 2013). Furthermore, each generated first-order concept, second-order theme and aggregate dimension is concisely displayed, thereby providing deeper insights into the rich substance of each of these categories. The data structure for the conceptual study is presented in **APPENDIX II: Conceptual study data structure**. The data structure for the care hospital dataset is presented in **APPENDIX IV: Empirical study client**

perspective – data structure. The data structure for the IT multinational service provider dataset is presented in **APPENDIX V: Empirical study provider perspective – data structure**.

### Developing a vibrant, inductive model

The final step in analysing the data sample involves the construction of a vibrant, inductive model grounded in the data and that displays identified relationships among the developed second-order themes (Corley and Gioia, 2004; Gioia *et al.*, 2013). For the conceptual study, an inductively generated framework is seamlessly weaved into Chapter 4: Conceptual study findings. The framework developed for the empirical studies is shown in the overall summary section at the end of **CHAPTER 6: Empirical study findings – provider organisational member perspectives**.

Excerpts in **Table 8** offer three specific examples of Gioia *et al.*'s (2013) proposed approach to formulate dynamic relationships among identified 2<sup>nd</sup>-order concepts. This particular format of showcasing the analytical thread is based on prior research, most notably by Vial (2019).

Conceptual study dataset excerpt	“The supplier cannot easily provide ideas, knowledge, and expertise that would not have been specified <i>ex ante</i> . Constrained by the terms of the contract, the supplier is unlikely to innovate.” (Aubert <i>et al.</i> , 2015, p. 258)		
	Element A	Relationship	Element B
1 <sup>st</sup> -order concept step	Contractual governance completeness	constrains	Provider innovation capability
2 <sup>nd</sup> -order theme step	Degree of formalisation	has negative implications for	Knowledge combinations
Client case study dataset excerpt	“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 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.'" (Executive-level manager 3)		
	Element A	Relationship	Element B
1 <sup>st</sup> -order concept step	Proactive participation	discouraged by	Conflicting intents
2 <sup>nd</sup> -order theme step	Strategic innovation task demands	supported less ably due to	Intent alignment (issues)
Provider case study dataset excerpt	"So I think most of the RMs are consistently motivated from an innovation perspective, because that is one of the agenda items of their KRAs as well." (IT multi relationship manager 2)		
	Element A	Relationship	Element B
1 <sup>st</sup> -order concept step	Digital innovation for clients	encouraged by	Formal innovation agenda items (KRAs)
2 <sup>nd</sup> -order theme step	Expected business impact	more willingly supported due to	Organisational culture
<b>Table 8:</b> Excerpts showcasing identified dynamic relationships between 2 <sup>nd</sup> -order themes			

## CHAPTER 4: CONCEPTUAL STUDY FINDINGS

### Chapter overview

This chapter presents a conceptual study in form of a theoretical literature review about the strategic innovation through outsourcing research landscape to date. First, insights from the descriptive analysis of the article set are presented. Then, a framework is introduced that breaks down the process of achieving strategic innovations in outsourcing engagements into four broad phases. These phases represent the aggregate dimensions that were developed in the thematic analysis.<sup>2</sup> Each phase and related (second-order) themes are then discussed in detail. Based on this discussion, the research gap for RQ 2 is carved out. After that, the theoretical lens that is used to guide the empirical studies is presented.

#### 4.1 Descriptive analysis insights

This subchapter follows Tranfield *et al.*'s (2003) recommendation to provide a *descriptive overview of the paper sample*. It offers chronological and paper type-based arrangements that clarify notable features of the reviewed articles. More specifically, it throws light on the varying number of publications per year, whether the studies are of conceptual or empirical nature, the number of studies adopting a client firm, service provider or bilateral perspective and the number of studies examining strategic innovation in an ITO, BPO or mixed context.

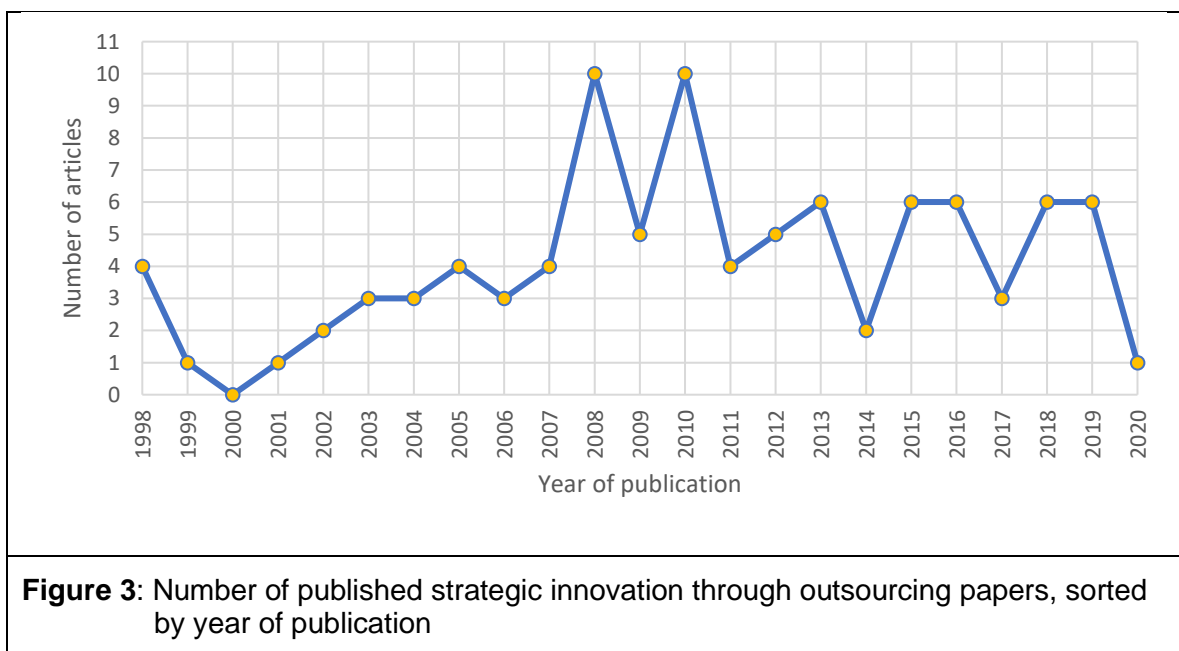
##### Number of papers per year

Concerning the growth of published papers in the sample (95 papers) on strategic innovation through outsourcing (depicted in **Figure 3**), one can see that academic interest remained roughly steady since the start of the defined timespan, 1998, ranging from a low point of zero publications in the year 2000 to a peak of four publications in the years 1998 and 2005. There

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<sup>2</sup> The thematic analysis insights reported in this chapter have been continuously refined over the course of this research project with academic feedback collected at various conferences and research seminars, such as the Scandinavian Information Systems (SCIS) conference 2019 and the Business Process Mining research seminar 2020 held at the Vienna University of Economics and Business (WU Wien). They also benefitted from a plethora of invaluable suggestions made by editors and reviewers of the Journal of Strategic Information Systems. A paper to be published in this journal, co-authored with Aleksandre Asatiani (co-author 1) and Julia Kotlarsky (co-author 2), is currently (June 2021) in development. The paper uses the same article set (95 studies published between 1998-2020) and discusses similar findings. They have been written by the candidate and refined by the co-authors.

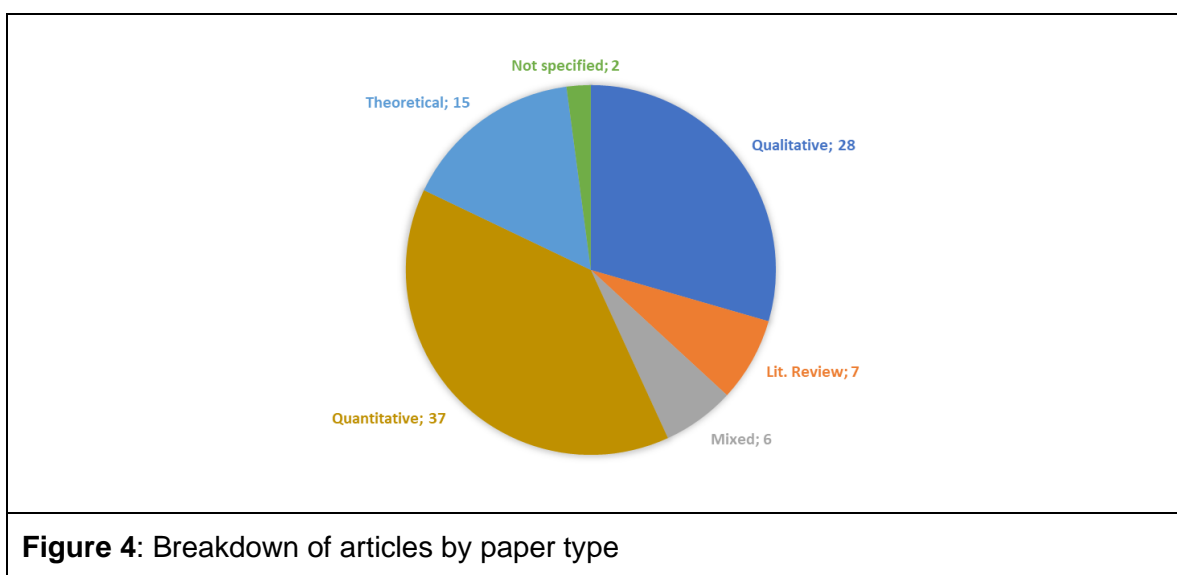
are considerable spikes in 2008 and in 2010, with ten articles respectively published over the course of these years. The number of publications then dropped to four in 2011, and after a slow increase to six publications in 2013, dipped to only two publications in 2014. In the subsequent years, the number of publications bounced back and remained somewhat steady, fluctuating between three (year 2017) to six publications (years 2015, 2016, 2018, 2019). On the whole, this graph indicates that the strategic innovation through outsourcing phenomenon attracted particular attention in the years 2008 and 2010, and remained a relevant topic for examination until the end of the observed timespan. One may further speculate that the call for research issued in the Journal of Strategic Information Systems editorial by Kotlarsky *et al.* (2015) incited scholars to revisit this yet underexplored research area, after the decline to two publications recorded in the previous year, 2014.



### Paper types

The collected articles were also analysed by type, which is illustrated in **Figure 4**. The chart shows that the final article sample largely consists of empirical studies using either quantitative research methods (37 papers) or qualitative research methods (28 papers), while mixed methods were only used in six papers. 15 papers are of theoretical nature, while seven papers present literature reviews. The remaining two papers are published in practitioner-oriented journals and do not provide sufficient information to permit a clear paper type categorisation.

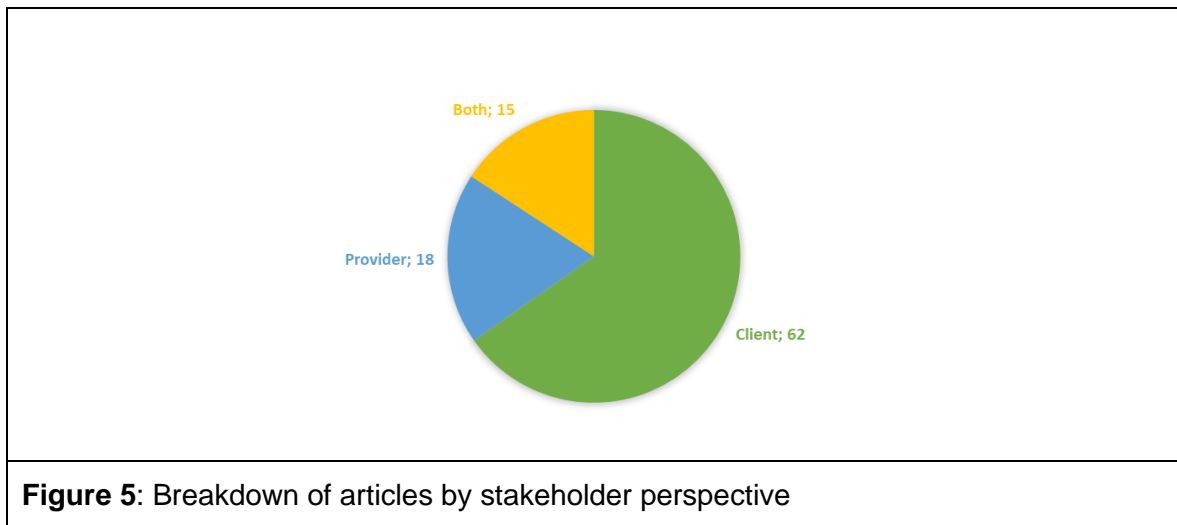
Overall, empirical qualitative and empirical quantitative research approaches remain nearly equally popular when examining the strategic innovation through outsourcing phenomenon. It further needs to be mentioned that the seemingly plentiful literature reviews do not solely focus on strategic innovation, but rather adumbrate its importance within the adjacent or broader IS sourcing topic they concentrate on. Lacity *et al.*'s (2010, 2011, 2016) series of highly cited IS sourcing literature reviews for instance repeatedly highlight the dearth of research related to innovation in an IS sourcing context while endeavouring to provide an all-encompassing snapshot of the ITO, BPO and business services outsourcing body of research.



### Firm perspectives

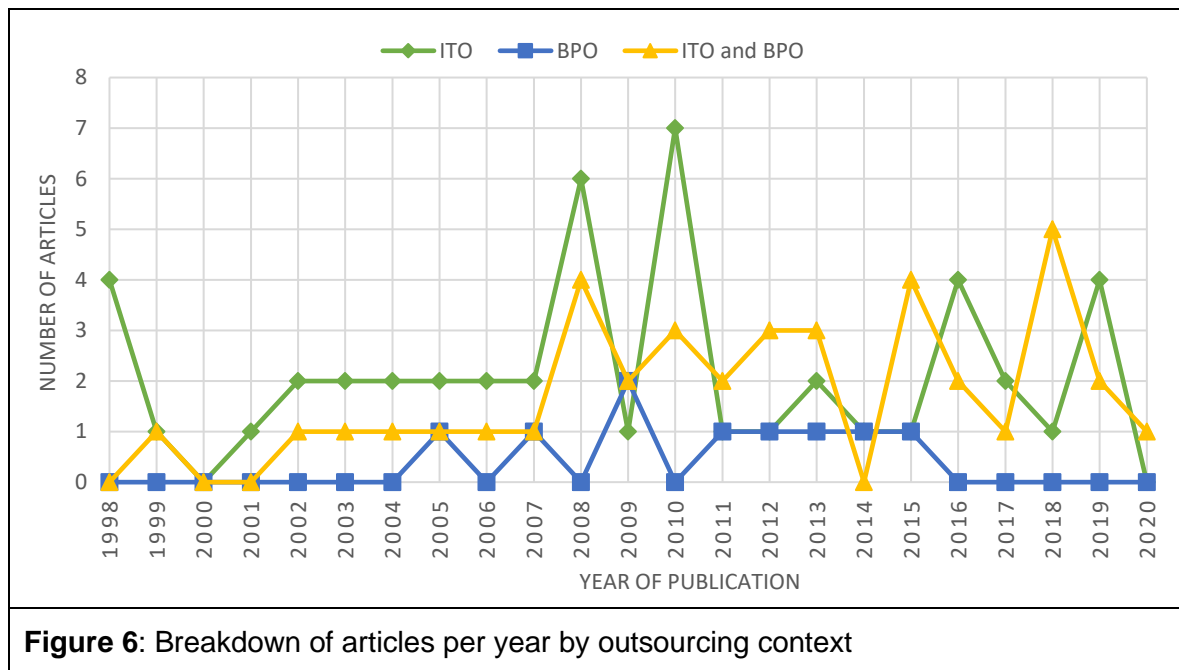
Regarding the focused-on firm perspective, one can observe a notable disparity between the number of client firm-focused and service provider-focused studies. The corresponding visualisation is presented in **Figure 5**. Here, the majority of studies (62 papers) focus on the client's point of view, and only 18 studies discuss topics related to strategic innovation through outsourcing from a provider perspective. The remaining 15 studies adopt a holistic approach, examining relevant areas from a bilateral perspective. This insight coincides with a known problematic aspect in the research field, namely that the current scholarly understanding about the mode of organising for innovation within the provider organisation and the mechanisms through which innovation is offered and delivered remains limited (Kotlarsky *et al.*, 2015). The difficulty of gaining deeper insights into the innovation-related facets of outsourcing from the

two understudied perspectives (provider and bilateral) may present an obstacle in practice for many researchers, which has also posed a major challenge in this research project.



### Outsourcing context

**Figure 6** visualises the number of articles per year discussing areas relevant to strategic innovation through ITO and BPO individually, or in both outsourcing contexts. The green line shows the number of articles exploring strategic innovation in an ITO context. One can see that the ITO context (1) dominates in pioneering studies, (2) is examined by the majority of articles published during the two publication peaks in 2008 and 2010 described earlier, and (3) continues to remain of great relevance today. The blue line shows the number of articles discussing strategic innovation in a BPO context. This outsourcing context rapidly gained momentum during the late 2000s/early 2010s, but seems to have faded just as quickly in recent years. Lastly, the yellow line shows the number of articles discussing strategic innovation in both contexts. Scholarly interest in this context picked up as early as 1999 and reached three peaks, namely in the years 2008 (four articles), 2015 (four articles) and 2018 (five articles). In sum, strategic innovation in a BPO context appears to be neglected compared to the number of studies in an ITO and both, ITO and BPO, contexts. A simple reason for BPO being pushed to the margins could be the increasing consolidation of ITO with BPO activities, especially in recent years (Lacity *et al.*, 2016). This conclusion however lacks conclusive empirical evidence and is purely hypothetical.

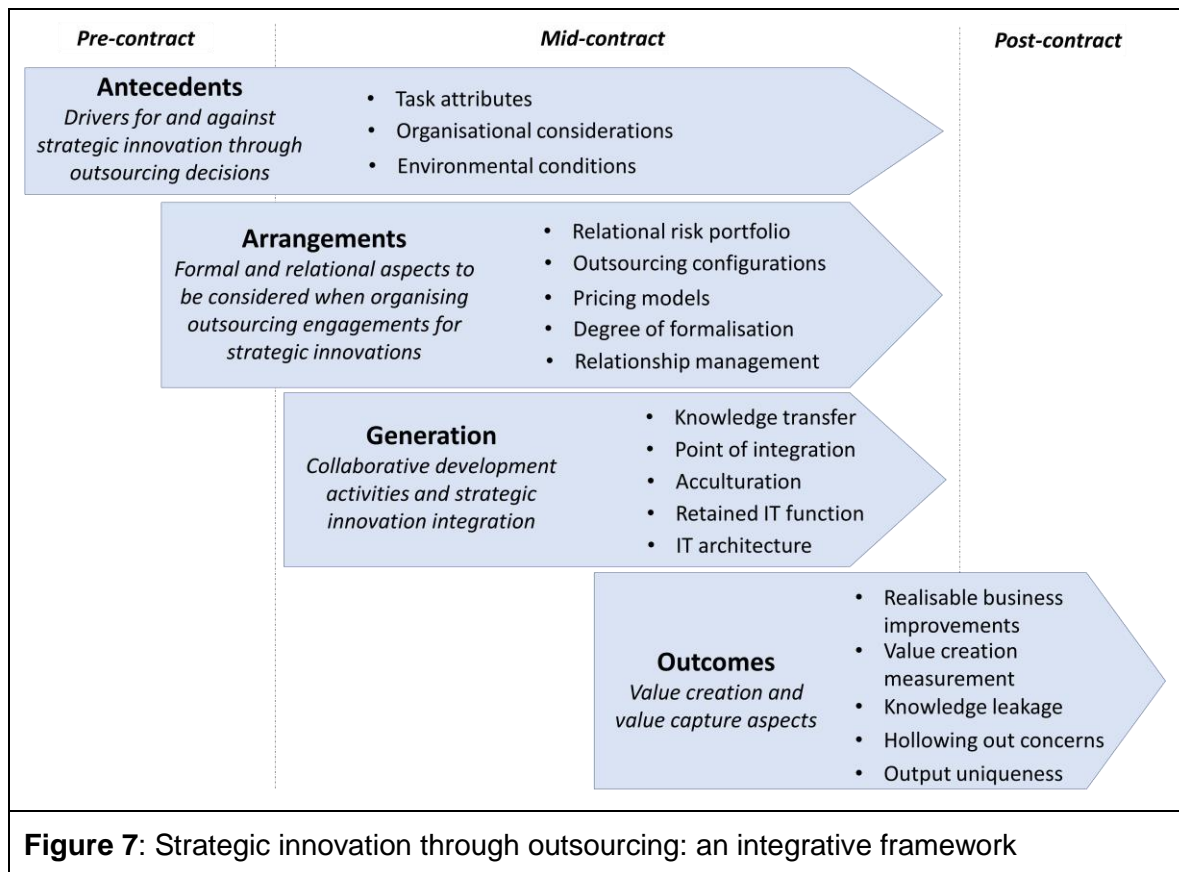


## 4.2. Thematic analysis insights

In this subchapter, thematic analysis findings are reported. They are organised in a four-phase integrative framework. This subchapter starts by presenting the main elements of the framework. Each framework phase and corresponding theme is then discussed in detail. Each phase concludes with a summary. This subchapter ends with a conclusion containing a table (**Table 9**) that provides an overview of all expanded on findings.

### 4.2.1 Framework overview

At the heart of the framework, visualised in **Figure 7**, are four emergent phases of achieving strategic innovations. The first phase, *antecedents*, captures researched motivations that drive or discourage the strategic innovation through outsourcing decision. The second phase, *arrangements*, refers to configurational, contractual and relational considerations. The third phase, *generation*, involves previously investigated aspects related to joint strategic innovation development and integration efforts. The fourth phase, *outcomes*, includes research insights associated with realisable business improvements and potential consequences for the firm. A brief description of each phase can be seen in the framework. Each depicted phase also contains bullet points, which list identified major second-order themes. They will be discussed in the sequence as illustrated in framework, from top to bottom.



In order to more clearly situate the four emergent phases within the contextual background of an outsourcing engagement, the framework structures prior insights around a basic outsourcing project lifecycle consisting of a pre-contract, mid-contract and post-contract stage.

The *pre-contract* stage relates to the period before contractual outsourcing arrangements are signed off. At this point in time, organisations that are new to outsourcing may evaluate the strategic innovation potential of service providers. They may further start engaging in outsourcing configuration and contract negotiation efforts. As shown in the framework, the antecedents and arrangements phases therefore stretch into this lifecycle stage. Not all organisations however are new to outsourcing. In fact, they usually find themselves in an already ongoing engagement when demanding strategic innovations (Weeks and Feeny, 2008; Kotlarsky *et al.*, 2015). For this reason, the antecedents and arrangement phase extend to the mid-contract stage.

The *mid-contract* stage denotes the period in which client firms and service providers are formally tied to an outsourcing contract. It is also during this stage when strategic innovation generation-related efforts are generally made. Assessments of realised innovation outputs and

performance improvements may be similarly made during the ongoing engagement, which can have implications for continuing the business relationship after the termination date of the contract (*post-contract* stage). In the framework, dotted lines are used to visualise the permeability of the three outsourcing lifecycle stage boundaries in relation to the four emergent phases.

#### ***4.2.2 Antecedents of strategic innovation through outsourcing decisions***

Reviewed studies discuss several drivers that may influence the decision to pursue strategic innovations through outsourcing. Related insights can be divided into three themes:

- task attributes
- organisational considerations
- environmental conditions

The task attributes theme refers to the compatibility of the innovation task environment with outsourcing. The second theme, organisational considerations, involves firm-level aspects related to the client and service provider that are of note when considering outsourcing as a means for achieving strategic innovation. The third theme, environmental conditions, includes industry developments that may give the impetus to turn to outsourcing for strategic innovations. Thematic analysis findings reveal that task attributes associated with strategic innovations discourage the decision at issue. Organisational considerations and industry developments however offer compelling arguments in favour of leveraging outsourcing for strategic innovation.

#### **Task attributes**

##### *Transaction cost-related task attributes*

Conventional business services outsourcing engagements typically involve the transfer of generic IT-enabled tasks, such as legacy systems management (Arora *et al.*, 2001), payroll processing (Mani *et al.*, 2010) or call centre activities (Weerakkody and Irani, 2010). Related studies usually examine such activities through the theoretical lens of transaction cost

economics (TCE) (Williamson, 1975, 1985). TCE helps study “make” or “buy” decisions and suggests that activities should be internalised when transaction costs are excessive (Stanko and Calantone, 2011). Two TCE concepts are often applied to inspect the task environment of the IT-enabled business service to be performed. One is asset specificity, which refers to the transferability of assets that support the business service (Aubert *et al.*, 2004; Stanko and Calantone, 2011). The other is uncertainty in the task environment, which refers to the extent to which the exact nature of the deliverable can be defined (Aubert *et al.*, 2004). Generic business services are generally characterised by a task environment featuring low asset specificity (Grover *et al.*, 1996) and low uncertainty (Willcocks *et al.*, 1995). Hence, they present ideal candidates for outsourcing.

The reviewed literature indicates that the task environment of strategic innovation activities features a high degree of asset specificity and high uncertainty. The former mainly arises from the necessity of developing deep relationship-specific knowledge. Client firms need to develop an understanding of the range of customisable technological solutions available at their service providers (Weeks and Feeny, 2008; Oshri *et al.*, 2018). Service providers must accumulate client firm-specific domain knowledge to tailor their state-of-the-art technology solutions to distinctive client firm business problems (Arora *et al.*, 2001; Chatterjee, 2017). The latter, high uncertainty, is inherent in strategic innovation, which is of exploratory nature and requires non-routine problem solving and deviation from existing knowledge (Miranda and Kavan, 2005; Jansen *et al.*, 2006). A priori, the final output of a strategic innovation is unknown (Miranda and Kavan, 2005; Susarla and Mukhopadhyay, 2019). In line with TCE perspectives, some studies indicate that value creating IT-enabled business services that involve high degrees of customisation, as is the case with strategic innovation, can be better performed in-house (Safizadeh *et al.*, 2008; Qu *et al.*, 2010; Weigelt and Sarkar, 2012).

#### *Knowledge-related task attributes*

Relationship-specific knowledge development sits at the heart of the strategic innovation task environment. Central tenets of the knowledge-based view (KBV) (Kogut and Zander, 1992) and of theoretical extensions like social capital theory (Nahapiet and Ghoshal, 1998) are thus

commonly utilised to assess the “make” or “buy” decision from a knowledge-centric perspective. Concisely put, the KBV suggests that an organisation can be viewed as a social community with common organising principles, thereby facilitating knowledge combination activities between its organisational members (Bunyaratavej *et al.*, 2011; Verwaal, 2017). An organisation therefore has an advantage over the market to coordinate, combine, and integrate specialised knowledge circulating within its organisational boundaries (Takeishi, 2002).

Some studies provide empirical support for the superiority of in-house approaches in view of knowledge sharing advantages compared to outsourcing (Qu *et al.*, 2010), especially via captive sourcing (Zimmermann *et al.*, 2018). Client-specific domain knowledge in particular is often argued to be difficult to codify and complex (Nickerson and Zenger, 2004). This type of knowledge is deeply embedded in client firm organisational members, and thus difficult to share beyond organisational boundaries (Roy and Sivakumar, 2012; Chatterjee, 2017). Accordingly, non-routine problems that require experimentation with high degrees of tacit domain knowledge are found to be better performed in-house (Weigelt, 2009; Weigelt and Sarkar, 2012).

Altogether, studies examining the task environment demonstrate that transaction cost and knowledge sharing advantages within a firm seem to be superior to market settings when highly specific assets, uncertain and complex knowledge-intensive activities are involved. These findings discourage strategic innovation through outsourcing decisions. The rationale behind those decisions must therefore spring from different arguments. They are found to be largely located in the organisational and industry environment, expanded on below.

### **Organisational considerations**

Currie and Willcocks (1998) underline that outsourcing should not be examined in isolation of the wider business imperatives. Correspondingly, thematic analysis findings introduced in this section show that key drivers for engaging in strategic innovation through outsourcing may stem from a prioritisation of pursuing long-term competitive opportunities rather than short-term profitability. Specifically, access to specialised resources, competitive strategies, outsourcing engagements as sources of competitive advantages, and evolving demands for

more value are identified as key arguments for strategic innovation through outsourcing decisions.

#### *Resource-related considerations*

Accessing each other's specialised resource pools can be advantageous for both the client firm and service provider. Widely utilised theoretical foundations in this regard include the resource-based view (RBV) (Barney, 1991) and the core competency perspective (Prahalad and Hamel, 1990). Concerning the client firm, outsourcing presents a practical alternative to fill potential voids in its IT portfolio, by substituting weak internal technological capabilities with those of the provider that are state-of-the-art (Shi, 2007; Weigelt, 2013). Combined with the service provider's specialised talent and cumulative domain knowledge extracted from engagements with other customers operating in various industries, this resource pool can result in innovative solutions for the client firm (Kedia and Lahiri, 2007). For the provider, domain-specific knowledge is highly valuable (Arora *et al.*, 2001; Chatterjee, 2017). Such intellectual resources are only fungible to a limited extent, meaning that they cannot be fully transferred from one client to another, especially when clients operate in different industries (Chatterjee, 2017). They are also difficult to learn, systematise or for others to replicate, but are critical to create custom solutions for the client (Chatterjee, 2017; Desyllas *et al.*, 2018).

#### *Competitive strategy-related considerations*

The reviewed studies often extend resource-related arguments to organisational design perspectives, which focus on the interplay between resource stocks and business strategies (Mukherjee *et al.*, 2013). From the client firm perspective, the strategic potential of IT and related competitive strategies to exploit IT is a widely discussed topic, reaching all the way back to the earliest studies in the article sample (Currie and Willcocks, 1998; DiRomualdo and Gurbaxani, 1998). Some scholars suggest that outsourcing can be an integral part of a client firm's business strategy, especially when it lacks the capabilities to exploit IT itself (DiRomualdo and Gurbaxani, 1998; Miozzo and Grimshaw, 2005). Consequently, strategic innovation is rarely a standalone outsourcing project objective, but commonly tied to a client firm's business development goals (Jensen, 2009), like technological leadership (Kern *et al.*,

2002; Choudhury and Sabherwal, 2003), and business transformation (Linder, 2004; Kedia and Lahiri, 2007; Mani *et al.*, 2010). From a service provider perspective, Desyllas *et al.* (2018) find that providers are more inclined to engage in strategic innovation efforts when they follow a differentiation-based rather than cost-based competitive strategy, which focuses on customisation rather than replication.

#### *The outsourcing relationship as a source of competitive advantage*

The relational view proposes that business relationships can yield competitive advantages for the firm. More specifically, competitive advantages may emerge from relationship-specific assets, knowledge-sharing routines, complementary resources and governance structures (Dyer and Singh, 1998), the latter pertaining to a topic that will be discussed in the arrangement phase. In view of these promises, and in contrast to TCE arguments, organisations may be incited to intentionally develop idiosyncratic assets over the course of a relationship, which eventually can be leveraged for strategic innovations. Empirical evidence shows that such assets mainly take the form of synergistic knowledge bases (Weeks and Feeny, 2008). Following Dyer and Singh (1998), the ability to leverage these assets is a function of prior related knowledge (knowledge-sharing routines), which Cohen and Levinthal (1990) refer to as absorptive capacity. When seeking strategic innovations through outsourcing, research reports bilateral absorption effects; the client firm absorbs its provider's technological knowledge, while the provider's capacity expands with client firm domain knowledge over time (Weeks and Feeny, 2008; Oshri *et al.*, 2018). Lastly, to facilitate resource complementarity, prior research demonstrates that the client and provider may go so far as to set up jointly owned value-creation centres (Kotlarsky *et al.*, 2016).

#### *Progressively increasing demands for more value*

Organisations may be motivated to seek strategic innovations when they already are in an ongoing, successful outsourcing relationship (Rottman and Lacity, 2006; Weeks and Feeny, 2008; Kotlarsky *et al.*, 2015; Oshri *et al.*, 2018). Evolutionary perspectives suggest that organisations will eventually move from cost savings to strategic innovation objectives after consistently experiencing satisfactory results with delivered operational business services.

One concept from a client perspective in this regard is Rottman and Lacity's (2006) learning curve. The learning curve divides outsourcing relationships into four phases. In principal, it proposes that after a client learns about the potential benefits of outsourcing (first phase), it gradually moves from cost (second phase) to quality (third phase), and then to innovation objectives (fourth phase). Weeks and Feeny (2008) use this concept as theoretical basis, but find that in practice, organisations do not always move sequentially through, but more often oscillate between the phases. From a provider perspective, Desyllas *et al.* (2018) rely on a concept with similar ideas, the reverse product cycle (Barras, 1986, 1990). Adapted to an outsourcing context, it proposes that service providers initially pursue service efficiency improvements, then incrementally improve service quality, and ultimately generate new or improved service products that help the client capture new markets (Barras, 1986; Desyllas *et al.*, 2018). Desyllas *et al.*'s (2018) findings are broadly consistent with this concept.

### **Environmental conditions**

Changing conditions in the client firm's industry or business services landscape may carry considerable implications for the strategic innovation through outsourcing decision. For the client firm, thematic analysis findings highlight technological turbulences and shifts in the locus of competition. For the service provider, business service industry commoditisation is highly influential on competitive behaviour.

#### *Technological turbulence*

The analysed literature recurrently provides examples of client firms that struggle to cope with technological leaps in the respective industries they operate in. In the financial industry for instance, end customers increasingly expect quicker access to account information and less complex online banking interface designs (Weigelt and Sarkar, 2012). The commercial printing industry is similarly gradually being inducted into the foreign world of digital content as end customers want to customise their publications online (Kumar and Snavely, 2004). A client firm's workforce may also show strong interest in advanced IT-enabled solutions. Managers can for example gain a more transparent account of employee activities (Wiener *et al.*, 2019), while employees can coordinate business activities within the organisation and across supply

chain partners more proficiently (Oshri *et al.*, 2015; Kotlarsky *et al.*, 2016). Altogether, to stay ahead of technological, and, most recently, digital demands (Gozman and Willcocks, 2019; Wiener *et al.*, 2019), client firms may be motivated to turn to service providers for strategic innovations.

#### *Locus of competition*

Value network perspectives (e.g., Gulati, 1995; Gulati *et al.*, 2000) provide a common theoretical ground for examining the advent of strategic innovation through outsourcing from a client firm perspective (Van de Ven, 2005; Manning *et al.*, 2018). They build on tenets of the open innovation paradigm (Chesbrough, 2003) and emphasise on new business opportunities that become tangible with joint forces (Aubert *et al.*, 2015). Studies following these perspectives can take into account that the knowledge needed to develop innovations is distributed outside of a single organisation, which renders vertical integration unfeasible (Van de Ven, 2005; Manning, 2013). The locus of competition shifts from individual firms to value networks (Van de Ven, 2005). Translated to the strategic innovation through outsourcing context, service providers can become valuable nodes in the client firm value network (Miozzo and Grimshaw, 2005; Van de Ven, 2005). Studies offer empirical evidence of client firms across industries that integrate both established and disruptive providers as nodes in their value networks (Su and Levina, 2011; Su *et al.*, 2016). Such manoeuvres can be especially advantageous during ambiguous early innovation development stages, where experimentation is a far more important concern than coordination (Miozzo and Grimshaw, 2005) and business interests change quickly (Van de Ven, 2005).

#### *Business services outsourcing landscape*

Largely based on theoretical foundations from international business literature, prior studies identify notable cluster developments in popular outsourcing destinations, especially in India (Massini and Miozzo, 2012; Manning, 2013; Lema *et al.*, 2015). Manning (2013) finds that they emerge due to the increasing commoditisation of knowledge work, the growing demand for high-skilled, low-wage talent, and the growing supply of business services by specialised providers. Indeed, a common pattern observed across the literature reveals that the

outsourcing industry approaches a stage of maturity (Davenport, 2005; Manning *et al.*, 2018). Coupled with fast-paced advancements in IT (Chou *et al.*, 2015), such developments help answer why providers are increasingly driven to support the business objectives of client firms. First, process commoditisation, mainly due to the explicit nature of technological knowledge (Gopal and Gosain, 2010; Chatterjee, 2017), causes growing competition among providers (Arora *et al.*, 2001; Davenport, 2005; Manning *et al.*, 2018). Second, cluster developments provoke growing competition for local talent (Manning, 2013). With the cost of talent increasing and the emergence of new low-cost outsourcing destinations, such as in African and Central American countries, competing on the basis of labour arbitrage alone becomes an unsustainable competitive strategy (Manning, 2013). Third, the maturing outsourcing industry accelerates the pace of consolidation (Shi, 2007; Massini and Miozzo, 2012). This requires providers to broaden and deepen their scope of services, otherwise they will be side-lined by a small number of dominant players (Shi, 2007). In light of the above, service providers are not merely motivated to innovate for the client just for the sake of innovation. Rather, they appear to engage in strategic innovation initiatives with the ulterior motive of differentiating themselves in a maturing industry (Davenport, 2005; Manning *et al.*, 2018).

### **Summary of prior research related to the antecedents phase**

Prior research related to the antecedents phase, which deals with drivers for and against strategic innovation through business services outsourcing decisions, reflects an unclear picture. The attributes of strategic innovation-related tasks seem to discourage client firms from turning to outsourcing for innovation. Mostly examined through the lens of TCE and the KBV, the high uncertainty and knowledge intensity in the associated task environment undermines the legitimacy of outsourcing approaches, while making in-house alternatives more appealing. Other findings however indicate that a blinkered focus on immediate cost savings and knowledge sharing efficiencies does not provide full justification for neglecting the outsourcing approach. In fact, long-term considerations at the organisational level and recent industry developments provide many compelling reasons for leveraging outsourcing for strategic innovations. Altogether, the strategic innovation through outsourcing decision may be viewed

more favourably by organisations that are prepared to sacrifice short-term profitability for long-term business development.

#### ***4.2.3 Arranging outsourcing engagements for strategic innovation***

Findings in the arrangement phase present researched configurational, pricing, contractual and relational variants when leveraging outsourcing engagements for strategic innovation, in consideration of major relational risks. These topics are discussed below in the following order:

- Relational risk portfolio
- Outsourcing configurations
- Pricing models
- Degree of formalisation
- Relationship management

In the analysed article sample, most research appears to investigate aspects related to this phase. While a lack of research clearly is less of problem in this phase, the consistency of prior findings is. Specifically, it remains unclear whether a slim supply base configuration, consisting of one or a few providers, or a broad supply base, is more suitable for achieving strategic innovations. Similarly, flexible pricing models are found to facilitate strategic innovation. Yet, which kind of flexible pricing model is the most appropriate for such a purpose is unclear. Whether a more complete or incomplete contract, coupled with a greater or lesser reliance on relational governance mechanisms, establishes an adequate environment for collaborative strategic innovation efforts is another area plagued by inconclusive results.

#### **Relational risk portfolio**

Outsourcing engagements are notoriously difficult to arrange and manage, particularly due to the many relational risks that stem from naturally diverging strategic interests of the client firm and service provider (Aron *et al.*, 2005; Hoecht and Trott, 2006; Shi, 2007; Handley and Benton, 2009). When leveraged for strategic innovation, the magnitude of these risks is greatly

amplified, given the uncertainty of strategic innovation outputs and the widened scope for opportunism (Aubert *et al.*, 2015). Four relational risks recurrently appear in the literature. They include the pre-contractual adverse selection problem, moral hazard, hold-up problem (both usually mid-contract), and poaching, which is a salient issue in the post-contract stage and will be expanded on in the fourth framework phase, outcomes.

#### *Adverse selection problem*

The adverse selection problem is theoretically rooted in agency theory (Eisenhardt, 1989), together with moral hazard. These relational risks spring from information asymmetries and goal incongruencies (Roy and Sivakumar, 2012; Langer and Mani, 2018; Wiener *et al.*, 2019). The adverse selection problem arises from hidden information. More specifically, it denotes situations wherein the principal (in the outsourcing context the client firm) does not have complete information about relevant characteristics of the agent (service provider) (Roiger, 2006). Consequently, the client is unable to recognise the ideal provider and may select a provider who claims to be best-in-class, but may in fact only be second-best. The winner's curse (Kern *et al.*, 2002) is a closely associated issue. Here, the client firm disseminates a request for proposal upon which a provider may make unrealistic bidding promises to win the contract, fully aware of its inability to recover operational expenses over the short term. As a result, the client firm may select such a provider, only to find itself locked into an engagement with a laundry list of service delivery issues.

Prior research shows that clients may skim the cream of service providers by engaging in comprehensive screening activities. Selection criteria can include relationship histories, the service provider's experience with certain technologies and attractive rates (Choudhury and Sabherwal, 2003; Levina and Vaast, 2008), levels of transparency (Søderberg *et al.*, 2013) and certifications (Chatterjee, 2017), registered patents and the ownership of technical, and commercial information in the form of trade secrets (Miozzo *et al.*, 2016). They may also "groom" providers by incentivising them to acquire valuable knowledge about the domain they operate in (Su *et al.*, 2016).

### *Moral hazard*

In contrast to the adverse selection problem which arises from hidden information *ex ante*, moral hazards arise from hidden actions *ex post*, that is, after the contract has been signed (Hart and Holmström, 1987; Roiger, 2006). Moral hazard centers on the problem of inducing agents to supply proper amounts of productive inputs when their actions cannot be observed (Holmström, 1982). In the outsourcing context, this problem is mainly reflected in supplier shirking (Aron *et al.*, 2005; Handley and Benton, 2009).

Supplier shirking refers to deliberate underperformance by an agent (service provider) while claiming full payment (Aron *et al.*, 2005). Specifically, the provider may be driven to refrain from fulfilling agreed-on responsibilities due to self-interest, combined with the imperfect ability of the client firm to fully observe the provider's actions (Aron *et al.*, 2005; Handley and Benton, 2009). In one of their studied cases, Choudhury and Sabherwal (2003) find evidence of a service provider shirking testing responsibilities. The client developed such exhaustive test plans for the innovation that the provider started relying on the client to identify technical problems. The result was the delivery of an underdeveloped software solution that failed the client firm's internal testing procedures.

### *Hold-up problem*

The classical hold-up problem (Klein *et al.*, 1978) is a central concept in TCE (Williamson, 1985). It arises from hidden intentions and involves relationship-specific investments that have no value in alternative engagements (Holmström and Roberts, 1998; Roiger, 2006). Because any initial contract is incomplete, situations are likely to arise after the investment has been made that require renegotiations between the parties, especially over the sharing of future returns from the investment (Holmström and Roberts, 1998).

In the strategic innovation through outsourcing context, both the client and service provider are found to be vulnerable to hold-up. The client may be exposed to providers who intend to deliver only parts of the developed innovation, or the entire innovation but on terms and at a higher price that reduces the benefits for the client (Aubert *et al.*, 2015). Conversely, the provider may

be forced by the client to engage in customisations at rock-bottom prices, or else the client terminates the relationship (Veltri *et al.*, 2008). In both cases, the gravity of these threats could motivate either victimised party to cease cooperation, or even engage in “shading”, a form of retaliatory behaviour (Frydlinger *et al.*, 2019).

### *Poaching*

Poaching refers to the risk of information, transferred between parties for purposes specified in the contract, deliberately being used by the receiving party for purposes outside of the contract, to its own economic benefit, and to the detriment of the information-providing party (Clemons and Hitt, 2004). From the victimised party’s view, this risk can lead to unintentional knowledge leakages (Hoecht and Trott, 2006; Miozzo *et al.*, 2016). Poaching presents a serious risk in outsourcing when strategic innovations are pursued. Since the development of strategic innovations requires the client to extensively share its domain knowledge with the provider, the provider may eventually spread this knowledge to the client’s competitors (Hoecht and Trott, 2006). After all, while domain knowledge is not fungible across industries, it is likely to be redeployed in projects with different clients that compete in the same industry (Chatterjee, 2017). Hoecht and Trott (2006) describe a challenging trade-off in this regard, namely that access to the client’s deep domain knowledge can lead to custom innovations, but increases the risk of leaking commercially sensitive information. This relational risk will be revisited in the knowledge leakage theme located in the outcomes framework phase.

### **Outsourcing configurations**

Scholars are divided as to which outsourcing configuration is most conducive to strategic innovation. Several studies examine outsourcing relationships with slim supply bases, that is, engaging with one or few providers (Lee *et al.*, 2004; Weeks and Feeny, 2008; Su and Levina, 2011; Wiener and Saunders, 2014; Bui *et al.*, 2019). Su and Levina (2011) also refer to these configurations as concentrated partnerships. Lacity and Willcocks (2017) note that such configurations become increasingly prevalent in practice, together with demands for innovations that have business-wide impacts. Other studies provide empirical evidence of successful strategic innovation outcomes with broad supply bases, occasionally involving

hundreds of providers (Su *et al.*, 2016). Su and Levina (2011) term such configurations diversified partnerships. Thematic analysis findings suggest that supply base configuration decisions have considerable implications for the diversity of ideas, dependency involvement and coordination. Early advancements in configurations that combine broad and slim supply bases are similarly identified.

#### *Idea diversity*

Scholars who extol the virtues of broad supply bases highlight that client firms can thereby better respond to disruptive changes, by staying engaged with multiple established and niche players that contribute diverse ideas (Su *et al.*, 2016). The broad supply base variant may be suitable for project-based, knowledge-intensive activities, where experimentation is more important than economies of scale, and constantly differing best-of-breed capabilities are needed (Su and Levina, 2011). Accessing a greater diversity of ideas also increases the flexibility to accommodate requirement changes (Bui *et al.*, 2019), and allows the client to better probe the potential of new technologies (Su and Levina, 2011; Su *et al.*, 2016).

Conversely, engaging with one or a few providers narrows down the diversity of ideas (Su *et al.*, 2016), but promotes the development of a shared language, knowledge, and routines (Bui *et al.*, 2019). This in turn facilitates the discovery of business-level innovations that more closely fit to the distinctive characteristics of the client (Weeks and Feeny, 2008). A slim supply base variant may be useful when the task environment requires both economies of scale and customised innovations, as in complex, large-scale enterprise IS outsourcing engagements (Su and Levina, 2011).

#### *Dependency involvement*

Dependency involvements may be a critical issue in slim supply base configurations. Prior research warns of lock-in problems, especially in long-term contract regimes (Kumar and Snavely, 2004; Su *et al.*, 2016). In the tradition of TCE, switching costs are high when the task environment is characterised by high uncertainty (Cordella and Willcocks, 2012) and involves the development of highly specific assets that cannot be easily redeployed in other

engagements (Lee and Kim, 2010). When it comes to strategic innovations, this can result in unsustainably high opportunity costs, as client firms are locked into a specialised, but, compared to broad supply bases, limited set of expertise (Hoecht and Trott, 2006).

Another consequence is that clients tie their innovation strategies to the business objectives of their providers (Miozzo and Grimshaw, 2005) and hamper their flexibility to respond to new challenges in their business environment (Shi, 2007). To mitigate the significant lock-in problems associated with slim supply bases, clients are traditionally advised to use short-term contracts (Su *et al.*, 2016), that keep their service providers on their feet to continuously engage in sincere innovation efforts (Kumar and Snavely, 2004).

Related insights offer conflicting recommendations. For example, Susarla *et al.* (2010) find a negative relationship between task complexity and contract duration, which suggests that short-term contracts can promote complex tasks like innovation-related efforts and supports the idea of keeping providers on their feet. Mani *et al.* (2010) in contrast find a positive relationship between task complexity and long-term partnership structures. This may be explained by arguing that a lack of strong dependencies poses a continuous reminder to the providers that they are replaceable (Su *et al.*, 2016). Such concerns create fear, distrust and pre-empts collaborative problem-solving activities (Miranda and Kavan, 2005).

#### *Coordination issues*

Broad supply bases generate high coordination costs, especially in terms of monitoring (Su *et al.*, 2016). Broad supply bases may also give rise to performance issues when the client “slices the pie too thinly” (Levina and Vaast, 2008, p. 545). This may cause information losses during communication (Mani *et al.*, 2010), while hindering the many providers from having a clear view of all elements linked to the strategic innovation (Aubert *et al.*, 2015). Entertaining multiple engagements can further increase the magnitude of knowledge leakage problems (Hoecht and Trott, 2006). When a client notices that this risk may actually materialise, it may minimise spontaneous knowledge combination activities (Miranda and Kavan, 2005), thereby similarly hampering strategic innovation efforts.

Broad supply bases however are also associated with more competition within the provider portfolio, which may lead to more innovations (Currie and Willcocks, 1998; Bui *et al.*, 2019). This benefit was scrutinised by Wiener and Saunders (2014). Drawing on the concept of coopetition (Brandenburger and Nalebuff, 1996), they study a client firm in the sportswear industry that engaged in multi-sourcing to receive innovative IT solutions. They unveil that successfully inducing competition and cooperation in a broad supply base is possible, but requires extensive coordination efforts. Such efforts entail repeated bargaining costs due to a high frequency of provider bidding, high monitoring costs due to regular performance checks, and high transition costs that should help weaker service providers in the portfolio catch up with their stronger rivals.

The presented coordination difficulties do not apply to such a considerable extent in slim supply bases. Slim supply bases promote the development of shared language, knowledge, and routines that enhance coordination efficiency (Bui *et al.*, 2019). This may not only result in improved time, talent and financial resource utilisation, but also helps the service provider become more knowledgeable about the client's needs and business strategies. Accordingly, the provider may perceive to be able to secure future business opportunities with the client through more targeted innovation efforts, which ultimately benefit the client as well as itself (Henke and Zhang, 2010). Furthermore, developed shared understandings in slim supply bases facilitate effective monitoring efforts (Weeks and Feeny, 2008), and can even enable the use of trust as a substitute for excessive monitoring (Miozzo and Grimshaw, 2005).

#### *Broad and slim supply base combination configurations*

Lastly, prior research has only recently started to examine configurations that attempt to combine slim and broad supply bases through service provider ranking systems. Generally, they involve a differentiation between preferred and secondary service providers. In prior research, modern concepts like the long-tail strategy (Su *et al.*, 2016) are based on this idea. A small set of "strategic partners" is contracted for maintaining IT platform services, while innovations based on emerging technologies are developed with disruptive niche providers on a one-off project basis. These niche providers may eventually move up to the list of preferred

strategic partners, or can win new outsourcing contracts with similar organisations by showcasing their success stories.

### **Pricing models**

Various pricing models have been investigated in connection with strategic innovations. Prior research has studied outsourcing engagements based on fixed price contracts (Choudhury and Sabherwal, 2003; Oshri *et al.*, 2015; Bui *et al.*, 2019). Studies have also examined a variety of flexible pricing models, like time and materials contracts (Oshri *et al.*, 2015; Bui *et al.*, 2019), performance-based contracts (Sumo *et al.*, 2016), and equity-based pricing models in form of partnership contracts that share features with joint venture structures (DiRomualdo and Gurbaxani, 1998; Mani *et al.*, 2010; Holweg and Pil, 2012; Oshri *et al.*, 2015).

#### *Fixed pricing models*

Fixed price contracts involve predetermined prices for specified deliverables. In general, scholars advise against their stand-alone use for innovation, because they require detailed requirement specifications in advance (Bui *et al.*, 2019) and entail high adaptation costs for unforeseeable challenges (Oshri *et al.*, 2015; Bui *et al.*, 2019). Bui *et al.* (2019) for instance find that those few clients that achieved strategic innovations avoided fixed price contracts altogether. Fixed price contracts also create a risk imbalance, with the provider bearing the risk of cost escalation, which consequently motivates quality cutbacks (Bui *et al.*, 2019). Such issues are partially reflected in one of Choudhury and Sabherwal's (2003) observed fixed-price contract engagements, where a provider developed a low-quality software and more detailed requirement specifications had to be introduced afterwards for its redesign. Lastly, Oshri *et al.* (2015) show that stand-alone fixed price contracts do not influence the quality of an outsourcing relationship. A high relationship quality however greatly increases the ability to achieve strategic innovations.

#### *Flexible pricing models – equity-based contracts*

There seems to be a consensus that successful strategic innovation outcomes necessitate flexible pricing models that accommodate the uncertainty associated with related innovation

development tasks. In this regard, Oshri *et al.* (2015) find that joint venture contracts or a combination of a joint venture contract with either a fixed price or time and materials contract greatly amplifies the positive effect of relationship quality on the ability to achieve strategic innovations. Holweg and Pil (2012) lend empirical support to the success of such equity-based contracts, highlighting that such contracts promote the creation of shared interests and equal sharing of risk and profit. Mani *et al.* (2010) and DiRomualdo and Gurbaxani (1998) also emphasise on the thereby enhanced facilitation of knowledge transfers. Equity-based contracts most closely replicate features of vertically integrated organisations and therefore also feature joint ownership of the outsourced task, ongoing value creation over longer time horizons, higher levels of unification, and greater commitment (Barua and Mani, 2014), while reducing knowledge leakage risks (Hoecht and Trott, 2006). A major drawback is that they incur considerable setup costs (Holweg and Pil, 2012).

#### *Flexible pricing models – performance-based and outcome-based contracts*

The little research that has focused on performance-based and outcome-based contracts, which directly tie rewards to realised business value, yields mixed results. The potential utility of such contracts has already been suggested by DiRomualdo and Gurbaxani (1998), who noted that “pricing provisions should tie vendor compensation to value received by the client” (p. 10). Sumo *et al.* (2016) examine two engagements governed by performance-based contracts. One involved a provider who proactively engaged in innovation activities, while the other involved a reactive provider with low levels of innovation. The scholars argue that the latter was risk-averse and, as a long-term market leader, not frequently confronted with the need for innovation. Lacity and Willcocks (2013) inspect the effectiveness of gainshare pricing models and found that their success depends on the allocated point of reference. These pricing models are more effective when tied to individual initiative, rather than to annual service provider performance outcomes.

#### **Degree of formalisation**

In more complete contracts, behaviours and project outcomes are extensively formalised, while more incomplete contracts give the parties flexibility to deal with new contingencies as

they arise (Argyres *et al.*, 2007). The suitability of more complete or more incomplete outsourcing contracts for achieving strategic innovation has attracted extensive attention. Prior research on contract completeness is heavily influenced by TCE (Argyres *et al.*, 2007; Goo *et al.*, 2009; Susarla *et al.*, 2010). Some studies have also examined the role of particular formal control mechanisms (Kirsch, 1997; Wiener *et al.*, 2016).

TCE in relation to contract design proposes that economic actors are limited by bounded rationality which inhibits them from crafting fully complete contracts (Argyres *et al.*, 2007; Susarla *et al.*, 2010). Because they are unable to foresee all possible future contingencies, they need to incorporate formal safeguards that protect them from holdup problems arising from incomplete contracts (Susarla *et al.*, 2010). Formal safeguards are broadly categorised as outcome and behaviour controls in control theory (Kirsch, 1997). The former, outcome controls, specify parameters of the desired outcome and rewards for meeting related goals (Kirsch, 1997; Gopal and Gosain, 2010). They may for example include specifications of desired functionalities or project milestones (Wiener *et al.*, 2016). The latter, behaviour controls, establish explicit rules and procedures that should help reach the outcomes (Kirsch, 1997; Gopal and Gosain, 2010). They may include prescribed development methodologies and monitoring routines like weekly reports (Wiener *et al.*, 2016).

#### *Higher degrees of formalisation*

The literature is inconsistent concerning contract completeness. One side argues that more complete contracts can facilitate strategic innovation. Contracts not only serve as protective devices, but also facilitate coordination (Argyres *et al.*, 2007; Handley and Benton, 2009). Correspondingly, a range of formal mechanisms have been studied that may be applied for such purposes, like contractually defined innovation plans which specify the process for innovation, including implementation and prioritisation (Goo *et al.*, 2008, 2009), setting up a joint innovation board (Weeks and Feeny, 2008), flexible management pairs, dual formal reviews, or, drawing on advances in ambidexterity literature (March, 1991), structural and temporal separations of exploitation and innovation foci (Aubert *et al.*, 2015). Parties with relationship histories have also been found to learn how to specify contractual provisions more

effectively. In such cases, they add more detailed clauses to account for increasingly foreseeable contingencies (Argyres *et al.*, 2007).

#### *Lower degrees of formalisation*

In contrast, the other side suggests that more complete contracts hinder strategic innovation efforts. Bui *et al.* (2019) clearly note that detailed contracts are a key reason for the lack of strategic innovation. Langer and Mani's (2018) findings indicate that incompleteness is an essential feature of well-designed contracts in the case of complex initiatives which involve aspects that are difficult to verify, like strategic innovation. Apart from that, more complete contracts limit provider flexibility and responsiveness (Miranda and Kavan, 2005; Aubert *et al.*, 2015). Hoecht and Trott (2006) suggest that detailed contracts are especially ineffective for such “moving targets” and when the client lacks a detailed understanding of the nature of the provider's work. In addition, since strategic innovations require creativity, rigid behaviour controls like stage-gate processes could stifle exploration as the provider may be more concerned with trying to learn how to comply with formalities (Roy and Sivakumar, 2012). Following Aubert *et al.* (2015), the restricted flexibility of the service provider hinders the delivery of ideas that were not specified *ex ante*. In the worst case, this may lead to a downward spiral, where the provider's inability to innovate drives the client firm to enforce penalties for not innovating and monitor the contract even more closely. Langer and Mani (2018) describe such instances as “curses” of too much measurement in complex initiatives. Conversely, empirical evidence demonstrates that the autonomy enabled by a low degree of term specificity can create the freedom for providers to initiate strategic innovation efforts and to freely allocate their most suitable resources (Sumo *et al.*, 2016). Altogether, some best practice contracting principles of conventional outsourcing, like detailing tasks (Holweg and Pil, 2012), can be at odds when arranging for strategic innovation (Aubert *et al.*, 2015; Oshri *et al.*, 2018).

#### **Relationship management**

Formally arranged obligations to engage in strategic innovation efforts do not guarantee cooperative behaviour during the initiative (Lahiri and Kedia, 2009). This implies that a contract alone is insufficient to align objectives and mitigate external sourcing risks (Handley and

Benton, 2009). The outsourcing relationship therefore needs to be set up in a way that ensures commitment by the client and provider over the course of the engagement (Kedia and Lahiri, 2007). Commitment incorporates both belief and behaviour, reflects the parties' intentions to stay in the relationship, and their willingness to expend efforts to maintain the relationship (Chou *et al.*, 2015). In essence, commitment denotes the loyalty to the other party (Handley and Benton, 2009; Chou *et al.*, 2015). To foster commitment, the relationship needs to resemble a partnership (Kotlarsky *et al.*, 2015).

Prior research has examined various aspects associated with a partnership relationship style, drawing on relationship theories that focus on cooperation, interactions, and social and economic exchanges as central factors in inter-organisational relationships (Dibbern *et al.*, 2004). Related insights repeatedly align with Dyer and Singh's (1998) relational view. Studies have also examined informal control mechanisms (Kirsch, 1997; Wiener *et al.*, 2016), and their complementarity with contractual structures (Poppo and Zenger, 2002). Informal controls rely on an implicit system of shared norms, values, and goals that promote desirable behaviour (Kirsch, 1997; Tiwana, 2010; Wiener *et al.*, 2016). They include clan controls, that build shared norms and values as well as a common vision, mostly through socialisation, and self-controls, which encourage self-monitoring of behaviours based on intrinsic motivation and individual standards and objectives (Wiener *et al.*, 2016).

#### *Partnership features*

In the reviewed literature, it is commonly understood that the outsourcing relationship must not be treated as an arms-length, tactical relationship (Lahiri and Kedia, 2009; Barua and Mani, 2014; Susarla and Mukhopadhyay, 2019), but rather as a partnership (Levina and Su, 2008; Weeks and Feeny, 2008; Kotlarsky *et al.*, 2015). Certain characteristics are associated with partnerships. They include shared interests (Weeks and Feeny, 2008; Bui *et al.*, 2019; Frydlinger *et al.*, 2019), high levels of trust (Kedia and Lahiri, 2007; Weeks and Feeny, 2008; Søderberg *et al.*, 2013) and transparency by sharing plans, expectations and technology road maps (Henke and Zhang, 2010; Søderberg *et al.*, 2013). They also involve irreversible investments in specialised technologies and platforms unique to the provider (Susarla and

Mukhopadhyay, 2019), a strong identification among participants with the project (Søderberg *et al.*, 2013), corporate and mid-level executive involvement (Miranda and Kavan, 2005; Weeks and Feeny, 2008; Handley and Benton, 2009), and shared routines (Argyres *et al.*, 2007). Together, these characteristics imply that partnerships are governed more effectively by enabling control styles that promote cooperation, rather than by predominantly authoritative control styles that rely on bureaucratic values (Wiener *et al.*, 2016, 2019).

#### *Relationship management in more complete contracts*

Prior research has frequently examined how these partnership elements and informal control mechanisms interact with contractual aspects when attempting to innovate in outsourcing. Supporting Poppo and Zenger's (2002) propositions, studies demonstrate that contractual safeguards are often complemented by relational norms to motivate continuous cooperation and to deter the pursuit of self-interested, short-term gains. Empirical findings by Argyres *et al.* (2007) for instance reveal that greater contract detail can contribute to the development of trust, because it demonstrates the importance of protecting the relationship. Susarla and Mukhopadhyay (2019) demonstrate that having both credible commitments and contractual provisions in form of contingent control rights increases the likelihood of realising post contract innovation value at the client firm. Weeks and Feeny (2008) find that successful strategic innovation through outsourcing initiatives are visibly governed by a “trust-but-verify” approach that builds on tightly maintained service levels. Overall, combining high degrees of formalisation with relational governance is argued to be particularly suitable for long-term, complex relationships. Such approaches reflect the main ideas of formal relational contracting (Frydinger *et al.*, 2019).

#### *Relationship management in more incomplete contracts*

Studies examining outsourcing engagements governed by more incomplete contracts show that complex tasks like those involved when generating strategic innovation can be similarly completed successfully with an extensive reliance on social interactions, rather than on prespecified contractual terms (Kumar and Snavely, 2004; Langer and Mani, 2018). They are principally based on relational governance perspectives grounded in sociopsychology

(Tiwana, 2010). Higher degrees of formalisation are considered to be detrimental to the relationship's quality, since they signal a lack of trust. Providers may consequently shift their focus and resources from information exchange aimed at problem solving to defending actions and choices (Mani *et al.*, 2010). Incomplete contracts in contrast are found to help build trust and incentivise the provider to invest in non-contractible activities (Langer and Mani, 2018). Enforcing the contract is associated with a last-ditch effort and should only be necessary in extreme cases (Kumar and Snavely, 2004). Contractual controls are relaxed, while authority, autonomy, incentives and trust are strengthened to encourage the provider to step outside of formal boundaries and create beneficial solutions for all involved parties (Bui *et al.*, 2019). The lack of contractual safeguards however implies that such trust-based approaches are prone to relational risks. When the client is overcommitted, the provider could shirk on some of its responsibilities, whereas an overcommitted provider runs the risk of facing low-ball offers made by the client (Susarla and Mukhopadhyay, 2019). Such approaches reflect the main ideas of vested outsourcing (Vitasek and Manrodt, 2012).

### **Summary of prior research related to the arrangement phase**

Thematic analysis findings presented in the arrangement phase show that the literature to date has produced many, but largely inconclusive results. In view of well-known relational risks, major avenues of exploration include outsourcing configurations, pricing models, degrees of formalisation and relationship management. Slim supply base configurations that rely on a few providers offer the potential benefit of more intensive collaboration that can enable highly customised innovations, but isolate the client from the diversity of ideas distributed among the many niche technology players in the industry. Broad supply bases in contrast enable a greater influx of diverse ideas but generate high coordination costs. Concerning pricing models, research largely agrees that fixed-price contracts are inferior to flexible pricing models like equity-based or outcome-based contracts. Equity-based contracts in particular, where each party acquires a stake in the venture, are found to consistently lead to successful strategic innovation outcomes but incur considerable set-up costs. Apart from that, the degree of formalisation in contracts has engendered controversy. Some findings point to the

appropriateness of more complete contracts for strategic innovations, while others suggest that extensively detailed contracts stifle creativity. Lastly, while it is relatively clear that the outsourcing engagement should be managed as a partnership, findings conflict with regards to balancing informal governance mechanisms with formal controls.

#### ***4.2.4 Generating strategic innovation in outsourcing engagements***

Findings in the generation phase comprise research insights related to the collaborative development and integration of strategic innovations. It is commonly argued that innovation increasingly depends on the ability to assimilate new knowledge produced elsewhere and to combine this with internally available knowledge (Hoecht and Trott, 2006). In an outsourcing context, the client usually possesses deep knowledge specific to its domain, while the provider possesses deep technological knowledge (Chatterjee, 2017; Oshri *et al.*, 2018). These specialised knowledge bases need to be combined for the generation of strategic innovations (Weeks and Feeny, 2008). A generic variant of the underlying process will now be outlined.

To generate strategic innovations that are customised to the client's business objectives, a common understanding of the client's distinct requirements, business systems architecture and industry challenges must be developed (Chatterjee, 2017). An extensive understanding is necessary to ensure that the innovation will lead to new business outcomes (Weeks and Feeny, 2008). This requires the client firm to share its domain knowledge with the provider (Roy and Sivakumar, 2012; Chatterjee, 2017). Subsequently, identified business needs are translated into technological specifications and an IT-enabled solution is developed, usually based on a combination of the service provider's state-of-the-art, but, in essence, "vanilla" IT products, that are customised to fit the idiosyncratic business environment of the client firm (Chatterjee, 2017). To engage in meaningful exchanges during this step, prior research points out that the client firm must (re)build a strong internal IT function (Weeks and Feeny, 2008). Lastly, the developed IT-enabled solution is integrated into the client firm's business architecture and put to use (Weigelt, 2009; Roy and Sivakumar, 2012).

Prior research has examined a variety of aspects related to the generation of strategic innovations. These insights are categorised into the following topics:

- Domain knowledge transfer
- Point of integration
- Acculturation
- Retained IT function
- IT architecture compatibility

The first three themes, domain knowledge transfer, point of integration and acculturation, refer to aspects that are directly linked to knowledge combinations in a strategic innovation initiative. The other two themes, retained IT function and IT architecture compatibility, refer to structures in the client firm's organisational environment that may facilitate or inhibit the coordination of knowledge flows and combinations.

Frequently employed theoretical perspectives include the RBV and KBV, as well as related extensions like absorptive capacity and learning, problem-solving (Nickerson and Zenger, 2004), cultural differences (Hofstede, 2003), familiarity (Herrera and Blanco, 2011), practice theory (Bourdieu and Wacquant, 1992) and boundary spanning (Carlile, 2002). Only rarely have concepts or insights been borrowed from innovation literature. Issues and challenges that may specifically emerge during individual stages of the innovation process, such as during the discovery, development and diffusion of innovations (Fichman *et al.*, 2017), thus remain poorly understood.

### **Domain knowledge transfer**

The transfer of tacit domain knowledge is critical for the enablement of client and provider knowledge combinations (Roy and Sivakumar, 2012; Weigelt and Sarkar, 2012; Chatterjee, 2017). Kibbeling *et al.* (2013) demonstrate that the more the service provider knows about the client's end user needs, the more innovative ideas it can seek and embed in its value propositions on behalf of the client. The provider's accumulated domain knowledge reflects its

domain-related absorptive capacity (Weeks and Feeny, 2008). Consistent with the KBV, domain knowledge requires context-specific understanding to make sense. Its tacitness however makes it “sticky” (von Hippel, 1994) to its owner and the context in which it has accumulated (Weigelt, 2009). Domain knowledge is also referred to as “know-why” (Chatterjee, 2017).

The service provider principally absorbs client-specific domain knowledge over time through repeated interactions with the client firm (Oshri *et al.*, 2018), especially via learning by doing and trial and error (Chatterjee, 2017). Forging strong social ties (Miranda and Kavan, 2005) and developing a shared language (Barua and Mani, 2014) is thus central, which accentuates the importance of arranging the engagement as a partnership. Additionally, the provider may also inherit some domain knowledge through the transfer of the client’s staff (Weeks and Feeny, 2008; Massini and Miozzo, 2012). Other aspects of domain knowledge may be codified using training manuals and certification exams, and imparted to employees through training courses (Chatterjee, 2017).

### **Point of integration**

Point of integration refers to the specific point in the innovation development process, when the client firm integrates its providers in development activities. Prior research suggests that collaboration is important both in the early stages of generating innovations and in the late stages during their integration (Miozzo *et al.*, 2016). In this vein, Lema *et al.* (2015) find that multinational Indian service providers are increasingly involved in high-level “systemic” development activities in addition to low-level “applied” development activities. The former includes problem identification and solution, requirements analysis and high-level design activities. The latter refers to low-level design, coding and testing. Linder (2004) observes issues when isolating the provider from high-level activities. In one reported case, the provider was not able to control costs when the client designs complex IT products on its own. To resolve this problem, the client needs to involve the provider in the early design stages. Furthermore, early involvement needs to be complemented by proactive behaviour on the part of the client (Søderberg *et al.*, 2013). Weigelt and Sarkar (2012) advise that a lack of client

firm involvement may compromise the benefits stemming from the proficiency of providers in designing custom technology applications.

### **Acculturation**

A recurrent pattern indicates that cultural distances need to be minimised to allow effective knowledge combinations. These findings align with KBV arguments when adapted to inter-organisational networks, which emphasise on the importance of building shared identities in a network that reduce costs of knowledge sharing, and create network-based learning opportunities that are superior to those of the individual firm (Dyer and Nobeoka, 2000). Cultural differences may manifest in form of differing employee values and norms, attitudes towards technology, customers, interpersonal contact and interaction, and role perceptions (Kedia and Lahiri, 2007). This does not necessarily imply that the client and provider need to be geographically close. In fact, Chen and Lin (2019) find that parties which are culturally close, but physically distant, tend to be more innovative. Lacity and Willcocks (2013) report that organisational cultures merge over time, as some providers brand their delivery centres with client colours and logos, while clients recognise national holidays of their providers. It is also crucial to consciously break down cultural walls when specialists from different disciplines come together in a strategic innovation initiative, since they may otherwise be unwilling to collaborate (Linder *et al.*, 2003).

### **Retained IT function**

Outside of the immediate project environment, prior research indicates that client firms need to maintain a strong technological knowledge base, or technology absorptive capacity, to effectively communicate with service providers about technological issues and disseminate related understandings internally through the wider organisation (Weeks and Feeny, 2008). Technological knowledge is also referred to as the “know-how” necessary to customise vanilla IT products to the specific business development objectives of the client firm, and is largely codifiable (Chatterjee, 2017).

To help bridge gaps in understanding between the provider's view of the desired innovation and that of the client, boundary spanning objects (Carlile, 2002) in form of blueprints and prototypes (Weigelt, 2009), document archives, software code and design artefacts have been found to be suitable (Gopal and Gosain, 2010). While effective, recent research is largely in agreement that the client should additionally retain or rebuild its internal IT function to absorb technological knowledge (Weigelt and Sarkar, 2012) and effectively communicate with the provider (Weeks and Feeny, 2008). This diametrically opposes the conventional outsourcing idea of downsizing the IT function to its bare essentials when pursuing cost efficiencies (Shi, 2007; Weeks and Feeny, 2008).

From a core competency perspective, the IT function is traditionally not viewed as a core business function of the client and should therefore be outsourced (Grover *et al.*, 1994). Yet, when pursuing strategic innovation, research shows that a too downsized internal IT function can inhibit collaborative efforts with the provider (Weeks and Feeny, 2008). In contrast, Miozzo and Grimshaw (2005) show that a too strong retained IT function can be a source of conflict between the parties. Linder *et al.* (2003), Weeks and Feeny (2008) and Weigelt (2013) also warn against duplicated efforts. Altogether, retaining the IT function challenges core competency arguments associated with traditional outsourcing and seems to be a delicate balancing act.

### **IT architecture compatibility**

To integrate collaboratively developed strategic innovations, the literature suggests that the client needs to retain architectural oversight (Chesbrough and Teece, 2002; Krishnamurthy *et al.*, 2009; Su *et al.*, 2016). It should have a suitable IT architecture in place, together with prespecified application and data standards (Su *et al.*, 2016; Sumo *et al.*, 2016). The client can thereby better “make technology work” (Willcocks and Kern, 1998, p. 43) by calibrating the strategic innovation to fit the idiosyncratic work processes of its business (Weigelt, 2009; Su *et al.*, 2016). The service provider should be familiar with these architectural standards and may then experience improved economies of scale, while minimising operational risks (Krishnamurthy *et al.*, 2009).

These suggestions are not without controversy. Maintaining an IT architecture designed to ease the integration of solutions developed by a variety of external providers is associated with considerable financial and organisational commitment (Su *et al.*, 2016). Also, the latest cutting-edge IT architectures may be located at the service provider, rather than at the client (Gozman and Willcocks, 2019). Yet, when the client firm relinquishes its dominant position in favour of a shared architectural oversight, it may sacrifice coordination advantages that are needed to seamlessly integrate highly interdependent innovations (Aubert *et al.*, 2015).

The literature has also observed that successfully integrating solutions does not guarantee their use (Hong and Zhu, 2006; Weigelt, 2009, 2013; Chatterjee, 2017). Circumventing the arguably slower internal development process may not only result in a strategic innovation that is poorly aligned with the client's other business processes and operational capabilities (Hong and Zhu, 2006; Weigelt, 2013), but it may also lead to a strong political bias, with the strategic innovation being regarded as a foreign solution (Hong and Zhu, 2006; Weigelt, 2009). Also, the client's experience with its current IT applications plays a role. When these applications are perceived as viable alternatives, or when associated prior technological knowledge would be rendered obsolete, then the newly developed solution may not be widely used (Weigelt, 2009).

### **Summary of prior research related to the generation phase**

Prior research insights presented in the generation phase are related to strategic innovation through outsourcing development and integration activities. Development activities are in principal a matter of combining the client's specialised domain knowledge with the service provider's specialised technological knowledge. Research has examined the transfer of tacit domain knowledge from the client to the provider, the importance of involving the provider already in the early stages of innovation development, and the stimulating role of cultural similarity. To facilitate knowledge combination activities, scholars are largely in agreement that the client needs to maintain a strong technological knowledge base. Accordingly, the internal IT function needs to be retained or rebuilt, which directly opposes core competency arguments that guide traditional outsourcing decisions. To integrate thereby developed IT-based

solutions, a compatible technological architecture is encouraged in the literature, with common standards that are visible to all parties involved.

#### **4.2.5 Strategic innovation through outsourcing outcomes**

Findings in the outcome phase include scholarly assessments of benefits and drawbacks of implemented strategic innovations. Five themes emerge from the thematic analysis:

- Realisable business development advantages
- Value creation measurement difficulties
- Unintended knowledge leakages (poaching)
- Hollowing out concerns
- Strategic innovation output uniqueness

#### **Realisable business development advantages**

Business development outcomes have been observed both in client firm front-end and back-end business operations. Regarding the former, empirical studies describe a range of extensive customer-facing enhancements that complement, adapt and extend the usage of the client firm's offerings (Susarla and Mukhopadhyay, 2019). Related strategic innovation outputs for instance include social media marketing platforms (Oshri *et al.*, 2015, 2018), and online e-commerce transaction systems (Hong and Zhu, 2006). Concerning the latter, the literature reports various custom, IT-based solutions that substantially improve the client's operating efficiency, business process effectiveness and strategic performance (Lacity and Willcocks, 2013). They for instance include custom IT-enabled HR systems (Holweg and Pil, 2012), forecasting tools for supermarkets (Lacity and Willcocks, 2013), and cloud-based services in the finance industry (Gozman and Willcocks, 2019).

Realisable business development outcomes for the service provider are less researched. Some studies argue that implementing innovations can help the provider secure additional future business opportunities with the same, but more satisfied client (Henke and Zhang, 2010;

Oshri *et al.*, 2015; Gopalakrishnan and Zhang, 2019). This may very much be in the interest of the client, which will be compelled to transfer more value-creating activities, to facilitate innovation efforts by the provider (Gopalakrishnan and Zhang, 2019). The strategic innovation by itself may therefore not only directly translate into higher project revenues for the provider (Oshri *et al.*, 2015), but also creates possibilities to leverage client firm-specific investments in follow-on innovation initiatives for the same client (Linder, 2004; Susarla *et al.*, 2010). These investments become unrecoverable otherwise, since they cannot be fully transferred to other clients (Argyres *et al.*, 2007). Sunk cost prevention may therefore also be an innovation-enabled business outcome from the provider perspective.

### **Value creation measurement difficulties**

The measurement of innovation-enabled business outcomes is difficult, because they tend to manifest in multiple dimensions (Susalra *et al.*, 2010). In the literature, innovation outcomes have for instance been measured as a composite variable including the dimensions innovation quality, innovation frequency, cost savings and service improvements (Oshri *et al.*, 2018). Strategic innovation outputs, like the ones introduced above, may lead to new ways of producing and delivering services, new forms of customer interactions and new forms of quality control and assurance (Miozzo *et al.*, 2016). While some outcomes resulting from these improvements can be quantitatively assessed, like supermarket stock fill forecasting error rates (Lacity and Willcocks, 2013), others are primarily qualitative, like a better supplier relationship (Miozzo and Grimshaw, 2005). This complicates the verifiability of certain aspects of the value created (Susalra *et al.*, 2010; Langer and Mani, 2018).

Despite these complications, prior research widely agrees that actively tracking measurable outcomes is paramount. Organisations may employ productivity metrics like time to market comparisons for in-house and outsourcing approaches (Linder *et al.*, 2003), comparisons of the time of delivery against scheduled milestones (Choudhury and Sabherwal, 2003), or profitability metrics like revenues increases (Su *et al.*, 2016). Clients that do not actively track measurable outcomes expose themselves to moral hazards which may result in low-quality

outputs and underwhelming business performance outcomes (Shi, 2007; Roy and Sivakumar, 2012).

### **Unintended knowledge leakages**

The literature suggests that the more knowledgeable service providers are about the client's business, the more effectively they can engage in innovation efforts (Chatterjee, 2017; Oshri *et al.*, 2018). A notable downside of extensive knowledge sharing however is the aggravated risk of unintentionally leaking commercially sensitive information (Hoecht and Trott, 2006). Consistent with the KBV, it is the natural tendency of client firms to protect the proprietary knowledge which providers need for engaging in purposeful combination efforts (Dyer and Nobeoka, 2000). Because service providers are expected to deliver custom solutions for all their clients, they are unlikely to withhold firm-specific domain knowledge when working with different clients (Hoecht and Trott, 2006). Individual clients in contrast may want to prevent the solution and associated commercially sensitive knowledge from being sold on to their competitors (Miozzo *et al.*, 2016). This reflects the poaching risk from the client perspective (Clemons and Hitt, 2004; Aron *et al.*, 2005) outlined earlier and presents a notable problem that has been addressed to some extent in prior research.

Intellectual property management and appropriability strategy literature form the theoretical basis of most related empirical studies. The literature usually distinguishes between formal appropriability mechanisms, including patents, copyrights, design rights or trademarks, and informal appropriability mechanisms, including lead-time advantages, product complexity, complementary assets and secrecy (Miozzo *et al.*, 2016; Desyllas *et al.*, 2018). Leiponen (2008) finds that providers that focus on customised solutions put little emphasis on formal mechanisms. They are often willing to transfer these rights to the client. Desyllas *et al.* (2018) also find that providers competing on the basis of customised solutions are less disposed to rely on formal appropriability mechanisms than cost-oriented providers. Their innovations are better protected with informal appropriability mechanisms, due to the extensive socially embedded domain knowledge. This is echoed in Miozzo *et al.*'s (2016) study. They find that an excessive reliance on formal appropriability mechanisms creates barriers to capturing value

from innovation. Their evidence indicates that modest levels of emphasis on formal appropriability mechanisms are best suited to prevent unintended knowledge leakages. In their conceptual study, Roy and Sivakumar (2011) draw on relationship theory to argue that knowledge leakage risks could further be curbed by high levels of trust and strong country legal regimes. Lastly, Hoecht and Trott (2006) argue that the magnitude of leakage risks is greatly increased in broad supply bases, but also view trust as a mechanism that can help manage this dilemma between knowledge sharing and knowledge protection.

### **Hollowing out concerns**

The gradual hollowing of corporations is a well-documented issue in the IS sourcing body of knowledge (Weigelt, 2009; Mukherjee *et al.*, 2013). This issue is traditionally associated with the idea that ITO will eventually impede the client from identifying future opportunities for utilising IT as a source of competitive differentiation (Willcocks *et al.*, 1995). The idea builds on the principles of the RBV, which postulate that valuable resources are scarce, difficult to imitate and substitute, and evolve within the firm (Barney, 1991). When engaging in outsourcing, the client surrenders the development of its IT resources to the provider (Shi, 2007). As a result, the client's internal IT resources atrophy, which compromises its ability to exploit future business opportunities with these resources (Miozzo and Grimshaw, 2005; Weigelt, 2009).

No definitive results could be extracted from the literature regarding the extent to which clients experience hollowing out effects when they leverage outsourcing for innovations. While the client's technological knowledge erodes in traditional outsourcing engagements, the necessity of maintaining an internal IT function to effectively engage in knowledge combination activities adds a new level of complexity to the setting. Some studies discuss outcomes of an overreliance on the provider for innovation. The consequences however seem to be similar to those of traditional outsourcing. Overreliance discourages the client from developing its internal technological knowledge base (Lee and Kim, 2010; Manning *et al.*, 2018), technological knowledge-building activities are shifted to the provider, which decelerates the client's learning by doing (Weigelt, 2009), and the client faces issues when attempting to

respond to IT-related business challenges (Lee and Kim, 2010). As the client gradually loses its ability to detect and exploit IT-enabled opportunities, it becomes less innovative (Hoecht and Trott, 2006) and more dependent on the provider to show leadership in innovation (Lee and Kim, 2010).

### **Strategic innovation output uniqueness**

The uniqueness of strategic innovations achieved through outsourcing has been called into question. Central tenets of the RBV establish the theoretical foundations of related studies. Some scholars suggest that providers offer seemingly bespoke solutions, which, in fact, are merely vanilla (Shi, 2007). In other words, they are largely standardised, based on widely diffused industry best practices (Shi, 2007; Weigelt and Sarkar, 2012). IT products and services may be targeted at a vertical segment or may cut across segments, but are rarely specific to an individual client (Arora *et al.*, 2001). As a result, clients will benefit from their provider's state-of-the-art solutions differently. Weigelt (2009) finds that clients with strong internal IT capabilities experience neutral performance effects when they replace these with provider IT capabilities that are valuable, but neither rare nor unique. Weigelt's (2009) results indicate that outsourcing is more beneficial for clients with weak internal IT functions. They can remove their competitive disadvantage by accessing specialised service provider IT capabilities but are unlikely to achieve superior business performance.

In contrast, other studies suggest that highly localised innovations may certainly be unique (Avgerou, 2008). Greater customisation to idiosyncratic business needs provides the client with a firm-specific innovation (Kedia and Lahiri, 2007; Lema *et al.*, 2015) that its rivals may find difficult to replicate (Qu *et al.*, 2010). Such innovations, that are based on genuinely unique knowledge combinations, can subsequently lead to competitive advantages (Mani *et al.*, 2010). While the provider may salvage the core of the solution, which tends to be a replicable service (Arora *et al.*, 2001; Desyllas *et al.*, 2018), the provider will find it difficult to redeploy the innovation with identical content to its other clients (Mani and Barua, 2015; Desyllas *et al.*, 2018). Ultimately, the question of innovation output uniqueness and thereby enabled

competitive advantages seems to boil down to the degree to which the strategic innovation is customised to the client's business context.

### **Summary of prior research related to the outcome phase**

Thematic analysis insights presented in the outcome phase include scholarly assessments of client and provider business development benefits enabled by strategic innovations, and notable issues that may harm the client's competitive performance. Prior research indicates that the client can substantially improve its front-end and back-end operations with custom IT-based solutions, while the provider can thereby secure future business opportunities and expand its scope of work with more lucrative business services. Measuring realised benefits however can be problematic because they can only be partially captured with quantitative metrics. Three notable client firm issues remain largely underexplored. They include the risk of unintended knowledge leakages, becoming hollow, and the risk of receiving a seemingly unique solution that is in fact only hardly customised to the client's business environment.

#### ***4.2.6 Thematic analysis insights conclusion***

The thematic analysis insights presented above provide a comprehensive snapshot of the strategic innovation through outsourcing literature to date. Evidently, research has branched out in multiple directions, which are brought together in a four-phase integrative framework. **Table 9** provides an overview of insights related to each phase. It can be concluded that outsourcing promises customised IT-based solutions which may facilitate strategic business outcomes for the client and provider. Extensive efforts are however required to arrange the outsourcing relationship and development activities in ways that afford sufficient room for creativity, without giving scope for opportunistic behaviour. Capturing performance benefits of strategic innovations is also accompanied by potentially differentiation-harming issues, like the risk of knowledge leakages and the ambiguous uniqueness of generated solutions.

Phase	Theme	Summary
Antecedents	Task attributes	Coordination advantages of vertically integrated firms appear more favourable than outsourcing for innovation-related tasks involving high asset specificity, uncertainty, complexity, and tacit domain knowledge.
	Organisational considerations	Specialised resource pools, supporting corporate strategies, relationship-specific investments and naturally evolving demands for more value drive the strategic innovation through outsourcing decision.
	Environmental conditions	Leveraging outsourcing for strategic innovation may similarly be driven by industry-wide shifts in competition from individual firms to networks and, from the provider perspective, the commoditisation of business services.
Arrangement	Relational risk portfolio	Adverse selection problems due to hidden information, moral hazard in form of supplier shirking, hold-ups from hidden intentions and poaching risks linger in the background of outsourcing relationships.
	Outsourcing configurations	Slim supply bases involving a few providers or broad supply bases come with trade-offs concerning the accessible diversity of ideas, dependency evolvments and coordination efficiency.
	Pricing models	Flexible pricing models, especially equity-based contracts, are preferable over fixed price contracts when strategic innovations are pursued.
	Degree of formalisation	One side argues that more complete contracts which specify innovation-related behaviours and outcomes in advance promote explorative efforts, while the other side views complete contracts as exploration-inhibiting.
	Relationship management	Treating the outsourcing engagement as a partnership is crucial. Relational mechanisms may complement more complete contracts (trust but verify approaches). In more incomplete contracts, they may serve as primary medium of control.
Generation	Domain knowledge transfer	Extensive tacit domain knowledge needs to be transferred to the provider to facilitate the customisation of IT-based solutions to the client's business context.
	Point of integration	Involving the provider in early innovation concept development activities and later integration activities, as well as proactive contributions by the client are central to ensure the unobstructed generation of innovations.
	Acculturation	Cultural distances between the client and provider need to be minimised to facilitate the transfer of knowledge.
	Retained IT function	The client requires a strong technological knowledge base to effectively communicate with the provider. This base can be established by retaining the IT function.
	IT architecture compatibility	An IT architecture with visible standards eases the integration of collaboratively generated solutions into the client's ongoing business processes.
Outcomes	Realisable business development advantages	Strategic business outcomes for the client materialise in form of substantial front-end or back-end operations improvements. The provider can expand its services.

	Value creation measurement difficulties	Some performance benefits of strategic innovations can be quantified, while others are of a qualitative nature, like increased trust in the partnership.
	Unintended knowledge leakages	Informal appropriability mechanisms appear effective to minimise unintended knowledge leakages.
	Hollowing out concerns	To what extent client firms become hollow is unclear when the IT function is retained.
	Strategic innovation output uniqueness	While provider IT products and services are vanilla, they can be extensively customised to the client, which makes the resulting IT-based solution unique.
<b>Table 9:</b> Summary of thematic analysis insights		

### 4.3 Carving out the empirical study research gap

Based on the presented thematic analysis insights, the research gap for the empirical studies, discussed in Chapter 5: Empirical study findings and **CHAPTER 6:** Empirical study findings – provider organisational member perspectives, can be carved out. When looking back at the reviewed literature, prior research advancements help understand why organisations decide to leverage outsourcing for strategic innovation. They also help understand how engagements can be arranged and which knowledge transfer facilitation mechanisms can be employed to promote innovation-related efforts.

In short, conceptual study findings suggest that previous works provide many useful insights into *what* conditions may facilitate strategic innovation in an outsourcing context, but there is little understanding as to *how* these conditions influence organisational members attitudes. Whether organisational members believe they are ready, that is, they are willing and perceive to be able to support strategic innovation initiatives remains a black box in the literature.

Readiness has received some attention in the IS sourcing literature, albeit not in an innovation-oriented outsourcing context. In relation to clients preparing to offshore IS activities for instance, Ranganathan and Balaji (2007) observe that more successful client organisations consciously created a favourable mindset within the firm by conducting orderly assessments of internal IS activities, formulating clear expectations and setting realistic goals, and generating buy-in from key stakeholders. Less successful client organisations underestimated preparation activities, entering offshoring relationships with hopes for a productivity miracle but little understanding of impending costs and efforts. They eventually faced scope and price creeps. From a provider

perspective, Palvia *et al.* (2011) find that readiness similarly plays an important role. Provider organisational members perceive to be unable to deliver promised levels of service when their clients are not committed to the engagement, have inadequate levels of staffing, unclear roles and responsibilities, poor understanding of their business domain, and their processes are in a state of disarray. All in all, these findings from the wider IS sourcing literature show that firms are more likely to experience better sourcing outcomes when they themselves are more ready (Lacity *et al.*, 2016), i.e., they are committed to the engagement, have realistic expectations, a clear understanding of outsourcing-related activities and costs, and skilled professionals who are proficient in effectively managing the relationship and communicating with the outsourcing partner.

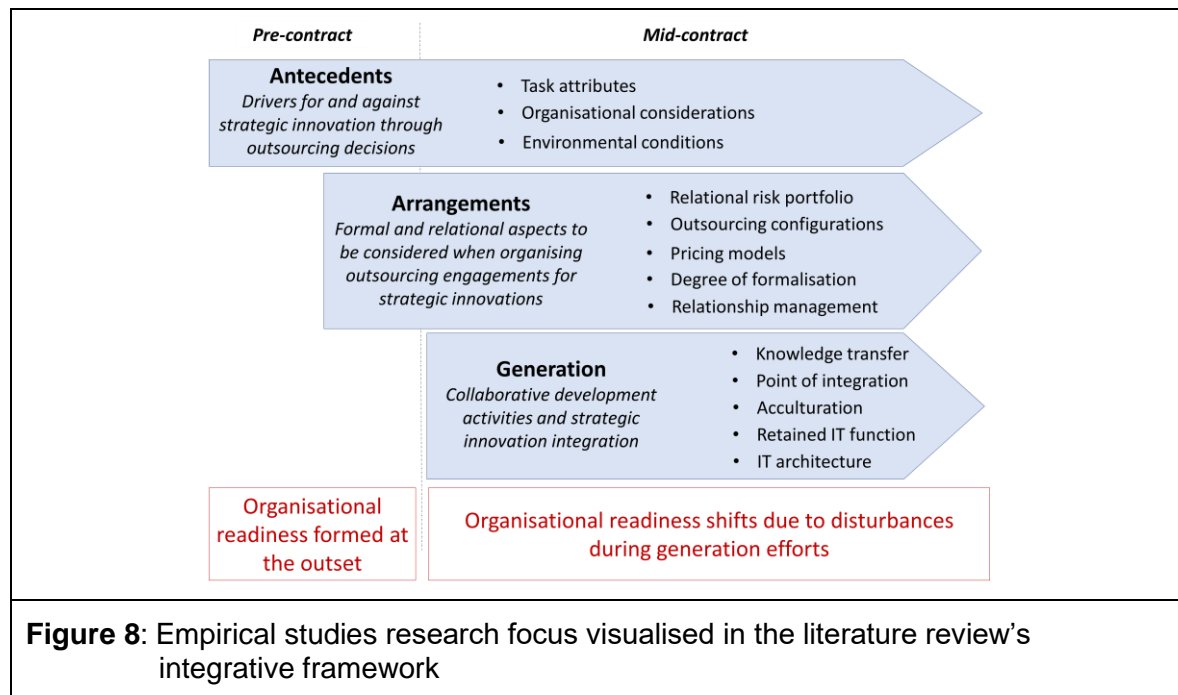
Due the dearth of readiness-centric investigations in the specific context under study however, it remains unclear under which conditions client and provider organisational members are more or less motivated to support strategic innovation through outsourcing initiatives. Yet, consistent with recent advancements in organisational change research (Armenakis and Harris, 2009; Weiner, 2009), a deeper understanding of this topic, organisational member motivations to support or resist innovation efforts, can offer valuable insights into how to effectively manage strategic innovation initiatives in an outsourcing context. RQ 2 corresponds to this area of enquiry:

RQ 2: How can high degrees of organisational readiness be created for strategic innovation initiatives in outsourcing from a (a) client perspective and (b) provider perspective?

With regard to the integrative framework, RQ 2 concentrates on the pre-contract and mid-contract stage. This is visualised in **Figure 8**. Whether and how the resulting strategic innovation output will be adopted, and how thereby created value will be captured in the post-contract stage present research issues that fall out of the empirical studies' scope. RQ 2 focuses on a specific attitude toward strategic innovation initiatives, namely *readiness*.

Following Weiner (2009), organisational readiness refers to the organisational members' collective willingness and perceived ability to implement organisational change. Of relevance in the empirical studies are organisational member willingness and ability beliefs that are

formed initially *at the outset* of a strategic innovation through outsourcing initiative (pre-contract), and subsequent shifts in these beliefs, in response to potential disturbances *during generation efforts* (mid-contract). Aspects in the project, organisational and market environment that have been examined in prior research may carry implications for the formation of these beliefs.



#### 4.4 Organisational readiness theory adapted to innovation as theoretical lens

Weiner's (2009) organisational change readiness theory adapted to innovation readiness<sup>3</sup> is applied as theoretical lens to the empirical studies. It represents a modern adaptation of change readiness theory for innovation contexts. The theory acts as a cognitive precursor to supportive or resistive behaviour of organisational members that may arise in reaction to the planned implementation of an innovation. Based on the *perceived* need and capacity to implement an innovation, a collective state of readiness within an organisation can be deduced (Holt and Daspit, 2015; Lokuge *et al.*, 2019). Through managerial influence strategies, a more ready state can be reached (Armenakis and Harris, 2009). Insufficiently ready organisations will likely fail to successfully complete innovation initiatives (Holt and Daspit, 2015).

<sup>3</sup> Innovation (change) readiness and readiness for innovation (change) is used interchangeably in this thesis.

Applying organisational readiness theory will help reveal major factors that influence the state of readiness at the outset and during observed innovation initiatives. In the next sections, the origins of readiness theory are presented, followed by the specification of the applied readiness theory version. Afterwards, the fit of the theory to the strategic innovation through outsourcing context is described.

#### **4.4.1 Origins of innovation readiness theory**

The theory of organisational readiness for innovation, as for instance applied in Lokuge *et al.*'s (2019) study, takes its roots in investigations on readiness for organisational change (Walinga, 2008). It is a well-established field combining prior findings related to the standalone constructs of *change* and *readiness*.

Change in the context of organisational change readiness theory refers to endogenously initiated changes which an organisation plans to implement (Weiner *et al.*, 2008). Relevant organisational change initiatives may for instance include alterations in the areas of business strategy, structure, process, and culture (Armenakis *et al.*, 1993). In essence, organisational change is about the process of taking an organisation on a journey from its current state to a desired future state and dealing with all the problems that arise along the transition (Gill, 2002; Lunenburg, 2010). Uncertainty, ambiguity in roles and responsibilities, and information overload are only some of the grave risks that may emerge during the change and can severely complicate the corresponding initiative (Eby *et al.*, 2000). Organisational members may consequently stop to support, and rather start resisting change efforts (Armenakis *et al.*, 1993; Eby *et al.*, 2000).

In the organisational change readiness field, it is widely recognised that the idea of readiness has followed observations on managerial efforts to neutralise employee *resistance* to organisational change initiatives (Holt *et al.*, 2007). Coch and French's (1948) early examination of production worker participation in a garment manufacturing plant's change efforts is traditionally described as a classical study about reducing resistance to organisational change (Armenakis *et al.*, 1993; Holt *et al.*, 2007; Walinga, 2008). As students of the late Kurt

Lewin, they adopted Lewin's (1947) well-known principles on change as underlying theoretical basis. Their observed cases of change involved the reassignment of work duties, a frequent and necessary measure to keep up with new production methods and ensure high levels of efficiency, but one that the plant's production workers typically reviled. As part of the study, those workers facing an internal duty transfer were split into groups with varying degrees of participation in designing their changed tasks. Their findings show that greater participation reduced resistance to the subsequent work duty changes, whereas the nonparticipation control group showed resistance almost immediately after the change occurred and continued to remain demotivated for the duration of the investigation.

The resistance construct continues to remain of great significance in today's change research and has stimulated the development of numerous resistance neutralisation strategies (e.g., Kotter and Schlesinger, 1979, 2008). It has been revisited in later studies, facilitating the genesis of the readiness construct (Holt *et al.*, 2007). Jacobson (1957) was presumably among the first to contend that Coch and French's (1948) emphasis on resistance to change "suggests the possibility of a complementary construct of readiness to change" (p. 239).

Within their critical appraisal of Coch and French's (1948) landmark study, Bartlem and Locke (1981) similarly questioned the explanatory power of resistance as a motivational effect of participation on performance. In addition to Coch and French's (1948) implemented participation techniques, further variables, such as the management's explanation of the need for changes, the method used to time the new jobs, and conducted training, could have had wider cognitive effects of participation (e.g., greater knowledge or better ideas) that may have accounted for the reported performance outcomes. Bartlem and Locke's (1981) suggestions thus parallel the idea of facilitating a state of readiness, wherein the attitudes of production workers toward the impending change extend beyond resistance (Holt *et al.*, 2007). Hence, despite resistance representing the commonly acknowledged source of the readiness construct, focusing on its mitigation may be a necessary but ultimately insufficient requirement for promoting a heightened state of readiness (Armenakis *et al.*, 1993; Holt *et al.*, 2007; Weiner *et al.*, 2008).

Modern interpretations of change readiness draw a clear line between the resistance and readiness constructs (Holt *et al.*, 2007). Readiness is associated with a positive, energetic stance toward an intentional change, and not merely the absence of a negative, energetic stance as connoted with resistance (Weiner *et al.*, 2008). In other words, neutralising the forces of resistance that emerge with an organisational change initiative is insufficient. The advent of this perspective assists in the development of managerial influence strategies that enable a more effective adoption of organisational change, while neutralising predicted resistance within the organisation (Holt *et al.*, 2007).

#### **4.4.2 Applied version of readiness theory**

The principles of change readiness theory have been transposed to an innovation context in prior empirical studies, resulting in the development of a relatively new branch of research focused on innovation readiness and the corresponding emergence of innovation readiness theory. In this modern version of change readiness theory, change manifests in form of innovation initiatives which an organisation aims to implement. Recent studies adapt change readiness theory to digital innovation (Nylén and Holmström, 2015; Lokuge *et al.*, 2019), in a business services provider context (Makutsoane and Leonard, 2014; Tsou and Hsu, 2015) and in a healthcare context (Hallikainen and Laukkanen, 2016; Johnston, 2017; Yusif *et al.*, 2017; Scott *et al.*, 2019).

This thesis applies Weiner's (2009) version of organisational readiness for change theory. The theory's underpinnings are outlined below. Afterwards, Weiner's (2009) organisational change readiness model (**Figure 9**) is discussed. Then, its fit to the strategic innovation through outsourcing context is expanded on.

#### **Organisational change readiness theory key underpinnings**

Weiner's (2009) version of organisational change readiness theory is underpinned by the following assumptions:

- Collective level of analysis

- Dynamic readiness assessments
- Change commitment and change efficacy as two pillars of change readiness

#### *Collective level of analysis*

Weiner (2009) defines change readiness theory at the collective level, by proposing that “organizational readiness refers to organizational members' change commitment and change efficacy to implement organizational change” (p. 68). This implies that change readiness is treated as a shared psychological state that is formed collectively by employees of an organisation (Weiner, 2009). It thus acts as a higher-level concept that aggregates the cognitions and motivations of relevant individuals involved in a change initiative (Weiner, 2009; Rafferty *et al.*, 2013). In other words, the theory focuses on what employees believe they can do together, which is particularly important when a change has system-wide aspects, rather than what each employee feels capable of doing alone (Holt and Vardaman, 2013).

#### *Dynamic readiness assessments*

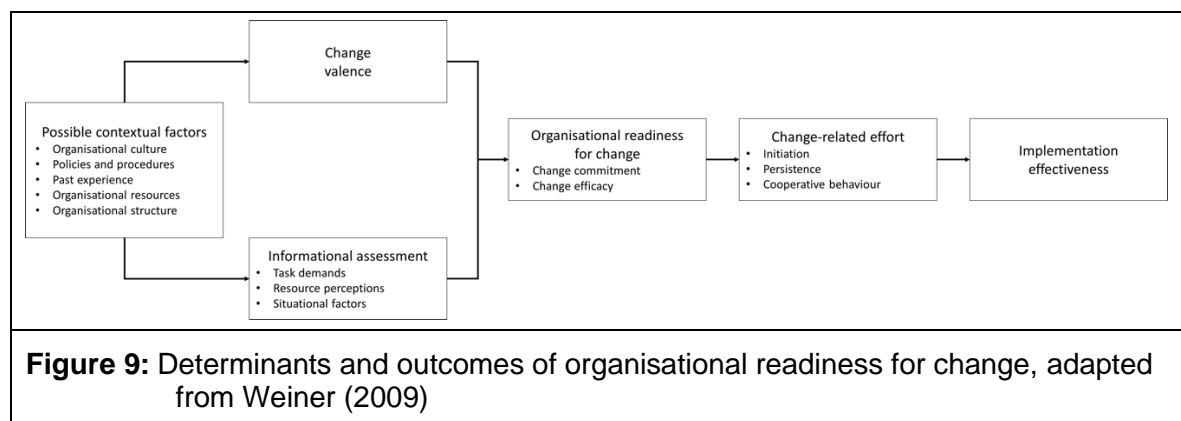
Weiner (2009) implies that his theory is underpinned by the principle of casting readiness for change as a dynamic series of subjective assessments. This has two noteworthy implications. First, change readiness should not be understood as a discrete, monolithic event (Rafferty *et al.*, 2013). Instead, a high degree of change readiness not only needs to be achieved at the outset of a change initiative, but must be maintained continuously. Hence, its relevance stretches across the entire change-related effort, beginning with the initiation of the change and ending with its implementation (Weiner, 2009). Second, readiness for change is constituted by a subjective, rather than objective assessment of the collective willingness and ability to implement a change. This distinguishes the concept from organisational capacity (Weiner *et al.*, 2008). It suggests that even if the “raw potential” (Weiner *et al.*, 2008, p. 425), that is, the actual expertise, resources and the opportunity for successfully making a change is in place, employees may still believe that they are not adequately equipped to complete the change.

#### *Change commitment and change efficacy as two pillars of change readiness*

A third crucial underpinning of Weiner's (2009) theory version is the conceptualisation of organisational readiness for change as a two-dimensional state. One dimension denotes the organisational members' collective motivation (change commitment). The second dimension relates to the perceived behavioural capability (change efficacy). Put colloquially, employees are more ready to support a change initiative, the more *willing* and *able* they are (Weiner *et al.*, 2008; Weiner, 2009; Lokuge *et al.*, 2019). To exemplify the importance of keeping commitment and efficacy at high levels, Weiner *et al.* (2008) draw on a military unit, proposing that its readiness is determined by its shared psychological (willingness) and behavioural (perceived ability) preparedness to engage in combat. They suggest that a unit that is demoralised, but well trained and equipped, is no more ready for combat than a unit that is enthusiastic, but poorly trained and equipped.

### Readiness theory building blocks

Weiner's (2009) theory of organisational change readiness model is depicted in **Figure 9**. The building blocks of the model will now be discussed.



At the heart of Weiner's (2009) version is the *organisational readiness for change* building block, located in the middle. Weiner (2009) suggests that change commitment is largely a function of change valence, while change efficacy is predominantly influenced by informational assessments.

*Change valence* principally centres on the created value of the change. Of relevance are the organisational members' resolve, drive, and determination to engage in those courses of action

required to implement the change (Weiner *et al.*, 2008). In other words, their willingness is of interest.

*Informational assessment* refers to the organisational members' collective ability to implement a change. Related assessments involve collective judgements about (1) the courses of action that are necessary to make the change, (2) the available resources and (3) the conduciveness of the organisational environment to the change (Weiner, 2009). Weiner (2009) formulated three corresponding questions, namely: (1) do we know what it will take to implement the change; (2) do we have the resources to implement the change; and (3) can we implement the change given the situation we currently face?

On the left side of the figure, the *possible contextual factors* building block can be found. Change valence and informational assessment judgements may be influenced by cues in the broader environment, that are not specific to a particular change initiative. Weiner (2009) does not discuss these extensively, but acknowledges that organisational culture, policies and procedures, past experience with change, the organisation's resources in general and the overall organisational structure are potentially influential.

Moving on to the *change-related effort* building block on the right side, this refers to change implementation activities. Weiner (2009) argues that organisational members are more likely to initiate actual change efforts when organisational readiness is sufficiently high. However, obstacles and setbacks may emerge during the change implementation process. With a high maintained degree of organisational readiness, organisational members will exhibit greater persistence in the wake of such impediments, while showing fortitude in continuing to support the change initiative. This means that readiness does not become irrelevant after reaching an initial threshold, but needs to be reinforced in response to changing conditions throughout the change (Stevens, 2013). Based on insights from motivation theory research, Weiner (2009) also proposes that organisational members will engage in cooperative, pro-social behaviour when they are more ready. They may engage in change-supporting actions that exceed job requirements or role expectations. In case of a low degree of organisational readiness, organisational members are expected to behave in an opposite way. That is, they will resist

initiating the change, persevere less in the face of implementation challenges and do what is necessary, at best (Weiner, 2009).

Concerning *implementation effectiveness*, organisational readiness is a predictive, but not a deterministic concept. Hence, even with a high degree of organisational readiness, a successful change implementation is not guaranteed (Weiner, 2009; Rafferty *et al.*, 2013). In this regard, Stevens (2013) suggests that readiness may be demonstrated differently in response to the initial evaluation of a change announcement or planning (e.g., willingness to consider the change), than to the actual change implementation (e.g., adoption of new behaviours and participation). This implies that anticipated outcomes of a change initiative, be it enhanced quality, safety, or improvements in other dimensions, cannot be generated if organisational members for instance do not want, or are unable to use a new technology, despite showing a high degree of readiness before and during change-related efforts (Weiner, 2009).

#### **4.4.3 Theory-research fit**

To explain why Weiner's (2009) theory version of organisational change readiness fits to the examined angle on strategic innovation in a business services outsourcing context, two key aspects need to be discussed:

- strategic innovation initiatives as change initiatives and
- the inter-organisational setting

#### **Strategic innovation initiatives as change initiatives**

Lokuge *et al.* (2019) suggest that Weiner's (2009) organisational change readiness theory fits to the innovation context, because innovation requires an organisation to continuously change its resources, procedures, and strategies to produce, adopt, assimilate and exploit a value-added novelty. In other words, an organisation is in a constant state of flux when engaging in innovation initiatives. Such complexities make understanding the readiness of organisational members, to be willing and able to innovate, crucial (Holt and Dasgupta, 2015). The reviewed

literature suggests that leveraging outsourcing for strategic innovations reflects a similarly complex endeavour. Organisational members need to flexibly engage in intensive knowledge combination efforts to produce innovative IT-enabled solutions that are tailored to the client firm's business environment. Adapting Weiner's (2009) theory version to the empirical studies is therefore considered to offer a good fit to the context under study.

Another reason for its good fit is reflected in RQ 2, which concentrates on an organisation's readiness to increase the strategic innovation generation potential of an outsourcing engagement. Weiner *et al.* (2008) note that organisational change readiness theory is more impactful when applied to a specific change context, such as the strategic innovation through outsourcing context, rather than to a general state of affairs. They also argue that the theory's merits only come to light when it focuses on organisational members' readiness to implement a change initiative, which again is reflected in the context the empirical studies concentrates on, rather than simply capturing their interest in a possible change.

### **Inter-organisational setting**

After screening several widely cited reviews on prior change readiness research (Holt *et al.*, 2007; Weiner *et al.*, 2008; Stevens, 2013), it becomes apparent that existing studies mostly concentrate on an intra-organisational setting when drawing on the organisation as unit of analysis. Hence, it seems that inter-organisational settings have yet evaded the attention of change readiness, and more recently, innovation readiness scholars. Strategic innovation through outsourcing therefore offers a largely underresearched and more complex context, involving the collaboration of two unaffiliated organisations, instead of a single organisation attempting to introduce a change internally. How well Weiner's (2009) theory version will fit to this context could therefore not be said with certainty at the beginning of the research project. I therefore adopted a cautious approach and first analysed the care hospital and IT provider datasets separately, before synthesising insights in the discussion chapter.

### Chapter summary

In this chapter, insights distilled from the analysis of the care hospital case study dataset are presented. Findings show that organisational members not only consider factors embedded in the immediate project environment, but also in their organisational surroundings and external market. This chapter begins with an overview of the observed care hospital strategic innovation through outsourcing initiatives. A compact data structure is visualised next. It captures all identified factors, which are then discussed individually in greater detail. Findings about how these factors interact (thematic linkages) are described afterwards. They represent the key insights of this chapter.

#### 5.1 Care hospital strategic innovation through outsourcing initiatives

Four strategic innovation through outsourcing initiatives are examined in the care hospital case study. They introduce new digital and robotic technologies to long-term care, and have the potential to deliver substantial long-term improvements to the care home's operating efficiency, business process effectiveness and strategic performance (Lacity and Willcocks, 2013). These developments support customer-centric objectives, including quality of life improvements for residents, and staff-centric objectives, including optimised nursing workflows. An at-a-glance overview of the observed initiatives is provided in **Table 10**.

**eNDS initiative.** The first observed initiative is labelled as electronic nursing documentation system (*eNDS*) *initiative*. It was directly pursued by the care hospital without the involvement of the research subsidiary and has been completed in 2019. It greatly improves the care hospital's existing eNDS with modernised care anamnesis and care planning modules. Its most significant benefit is the acceleration of documentation activities, enabled by a list-based item selection interface that is built on a custom-developed nursing classification system. The previous eNDS version was based on a generic classification system that contained many elements which were not related to long-term care, consequently slowing down documentation activities. The previous eNDS version also mainly relied on self-written inputs, which required

the care staff to write entire reports themselves. They thereby lost valuable time they could have spent with residents. This initiative involves one IT service provider (eNDS provider) with whom the care hospital already has a long-standing relationship.

Initiative	Main purpose	Timespan	Organisations involved
eNDS initiative	The aim of the eNDS initiative is to significantly improve care documentation workflow efficiency. It requires a major renewal of the dated and impractical eNDS version. A new list-based item selection interface based on a custom nursing classification system has to be developed.	2014-2019	Care hospital and eNDS provider
Robot initiative	In this initiative, a robot is developed that autonomously roams the ground floor of the care hospital. Visitors and residents can interact with the robot in various ways. This initiative mainly serves an exploratory purpose by examining how robots can navigate dynamic environments.	2013-2017	Care hospital research subsidiary, IT providers and universities
Compass initiative	This initiative involves the development of a smart compass device that guides people with early-stage dementia to a safe destination when they get lost.	2016-2018	Care hospital research subsidiary, IT providers and universities
VR initiative	The purpose of the VR initiative is to allow care hospital residents to visit places virtually, which they no longer can travel to physically.	2018-2020	Care hospital research subsidiary and VR provider
<b>Table 10:</b> At-a-glance overview of care hospital (client) case study innovation initiatives			

**Robot initiative.** The second observed initiative is labelled as *robot initiative*. This initiative was pursued by the research subsidiary, together with multiple IT providers and universities, one of the latter acting as project leader. The research subsidiary had no previous relationships with these project partners. The robot initiative started in 2013 and was completed in 2017. It involved the development of an autonomous robot which roamed around the care home's ground floor by learning about its environment. It accompanied walking-based therapy groups, navigated visitors to conference rooms, could play music, and provided general information on demand with its back-mounted tablet. The focus of this initiative was primarily on gaining new technological insights, rather than on developing a ready-to-use robot for the mass market. It nonetheless was perceived as a steppingstone for the future potential deployment of robots in the long-term care sector and specifically at the care hospital.

**Compass initiative.** The *compass initiative* was similarly pursued by the research subsidiary, together with two IT providers and a local university, the latter acting as project leader. The research subsidiary had no previous relationships with these project partners. The initiative started in 2016 and was completed in 2018. It was plagued by several setbacks and therefore the most difficult endeavour to manage. The initiative involved the development of a mobility assistant for people with early-stage dementia. These people often still reside in their private homes, but increasingly experience a temporary loss of their sense of time and orientation. Such incidents can be especially problematic in combination with wandering behaviour. Wandering refers to aimless movement and is common among people with dementia (Lai and Arthur, 2003). Certain daily activities, like going to the supermarket, can thus turn into daunting challenges. After several project scope alterations, the focus of this initiative was placed on the development of a pocket-sized, GPS-enabled device that optically resembled a compass. Instead of a street map, a big arrow should be shown on its display that guides users from their current location to a predefined address, like their residential address. Hence, when people with dementia get lost, they must simply follow the arrow on the compass to find their way back home.

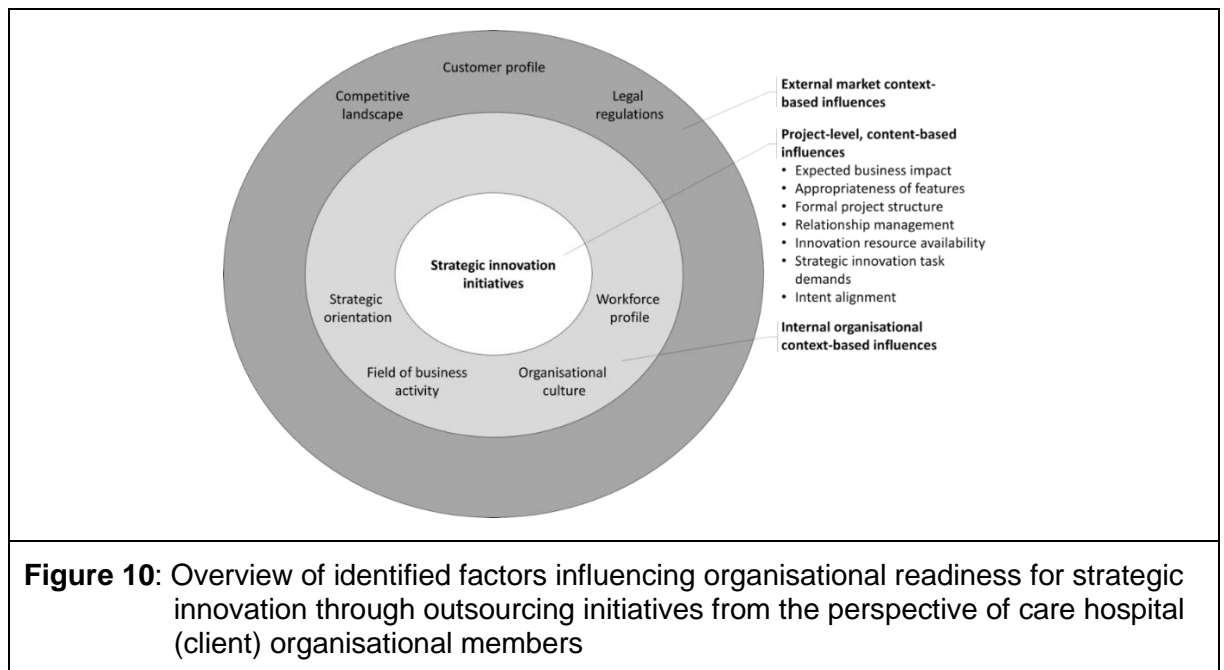
**VR initiative.** The fourth initiative is labelled as virtual reality (*VR*) *initiative*. This initiative was, again, pursued by the research subsidiary, together with one IT (VR) provider. The research subsidiary acted as project leader and had no relationship history with the VR provider. The initiative was launched in 2018 and completed in 2020. It involved the development of a VR solution that could be used for therapeutic activities. It should allow residents to visit a virtual environment of their choosing, such as a popular travel destination, enchanting landscapes or everyday sceneries. By sharing their experiences with a therapist in real-time, negative feelings like loneliness and boredom should be mitigated. Informants argued that these feelings are often underestimated, but can develop into serious depression. A custom software had to be developed that allows the accompanying therapist to view what the resident sees through the VR headset on an external monitor. The software should further allow the accompanying therapist to navigate through the virtual world by interacting with cues in the virtual environment

on the residents' behalf. Solving this issue was required because many physically handicapped residents struggled to use commercially available VR motion controllers.

## **5.2 Overview of identified strategic innovation readiness factors – client perspective**

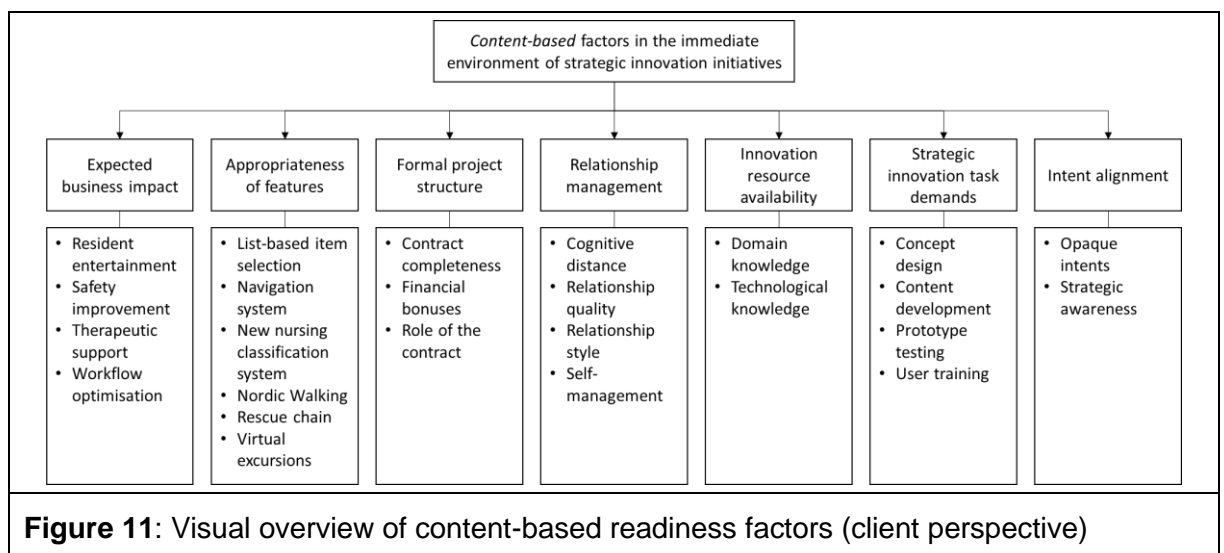
**Figure 10** displays an overview of all identified factors that notably influence the readiness of the care home's organisational members for the four strategic innovation through outsourcing initiatives. They are discussed in detail in the next sections. Most of the factors are located in the immediate outsourcing project environment. Since they directly relate to elements *within* a strategic innovation initiative, they are *content-based*.

Consistent with Armenakis and Harris (2009) and Weiner (2009), the tendency to support strategic innovation initiatives is additionally found to be influenced by factors in the internal organisational context. Beyond that, findings further indicate that factors in the wider market environment play an important role. Such factors are originally not considered in Weiner's (2009) theory, which is limited to a within-firm focus. The analysis however suggests that micro-environmental (competitive landscape, customer profile) and macro-environmental market factors (legal regulations) cannot be ignored, as they are repeatedly drawn on by care hospital organisational members to evaluate whether a strategic innovation initiative can and needs to be implemented. Since these organisational and market-level factors relate to elements *outside* of a strategic innovation initiative, they are *context-based*.



### 5.2.1 Project-level (content-based) influences

Discovered patterns within the immediate outsourcing project environment of the four observed strategic innovation initiatives reveal a variety of readiness evaluation-influencing factors. They are discussed in greater detail below and summarised at the end of this section in **Table 11**: Strategic innovation initiative content-based factors – client perspective. **Figure 11** provides a concise visual overview of identified factors and related key concepts.



**Expected business impact.** The expected business impact of the strategic innovation through outsourcing initiatives is found to be a main reference point the care hospital informants would draw on when reflecting upon the potential benefits of a strategic innovation. Of note are the

varying areas of impact of each initiative. In the case of the eNDS initiative, the impact is mainly staff-based. Renewing the outdated eNDS version would enable substantial usability improvements. These would then translate to less time spent on documentation and more time with residents. The robot initiative primarily has an exploratory impact by providing insights about autonomous navigation systems for robots and their suitability for the care hospital. The compass initiative and VR initiative have an end user-based impact. Whereas the compass initiative is supposed to improve the safety of elder individuals with dementia in private home care, the VR initiative should enhance the general well-being of residents in care institutions.

**Appropriateness of features.** Informants considered the expected features of an initiative as another key reference point for readiness-related evaluations. Features varied greatly from initiative to initiative. The main features of the eNDS initiative include the integration of a custom nursing classification system and a language barrier-reducing user interface with a new list-based item selection. The robot initiative mainly involves resident-oriented entertainment features, ranging from a built-in touchscreen providing information on demand to its ability to accompany the care hospital's Nordic Walking resident therapy group. Compass initiative features include an intuitive navigation system that should guide users to their destination when they get lost, coupled with a rescue chain initiation feature that notifies family members or caregivers in such cases. The VR initiative creates a virtual environment for care hospital residents and therapists to explore. A destination of their choosing can be visited virtually, which should encourage conversations about memories and current experiences.

**Formal project structure.** The role of formal mechanisms in the strategic innovation initiatives was surprisingly viewed as insignificant by care hospital organisational members. From their perspective, managing strategic innovation has little to do with the contract. Consequently, the contracts were intentionally left incomplete, with process and output specifications only broadly outlined. Contractual incentivisation mechanisms in form of financial bonuses were similarly regarded as trivial for strategic innovation. Fixed hourly rates in the case of the eNDS initiative, and a prespecified budget in the research subsidiary's three observed initiatives, anyhow left little to no room for such incentives.

**Relationship management.** The nature of the outsourcing relationship is identified as a key factor for readiness evaluations. All four observed strategic innovation initiatives are principally managed with an informal, relational approach, by extensively relying on social practices and self-management to foster cooperation (Kirsch, 1997; Choudhury and Sabherwal, 2003). Major differences are nevertheless visible in cognitive distances and relationship styles when comparing the eNDS initiative with the research subsidiary's three initiatives. The eNDS initiative benefitted from a cooperative communication system that was fostered with the eNDS provider over many years. Cognitive distances between the care hospital and eNDS provider could thereby be reduced to a minimum. In contrast, cognitive distances between the research subsidiary and its initiative partners tended to be greater, which is evident in partially highly restrained information flows and the partners' unfamiliarity with the long-term care domain. In terms of relationship styles, the relationship with the eNDS provider was characterised by high trust and reciprocity. Explicitly referred to as a partnership, some informants even went so far as to suggest that the eNDS provider treats the care hospital not just as a customer, but also as a development partner. The relationships with the research subsidiary's initiative partners were similarly approached with a laissez-faire style, but lacked a strong foundation of mutual trust.

**Innovation resource availability.** The portfolio of available strategic innovation resources is another recurrently considered reference point for readiness evaluations. This factor is consistent with Weiner's (2009) idea that resource endowments contribute to shaping readiness perceptions. In all four observed initiatives, organisational members considered the availability of relevant internal technological knowledge as limited. Available internal domain knowledge necessary to implement strategic innovation initiatives however was viewed as extensive. The opposite is true for perceptions about initiative partners. They are believed to have a strong understanding of technological matters but are largely unfamiliar with long-term care-related challenges.

**Strategic innovation task demands.** Task anticipations related to the implementation of strategic innovation initiatives additionally play into readiness evaluations. This finding aligns

with Weiner's (2009) proposed relevance of task demands. In the eNDS initiative, care hospital employees commonly highlighted difficulties with content development, especially in relation to the custom nursing classification system. A core issue was the complex communication chain, involving internal care consultants, internal eNDS relationship managers and external eNDS project members. User training was similarly considered challenging, due to the “big bang” transition from the old to new eNDS version. The nursing staff had to master the new eNDS version by a fixed transition date. Implementation activities of the research subsidiary mainly concentrated on concept design and prototype testing in the robot, compass, and VR initiative. The novelty of developments increased the risk of overlooking specific user needs during design, that would only surface later during prototype testing and render a theoretically well-designed innovation concept impractical. This risk materialised in the compass initiative.

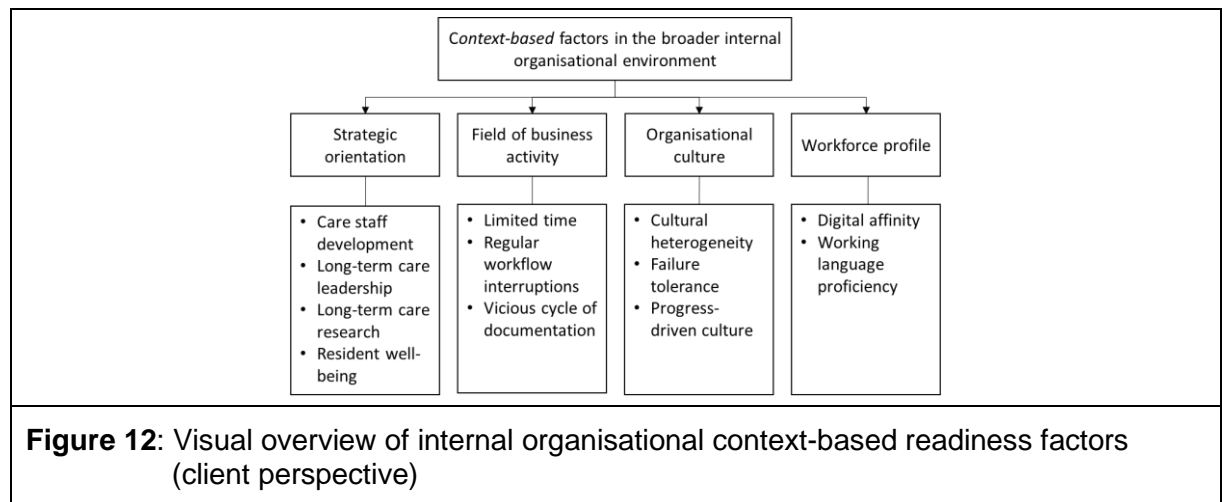
**Intent alignment.** A fundamental problem in outsourcing is that intents naturally diverge (DiRomualdo and Gurbaxani, 1998). Clients and providers have their own vision of where they want to be and what they want to achieve. For strategic innovation initiatives, this may give rise to complications. Noticeable differences are again visible between the eNDS initiative and the research subsidiary's three initiatives. The long-standing relationship with the eNDS provider equipped the care hospital organisational members with high strategic awareness. Having learnt to learn which innovations would benefit both the care hospital and the provider, they would even refrain from insisting on developments that could improve their business activities but harmed their partner's profitability. The lack of prior collaborations in the research subsidiary's initiatives in contrast caused difficulties in making sense of the initiative partners' intents.

<b>Content-based factor</b>	<b>Brief description</b>
Expected business impact	The eNDS initiative supports nurses by optimising nursing documentation activities. The robot initiative focuses on exploring autonomous navigation systems and the practical use of robots at the care hospital. The compass initiative improves safe mobility of people with dementia. The VR initiative enhances resident well-being.
Appropriateness of features	A custom nursing classification system and new list-based item selection should speed up documentation activities (eNDS initiative). Robot initiative features mainly serve entertainment-centric purposes. Compass initiative features should help people with dementia easily find their way to a destination when they get lost. VR initiative features serve a therapeutic use by enabling virtual excursions that incite conversations between residents and therapists.
Formal project structure	From the perspective of care hospital organisational members, strategic innovation initiatives had little to do with the contract. Contracts were left incomplete and outcomes broadly outlined. Additional financial bonuses for initiative partners were not incorporated.
Relationship management	Relationships were mainly managed with an emphasis on social elements. Differences in cognitive distances however were evident in the eNDS initiative and research subsidiary initiatives. The relationships underlying the initiatives also differed in terms of foundations of mutual trust.
Innovation resource availability	Resources necessary for innovation developments were predominantly associated with technological and domain knowledge. Technological knowledge was limited internally, but could be tapped via outsourcing. Long-term care domain knowledge was extensive internally, while that of initiative partners was limited.
Strategic innovation task demands	Content development activities were considered challenging in the eNDS initiative due to a complex communication chain between internal care consultants and eNDS relationship managers, and external eNDS project members. Design and prototype testing activities were complicated by the risk of overlooking user needs and design issues that would only surface at late development stages.
Intent alignment	Intents in outsourcing engagements naturally diverge between partners. In the eNDS initiative, this gave little cause for concern, because of a strong confidence in a shared intent to only pursue innovations that are mutually beneficial. In the research subsidiary's initiatives, intents of the partners were opaque and occasionally conflicted.
<b>Table 11: Strategic innovation initiative content-based factors – client perspective</b>	

### **5.2.2 Internal organisational context-based influences**

Organisational context-based factors support Weiner's (2009) notion, that broader conditions in the internal organisational environment influence collective readiness evaluations. Findings show that from the perspective of care hospital organisational members, four organisational factors play such a role in the strategic innovation through outsourcing context. Like above,

**Table 12:** Organisational context-based factors – client perspective offers a summary, while **Figure 12:** Visual overview of internal organisational context-based readiness factors (client perspective) provides a visual overview of identified factors and related key concepts.



**Strategic orientation.** The strategic orientation of the organisation is identified as a key factor that influences readiness evaluations. Of note are the two interlinked strategic orientations of the care hospital and research subsidiary. Essentially, the care hospital's strategic orientation is focused on excelling in long-term care while the research subsidiary's strategic orientation is geared towards exploring emerging technologies for long-term care. Combined, they provide the impetus to support strategic innovation initiatives that clearly promise to benefit residents or the workforce, while discouraging experimental endeavours just for the sake of innovation.

**Field of business activity.** Another factor in the organisational environment involves day-to-day operations in the care hospital. While care practices have advanced from the three basic guiding principles of keeping patients warm, fed, and clean to a scientifically informed field, they continue to remain both physically and mentally demanding. Of note are a range of problematic conditions in the work environment, like limited time resources, constant workflow interruptions due to emergencies or competing activities, or a seemingly vicious cycle of documenting care activities. Here, more care interactions entail more documentation, consequently stealing the time to perform additional direct care duties with other residents. Performing these afterwards however would again require time spent on documentation than with residents.

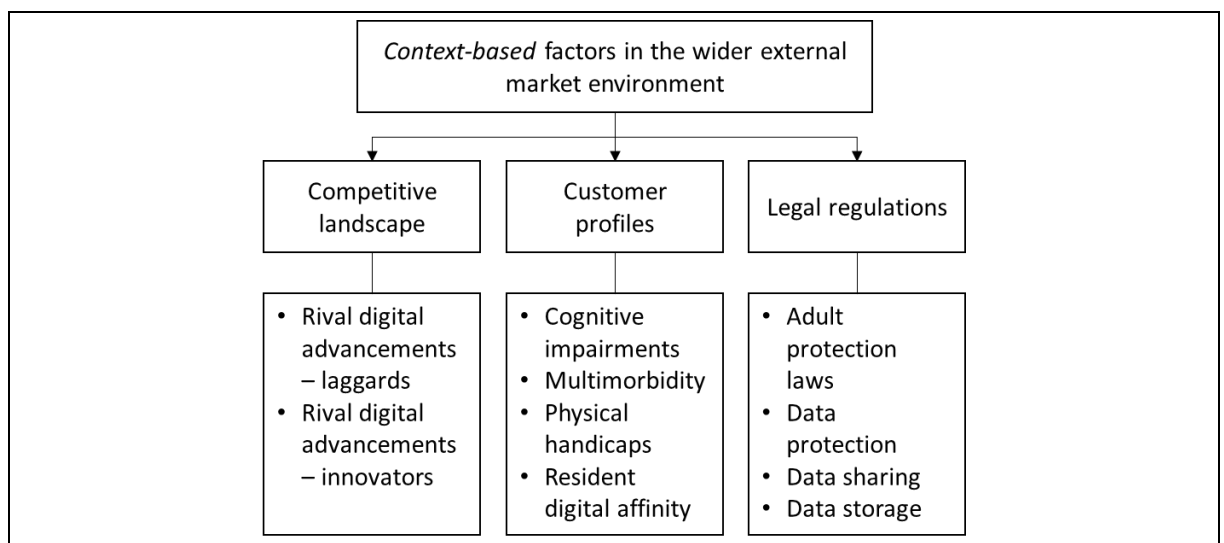
**Organisational culture.** In line with Weiner (2009), the organisational culture is identified as a broad factor that influences readiness evaluations of care hospital organisational members. Progressiveness and failure tolerance are found to be two widespread values. Concerning the former, organisational members are continuously exposed to improvements, whether directly in the core business area, like new palliative care treatment programmes, or in technology, like a recently introduced internal social media platform. As such, change and innovation are viewed as integral parts of the care hospital's culture. Regarding the latter, failed development efforts are viewed to be just as valuable as successes, especially for the research subsidiary's innovation initiatives. Some cultural heterogeneity was nevertheless evident. The workforce's more seasoned generations, and especially those who are less computer literate, did not fully share these values and were thus associated with less openness towards innovation.

**Workforce profile.** The care hospital's workforce profile was identified as another influential factor. Informants commonly highlighted language barriers and a widespread low digital affinity as two major areas of concern. Concerning language barriers, German as working language was perceived as a general obstacle to communication, given the diversity among employees and the concomitant linguistic heterogeneity. Regarding digital affinity, informants noted a low interest in digital technologies among seasoned employees. Many would view day-to-day work with computers as a burden and require more time to master new applications. Informants also suggested that many would perceive the related necessity to learn as an additional workload, whereas younger employees generally exhibited a greater willingness to learn.

Organisational context-based factor	Brief description
Strategic orientation	The care hospital's strategic orientation is geared towards excelling in long-term care while the research subsidiary's orientation focuses on exploring emerging technologies for long-term care.
Field of business activity	The work environment at the care hospital is characterised by time pressures and regular interruptions. Against this background, nurses need to engage in time-consuming care documentation activities.
Organisational culture	A progress-driven mindset and high failure tolerance are hallmarks of the care hospital's culture. These values are widespread, but not shared fully by the entire workforce.
Workforce profile	German as working language acts as a general barrier to communication. Seasoned employees are further associated with low digital affinity.
<b>Table 12:</b> Organisational context-based factors – client perspective	

### 5.2.3 External market context-based influences

Beyond the internal organisational environment, findings point to three additional factors in the external market environment that are beyond the control of the care hospital, but notably influence the strategic innovation readiness of its organisational members. As before, **Figure 13:** Visual overview of external market context-based readiness factors (client perspective) offers a visualisation of the factors and relevant concepts. **Table 13:** Market context-based factors and brief descriptions – client perspective provides a concise overview at the end of this section.



**Figure 13:** Visual overview of external market context-based readiness factors (client perspective)

**Competitive landscape.** Within the more immediate micro-environment of the market, which refers to actors that are close to the care hospital and affect its ability to serve its customers (Kotler and Armstrong, 2018), other healthcare institutions in the market are found to influence readiness perceptions. Specifically, digital advancements at former employer organisations of the informants, mostly large local healthcare institutions with a focus on acute care, were drawn on for readiness evaluations. A rather mixed picture is the result, as comparisons were made to institutions that have only recently started to leverage IT for care activities, and others which are far ahead of the curve, already considering the introduction of sophisticated technological solutions, ranging from advanced data-based alert systems like smart toilets to surgery robots.

**Customer profile.** Another influential readiness factor in the micro-environment involves the customer profile. Of relevance here are two defining characteristics, their fragile state of health and their typically low familiarity with modern technologies. The care hospital's target group is comprised of elderly people with various physical and mental handicaps. Usually, these include cardiovascular diseases and dementia. Many of the care hospital's residents have multiple morbidities, suffering from many diseases at once. Apart from that, their exposure to digital technologies at a late age tends to result in usability difficulties. Resident-oriented strategic innovations (robot and VR initiative) must meet these extreme user needs, otherwise they may be too impractical or complex. The same applies to users in home care. They are targeted in the compass initiative. This user group includes elderly people who live independently at home, have milder forms of dementia and a similarly low fluency in digital technologies.

**Legal regulations.** In the wider macro-environment of the market, which according to Kotler and Armstrong (2018) refers to broader forces that affect the actors in the micro-environment, legal regulations are identified as a notable readiness-influencing factor. Specifically, stringent data protection requirements form an aspect that organisational members considered central, especially in relation to the research subsidiary's customer-oriented strategic innovations. Due to cognitive impairments of elderly users, adult protection laws require reaching out to relatives

or guardians for their agreement to allow the collection of user data. Concerns also arose as to what kind of data is actually recorded, which data must or must not be stored and for how long. This was a particularly sensitive issue in the compass initiative and the sharing of location information.

Market context-based factor	Brief description
Competitive landscape	Innovation initiatives were frequently compared to the overall digital progress of other local care institutions. These were either about to embark on their digital journey, or already far ahead.
Customer profiles	This factor comprises relevant characteristics associated with the elderly target group. Their generally fragile state of health and low fluency in digital technologies were particularly salient points.
Legal regulations	Data protection ambiguities and related privacy issues were found to be major concerns especially for the research subsidiary.
<b>Table 13:</b> Market context-based factors and brief descriptions – client perspective	

### 5.3 Organisational readiness from a client perspective based on thematic linkages

The factors described above represent important conditions in the project, organisational and market environment that shape organisational readiness for strategic innovation initiatives in an outsourcing context from a client perspective. How they do so is discussed in the following sections, in light of Weiner's (2009) theory and by unearthing notable connections (“thematic linkages”) between identified factors and their related concepts.

Weiner (2009) suggests that organisational readiness is mainly a function of the organisational members’ shared resolve (change commitment) to implement a change, and shared belief in their collective capability to execute related courses of action (change efficacy). Commitment is based on *valence-related assessments*, which involve considerations about the perceived need, urgency and appropriateness, as well as anticipated benefits or costs of change (Weiner *et al.*, 2008; Weiner, 2009). Efficacy in contrast is based on *informational assessments*, which, according to Weiner (2009), are largely determined by considerations about task demands, resource availability and situational factors. Broader contextual conditions in the organisational environment, like organisational culture, may also affect organisational readiness by amplifying or dampening valence-related and informational assessments (Weiner, 2009).

Findings from the care hospital case study unveil an intricate interplay of identified factors and related concepts, once they are analytically “set in motion” (Nag *et al.*, 2007, p. 829). Thereby resulting thematic linkages broadly lend support to Weiner's (2009) main theoretical premises and reveal three distinct patterns: multi-influence evaluation effects, evaluation sequencing, and readiness fragility.

**Multi-influence evaluation effects.** This pattern indicates that organisational readiness is shaped by multiple valence-related and informational evaluations. In general, organisational members evaluate various concepts from multiple content-based factors against concepts located in other content-based and context-based factors. Case study findings show that care hospital organisational members commonly assess whether a strategic innovation may be beneficial for the organisation (valence-related assessments) by evaluating prominent concepts from the two content-based factors *expected business impact* and *appropriateness of features* against reference points in the project, organisational and market environment. Informational assessments in contrast are based on evaluations of prominent concepts located in other content-based factors (*formal project structure, relationship management, strategic innovation task demands, innovation resource availability, and harmony of intents*) against each other, and against concepts in identified organisational and market context-based factors.

To offer an example of how related thematic linkages emerged, consider the *appropriateness of features* content-based factor with regard to the eNDS initiative. One of its main concepts is the new list-based item selection interface. On its own, it gives no indications of actual benefits it creates for the care hospital. To evaluate its benefits, organisational members are found to commonly assess this feature against language barriers at the workplace, which acts as a reference point located in the context-based factor *workforce profile*. It is commonly believed that the new list-based item selection interface can reduce language barriers, which translates to a tangible benefit and increases the shared willingness to support the eNDS initiative. One analytical insight thus suggests that the *appropriateness of features – workforce profile* thematic linkage can positively influence organisational member willingness, or, in the spirit of

Weiner (2009), promote favourable valence-related evaluations, along with multiple other influential thematic linkages.

**Evaluation sequencing.** Following Holt and Daspit (2015), evaluating appropriate readiness-influencing factors at the appropriate time is critical, otherwise innovation initiatives may lose their momentum and fail. Consistent with their arguments, care hospital case study findings suggest that valence-related and informational evaluations can be sequenced. At the outset of the four observed strategic innovation through outsourcing initiatives, before collaborative development activities take place, care hospital organisational members are found to prioritise valence-related assessments over informational assessments. This prioritisation is reasonable in consideration of the uncertain nature of innovation. As strategic innovation development task demands are vague a priori, too early efficacy-related evaluations may lose their relevance during actual implementation activities. Accordingly, informational assessments are found to be more prevalent mid-implementation, during intensive collaborative development efforts.

**Readiness fragility.** Lastly, concerning the readiness fragility pattern, findings indicate that organisational readiness is in a constant state of flux – it evolves throughout an initiative. Initially high degrees of organisational readiness, largely a function of commitment at the outset of a strategic innovation initiative, may decline mid-implementation. Unexpected occurrences, like hidden interests or misjudged user requirements, may provoke readiness re-evaluations that spread shared negative beliefs about the willingness and ability to successfully complete an initiative. They thus corrupt the initial degree of organisational readiness. Related thematic linkages are labelled “corruptive influences”. Responses to corruptive influences are labelled “corrective influences”. They should raise and sustain high organisational readiness degrees and may include proactive interventions, which act as a precaution against dormant corrupting influences, or reactive adjustments, which neutralise active corrupting influences.

Overall, these general patterns help to address RQ 2(a). Unearthing thematic linkages not only helps explain how organisational readiness for strategic innovation initiatives is shaped in an outsourcing context from the perspective of care hospital organisational members. These linkages are also useful for designing actionable managerial influence strategies (Armenakis

and Harris, 2009). With a clearer understanding of which thematic linkages contribute to more or less favourable valence-related and informational assessments, weak spots in a strategic innovation through outsourcing initiative can be pinpointed more easily and responded to more effectively. In light of this, the following discussion of unearthed thematic linkages forms the groundwork for the development of practical implications presented in **CHAPTER 7: Discussion**.

### **5.3.1 Readiness influences at the outset of strategic innovation initiatives**

Findings demonstrate that, at the outset of strategic innovation through outsourcing initiatives, organisational readiness is primarily shaped by valence-related evaluations of an innovation's *expected business impact* and *appropriateness of its features* against multiple reference points in the project, organisational and market environment. In line with the evaluation sequencing pattern, informational assessments play a minor role at the early innovation stage. **Table 14:** Overview of readiness influences at the outset – client perspective offers an overview of relevant thematic linkages.

<b>Content-based factor</b>	<b>Linked to theme</b>	<b>Influence</b>	<b>Brief description</b>
Expected business impact	Strategic orientation	Valence (+)	VR initiative: Potential impact aligns with the care hospital's business strategy.
Expected business impact	Intent alignment	Valence (+)	eNDS initiative: Provider intends to expand with an innovation that benefits the care hospital.
Expected business impact	Organisational culture	Valence (-)	eNDS initiative: Progress-driven values not shared by all employees.
Appropriateness of features	Field of business activity	Valence (+)	eNDS initiative: Features optimise workflows.
Appropriateness of features	Workforce profile	Valence (ambiguous)	eNDS initiative: List-based item selection reduces language barriers but can discourage detailed documentation.
Appropriateness of features	Competitive landscape	Valence (+)	eNDS initiative: Comparisons with less sophisticated IS at rivaling institutions.
<b>Table 14:</b> Overview of readiness influences at the outset – client perspective			

**The valence-related role of the internal strategic orientation.** Care hospital organisational members strongly supported the VR initiative because it promised to improve two core areas of the care hospital's strategic orientation: resident quality of life and workforce development. One informant noted the following in this vein:

"This headset is simply to enable walks. Whether those take place in Schönbrunn [Vienna tourist attraction] or elsewhere. To take residents for a walk, so to say, visually. And to entice them into exploring a different world, if they are often bound here, bedridden. But if they are cognitively fit and simply cannot see anything out there, then this is a great way to help them out. I think, it is very important to pursue these projects. They contribute to the development of the employees, but also to the development of everyone here in the care hospital." (Head nurse 1)

Beyond the care hospital's strategic orientation, the VR initiative also aligned with the research subsidiary's focus on exploring emerging technologies for long-term care. In this light, another informant argued:

"One should think a bit about the future. And that is why I consider all developments in the direction of gerontological research as positive. Because in its early days, care was easy to manage. Warm, fed and clean, all good. But the spectrum is now so extensive, so holistic, and many needs have actually not been completely made aware of yet, or been picked up yet. Such things can be picked up with this [VR initiative]." (Head nurse 1)

Here, besides providing a virtual alternative to real-life excursions, a secondary benefit of the VR initiative was associated with helping shed more light on the multifaceted nature of modern care-related activities. Altogether, the initiative's high compatibility with these two interlinked strategic orientations created collective enthusiasm. Of importance here is that the idea alone behind the new VR solution already propelled these positive beliefs across the organisation at the outset of the initiative. This gives credence to the notion that organisational members are more committed to a strategic innovation initiative at its outset and thus more ready, on the condition that its potential benefits unambiguously support central facets of the organisation's business strategy. As shown, these facets do not centre directly on profitability or competitive advantage. Rather, for care hospital organisational members, positive impacts on resident quality of life, nursing workflows and exploration of the care domain played a more crucial role.

**The valence-related role of intent alignment.** The eNDS initiative has been pursued by the care hospital organisational members since as early as 2014. While many failed launches can

be attributed to the regular turnover of internal project team members, the very key component that ultimately gave care hospital organisational members the impetus to commit to innovation development efforts was the eNDS provider's intent to improve its digital product portfolio. As one informant recalled:

"This need [for the eNDS initiative] actually came from [eNDS provider]. We need to differentiate between two things here. One is the redesign of care planning. So how the diagnoses are structured. Which diagnoses one uses. The other is, how this in its entirety can be presented in the software. This simply came together at that point in time, although it was part of the development plan of [eNDS provider]. To revise care planning. More up to date so to say, with more functionalities." (eNDS relationship manager 1)

While the need for an improved eNDS version existed already before, the eNDS provider's intent to expand its product portfolio evidently greatly increased the perceived urgency among care hospital organisational members and thus their readiness to support the eNDS initiative. A key point of this finding is that the willingness of the care hospital's organisational members is not only influenced by internal organisational factors as Weiner (2009) originally proposes, but also by the strategic intent of the external initiative partner. In the eNDS initiative, the eNDS provider's intent to expand its product portfolio aligned with the care hospital's intent to improve its nursing documentation workflows. As care hospital organisational members recognised this alignment and greater commitment by their eNDS provider, they also shifted into a more ready state themselves.

**The valence-related role of organisational culture.** Despite the prevailing progress-driven cultural environment at the care hospital, the expected business impact of the eNDS initiative was not left entirely unquestioned. Its need was partially faced with scepticism, as an informant argued:

"Everything that is new will be accepted less willingly, especially among older generations or generations that have already worked for a long time with a system or are used to it. This will be viewed in a negative light immediately. And the younger people, those who are also simply able to learn more quickly and are in any case used to major changes, can often bounce back and get involved quicker. There were very mixed feelings, I do have to say that. Some argued: 'why does it have to be changed?' And others have looked forward to this new project." (Head nurse 1)

Findings show that early scepticism spreads across all age groups, but lingers longer among the more seasoned workforce. Here, innovation as an integral part of the care hospital's culture

was disregarded at the outset of the eNDS initiative because organisational members related the potential business impact with additional workload and the obsolescence of routinised activities. In his theory, Weiner (2009) only broadly outlined that organisational culture could affect valence-related assessments, depending on whether the change effort fits or conflicts with cultural values. This finding shows that even though the eNDS initiative fits to the cultural values of the care hospital, some initial degrees of resistance among organisational members are inevitable, catalysed by the belief that a strategic innovation can cause radical changes at the client firm.

**The valence-related role of the field of business activity.** Against initial concerns about the obsolescence of existing competencies related to navigating the eNDS, care hospital organisational members found comfort in specific features of the improved eNDS version. One widely anticipated feature was the facilitation of more simplified documentation workflows. The new, custom nursing classification system would only include those elements that are relevant for the long-term care context. Many less related elements that cluttered the interface of the old eNDS version and slowed down workflows would be removed. Another related and highly anticipated feature was the transition to an underlying European classification system. The European Nursing care Pathways (ENP)-based system would replace the off-the-shelf, North American Nursing Diagnosis Association (NANDA)-based classification system in the eNDS. This was considered advantageous for the following reasons:

“That [NANDA] is simply a classification for care diagnoses. The problem there however is that I have care diagnoses for all settings included. And they were all included in our previous system. I then had to really single out which care diagnosis I needed to even start. And then of course I needed the many individual elements, what do I need, what don't I need. Naturally, there were many things which we did not require. In no way. And also with the aspect, that it is an American classification. It often also raised cultural questions, also in relation to the interventions. There are many differences. We wanted to rectify this.” (Care consultant 1)

Hence, the prospective operational benefits of eNDS features increased the willingness of care hospital organisational members to support the initiative. Special emphasis should therefore not only be placed on raising awareness of a discrepancy between the current state and hoped for state which the strategic innovation should eliminate. In line with Armenakis *et al.* (2007), it

is also the perceived appropriateness of a strategic innovation's particular features to eliminate the discrepancy that flows into valence-related assessments. As shown here, organisational members considered the eNDS features as appropriate to address issues with documentation activities because they were extensively customised to the care hospital's setting. This led to greater commitment on their side.

**The valence-related role of the workforce profile.** Due to their radical nature from a client perspective (Kotlarsky *et al.*, 2015), strategic innovations may entail discontinuities and destroy the usefulness of existing competencies (Henderson and Clark, 1990; Wolter and Veloso, 2008). Inconsistencies in relation to the commitment of organisational members were found in the eNDS initiative in light of these consequences. Specifically, the eNDS initiative's list-based item selection feature initially prompted both positive and negative evaluations, in connection with language barriers. The previous, off-the-shelf eNDS version required nurses to capture their diagnoses predominantly via self-written texts, a task complicated by their, for the most part, limited fluency in German. The introduction of a list-based item selection was therefore generally perceived to be an improvement because self-written activities can be discontinued to a large extent. In this vein, one informant stated the following:

"And I think that this [eNDS initiative] simplifies things. You still need to be technically adept. You need to be able to use a PC. But I think it is a huge help from a linguistic standpoint. If somebody does not have German as their mother tongue and has not been here for a long time, then he simply reads through it. One can then understand this quickly and can also highlight and add. Yes, that is the benefit of this I think." (Care consultant 2)

The new list-based feature however also raised concerns about encouraging a more careless documentation approach. The simplified point-and-click system may act as a disincentive to the full documentation of unique resident-specific conditions that are not included as selectable items and need to be captured individually. Further concerns were associated with the limited digital fluency of the workforce. The number of clicks and consequent length of on-screen lists that have to be navigated were viewed as particularly problematic:

"One has to click on a lot. One has to click on something during every step. Previously, you just had to click into this, had to write it down and it was done. But now you have so many clicks, just to get into a menu and edit this. Then you of course also need to click

on the text blocks. Then you need to click on add so that they are recorded.” (Care consultant 3)

Organisational members bearing rudimentary technological skills usually prefer to navigate the eNDS by memory and not by logic. That is, they memorise a series of clicks to reach a certain function rather than using directional cues in the user interface as points of orientation. Naturally, the new eNDS version would make these competencies redundant and require them to memorise a new series of clicks in order to reach the new list with selectable items they need. Ultimately, these perceived drawbacks led to doubts as to whether the eNDS initiative features would actually allow the workforce to spend more time on direct care interactions and less on documentation. While eNDS innovation features were thus considered appropriate to address documentation issues per se, the additional consideration of workforce characteristics led to more ambiguous valence-related assessments.

**The valence-related role of the competitive landscape.** In the eNDS initiative, care hospital organisational members were found to be more supportive, because particular features would set the care hospital apart from its rivals in terms of digital progress. Two aspects are of note here, the key role of the care hospital’s all-in-one eNDS solution and its early roll-out. The eNDS is widely perceived as the digital backbone of the care hospital, nowadays comprising functions relevant for its main branches of activity, namely medical, nursing, and therapeutic services. By connecting these branches in the eNDS, the care hospital can exploit synergistic opportunities in form of enhanced inter-disciplinary information flows. The necessity of having to re-enter data in multi-system eNDS solutions can be avoided, which informants frequently experienced at other healthcare institutions. One informant stated the following:

“For example, [CareRival 2], as a comparison. What I still know from my experience. [CareRival 2] had [eNDS\_Alternative 1] and all the other institutions had [eNDS\_Alternative 2]. This meant that you could never connect with them, never draw on data from them. This was always associated with difficulties because it was not the same. Here, everything is uniform.” (Head nurse 2)

Many also expressed their discontent with paper-based and hybrid documentation systems they had to work with in rivalling healthcare institutions. Such unpleasant prior experiences led to a greater appreciation of the eNDS version implemented at the care hospital, and a greater

willingness to support its development. Apart from that, the care hospital's early decision to transition to an electronic documentation system and the corresponding roll-out of the eNDS back in 2009 was a milestone for internal digital improvements and one that not many other local healthcare institutions can pride themselves on. This bestowed prestige on organisational members. Being able to work with new developments conveyed a sense of accomplishment among the employees, and also brought social recognition from peers within the domain. It can be concluded that pleasant past experiences with the existing eNDS as digital backbone, and unpleasant experiences with less advanced documentation system solutions introduced at other healthcare institutions, as well as greater social recognition by peers within the domain, increased the commitment of organisational members to support the development of the eNDS in general and the eNDS initiative in particular.

### ***5.3.2 Corruptive influences mid-implementation***

Favourable initial readiness assessments are not only pivotal to securing support for strategic innovation through outsourcing initiatives at their outset, but remain important throughout their implementation. Conforming with the readiness fragility pattern, anticipated challenges, once actually encountered, as well as unexpected emerging complications, may provoke readiness re-evaluations. Consequently, organisational members may not only re-evaluate the necessity of a strategic innovation initiative, but also, and line with the evaluation sequencing pattern, shift their attention to evaluations about their ability to successfully complete related courses of action. This section describes analysed disturbances, labelled "corruptive influences", that prompted such perceptions. **Table 15:** Overview of corruptive influences – client perspective offers an overview of all identified corruptive influences.

<b>Content-based factor</b>	<b>Linked to theme</b>	<b>Corruptive influence</b>	<b>Brief description</b>
Appropriateness of features	Field of business activity	Valence (-); corruptive	Robot initiative: Technical failures and underwhelming functionalities reduced need.
Appropriateness of features	Customer profile	Valence (-); corruptive	Compass initiative: Low familiarity with technologies and accidental alarms rendered concepts unusable.
Strategic innovation task demands	Legal regulations	Informational (-); corruptive	Compass initiative: Data protection considerations cause ambiguity.
Strategic innovation task demands	Intent alignment	Informational (-); corruptive	Compass initiative: Competing intents led to developments that fell out of the project scope.
Formal project structure	Intent alignment	Informational (-); corruptive	Compass initiative: Loose specifications left room for undutiful behaviour.
Innovation resource availability	Intent alignment	Informational (-); corruptive	Compass initiative: Competing intents restricted access to technological resources.
Strategic innovation task demands	Relationship management	Informational (-); corruptive	eNDS initiative: Internal communication issues added complexity to collaboration.
<b>Table 15:</b> Overview of corruptive influences – client perspective			

**Corruptive influence related to the field of business activity.** The perceived need for the robot in the corresponding initiative quickly diminished due to a growing realisation that the robot's features are inappropriate to effectively support daily nursing activities. Causes for these negative re-evaluations can be attributed to two conditions: repeated technical failures during testing and underwhelming functionalities. Repeated technical issues were mostly associated with the robot's autonomous manoeuvrability. The robot collided with objects and people on the care hospital's ground floor from time to time. An informant recalled a critical incident:

“It happened one time that the ambulance had to come for transporting a bedridden resident and he [the robot] was in the way. They tried to push him to the side, but his wheels were locked. They were rigid. They could not push him aside. This led to delays in the transport and, understandably enough, caused frustration and errors on their side. Then his wheels were damaged because of this physical effort and he could no longer move autonomously. He then stood there without power, because he was stuck. And this was during the weekend. This means that the robot continued to stay at the same spot throughout the weekend and nobody knew why.” (CareResearch project manager 1)

On the care hospital's much-frequented ground floor, people move at greatly varying speeds, from nurses rushing to emergencies, wheelchair-bound residents, orderlies transporting bedridden residents to wards, to visitors walking around in the foyer. Hence, “traffic” is chaotic and not rule-based. This severely complicates the estimation of adequate distances for the robot when moving past people and objects, resulting in occasional collisions. The robot would also sometimes come to a stop in front of people in a conversation, invading their personal space.

Regarding the robot's functionalities, none were considered as particularly useful for daily nursing activities, consequently prompting largely underwhelming re-evaluations. Even though the robot was equipped with text and speech recognition software allowing basic commands, such as playing requested songs, displaying pictures, or informing about weather forecasts, its inability to support daily hands-on nursing activities dampened the initial enthusiasm of care hospital organisational members. Only its feature as guide of the Nordic Walking therapy group was believed to be somewhat valuable for the residents. In consideration of the underwhelming experiences however, their commitment based on beliefs in the robot's benefits for direct care activities decreased.

**Corruptive influence related to the customer profile.** Major concept design flaws emerged during the implementation of the compass initiative. The very idea of a smart compass device turned out to match the actual needs of people with dementia only poorly. Two scenarios led to the detection of related issues. The first revolved around the unfamiliarity of the user group with modern technologies, coupled with memory problems and confusion due to dementia. As an informant argued:

“It is so unrealistic, that someone who already suffers from such confusion, who is not used to this, and who has not taken his smartphone or whatever device with him when leaving [his home] over the last 20 years or longer. He then is so unlikely to bring this

[compass] along with him, let alone use it in a panic situation. That he then uses a device that he is not familiar with and starts to communicate with people whom he maybe not know that well. That is so unrealistic, that it turned out to not make any sense to develop this.” (Executive-level manager 3)

The second scenario involved accidental alarms. Originally, the navigation system device was based on geofencing. The user had to specify a target destination in advance, and the time by which this destination should have been reached. Based on the planned route, this would unlock virtual corridors for real-life geographic areas within which the user could move. Should the user move outside of these corridors or not reach the target destination by the prespecified time, then an alarm chain would be automatically triggered. Predefined contact persons, such as close relatives, would then be notified about the user’s current location and could help the user navigate back home. The main issue with this concept however was the likeliness of false alarms. The alarm may for instance be unintentionally triggered when public transport services are delayed or when the user would want to spontaneously meet friends during the trip.

Ultimately, these two scenarios raised doubts regarding the actual need of such a navigation system. Care hospital organisational members were increasingly less convinced that this solution can genuinely improve the safe and independent mobility of elderly users with dementia. As a result, the basis of their commitment to support the compass initiative shifted from beliefs in its inherent benefits (Herscovitch and Meyer, 2002) to the realisation that there were no feasible alternatives other than to go along with related efforts and ticking off the initiative as completed.

**Corruptive influence related to legal regulations.** Related to the issue of misconstrued user profiles in the compass initiative are data protection considerations, which surfaced during later stages of development while testing the compass prototype. The focus on safer navigation and practical innovation designs distracted from inconveniences regarding the necessary location sharing feature. Concerns arose as to whether a predefined contact person should indeed be informed about the location when the user (unintentionally) left the virtual corridor, whether the user is in a fully conscious state and knows where to go, or in a disoriented state and having lost any sense of space and time. Given this ethical dilemma, the perceived ability to develop a device that complies with such concerns declined mid-implementation.

**Corruptive influences related to intent alignment.** The compass initiative was accompanied by several managerial problems that emerged during its implementation. They corrupted initial readiness evaluations by provoking organisational members to form a negative appraisal of their ability to successfully complete innovation activities. Three identified thematic linkages, all springing from conflicting intents, are indicative of this unfavourable change in sentiment. One thematic linkage suggests that their partners consequently engaged in self-oriented rather than mutually beneficial development activities. The second involves an incapacity to realign conflicting intents due to an inadequate governance approach. The third exposes concerns about knowledge hoarding behaviour.

The conflicting intents that triggered these corrupting influences could be traced back to a team switch mid-implementation. The original project-leading university team retired soon after the initiative's launch. Subsequently, a new, albeit inexperienced university team was formed that assumed the leading role. It roped in two IT providers as initiative partners that turned out to be in a competitive relationship. An informant argued:

“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 [competing 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.” (Executive-level manager 3)

In relation to the first corruptive thematic linkage, their conflicting strategic intents deterred either IT provider from prioritising the initiative, due to the belief that the other would benefit from one's efforts. This essentially reflects a free-riding problem in the strategic innovation through outsourcing context. As a result, the IT providers carried out their allocated duties to fulfil minimum formal requirements, but proceeded with developments that did not match with the agreed-on scope. Instead of catering to the needs of elderly with dementia, one IT provider for instance refocused development activities on a compass device for tourists that could be diffused among hotels. Care hospital organisational members were consequently concerned that such development efforts would jeopardise the completion of the initiative, resulting in less favourable efficacy re-evaluations.

Regarding the second thematic linkage, the governance approach of the inexperienced project leading university team was perceived as unsuitable by care hospital organisational members to align conflicting intents and foster cooperative behaviour among the IT providers. The crux of the problem was the project leading university team's laissez-faire leadership style, which was characterised by a dangerous blend of an overreliance on loose formal specifications and optimism. One informant described the predicament as follows:

“One could not agree on specific to-dos that would now have to be completed by the organisations. But anyway, this again was not part of the proposal, one could have argued. It was chaotic from beginning to end. I can also not say that anyone did their part badly, but because there were no specifications which one could orient oneself along, there then were less outputs.” (CareResearch project manager 1)

The loose formal specifications only served as vague indicators for joint development efforts. Originally intended to foster exploration, they gave considerable latitude to opportunism. After a lack of interventions by the project leader, care hospital organisational members recognised that each initiative partner is best off when choosing to engage only in those activities that can be successfully completed independently. This greatly reduced collective efficacy and impelled care hospital organisational members to avoid efforts that require extensive collaboration.

Lastly, and in view of the third thematic linkage, conflicting intents further promoted knowledge hoarding behaviour. The IT providers showed great reluctance to share their portfolio of digital technologies. This constituted a major setback to the perceived ability to develop an advanced compass prototype. It was perceived as particularly bothersome, because care hospital organisational members were under the impression that one of the IT providers already had relevant technologies at its disposal for a while. As one informant 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. There were really bizarre moments.” (CareResearch project manager 1)

The inability to access the IT provider's technological knowledge base because of conflicting intents gave additional momentum to the downward spiral of efficacy re-evaluations during the implementation of the compass initiative.

**Corruptive influence related to relationship management.** Unanticipated collaboration difficulties emerged during development activities in the eNDS initiative. Interestingly, these were not caused by the external eNDS provider, but rather by communication issues between the care hospital's eNDS relationship managers and care consultants. The care consultants were tasked with eNDS initiative content development. They had to compile a list of diagnoses relevant for the geriatric setting, selectively extracted from the standardised ENP classification system. The eNDS relationship managers, having fostered strong ties with the eNDS provider, served as an intermediary. They transmitted the care consultants' content needs to the eNDS provider, and redirected the provider's responses about technologically realisable alternatives back to the care consultants. This connecting link however caused some perceived delays and erroneous messages. One informant noted the following:

"I would have expected more direct collaboration with [eNDS provider]. Because it always was so complicated, to tell this to the [eNDS relationship managers]. They would then get in touch with the provider. This was complicated now and then. I would have preferred a simpler approach. That they immediately tell us what is possible and what cannot be done. Because that also often was the enquiry. It did take a longer time because it was quite complex with the care diagnoses." (Care consultant 4)

Another informant suggested that these challenges resembled the telephone game, where messages become increasingly garbled the more they are passed on. A set of shared beliefs consequently emerged that disfavoured this connecting link. Collaborative activities could have been improved with a more direct communication system. Although this was not a practicable option according to the eNDS relationship managers, as the initiative would have been too difficult to administer otherwise, it still gave rise to concerns about the ability to collaborate optimally. As a result, collective efficacy was re-evaluated less favourably.

### ***5.3.3 Corrective and pseudo-corrective influences mid-implementation***

In contrast to corrupting influences that negatively affect valence-related and informational assessments mid-implementation, corrective influences should raise and sustain favourable re-evaluations. Hence, in relation to the readiness fragility pattern, they should contribute to its stabilisation. Corrective influences include proactive interventions that serve a precautionary role in order to alleviate anticipated concerns, and reactive adjustments that should neutralise

negative perceptions stemming from active corrupting influences. In the following, identified corrective influences are introduced. **Table 16:** Overview of corrective influences – client perspective provides relevant key insights at a glance.

Content-based factor	Linked to theme	Corrective influence	Brief description
Strategic innovation task demands	Workforce profile	Valence (+) & informational (+); corrective	eNDS initiative: On-the-job involvement of user groups increased positive first-hand experience of eNDS developments.
Appropriateness of features	Innovation resource availability	Informational (+); corrective	VR initiative: Managing provider confidence by underscoring the proximity to domain knowledge.
Expected business impact	Strategic orientation	Valence (+); corrective	Robot initiative: Features in practice provided insights for serving future demands.
Strategic innovation task demands	Relationship management	Valence (+) & informational (+); corrective	Robot initiative: Partnership-fostering activities raised both willingness and perceived ability.
Intent alignment	Relationship management	Informational (+); <i>pseudo-corrective</i>	Compass initiative: More authoritative governance style.
Intent alignment	Formal project structure	Informational (+); <i>pseudo-corrective</i>	Compass initiative: More cooperative supply base may have been better retrospectively.
<b>Table 16:</b> Overview of corrective influences – client perspective			

**Corrective influence related to the workforce profile.** User involvement in the remediation of challenges is a key mechanism to encourage readiness mid-implementation (Armenakis and Harris, 2009). It was also found to play a central role in the eNDS initiative. Here, ensuring an easy usage of the eNDS initiative's new features was a daunting challenge due to the difficulties many employees have when operating computers. Furthermore, as mentioned earlier, the eNDS initiative was initially met with scepticism. To counteract this early recognised issue, a range of user involvement-based measures were incorporated in mid-implementation activities.

One were formal eNDS training courses. Due to the limited time resources of the nurses, these were complemented by regular on-the-job support sessions, where care consultants helped nurses on the wards navigate the new eNDS, as well as by “buddy systems” that coupled more technology-savvy employees with their less digitally fluent colleagues. The positive impact of these measures is in part reflected in the following informant statement:

“It was a lot of work in the beginning, because one had to revise all of the existing care plans, especially as registered nurse. This naturally has provoked the impression of an added workload. However, as soon as the first training courses took place or one came together with colleagues, then it was perceived positively. Because the usability really is far more simplified. And there were also lines of thought or words spoken out such as: ‘it is much easier. It is easier to formulate. Previously, I had difficulties.’” (Head nurse 1)

While in the first place beneficial for the nursing staff, the direct involvement of the target group also helped care consultants recognise flaws in the new eNDS version. They could observe user difficulties with the interface, with the incorporated custom ENP classification system and with links in the programme. Further necessary eNDS version improvements could be deduced from these observations and passed on to the eNDS relationship managers, who in turn translated these into technical requirements that were fed back to the eNDS provider. Overall, formal and informal training systems were crucial for turning around negative, and raising positive workforce perceptions both of the value created by the eNDS initiative and of the ability to appropriately use the new features during daily care operations.

**Corrective influence related to innovation resource availability.** The VR provider’ euphoria in the VR initiative offered insights into consequences of an untypical concern in the outsourcing context, an over-committed IT provider. The main issue here was associated with creative design inputs that could digress too far off course, catalysed by the VR provider’s confidence in its extensive technological knowledge base. As one informant argued:

“Sometimes it already happened that we came up with an idea and said it would be good to make a project about this. Then one shares this idea with a project partner, who may have an innovation background or something like that. And they then say: ‘yes, that is great, but...’. Now in relation to the [VR initiative]. ‘One could now add videos as well, and one can also add, I don’t know what else, sounds and this and that. And we can also add attendance experiences where one can somehow join a birthday party, and so on.’ I mean, yes of course, those are all good ideas. But we tend to rather say: ‘But let us first stick to the simple things and ensure that they work. When they work then we can add other things.’” (Executive-level manager 3)

Safeguarding the VR initiative from creative but too impractical concepts was important, as innovative options afforded by VR technology were overabundant. To do so, care hospital organisational members would actively stress their close proximity to the resident user group. Thereby, the VR provider should be made aware of their ability to assess the appropriateness of proposed design ideas more realistically. Their deep expertise in the care domain would be highlighted in an unequivocal manner, which the VR provider should proactively consult before pursuing developments that may be technologically advanced, but serve little purpose for the care hospital residents. This is echoed in the following statement:

“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. And that is now more in the areas of the developers, from the developer perspective. That they say: ‘well, this would also be good and that would also be good’ and so on. And there it can happen that these ideas may miss the purpose of serving the needs of the target group.” (Executive-level manager 3)

Evidently, an over-committed IT provider can jeopardise the success of a strategic innovation initiative just as much as an uncommitted IT provider. Decelerating innovation activities under such circumstances, especially in the early stages of development, can thus be crucial to avoid moonshots. The main indicator that led care hospital organisational members to introduce this corrective manoeuvre was the VR provider’s focus on technological advancement rather than practicality. After decelerating innovation activities and highlighting the relevance of the internal domain knowledge resource base, the perceived ability to develop a VR solution that satisfies the needs of the residents, rather than the technological visions of the VR provider, could be increased.

**Corrective influence related to the strategic orientation.** As mentioned earlier, the robot’s inappropriate features led to organisational member re-evaluations that negatively influenced commitment based on beliefs in the robot’s practical benefits. In parallel to the formation of this set of beliefs, care hospital organisational members however also increasingly recognised the strategic benefits for the organisation when supporting the initiative. As one informant noted:

“This robot, I think it will still need several years until it will be accepted. But the project itself is something I definitely do not find bad. Without experimenting we will not make progress. And it is bad for an institution to reach a standstill. Also in relation to future

recruitment. Because employees want more. They want more offered. Similarly, the customers who are here, they want more offered. Want more to experience. Something needs to happen. Relatives as well. That is why it will be important for the institution, to continue to develop this and arrive at new ideas.” (Head nurse 1)

In this regard, the robot initiative was widely considered as a first step towards incorporating modern technologies in long-term care. The opportunity to observe the robot in practice further cemented the belief that robots can assist, but not replace human nurses. This perception was also important to promote commitment among care hospital organisational members. They were consequently more inclined to support the initiative, driven by the expectation to contribute to the development of a robot that can eventually take over secondary nursing activities, allowing them to focus on those core nursing areas that require human-to-human interactions. As one executive argued:

“Here it is about ordering meals, incontinence care, dispensing medicine, documenting, describing the health status, playing cards, reading papers, taking walks, celebrating birthdays together, alleviating fears associated with dementia, to calm these people down somehow. All of these things are not easily to solve with technologies. [...] To hold one’s hand when someone passes away, to dispel fear, to help cope with the frustration arising with the loss of competencies. Doing this with a robot? This is all about the human aspect.” (Executive-level manager 2)

Altogether, negative perceptions with regards to the practical utility of the robot’s features were compensated by the belief that exploring robotic technologies helps the care hospital continue to excel in long-term care. Accordingly, the collective willingness to support the robot initiative increased especially during its late stages, after organisational members could experience the interplay between humans and robots on site.

**Corrective influence related to relationship management.** The relationship between the robot initiative partners developed into what was widely perceived an exemplary partnership, despite the large consortium and no prior histories of collaboration. What contributed to its development was a range of commitment and efficacy-promoting mechanisms. One was the constant availability of project partners for emerging technical matters that could, importantly, be solved remotely. Others were (1) the availability of a local partner for more comprehensive repair services, (2) a clear division of tasks, (3) the parallel execution of iterative development activities and testing, which did not require temporary suspensions of the robot’s deployment, (4) development of custom modifications demanded by the research subsidiary, including an

emergency button that mechanically unblocked the robot's wheels, (5) regular socialisation opportunities in form of international conference calls, (6) timely communication with regards to progress-dependent deliverables, and (7) a competent project leadership team, emphasised on as the most critical success factor, that clearly spelled out the desired end state, without being too restrictive with regards to the path each initiative partner chooses to tread. Taken together, these partnership-fostering elements enhanced the perceived willingness and ability to support the robot initiative during its implementation.

**Pseudo-corrective influences.** Care hospital organisational members found themselves powerless in the compass initiative to enforce corrective measures which they believe could have neutralised encountered corruptive influences. Their perceived powerlessness stemmed from their non-directing role in the initiative. These corrective measures are now presented, but it must be noted that their actual impact in practice remains speculative.

In retrospect, care hospital organisational members considered an authoritative governance style (Wiener *et al.*, 2016) as more suitable than the project-leading university's laissez-faire approach. Its absence was regarded as the main reason for the poor alignment of the IT providers' competing intents, that remained incompatible throughout the compass initiative. Apart from the governance style, a different composition of the consortium was proposed as a reasonable alternative to mitigate the conflict potential. A supply base composed of other, more cooperative providers that prioritised the initiative and are not in direct competition with each other would have been helpful to alleviate cooperation problems. Lastly, project member switches were a major issue that inhibited the care hospital organisational members from forging social ties. They proposed that dedicated team members would not only have a positive signalling effect, by showing that the initiative is prioritised by the partners, but would also have eased coordination. All of these pseudo-corrective measures were expected to increase the perceived ability of completing the initiative as initially intended, thus encouraging more favourable efficacy re-evaluations.

### **Chapter summary**

In this chapter, insights distilled from the analysis of the multinational IT provider dataset are presented. The findings build on the foundation that has been established up to this point in the thesis and are thus presented using a structure similar to the previous chapter. Like client organisational members, valence and efficacy beliefs of provider organisational member are shaped by multiple factors in the project, organisational and market environment. This chapter ends with a summary that weaves key findings from both empirical studies together. It forms the basis for crafting a dynamic, inductive framework that explains the formation of organisational readiness for strategic innovation initiatives in outsourcing.

#### **6.1 IT multinational strategic innovation through outsourcing initiatives**

The IT multinational (IT multi) is one of the largest business services providers in the world, with more than 100,000 employees, regularly achieving billion-dollar annual turnovers, and catering to a variety of industry-leading corporations across the globe. With its UK offices, it won contracts with numerous established businesses in Europe. These firms increasingly seek new ways to leverage the IT multinational's digital technologies for their core business areas.

Strategic innovation through outsourcing initiatives involving the IT multinational are typically part of wider digital transformation efforts that are implemented on behalf of the clients. The informants openly shared relevant insights in the context of ongoing outsourcing relationships they managed with various clients dominating the UK accounting, banking, retail, utilities, and telecommunications industry. These firms are well-known multinationals faced with growing pressure from disruptive start-ups, that are founded on digitally-enabled business models.

To safeguard their clients' commercial interests, the informants generally preferred to avoid discussing specific strategic innovation initiatives in detail. Instead, they offered to provide a broad, yet highly informative account of factors they considered significant in shaping collective readiness beliefs. Even so, within the confidential relationship that was established with the informants, sensitive information about various high-profile clients, certain features of strategic

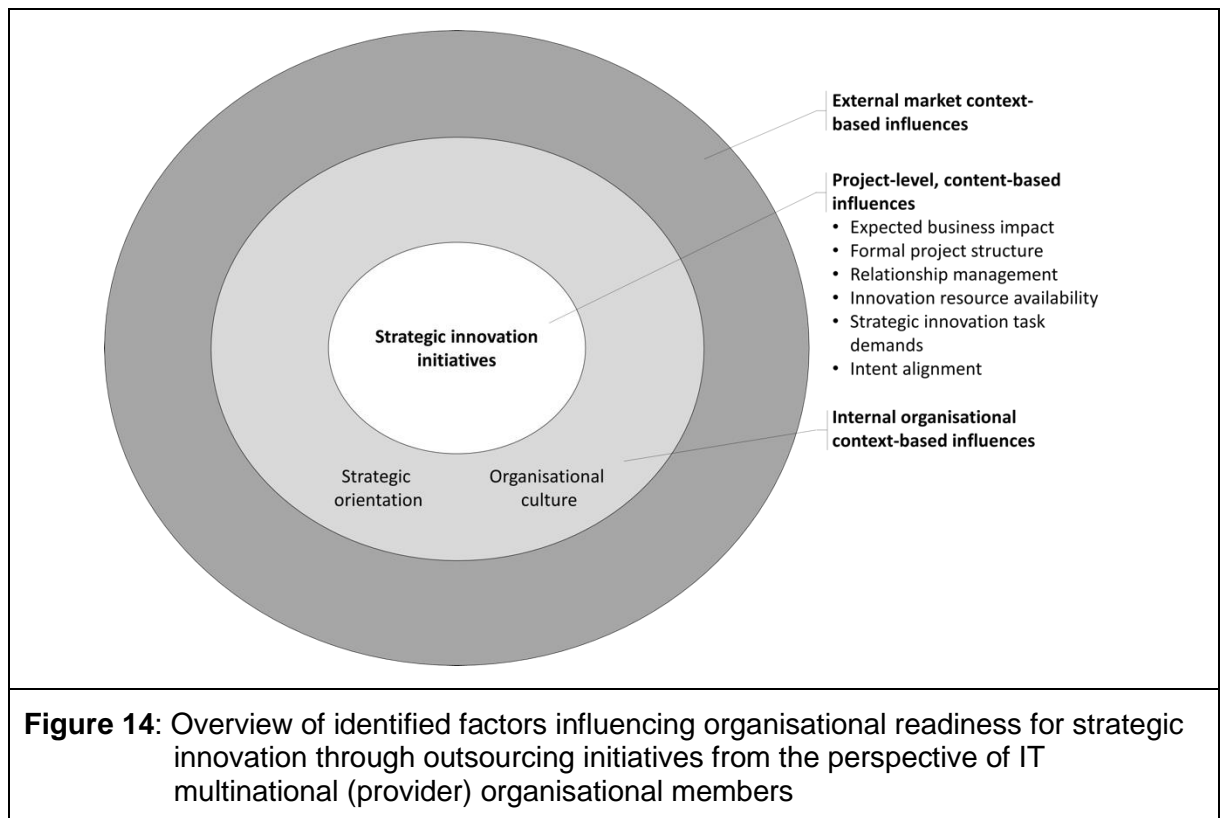
innovations and details of their outsourcing engagements was collected during the interviews. It was agreed with the informants that this information will not be disclosed. A comprehensive overview of strategic innovation initiatives, as offered in the previous chapter, is therefore deliberately omitted here. The subsequently reported findings nonetheless reveal several valuable readiness-related insights from a provider perspective that can help answer RQ 2(b).

## **6.2 Overview of identified strategic innovation readiness factors – provider perspective**

As in the preceding chapter, **Figure 14: Overview of identified factors influencing organisational readiness for strategic innovation through outsourcing initiatives from the perspective of IT multinational (provider) organisational members** displays an overview of all identified factors that notably influence readiness evaluations of the IT multinational's organisational members for strategic innovation through outsourcing initiatives on behalf of their clients. On a high level, they largely mirror those identified in the care hospital case study.

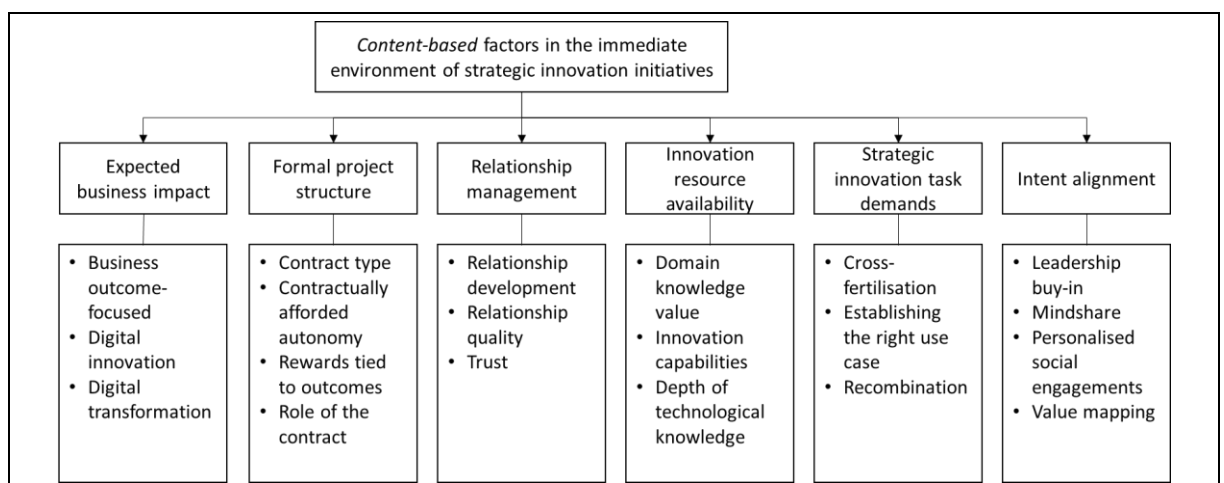
Differences can nonetheless be recognised in core concepts associated with these factors. While contractual elements associated with the *formal project structure* factor for example were of little relevance in the care hospital case study, IT multinational informants argued that the contract type can be a “game changer” in enabling strategic innovations from their perspective. Also of note is that certain factors identified in the care hospital case study did not emerge in the IT multinational dataset. Specifically, the content-based factor *appropriateness of features* was not established because of confidentiality concerns, while the context-based factors *field of business activity*, *workforce profile* (both wider internal organisational context), *competitive landscape*, *customer profile*, and *legal regulations* (external market context) lacked conclusive empirical support to be considered readiness-stimulating.

The identified factors are discussed in greater detail in the next sections. Most of the factors are, similar to the care hospital case study, *content-based* and evaluated against each other, or, to a lesser extent, against *context-based* factors.



### 6.2.1 Project-level (content-based) influences

Discovered patterns within the immediate outsourcing project environment of the four observed strategic innovation initiatives reveal a variety of readiness evaluation-influencing factors. They are discussed in greater detail below and summarised at the end of this section in **Table 17: Project-level content-based factors – provider perspective**. **Figure 15:** Visual overview of content-based readiness factors (provider perspective) provides a concise visual overview of identified factors and related key concepts.



**Figure 15:** Visual overview of content-based readiness factors (provider perspective)

**Expected business impact.** From the perspective of IT multinational organisational members, strategic innovations impact their clients' business environments, mainly by helping them leap over widening digital technology chasms. The discrepancies that should provoke the need for strategic innovations, and thereby influence valence-related assessments, are thus embedded in an external, rather than internal business context. IT multinational organisational members consequently have to assimilate to their clients' ways of thinking and working, in order to fully understand how strategic innovations may improve their competitiveness and capture benefits for both sides of the relationship.

**Formal project structure.** A central formal aspect for IT multinational organisational members is the contract type. Widespread contract types that are well-researched in existing outsourcing literature were discussed by the informants, such as fixed price or time and materials contracts, as well as the increasing acceptance of yet largely underexplored outcome-based contracts. The degree of autonomy that these contract types afford also play a paramount role in shaping readiness evaluations.

**Relationship management.** Like in the care hospital case study, a common pattern identified in the analysis of readiness-influencing factors involves relationship management. Of particular relevance for IT multinational organisational members is the relationship type associated with an outsourcing engagement. Whether the relationship is approached at an arm's length or as a trust-based partnership heavily influences the perceived ability to successfully complete task demands of strategic innovation.

**Innovation resource availability.** It is less the presence and mobilisation of technological and domain knowledge that is of relevance for readiness evaluations from the perspective of IT multinational organisational members, and more the difference in value attached to these two types of knowledge. According to the informants, deep pools of both have been accumulated at the IT multinational, but domain knowledge is more valued than technological knowledge. Consistent with arguments in existing outsourcing literature, a commonly argued reason for its

higher value is that it is largely tacit and thus more difficult to obtain (Weigelt, 2009; Weigelt and Sarkar, 2012).

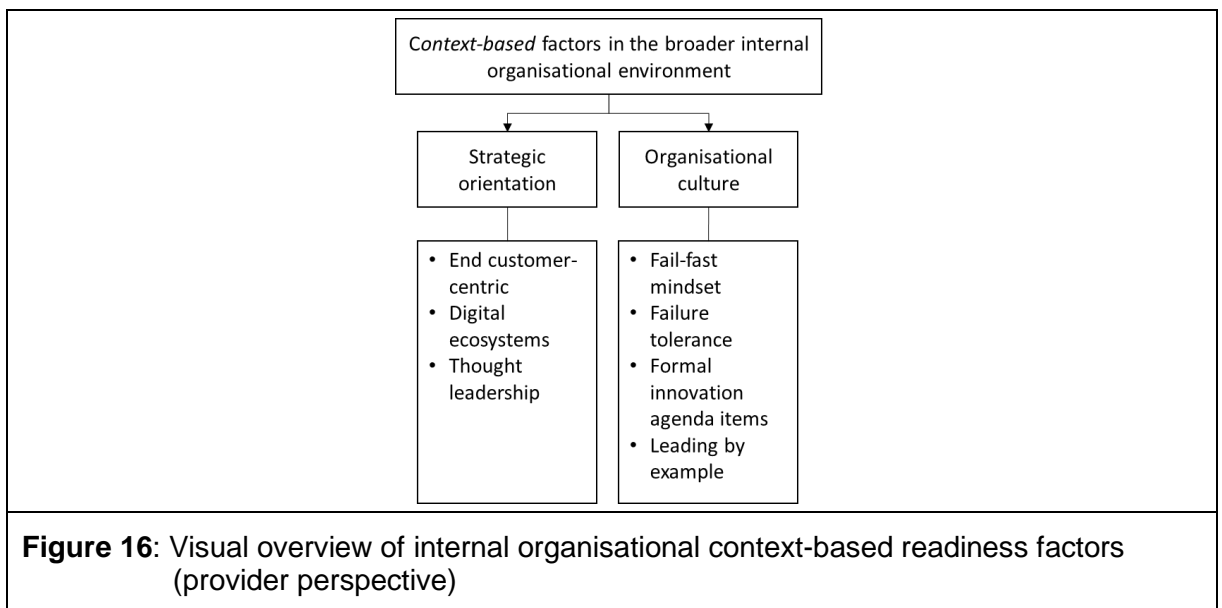
**Strategic innovation task demands.** Task demands of strategic innovation development from the IT multinational perspective broadly reflect those described in prior research. Already completed strategic innovations in other verticals of the IT multinational are made available to its organisational members, which can then be refitted for the particular needs of the clients they serve. This, in essence, reflects cross-fertilisation techniques, which involve salvaging the core of an implemented innovation at one client, and re-customising it for another (Desyllas *et al.*, 2018). Findings show that efficacy judgements are largely formed around influences that may notably promote or inhibit cross-fertilisation development efforts.

**Intent alignment.** The alignment of a client's intent for a strategic innovation initiative with that of the IT multinational is identified as another important content-based factor. Clients however commonly lack awareness of potential links between digital technologies and their business processes. Leadership buy-in that is necessary to ensure that intents are clear and stay aligned is similarly a typical area of concern that predominantly affects informational assessments.

Condition	Brief description
Expected business impact	Clients are the primary beneficiaries of strategic innovations that help close digital gaps and substantially improve their competitiveness.
Formal project structure	The contract type (fixed price, time and materials, outcome-based) and thereby afforded degree of autonomy play an important role.
Relationship management	The relationship type (transactional, arm's length relationship or trust-based partnership) is found to heavily influence readiness evaluations.
Innovation resource availability	The value of domain knowledge, only accessible and extractable by innovating with individual client firms, is associated with a readiness-stimulating effect.
Strategic innovation task demands	Development efforts associated with strategic innovation initiatives are largely based on cross-fertilisation techniques.
Intent alignment	Clients are often unaware of how digital technologies could support their business processes. Buy-in of their corporate executives is critical.
<b>Table 17:</b> Project-level content-based factors – provider perspective	

### 6.2.2 Internal organisational context-based influences

**Figure 16:** Visual overview of internal organisational context-based readiness factors (provider perspective) provides a visual overview of identified internal organisational context-based factors and related key concepts. A brief summary is provided in **Table 18:** Organisational context-based factors – provider perspective.



**Strategic orientation.** The strategic orientation of the IT multinational emphasises on two areas: digital ecosystems and thought leadership. The former involves helping clients change the way they currently work. Based on a customer-first approach, digital ecosystems should be set up by coupling clients that compete in different industries but service the same end customer. Consider for instance an airline which can be brought together with hotels, retailers, and other businesses to cover multiple stages of the shared customer’s journey. The latter involves helping clients envision how they should work, by supporting them in gaining clarity about digital possibilities for their business, where they want to be in future, and guiding their digital transformation efforts accordingly.

**Organisational culture.** The IT multinational follows the principles of leading by example and fosters an “agile” culture. According to the informants, this means moving away from rigid structures and excessive upfront planning. Instead, it entails high flexibility, with employees being able to adapt to changing schedules on the spot, location independence that allows

employees to collaborate on innovation development activities across different time zones, quick and independent decision-making, high risk tolerance, and a fail-fast mindset that encourages immediately pivoting to new paths of exploration when facing failure. These values and behavioural norms are formally reinforced with innovation performance metrics as key part of employee review agenda items.

Condition	Brief description
Strategic orientation	The IT multinational's internal business strategy focuses on creating digital ecosystems for clients and establishing itself as thought leader.
Organisational culture	The IT multinational fosters an agile environment which is characterised by flexibility, high risk tolerance, fail-fast mindset, independent decision making and formally reinforced with innovation performance metrics.
<b>Table 18:</b> Organisational context-based factors – provider perspective	

### 6.3 Organisational readiness from a provider perspective based on thematic linkages

Similar to the previous chapter, the factors described above represent important conditions in the project, organisational and market environment that shape organisational readiness for strategic innovation initiatives in an outsourcing context from a provider perspective. The three general patterns that were identified in the care hospital case study (multi-influence evaluation effects, evaluation sequencing, and readiness fragility) are partially discernible in the analysed empirical provider data. A notable difference is visible in the evaluation sequencing pattern.

In contrast to the care hospital case study, where valence-related evaluations are clearly prioritised over informational assessments at the outset of strategic innovation initiatives, IT multinational organisational members are found to simultaneously form multiple beliefs about their shared resolve and ability at the outset. Best practices toolkits coupled with insights from prior success stories help them detect common issues early on that may inhibit later innovation development efforts. Consequently, they follow a relatively structured approach to consciously groom the outsourcing relationship for collaborative innovation initiatives. Mid-implementation disturbances can be largely neutralised thereby. Accordingly, informants did not discuss these extensively, nor specific corrective influences.

### 6.3.1 Readiness influences at the outset of strategic innovation initiatives

Findings demonstrate that IT multinational organisational members are motivated by three key beliefs to pursue strategic innovation initiatives on behalf of their clients: they support the internal corporate strategy, they resonate with the IT multinational's cultural values and norms, and they afford the opportunity to accumulate domain knowledge. Their belief in the collective ability to successfully engage in related efforts is mainly determined by the following indicators: the relationship has evolved into a partnership, client leadership buy-in has been secured, and the client opens up its strategic planning activities. The factor *formal project structure* is found to have a notable influence on both valence-related and informational assessments. **Table 19:** Overview of readiness influences at the outset – provider perspective offers an overview of the identified thematic linkages.

Content-based factor	Linked to theme	Influence	Brief description
Expected business impact	Strategic orientation	Valence (+)	Business strategy of the provider supports strategic innovation for its customers.
Expected business impact	Organisational culture	Valence (+)	Agile culture, coupled with reinforcing mechanisms, encourage strategic innovation.
Expected business impact	Innovation resource availability	Valence (+)	Strategic innovation initiatives increase valuable domain knowledge.
Strategic innovation task demands	Relationship management	Informational (+)	Partnerships are essential for engaging in strategic innovation efforts.
Strategic innovation task demands	Intent alignment	Informational (+)	Strategic awareness and leadership buy-in are critical for strategic innovation activities. Events play an important role to secure both.
Strategic innovation task demands	Formal project structure	Valence (+), Informational (+)	Outcome-based contracts increase the willingness and ability to engage in innovation activities.
<b>Table 19:</b> Overview of readiness influences at the outset – provider perspective			

**The valence-related role of the internal strategic orientation.** The IT multinational's foci on creating digital ecosystems and shoring up a thought leadership position give its organisational members more latitude to innovate for their clients, who are increasingly seeking new ways to

leverage digital technologies, after establishing a resilient IT infrastructure, or “digital spine” in the words of the informants, and digitising their vertical supply chains. Particularly innovation demands of long-standing and digitally advanced clients can thereby be satisfied. Against this backdrop, one informant argued:

“What is I think the biggest trend, is trying to figure out new business models based on the same customer being serviced by two different industries. So we know that the same customer goes to a bank for doing some services, probably goes to a retailer to do some services, and banks and retailers, there is some kind of a link there, because if you buy something at the retailer, they will pay through a credit card and this goes through a bank. So the same customer is interacting with these two entities. But there is a growing realisation that the transformation and the new ideas would come at the intersection of these industries. So the bank can work with the retailer to come up with a product or a service to deliver to the customer in the journey of his buying something stock in a shop or in a website going through credit card payment and closing that loop. This increasing realisation, that there could be services that both the banks and retailers, without cannibalising each other's services, can provide a new service, to a new business model, to a new... There could be a completely new business for both of them as a joint cooperation.” (IT multi technology manager 1)

Shifting the centre of focus from the client's vertical supply chain to the client's end customers thus encourages IT multinational organisational members to exploit synergies between its fast-growing and diverse client portfolio, and advanced technological capabilities. These synergies primarily involve the utilisation of existing solutions that improve a client's connectivity in its wider ecosystem, and re-customising these solutions for other clients. Altogether, the strategic orientation gives IT multinational organisational members a major stimulus to commit to strategic innovation initiatives that specifically serve the purpose of establishing intersections between the many clients they service.

**The valence-related role of the organisational culture.** Informants highlighted that it is an integral part of the IT multinational's culture to partner with clients and help them grow, which ultimately gives organisational members a strong impetus to innovate on their behalf. Doing so however is complicated by high turbulence associated with technological advancements and client needs. In response to these uncertainties, organisational members are “living agile” as an informant pointed out. In relation to strategic innovation, agile values encourage them to embrace greater risks than they used to in the past and quickly pivot to new directions when

development efforts reach a dead end. A reward system that includes innovation as a formal key result area (KRA) complements their agile and fail-fast mentality. One informant argued:

“Because technologies are changing consistently, the market environments are changing consistently, the regulatory requirements are changing consistently, the business needs and demands are changing consistently, the customer spread for each of our clients is changing consistently and there are demands and products and services, they are all changing. So it's a very dynamic environment that we work in and hence we are always pushed around to keep pursuing that innovation. [...] If you fail quickly you have more time to go correct it and improve it, rather than the longer. That's where some of the waterfall agile methodology develops, and all of this becomes... So they have the focus of don't stop yourself from failure. Failure is good, because next time you try you will do better than what you did earlier. So I think most of the RMs [Relationship Managers] are consistently motivated from an innovation perspective, because that is one of the agenda items of their KRAs as well.” (IT multi relationship manager 2)

Altogether, the organisational culture and reinforcing mechanisms thus strongly encourage IT multinational organisational members to continuously scope out and commit to high risk, high reward strategic innovation opportunities that involve connecting emerging technologies with changes in the clients' business environments, be it new regulatory requirements, changing offerings or newly targeted end customers. Importantly, agile values have to be reciprocated by the client, otherwise IT multinational organisational members are less inclined to innovate on their behalf.

**The valence-related role of innovation resource availability.** The conceptual study already pointed out that domain knowledge is indispensable to contextualise general technologies to the client's particular business environment. Insufficiently contextualised IT-based solutions, even though they may be new to the client and may significantly improve its competitiveness, are likely to turn out as unusable in practice (Chatterjee, 2017). The high value of extensive domain knowledge has also been repeatedly emphasised on by IT multinational organisational members. In fact, according to one informant, employees with specialised domain knowledge are more valuable to the organisation than those with advanced technological knowledge. This is commonly justified on the grounds that domain knowledge “glues” the IT multinational to its clients. A relationship manager said the following about this:

“See, if we were focusing only on the technology as a company, we wouldn't have been surviving so long, because the technology changes fast. So what glues us is the knowledge of the customer as well as their businesses because we've been with them. We understood a lot of contextual knowledge, so we also give it a lot of importance. [...]

Because technology is something I can, I myself can outsource it, or get it as a commodity. But not domain knowledge.” (IT multi relationship manager 4)

IT multinational organisational members are therefore highly committed to engage in strategic innovation initiatives on behalf of clients, driven by the belief that these provide the opportunity to tap and extract otherwise inaccessible and valuable client-specific domain knowledge.

**The efficacy-related role of relationship management.** Outsourcing engagement histories, and with that the relationship type, are found to considerably influence the perceived ability of IT multinational organisational members to engage in innovation efforts. Favourable efficacy judgements are discernible in outsourcing relationships that are approached as partnerships. Those that are approached as transactional exchanges, in which the client keeps them at an arm’s length, are commonly regarded as incompatible with innovation. Typical characteristics of innovation-conducive partnerships according to the informants largely overlap with those in outsourcing literature, namely that they form over time, are built on strong trust and reliability, and facilitate effective communication (Weeks and Feeny, 2008; Søderberg *et al.*, 2013).

Notably, the momentum of the relationship is largely dictated by the digital product developed for the client. IT multinational organisational members can improve the relationship, as long as they enhance the digital product. To reach partnership status, they need to establish a “digital at core” position, in which the digital product supports the client’s core business activities. This entails a continuous process of attaining domain knowledge to improve the base digital product with more functionalities. After progressively elevating the quality of the relationship thereby, they eventually achieve what was described as “... more than a supplier-client relationship. There is still a contract, there’s still your various documentation that comes into play but at a higher level, it is then a partnership that you work with” (IT multi relationship manager 2).

Partnerships can thus take many years to build, especially with new “Logos”; newly acquired clients. One relationship manager of such a Logo account claimed that he worked for more than two years on the relationship, starting with basic staff augmentation services, and gradually adding new low-level solutions, such as in the application support area, until reaching partnership status. Another informant corroborated this argument, stating that, more often than

not, relationships progress from cost efficiency programs to strategic innovation programs with the continuous introduction of incremental improvements.

**The efficacy-related role of intent alignment.** IT multinational organisational members are found to form more favourable efficacy evaluations when their intents for strategic innovation initiatives align with those of their clients. Several informants also referred to aligned intents as “mindshare”. The importance of clearly understanding clients’ intents and performing regular “sense checks” to ensure that there are no deviations is reflected in the following statement:

“You need to continuously engage with the customer to understand where they are going, what their plans are. Okay so it is not the next three months, but you need to know for next three years, or four years, where they want to be. And there is a continuous interaction with the customer required. Now during the discussions you will get some ideas where they want to be and where we can help them out. So that is how it works.”  
(IT multi relationship manager 3)

When leveraging outsourcing engagements for strategic innovation, clients should therefore proactively involve IT multinational organisational members in strategic planning activities. A common issue that complicates intent alignment is that many clients are unaware of how digital technologies could support their core business functions. Helping to shape client intents is thus just as important. Demonstration effects of past success stories play a notable role herein. As one IT multinational relationship manager argued:

“We created something called a technology meet. And we’ve also taken them through an executive briefing centre. So where we have showcased all the digital transformations that we’ve done for our customers outside of this industry. Not within the professional services environment but all other industry lines, like banking, financial services, insurance, retail, whatever. So because a lot of times the disruption comes not from your own industry but from somewhere else. It may give you ideas, it may trigger your ideas and all that. And if you always restrict to only your own area then you may not find new ways. Sometimes what you might do in retail, it might resonate in a different environment. That’s how it is. And that worked well.” (IT multi relationship manager 1)

The purpose of such interpersonal events, which are customised to the business challenges of a particular client, is to compel clients to benchmark their digital status quo against that of rivals and leaders in other industries. By seeing how the IT multinational can help leverage the strategic potential of IT, clients should be motivated to refocus their present business strategy towards joint value creation with the IT multinational. This increases the perceived ability of IT multinational organisational members to overcome shallow client demands for innovative

digital solutions and define needs based on more precisely defined problems. After all, many clients "... know that something around digital, or something around innovation is where they should be, but they don't know why they should be there" (IT multi relationship manager 2).

A related and highly relevant aspect is client leadership buy-in. The support of client corporate executives is necessary to ensure close involvement in shaping strategic planning, to reduce ambiguities in intents and, ultimately, to successfully launch and complete strategic innovation initiatives. This gives credence to earlier change readiness research, which similarly suggested that principal support is a key influence on readiness, albeit in a within-firm change context (Armenakis and Harris, 2009; Madsen *et al.*, 2013). The following statement demonstrates its significance in an outsourcing context:

"Usually strategic don't happen at the operational level. And strategic interactions are only at senior management and executive level. It is never below. The interactions at middle management and bottom layers are usually operational and tactical. Nothing beyond that. And the strategic interactions only happen at an executive level. So any of the future roadmap of how their services can be done, how their application support landscape can be transformed or the infrastructure services can be transformed, that cannot be discussed with anyone below who don't have the big picture and who are probably, who do not have that kind of a goal or an objective to make the services better which may involve a lot of difficult decisions to take because of their role. So it has to be at a pretty senior level." (IT multi relationship manager 1)

IT multinational organisational members follow an organised approach in securing leadership buy-in. They start by screening and identifying key executive stakeholder within the client firm. Subsequently, they focus relationship-building efforts on this particular political insider. Once convinced, the key executive stakeholder is considered as a "coach" or "partner" who can help sway the rest of the client firm's corporate executives to support a strategic innovation initiative. Overall, aligned intents, enabled by high strategic awareness, close involvement in strategic planning, and secured leadership buy-in, substantially contribute to more positive informational assessments.

**The valence and efficacy-related role of the formal project structure.** For IT multinational organisational members, the contract type is found to play a significant role. It influences their commitment to engage in development efforts to a considerable degree. Fee-based contracts are considered ineffective. Outcome-based contracts, which informants also referred to as

pseudo-joint venture, profit-sharing model, pain-and-gain model and putting their skin in the game, are perceived to be the key to success. Herein, provider rewards are directly tied to realised business outcomes of the client (Hou and Neely, 2018). IT multinational organisational members are thereby encouraged to help their clients grow, in order to recoup investments, as well as parts of the realised profits. They are further given the necessary autonomy to decide how they distribute available resources to reach these outcomes. One informant described the significance of outcome-based contracts as follows:

“We know that, yes, we can help our customers optimise, reimagine, or help them to stay competitive in the market. So there are a lot of deals that we have recently won where it's an outcome-based model. So if you look at earlier... There used to be fixed-price projects and there used to be T&M [Time and Materials] projects. So T&M, okay, you give people and you earn from them and you're not bothered about what you are doing. Fixed-price, okay fine, you have certain tasks given to you, complete the task and get paid. The outcome-based model is a game changer. What it means is, I have given you a commitment and I will get paid only when I fulfil that commitment.” (IT multi staffing manager 1)

Informants stressed that the less prescriptive nature of outcome-based contracts increases the IT multinational organisational members' willingness (rewards tied to outcomes) and perceived ability (autonomous decision-making) to innovate.

#### **6.4 Summary of empirical findings from the client and provider perspective**

In the long tradition of change management research, it is widely recognised that readiness for change is the centrepiece of successful change initiatives (Armenakis *et al.*, 1993; Holt *et al.*, 2007; Weiner, 2009; Stevens, 2013). There is a broad consensus within this domain that an insufficient degree of readiness is a common cause for failure (Armenakis *et al.*, 1993; Holt and Daspit, 2015). In that respect, applying organisational readiness theory (Weiner, 2009) to the strategic innovation through outsourcing context contributes to a deeper understanding of factors that stimulate supportive or resistive attitudes among organisational members.

The empirical studies provide deep insights into the formation of organisational readiness from the perspective of client and provider organisational members. They help answer RQ 2:

**RQ 2:** How can high degrees of organisational readiness be created for strategic innovation initiatives in outsourcing from a (a) client perspective and (b) provider perspective?

Consistent with Weiner (2009), organisational readiness is principally a function of *commitment* and *efficacy*. Creating high levels of organisational readiness for strategic innovation through outsourcing initiatives therefore involves influencing organisational member beliefs so that they (1) collectively value the strategic innovation enough to commit to its implementation, and (2) share a sense of confidence that they can collectively execute the demands that come with strategic innovation development.

Three broad readiness-related patterns were recognised in the analysis of empirical data using Weiner's (2009) theoretical lens. They constitute key findings that help respond to RQ 2 on a high level:

**Key finding 1:** Organisational readiness for strategic innovation in an outsourcing context is created on the basis of multiple valence-related and informational evaluations.

This key finding is reflected in the *multi-influence evaluation effects* pattern, which shows that commitment is influenced by multiple valence-related evaluations, and efficacy is influenced by multiple informational assessments. For these assessments, a variety of project-level content-based factors are evaluated against each other and against several context-based factors. Notable relationships that are thereby formed are also referred to as thematic linkages.

**Key finding 2:** Valence-related beliefs about a strategic innovation may be more salient than efficacy-related beliefs (and vice versa) in different phases of the initiative.

Key finding 2 is encapsulated in the *evaluation sequencing* pattern, which indicates that organisational members primarily engage in valence-related evaluations at the outset of a strategic innovation initiative, and shift their focus to informational assessments with the commencement of development efforts. Interestingly, this pattern was only clearly evident in the care hospital dataset. IT multinational organisational members are found to simultaneously engage in valence-related and informational assessments at the outset of strategic innovation initiatives.

**Key finding 3:** Valence and efficacy-related beliefs about a strategic innovation are prone to be negatively influenced over the course of an initiative, necessitating corrective measures.

Key finding 3 is reflected in the *readiness fragility* pattern, which suggests that a high level of organisational readiness at the outset of a strategic innovation initiative may diminish during its implementation due to disturbances if not proactively maintained.

Overall, the identified thematic linkages indicate that readiness from the perspective of *client organisational members* is mainly a function of commitment at the outset of strategic innovation through outsourcing initiatives and is greater when they expect that:

- The potential business impact of a strategic innovation unambiguously conforms with central facets of the client's corporate strategy.
- The service provider intends to innovate on behalf of the client as part of its own business development efforts.
- Particular features of a strategic innovation are uniquely customised to significantly improve the client's core business activities.
- Particular features of a strategic innovation set the client apart from its rivals in terms of digital progress.

Readiness as a function of commitment may be greatly reduced at the outset of strategic innovation through outsourcing initiatives when *client organisational members* expect that:

- Values of the organisational innovation culture are not shared by all employees within the organisation.
- Particular features of a strategic innovation enable such substantial improvements in core business activities that they encourage complacency among organisational members.

Identified thematic linkages indicate that readiness from the perspective of *service provider organisational members* is a function of both commitment and efficacy at the outset of strategic innovation through outsourcing initiatives. Commitment is greater when they expect that:

- The strategic innovation initiative enables the exploitation of synergies between the client portfolio and technological capabilities, thereby aligning with the internal business strategy.
- The strategic innovation initiative harmonises with the innovation-driven organisational culture and its reinforcing mechanisms. The client shares these cultural values.
- The strategic innovation initiative enables the extraction of client domain knowledge.

Efficacy at the outset of a strategic innovation through outsourcing initiative is greater when service provider organisational member expect that:

- A “digital at core position” has been established at the client and the outsourcing relationship has evolved into a trust-based partnership.
- A high degree of “mindshare” has been developed with a close involvement in shaping the client’s strategic planning activities. This is cemented with secured client leadership buy-in.
- The outsourcing relationship is based on an outcome-based contract, giving autonomy to provider organisational members. This is also found to simultaneously lead to more favourable valence-related evaluations.

Findings from the care hospital case study suggest that disturbances may emerge during the implementation of a strategic innovation initiative that provoke unfavourable valence-related and informational re-evaluations. They are labelled corruptive influences and put the success of the ongoing initiative at risk. The following corruptive influences provoke negative valence-related re-evaluations from the perspective of client organisational members:

- The strategic innovation’s particular features turn out as inappropriate to support core business activities during prototype testing.
- The strategic innovation is based on a design that turns out to match actual needs of end customers only poorly and is thus impractical for the particular target group.

The following corruptive influences are found to provoke negative informational re-evaluations from the perspective of client organisational members:

- The strategic innovation is subject to stringent data protection considerations and ethical dilemmas that have not been resolved in advance.
- Strategic innovation initiative partners engage in self-oriented developments efforts due to competing strategic intents.
- An inadequate governance approach fails to mitigate undutiful behaviour by strategic innovation initiative partners.
- Strategic innovation initiative partners are reluctant to deploy the required technological resources.
- Strategic innovation development efforts entail a complex communication system that decelerates collaboration.

Findings from the care hospital case study similarly offer evidence of corrective influences that should provoke and sustain favourable valence-related and informational re-evaluations mid-implementation. The following corrective influences are identified from the perspective of client organisational members:

- Client organisational member direct participation in strategic innovation development efforts is identified as highly effective to improve valence-related and informational evaluations.
- Curbing provider overconfidence in its technological capabilities by emphasising on the importance of internal domain knowledge for contextualising strategic innovations reinforces the perceived ability to innovate for the target group and not simply for the sake of innovation.
- A collectively shared learning-from-failure mentality can considerably improve valence-related re-evaluations despite experiencing underwhelming innovation developments.

- Availability on demand, regular interactions between initiative partners, clear sets of tasks, additional custom developments on request, timely communication, and initiative leaders setting clear objectives all effectively foster high partnership quality throughout the entire strategic innovation initiative, thereby maintaining continuously high valence-related and informational re-evaluations.

The following pseudo-corrective influences are identified. They were not active in the observed initiatives. Informants argued that they could have encouraged more favourable informational assessments from the perspective of client organisational members:

- An emphasis on formal controls was considered as more adequate than a laissez-faire governance style in the face of self-oriented behaviour exercised by initiative partners.
- A more cooperative supply base configuration composed of non-competing initiative partners coupled with dedicated project members from all partners may have improved collaborative strategic innovation development efforts.

#### ***6.4.1 Incorporating client and provider perspectives in an inductive framework***

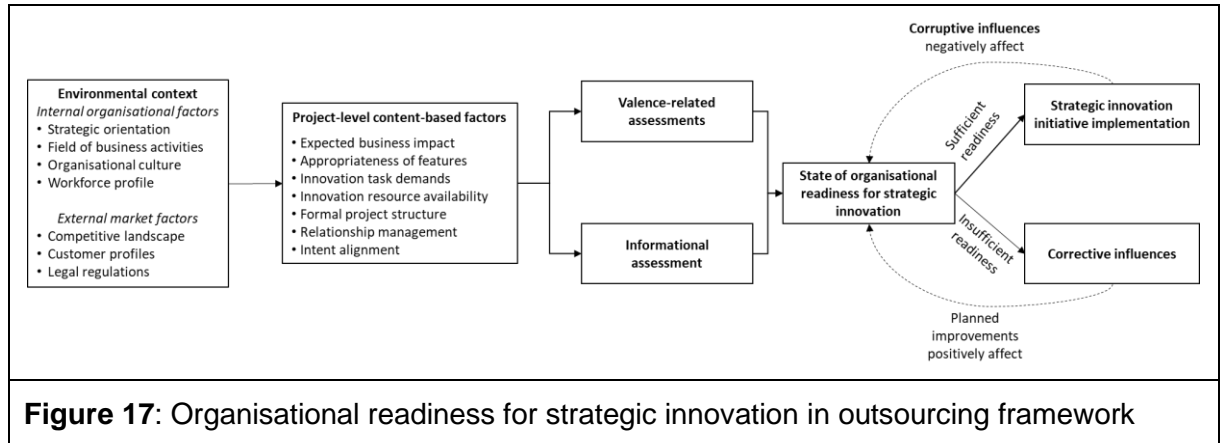
The dynamic, inductive framework, displayed in **Figure 17: Organisational readiness for strategic innovation in outsourcing framework** builds on the organisational change readiness model proposed by Weiner (2009) and extends its dimensions with factors that were found in the strategic innovation through outsourcing case studies. In line with Gioia *et al.* (2013), it offers a high-level view of the dynamic relationships among the identified concepts that explain the formation of organisational readiness in the strategic innovation through outsourcing context. The framework consists of seven main building blocks:

1. Valence-related assessments
2. Informational assessments
3. Project-level content-based factors
4. Internal organisational context-based factors

5. External market context-based factors

6. Corruptive influences

7. Corrective influences



*Project-level content-based factors* include key determinants in the immediate environment of strategic innovation initiatives that influence valence-related and informational assessments. The findings reveal that valence-related assessments are primarily based on the expected business impact and appropriateness of features of a strategic innovation. Informational assessments are largely, but again, not exclusively, influenced by beliefs formed around strategic innovation task demands and resources, the formal project structure, relationship management, and aligned intents.

Consistent with the multi-influence readiness evaluation pattern, organisational members engage in multiple evaluations to assess whether a strategic innovation will be beneficial for the organisation (valence-related assessments), and whether related courses of action can be completed successfully (informational assessments). They are found to assess project-based factors not only against each other, but frequently also against factors located in the broader internal organisational environment and external market environment.

Factors in the *environmental context* support Weiner's (2009) notion, that broader conditions in the organisational environment influence readiness, by amplifying or dampening valence-related and informational assessments. Findings show that four organisational conditions play such a role in the outsourcing context. They include the organisation's strategic orientation,

field of business activities, organisational culture, and workforce profile. Apart from that, key factors were also identified in the external market environment. They include the organisation's competitive landscape, its customer profiles, and legal regulations.

In accordance with the readiness fragility pattern, organisational readiness is shown to be in a constant state of flux. High degrees of organisational readiness at the outset of a strategic innovation initiative may diminish during its implementation due to corrupting influences. When the organisational readiness level drops to an insufficiently low level, corrective influences are required, otherwise the success of the strategic innovation initiative is jeopardised. Related theoretical and practical implications are discussed in the next chapter.

## Chapter 7: Discussion

### Chapter summary

This chapter begins with an overview of the thesis. Three core theoretical contributions to the business services outsourcing research stream (Lacity *et al.*, 2016) are discussed next. They include (1) a clearer portrayal of the strategic innovation concept, (2) an integrative framework that situates widely researched elements of the strategic innovation process within an ordinary outsourcing lifecycle, and (3) extending the organisational readiness model (Weiner, 2009) to the strategic innovation through outsourcing context. Notable limitations are expanded on next, after which recommended research directions are introduced. This is followed by a discussion of practical implications.

### 7.1 Key points of this thesis

This thesis offers insights that contribute to a deeper understanding of the strategic innovation through business services outsourcing phenomenon. **CHAPTER 2: Conceptual Background** traces its early emergence in the IS outsourcing literature to the late 1990s, when clients started to shift their focus from cost savings to leveraging outsourcing engagements for business impact (DiRomualdo and Gurbaxani, 1998). Research subsequently picked up on this development, but despite steady advancements, is still at a relatively nascent stage as recent literature reviews (Lacity *et al.*, 2011, 2016) and calls for research (Kotlarsky *et al.*, 2015) suggest. However, growing evidence of innovation initiatives failing to meet client expectations and resulting in high sunk costs (Veltri *et al.*, 2008; Su *et al.*, 2016) increasingly propels related research efforts to a more urgent level. Strategic innovation in an outsourcing context is therefore becoming a contemporary topic to investigate and attracts considerable interest of scholars and practitioners alike (Dibbern and Hirschheim, 2020).

The insights presented in this thesis build on the widely accepted strategic innovation concept developed by Weeks and Feeny (2008). According to their definition, strategic innovations "... significantly enhance the [client] firm's product/service offerings for existing target customers, or enable the firm to enter new markets" (p. 131). The concept underscores the close link

between value creation and business performance that should be exploited in an outsourcing engagement. Related developments thus go beyond mere incremental process improvements (Oshri *et al.*, 2015), are not necessarily specified in the contract (Kotlarsky *et al.*, 2015), and require the client and provider to engage in highly uncertain collaborative exploration efforts, in which failure occurs more frequently than success (Desyllas *et al.*, 2018).

On that basis, this thesis introduces a range of findings from the conceptual study (**CHAPTER 4: Conceptual study findings**) and two empirical case studies (**CHAPTER 5: Empirical study findings – client organisational member perspectives** and **Chapter 6: Empirical study findings – provider organisational member perspectives**) as a response to two research questions:

*RQ 1: How has existing research conceptualised the strategic innovation through outsourcing process and how have reference theories been applied?*

*RQ 2: How can high degrees of organisational readiness be created for strategic innovation initiatives in outsourcing from a (a) client perspective and (b) provider perspective?*

In light of these research questions, the studies provide a deeper understanding of the strategic innovation through outsourcing phenomenon by advancing the body of knowledge on two fronts: synthesising previous research with a focus on theoretical foundations, and, from an underexplored employee-centric perspective, examining influential factors on the motivation of client and provider organisational members to support related strategic innovation initiatives.

## **7.2 Theoretical contributions**

This thesis provides three important theoretical contributions to the evolving innovation through business services outsourcing research stream:

- A clearer portrayal of the strategic innovation concept.
- An integrative framework that situates previously researched elements of the strategic innovation process within the outsourcing lifecycle.<sup>4</sup>

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<sup>4</sup> This theoretical contribution is based on the above-mentioned co-authored manuscript which is currently under review. It has been written by the candidate and refined by the co-authors.

- The extension of the organisational readiness model to the strategic innovation through outsourcing context.

### **7.2.1 A clearer portrayal of the strategic innovation concept**

A notable inconsistency can be discerned in the way innovation is conceptualised in existing literature. **APPENDIX I:** Final sample of reviewed articles includes the column *innovation conceptualisations*. It contains study-specific descriptions, definitions or empirical examples that roughly coincide with the particular angle on strategic innovation outlined in **CHAPTER 2:** Conceptual Background. Earlier IS studies published before 1998 considered outsourcing itself as an innovative delivery mode (e.g., Loh and Venkatraman, 1992). They are acknowledged, but fall out of the scope of the outlined angle. Innovation in the modern business services outsourcing context refers to the content delivered, and, following Weeks and Feeny (2008), to enabled strategic business outcomes.

Weeks and Feeny's (2008) strategic innovation concept is referred to in four papers (Kotlarsky *et al.*, 2015; Oshri *et al.*, 2015, 2018; Bui *et al.*, 2019) that were reviewed as part of the conceptual study (see **CHAPTER 4:** Conceptual study findings). Alternative, but similar concepts were introduced in other reviewed papers. For instance, Hong and Zhu (2006) and Qu *et al.* (2010) refer to Swanson's (1994) competitive advantage-enabling *Type III innovation*. It is a business change-focused concept that is designed for understanding how new IS products and services change existing business operations. Aubert *et al.* (2015) use Langlois and Robertson's (1992) *systemic innovation* concept, adapted from Teece (1986). It underscores the compatibility of an innovation with complementary assets, which all need to be transformed at once to put a systemic innovation to use. Roy and Sivakumar (2011, 2012) rely on Benner and Tushman's (2003) technology-centric (Hopp *et al.*, 2018) *radical innovation* concept. According to Roy and Sivakumar (2012), radical innovations take shape when a technology platform is discontinued in favour of a new one. Lastly, Sen *et al.* (2020) use Baumol's (2002) idea-based *independent innovation* concept. It refers to completely new ideas that can create a new market and revenue streams, satisfy unrecognised customer needs, or develop a new approach to commercialise a technology.

The vast majority of reviewed papers however do not refer to recognised innovation concepts when discussing the strategic potential of innovations leveraged from outsourcing. Sumo *et al.* (2016) for example define innovation as "... supplier-led, proactive undertakings – with or without the outsourcer's collaboration, but in any case on their behalf – that in the outsourcer's perception result in new or improved ways of delivering transactions" (p.13). Then again, Lacity and Willcocks (2013) suggest that joint innovation projects can deliver long-term improvements to the client's operating efficiency, business-process effectiveness, and strategic performance.

The apparent diversity of conceptualisations, and with that, the lack of a common foundation of the strategic innovation through business services outsourcing phenomenon, is argued to be problematic for theory-building. This deficiency may help explain why the current research landscape is so fragmented (see **CHAPTER 4: Conceptual study findings**). Serious challenges may further emerge in the long run. The current conceptual diversity can eventually lead to confusion within the academic community, as is the case in more explored innovation-related fields like open innovation (Chesbrough, 2003; West and Bogers, 2014).

A closely related practical issue is the limited ability of scholars to conclusively inform practice. Prior research suggests that there is a wide variation in views among practitioners as to what qualifies as innovation (Weeks and Feeny, 2008; Lacity and Willcocks, 2013). Because there is an equally wide variation of innovation conceptualisations in the literature, inconsistencies in the presentation of practical implications may proliferate.

This thesis attempts to initiate first steps towards stabilising the shaky foundation the strategic innovation through outsourcing research stream builds on. Using Weeks and Feeny's (2008) client-based definition of strategic innovation as point of departure, the conceptual background chapter (Chapter 2: Conceptual Background) outlines several common characteristics, specifically in terms of strategic innovation outputs and outcomes. These are discussed from a client and provider perspective, leading to the conclusion that strategic innovation can be recasted as a perspective-dependent concept with dual meanings. The outlined characteristics are left broad enough to accommodate similar conceptualisations of innovation through outsourcing in prior literature, but are also sufficiently distinctive to draw borders to adjacent,

but inherently different conceptualisations. In this view, one major theoretical contribution of this thesis is the refinement of the strategic innovation concept in an outsourcing context, which helps mitigate extensive variation in future research and thereby prevents a potential “inflation” of the concept.

### ***7.2.2 An integrative framework that shows how innovation unfolds in outsourcing***

From a theoretical perspective, the framework developed in the conceptual study (**Figure 7: Strategic innovation through outsourcing: an integrative framework**) provides a useful foundation for understanding strategic innovation as complex, collaborative process in a business services outsourcing context. By pulling together and integrating current works within the growing body of IS sourcing research, the framework creates a holistic frame for considering a variety of key conditions in the immediate project, organisational and external market environment. Based on the breadth of identified themes (see **APPENDIX II: Conceptual study data structure**), the framework distinguishes between four broad phases associated with the strategic innovation through outsourcing process: antecedents, project arrangement, innovation generation and outcomes.

Scholars have previously speculated that “... innovation through outsourcing will be more risky than regular outsourcing, and that these outsourcing arrangements will be more complex than their traditional counterparts” (Aubert *et al.*, 2015, p. 265). In consideration of this assumption, the main elements of the integrative framework should be discussed in relation to traditional IS sourcing research on cost-focused ITO engagements (e.g., Grover *et al.*, 1994; Loh, 1994; Willcocks *et al.*, 1995) and related literature reviews (Dibbern *et al.*, 2004; Lacity *et al.*, 2010).

**Table 20:** Juxtaposition of cost-focused outsourcing against innovation-focused outsourcing displays notable differences between traditional outsourcing engagements utilised to garner cost savings and modern outsourcing engagements leveraged for strategic innovations. The juxtaposition of traditional and innovation-focused outsourcing is based on the integrative framework’s elements. It presents a key contribution of this thesis and simultaneously serves as a basis for developing four directions for future research. These directions will be introduced below in subchapter **7.4** Directions for future research.

All in all, the juxtaposition leads to the conclusion that strategic innovation through outsourcing does not present a completely new sourcing phenomenon. It can be better understood as an evolvement of traditional outsourcing for cost efficiencies that builds on a legacy of scholarly works in the IS sourcing literature. This evolvement can be recognised in several dimensions.

Theoretical foundations, for one, clearly shift from traditionally widespread TCE perspectives (Dibbern *et al.*, 2004) to a diverse set of reference theories, especially knowledge management and relationship management-based theories (Aubert *et al.*, 2015). They provide more suitable theoretical lenses to study the intensive bilateral knowledge flows and social interactions that occur during collaborative strategic innovation developments (Søderberg *et al.*, 2013).

The task environment is argued to be characterised by far greater complexity and uncertainty than that of traditional outsourcing engagements, which typically involve “bread and butter” IS services such as applications maintenance (Grover *et al.*, 1994, p. 184). Organisational and environmental drivers differ as well. Traditional outsourcing engagements are mainly driven by cost savings motivations and by the intention to replicate outsourcing successes of industry leaders (Loh and Venkatraman, 1992; Lacity and Hirschheim, 1993). In contrast, innovation-focused engagements are driven more by the pursuit of improved competitiveness in the face of ever more networked business landscapes. This suggests that the link between outsourcing and the client’s business strategy is far stronger than in traditional engagements. The empirical case studies (see **CHAPTER 5: Empirical study findings – client organisational member perspectives** and **Chapter 6: Empirical study findings – provider organisational member perspectives**) support this finding. The *strategic orientation* of the case study firms is identified as a key factor that influences readiness evaluations.

Best practices concerning formal arrangements are evolving from typically fixed price contracts (Currie, 1996) to flexible pricing models, highly detailed contracts are increasingly dethroned by more incomplete contracts (Aubert *et al.*, 2015) and relationship styles move from an arm’s-length approach to partnerships (Kotlarsky *et al.*, 2015). Equity and outcome-based contracts seem to gain popularity in innovation-focused outsourcing engagements. Such evolvments are also observable in the case studies (see **CHAPTER 5: Empirical study findings – client**

organisational member perspectives and Chapter 6: Empirical study findings – provider organisational member perspectives). Especially the IT multinational case study (**CHAPTER 6: Empirical study findings – provider organisational member perspectives**) lends strong support to the amenability of outcome-based contracts to strategic innovation through outsourcing.

Concerning innovation generation, knowledge exchanges expand in scope in innovation-focused engagements and include the intensive transfer of domain knowledge on top of technological knowledge (Chatterjee, 2017). Consequently, the client's IT function should be retained to effectively communicate with the provider (Weeks and Feeny, 2008). This stands in stark contrast to conventional outsourcing guidelines that typically encourage downsizing manoeuvres (Cross, 1995). In view of these insights, it remains unclear how a communication-encouraging, inter-organisational social environment can be established. While the empirical chapters shed some light on that issue, a future research direction specifically focusing on promoting inter-organisational knowledge combinations will be presented.

In terms of outcomes, realisable benefits are usually limited to a particular business function in traditional outsourcing engagements, but felt across multiple business functions, if not the entire business, with strategic innovations (Weeks and Feeny, 2008). The greater impact however also necessitates more complex value creation measurements due to multiple performance outcomes, out of which some may be qualitative (Weeks and Feeny, 2008; Susarla *et al.*, 2010). Apart from that, more intensive knowledge transfers are found to greatly increase the magnitude of knowledge leakage risks, which appear to be of little concern in traditional IS sourcing literature (Dibbern *et al.*, 2004). This however is a largely underexplored area, for which a research direction will be formulated.

Against this background, there are some areas, including relational risks and outsourcing configurations, where no notable differences between traditional and innovation-focused engagements are discernible. This implies that the existing body of knowledge about traditional outsourcing for cost savings continues to be a highly relevant and valuable source of insights which research on strategic innovation through outsourcing should consciously build on.

Theme	Traditional outsourcing for cost savings characteristics	Innovation-focused outsourcing characteristics
Theoretical underpinnings	Agency theory, RBV, TCE (Aubert <i>et al.</i> , 2004, 2015; Dibbern <i>et al.</i> , 2004)	Distributed innovation, knowledge management, organisation theory (Aubert <i>et al.</i> , 2015), relationship management (Chou <i>et al.</i> , 2015)
Task attributes	Simple, easy to measure and standardised (Aubert <i>et al.</i> , 2004)	Highly uncertain (Aubert <i>et al.</i> , 2015), unstructured (difficult to codify) and complex (Weigelt and Sarkar, 2012)
Organisational considerations	IT is generally viewed as a utility that can be outsourced for cost savings (Lacity and Hirschheim, 1993)	Successful prior collaborations and specialised resources can promote business development (Weeks and Feeny, 2008; Desyllas <i>et al.</i> , 2018)
Environmental conditions	Bandwagon effects (Loh and Venkatraman, 1992; Lacity and Hirschheim, 1993)	Network-based competition (Van de Ven, 2005), and growing need for service differentiation (Arora <i>et al.</i> , 2001)
Relational risk portfolio	Adverse selection, moral hazard, hold-up problem (Loh, 1994)	Same relational risks, but amplified, plus poaching (Aron <i>et al.</i> , 2005; Handley and Benton, 2009)
Outsourcing configurations	Single or multi-sourcing is feasible (Gallivan and Oh, 1999)	Similarly single or multi-sourcing (Weeks and Feeny, 2008; Su and Levina, 2011)
Pricing strategy	Typically fixed-price or time and materials contracts (Currie, 1996; Gopal <i>et al.</i> , 2003)	Flexible pricing is essential (Oshri <i>et al.</i> , 2015; Bui <i>et al.</i> , 2019)
Degree of formalisation	Emphasis on highly detailed, complete contracts (Currie, 1996; Aubert <i>et al.</i> , 2015)	Looser contracts or more innovation-focused terms may facilitate joint innovation efforts (Weeks and Feeny, 2008; Aubert <i>et al.</i> , 2015)
Relationship management	Arm's length/transactional relationship style (Lee <i>et al.</i> , 2004)	Partnership relationship style (Kotlarsky <i>et al.</i> , 2015)
Knowledge combination	Mainly technological resource exchanges limited to IT functions (Grover <i>et al.</i> , 1994)	Intensive domain and technological knowledge exchanges (Chatterjee, 2017)
Architectural coordination	Downsized or fully outsourced IT function (Dibbern <i>et al.</i> , 2004)	Retained IT function (Weeks and Feeny, 2008)
Realised business advantages	Immediate economic (Gallivan and Oh, 1999) and operational (Dibbern <i>et al.</i> , 2004) efficiencies; created value is independent of business strategies (Venkatraman, 1997)	Substantially improved overall business performance (Weeks and Feeny, 2008; Kotlarsky <i>et al.</i> , 2015)

Outcome measurement	Efficiency metrics, such as cost per millions of instructions per second (Venkatraman, 1997)	Variety of metrics needed to measure multi-dimensional outcomes (Linder <i>et al.</i> , 2003; Susarla <i>et al.</i> , 2010)
Knowledge leakage	Security concerns mainly involve physical IT assets, software and data (Fink, 1994)	Commercially sensitive domain knowledge may be leaked (Hoecht and Trott, 2006)
Hollowing out concerns	Ability of the client to compete with IT is adversely affected over time (Willcocks <i>et al.</i> , 1995)	Unclear consequences when the IT function is retained
Output uniqueness	Provided services are generic and enable unobstructed daily operations (Grover <i>et al.</i> , 1994)	Extensively customised solutions may be unique and enable competitive advantages (Kotlarsky <i>et al.</i> , 2015)
<b>Table 20:</b> Juxtaposition of cost-focused outsourcing against innovation-focused outsourcing		

### **7.2.3 Extending organisational readiness to strategic innovation in outsourcing**

This thesis further contributes to opening the black box of securing high levels of organisational readiness for strategic innovation initiatives in an outsourcing context (see subchapter 4.3 Carving out the empirical study research gap). Organisational change readiness theory (Weiner, 2009) is used as theoretical lens. It proposes that organisational readiness is mainly determined by the shared commitment (willingness) and collective efficacy (ability) perceptions of organisational members to implement a change.

In this regard, the empirically-grounded framework depicted in **Figure 17: Organisational readiness for strategic innovation in outsourcing framework** presents another key theoretical contribution of this thesis. It provides an extension of Weiner's (2009) organisational readiness model to the strategic innovation through outsourcing context. The framework incorporates three uncovered key readiness patterns: multi-influence evaluation effects, evaluation sequencing, and readiness fragility.

#### **Multi-influence evaluation effects pattern implications**

The first pattern, multi-influence evaluation effects, suggests that organisational readiness for strategic innovation in an outsourcing context is formed on the basis of multiple valence-related evaluations that influence the shared willingness, and multiple informational evaluations that

influence collective efficacy beliefs of client and provider organisational members. According to organisational change readiness theory, a variety of factors can influence these evaluations (Armenakis and Harris, 2009; Weiner, 2009). In that respect, the empirical findings unravel a set of notable factors specific to the strategic innovation context. The framework distinguishes between three environments within which these factors can be located: the immediate project, the internal organisational and the external market environment.

A key implication deduced therefrom is that outsourcing engagements should be managed holistically when strategic innovations are pursued, to ensure that they are readily supported by organisational members. In relation to valence-related evaluations, the findings show that the strategic orientation, field of work, organisational culture, access to valuable resources, and technological progress of rivals are commonly considered. This implies that organisational members attach a variety of beliefs to the benefits of a strategic innovation that may not be instantaneously recognisable. In fact, such beliefs may only have little to do with its primary purpose. Ascertaining these beliefs is nevertheless crucial to devise targeted managerial influence strategies that help secure their commitment upfront. Paying insufficient attention to such beliefs may result in overlooking unfavourable valence-related evaluations that may lead to resistant behaviour.

In relation to informational evaluations, organisational readiness theory puts forward that these are mainly based on task demands, resource availability and situational factors (Weiner, 2009). This thesis lends strong empirical support to the relevance of those determinants in a strategic innovation through outsourcing context. The findings also help identify new situational factors that play a notable role in this particular context. They show that formal and relational aspects, as well as outsourcing intents are commonly considered. This suggests that favourable informational evaluations have to be secured in five interdependent dimensions to ensure that organisational members are confident in their ability to implement a strategic innovation initiative: innovation task demands, innovation resource availability, and the three identified situational factors. Outsourcing research should thus consider these dimensions in conjunction when investigating related strategic innovation topics, rather than focusing on them in isolation.

It is further suggested that client and provider organisational members do not necessarily have to share the same set of beliefs when supporting a strategic innovation initiative. Client organisational members may for instance feel committed to such an initiative, because it can substantially improve their core business areas. Provider organisational members may feel committed because they can thereby extract client-specific domain knowledge. Likewise, client organisational members may be indifferent towards signing an outcome-based contract, which however greatly increases the perceived ability of provider organisational members to engage in strategic innovation development efforts. It can be concluded that beliefs should harmonise, but do not have to be identical. Successfully creating organisational readiness in a strategic innovation through outsourcing context therefore not only entails the ascertainment of beliefs held by the own organisational members, but also of those held by the initiative partner's organisational members, and ensuring their compatibility.

### **Evaluation sequencing pattern implications**

Concerning the second pattern, evaluation sequencing, prior readiness research notes that assessing the appropriate readiness-influencing factors at the appropriate time is a critical aspect of innovation readiness (Holt and Daspit, 2015). In this vein, the findings in this thesis suggest that distinguishing between readiness evaluations at the outset of strategic innovation initiatives and during their implementation is crucial. A clear evaluation sequencing pattern was found in the client case study (see **CHAPTER 5: Empirical study findings – client organisational member perspectives**). Valence-related evaluations were salient at the outset of strategic innovation initiatives, informational assessments were identified mid-implementation.

This pattern echoes the uncertain and radical nature of strategic innovation from a client firm perspective, which is also expressed in the literature (Kotlarsky *et al.*, 2015, 2016; Oshri *et al.*, 2015). At the outset, strategic innovation activities are evidently difficult to foresee for client organisational members. Too early informational evaluations about task demands, available resources and situational factors may consequently turn out as vague or even misleading. This implies that they can only make reasonable informational evaluations in situ, once engaged in collaborative development efforts. It further suggests that creating organisational readiness is

largely a matter of facilitating favourable valence-related evaluations at the outset of strategic innovation initiatives, and informational evaluations mid-implementation.

Interestingly, such an evaluation sequencing pattern was not discernible in the provider case study. A major reason for this finding may relate back to **CHAPTER 2: Conceptual Background**, which proposes that from a provider point of view, strategic innovations resemble architectural innovations (Henderson and Clark, 1990). Herein, and consistent with Desyllas *et al.* (2018), the core design of an IT-enabled solution remains the same, only the components are customised to specific business needs of a client. This seems to help eliminate major uncertainties early on. Combined with the exposure to a variety of other firms in which the solution has been introduced, it is argued that provider organisational members already have a relatively clear understanding of the tasks and related challenges that may emerge during strategic innovation development efforts. It follows that their valence-related and informational evaluations remain fairly stable throughout the initiative. Evaluation sequencing patterns are therefore suggested to be highly dependent on the relative uncertainty of strategic innovations.

### **Readiness fragility pattern implications**

The third pattern reveals the apparent fragility of readiness, an attribute that only crystallised over the course of observed initiatives. This gives substance to the notion that organisational readiness may be characterised by high volatility throughout a strategic innovation initiative. As such, readiness is not solely a pre-change concern (Armenakis *et al.*, 1993), but must be consciously maintained throughout a strategic innovation initiative. This supports recent views that propose to recast readiness as a steady state to a dynamic trajectory, in order to account for fluctuating environments and consequent shifts in evaluations of employees (Stevens, 2013).

In that respect, this thesis adds to existing research by introducing the idea of “corruptive” and “corrective” influences that provoke negative and positive valence-related and informational re-evaluations (see **CHAPTER 5: Empirical study findings – client organisational member perspectives**). Corruptive influences emphasise that although organisational readiness may be high at the outset of a strategic innovation initiative, issues such as strategic innovation

designs not matching user needs, complex chains of communication, unresolved legal and ethical issues, and ungoverned opportunism may emerge mid-implementation and consequently discourage organisational members from continuing to support the initiative. This may not necessarily lead to a termination of the initiative, but, as found in the client case study, can result in an adverse outsourcing project climate and a low interest to continue engaging in collaborative development efforts.

This thesis also reveals that the negative effects of corruptive influences may be neutralised with targeted interventions, representing corrective influences. Some support the effectiveness of universal change readiness interventions (Armenakis and Harris, 2009) in an innovation through outsourcing context, including user involvement and a learning-from-failure mentality, while others appear specific to this context, including the mitigation of partner overconfidence, partnership-fostering activities, authoritarian relationship styles in response to opportunism, and supply base reconfigurations. This suggests that emerging disturbances can be defused with three main response mechanisms: modifying formal project arrangements, reinforcing social interactions, and, consistent with recent leadership perspectives (Edmondson, 2011), moving away from the “blame game” to taking a sympathetic stance towards failures that can be learnt from.

### **7.3 Limitations**

Four noteworthy limitations require mentioning. First, the conceptual study is limited by a comprehensive, but not exhaustive paper sample. It is acknowledged that relevant scholarly works may be identifiable in journals that were excluded by the formulated inclusion criteria. Books (e.g., Dibbern and Hirschheim, 2020; Willcocks *et al.*, 2011) and conference papers (e.g., Leimeister *et al.*, 2008; Oshri *et al.*, 2011; Boehm *et al.*, 2014; Kotlarsky *et al.*, 2016) may similarly include valuable research insights about strategic innovation through outsourcing. This limitation is however viewed as acceptable, as it helped condense the article sample to a set of papers published in reputable, peer-reviewed outlets.

Second, the description of strategic innovation in an outsourcing context outlined in the conceptual background chapter (Chapter 2: Conceptual Background) limits the inclusion of papers only to those that examine the phenomenon from a similar angle. Thus, papers that conceptualise innovation differently and in loosely related outsourcing contexts were excluded. Papers conceptualising outsourcing as an innovative business practice for instance, as evident in early IS sourcing studies (Loh and Venkatraman, 1992), were excluded from the literature review. Likewise, papers studying innovation in a contract manufacturing (e.g., Bianchi *et al.*, 2010; Wagner, 2012; Alcacer and Oxley, 2014) or in a crowdsourcing context (e.g., Ruiz *et al.*, 2020) for were excluded. This again presents a limitation that is considered restrictive yet acceptable, since it permits a review scope which is more focused on the specific phenomenon of interest.

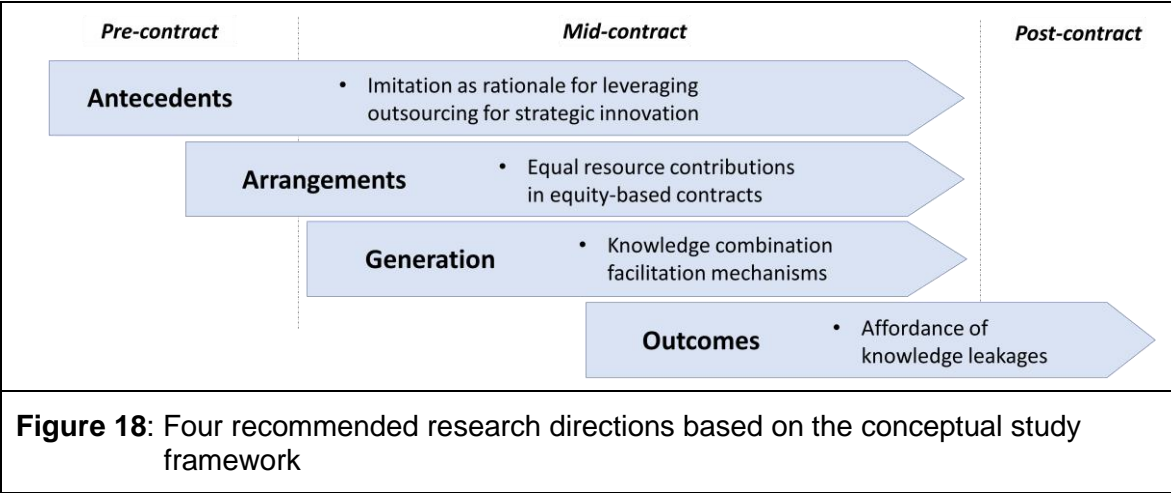
Third, a major limitation of the empirical studies is the restricted access to service provider-specific data in the care hospital case study, and, likewise, access to client-specific data in the IT multinational case study. This is a limitation resulting from negotiations with the informants, but, in view of the rich insights that could be gained based on arranged for anonymity and confidentiality measures, is seen as an acceptable trade-off. Nonetheless, a dataset that comprises information from both sides of an outsourcing relationship may contribute to a more comprehensive understanding of the formation and evolvement of organisational readiness for strategic innovation in outsourcing contexts. It should be cautioned that obtaining qualitative datasets containing bilateral perspectives is an often-faced obstacle in empirical IS sourcing research, as suggested in existing studies (Gallivan and Oh, 1999; Gopal *et al.*, 2003) and implied by the conceptual study's identified uneven distribution of reviewed papers focusing on the client, provider and bilateral perspectives (see **CHAPTER 4: Conceptual study findings**).

Fourth, the empirical studies focus on strategic innovation through outsourcing readiness evaluations at the outset of an initiative and during innovation development. While providing a detailed portrait of readiness evaluations at these stages, its findings are not applicable to the adoption stage, that is when the IT-enabled solution is fully developed and introduced for use. Readiness for adoption behaviour is a largely neglected research area, because most change

readiness studies primarily focus on stages preceding actual change efforts (Stevens, 2013). How readiness is shaped in the innovation adoption phase, especially with regards to the likely replacement of existing technologies and obsolescence of related knowledge, is unclear.

#### 7.4 Directions for future research<sup>5</sup>

The findings presented in this thesis open up new avenues for research on the intersection between business services outsourcing and strategic innovation. In this section, specific directions for future research are introduced. They are tied to the framework developed in the conceptual study and based on the juxtaposition of traditionally cost-focused and modern, innovation-focused outsourcing engagements presented above. One research direction for each framework phase is discussed. They are illustrated in **Figure 18**: Four recommended research directions based on the conceptual study framework.



#### Imitation as rationale for leveraging outsourcing for strategic innovation

The first research direction focuses on imitation as an understudied driver for the innovation through outsourcing decision from a client perspective. The imitation concept is borrowed from the innovation discipline and refers to a business strategy that is implemented by firms in various industries. Concisely put, it involves copying the innovator or stronger competitors in an industry to achieve business growth and increase profits (Levitt, 1966).

<sup>5</sup> Similar research directions are introduced in the above-mentioned co-authored manuscript under review. They have been written by the candidate and refined by the co-authors. The co-authors also added a fifth research direction in the manuscript, which is excluded in this thesis.

In traditional IS outsourcing research, imitation has been barely explored (Dibbern *et al.*, 2004). This research direction suggests that a deeper understanding of why client firms leverage outsourcing for strategic innovation may be established by studying patterns of competitive imitation (Levitt, 1966; Ordanini *et al.*, 2008). Translating Haunschild and Miner's (1997) trait-based, outcome-based and frequency-based imitation modes to a strategic innovation through outsourcing context may serve as useful point of departure.

Regarding trait-based imitation, a client firm may for instance be more inclined to turn to a provider for strategic innovations after it notices that the provider innovates for the client's main rival. Concerning outcome-based imitation, other clients may be more cautious, adopting a wait-and-see approach and only turn to the provider for an imitation of a strategic innovation after its positive and negative outcomes are clearly visible. Lastly, and loosely reflecting frequency-based imitation, clients may turn to a provider for strategic innovations, because many of their other direct competitors do so as well. In other words, strategic innovation is a taken-for-granted demand, prevalent in the client's competitive environment.

### **Equal resource contributions in equity-based contracts**

The second research direction directs scholarly attention to the contribution of resources in equity-based contracts. This contract type is not common in traditional IS sourcing literature, which usually examined fixed-price or time and materials contracts (Currie, 1996; Gopal *et al.*, 2003). Nevertheless, according to the reviewed papers, equity-based contracts seem to promote an outsourcing environment that is highly conducive to strategic innovation. Oshri *et al.* (2015) for example find that they improve relationship quality and thereby deflate the risk of opportunistic behaviour. Hoecht and Trott (2006) similarly suggest that with partial ownership, the provider will be less likely to harm part of its own organisation. Case-based evidence from Holweg and Pil (2012) resonates with this assertion and demonstrates that such contracts incite providers to innovate in ways that are not necessarily specified in the contract.

In view of these insights, future research may more closely examine how equity-based contracts affect the key constituents of partnerships, such as transparency, shared interests,

and trust. Future research may similarly explore under which circumstances clients and providers are more encouraged to equally contribute resources that are specific to the relationship. Finally, the consequences of unequal resource contributions remain unclear. Some indications can be gleaned from Gopalakrishnan and Zhang's (2019) research. They note that providers may be more inclined to maintain their dominant position by only making minor or no changes to existing services after developing relationship-specific resources, rather than generating innovations.

### **Knowledge combination facilitation mechanisms**

The third recommended research direction addresses the paucity of in-depth research on knowledge combination facilitation mechanisms. Considering that bilateral knowledge flows are quintessential for the generation of strategic innovations (Chatterjee, 2017; Oshri *et al.*, 2018), more research in this area seems valuable. It may be especially useful to examine knowledge combinations from the perspective of microfoundations, as they acknowledge that human interactions are the primary source of knowledge transfer (Felin *et al.*, 2012). By examining the work practices of organisational members, a deeper understanding of mechanisms that promote the transfer of domain and technological knowledge, and that facilitate knowledge combination activities may be gained.

To arrive at impactful contributions, future research may incorporate relevant insights from prior outsourcing literature. Early works for instance indicate that knowledge combination interactions may span across multiple levels of the client and provider organisations. Quinn and Hilmer (1994) noted that personal relationships between operating-level personnel can be promoted when provider specialists are brought to the client's premises for development projects. Later, Quinn (1999) highlighted that close, personal contacts between the client's and provider's top managers, relationship champions and operating-level organisational members facilitate knowledge sharing. More recently, Oshri *et al.* (2018) examined the role of advisors in outsourcing projects and found that their contribution to innovation is conditional on an already established shared understanding between the client and provider, as well as on the provider's knowledge of the client.

## **Affordance of knowledge leakages**

The fourth research direction focuses on the ambiguity surrounding the risk of unintentional knowledge leakages. Knowledge leakages appear to be less of an issue when little domain knowledge is required to deliver business services, which explains why they have not been extensively studied in traditional IS sourcing research (Dibbern *et al.*, 2004). However, they pose a key concern when the client shares commercially sensitive information with its provider (Hoecht and Trott, 2006; Shi, 2007). As the conceptual study shows, there is growing evidence that informal appropriability mechanisms and trust can counteract unintentional knowledge leakages. Much is however left uncharted.

One related area that merits further attention involves the affordance of unintended knowledge leakages when collaborating with providers on strategic innovation. Strategic management research on supply relationships shows that clients like Toyota can afford such knowledge leakages in their equipment supplier networks, as long as they move faster than their rivals in deriving learning advantages the suppliers (Dyer and Nobeoka, 2000).

Furthermore, unintentional knowledge leakages have predominantly been scrutinised from the client perspective. Henke and Zhang (2010) however suggest that they are an equally serious concern for providers. Here, it may be worthwhile investigating to what extent providers are willing to share their state-of-the-art technological and accumulated domain knowledge without sacrificing competitiveness, especially in multi-sourcing engagements in which they are required to cooperate with rivals.

## **7.5 Practical implications**

Findings of the conceptual study and empirical studies presented in this thesis have important implications for practitioners. First, concerning the conceptual findings, practitioners may utilise the four-phase framework as a high-level road map to locate vital concerns that apply to their particular status quo. Practitioners who currently entertain the idea of leveraging outsourcing for strategic innovations for example can draw on the framework to gain a comprehensive overview of factors that speak for and against such a decision. The framework may serve as

particularly useful guide on what lies ahead in terms of relationship arrangement alternatives, strategic risks, inter-firm knowledge sharing mechanisms, innovation-promoting organisational structures, and value capture considerations for first generation outsourcers when committing to such a decision.

Second, practitioners should be aware that transitioning from a cost-oriented to an innovation-oriented approach, especially in ongoing outsourcing relationships, likely calls for fundamental changes in the nature of the relationship, especially in terms of pricing models, contract design, relationship style, knowledge sharing, and organisational member involvement.

Concerning pricing models, practitioners need to be aware that fixed price models, prevalent in cost-oriented outsourcing engagements, have repeatedly been found to suppress innovation efforts (Lacity and Willcocks, 2013; Oshri *et al.*, 2015). In fact, they may even incite providers to underprovide quality in order to maximise their own profit margins, for instance by allocating less experienced personnel or using lower quality resources (Bui *et al.*, 2019). It is therefore paramount to switch to more flexible pricing models when seeking strategic innovation, such as performance-based (Sumo *et al.*, 2016) or joint venture contracts (Holweg and Pil, 2012; Oshri *et al.*, 2015). Provider case study findings additionally suggest that such outcome-based contracts have a notable motivational effect on provider organisational members, both in terms of commitment and perceived efficacy. Practitioners may therefore evaluate the suitability of such contracts in particular when seeking to leverage outsourcing for strategic innovation.

With regard to contract design, rigid contracts, usually favoured in cost-oriented relationships, deter providers from innovation because they limit exploration activities to those defined in the contract (Aubert *et al.*, 2015). A shift to looser contracts is generally suggested in the literature although the recommended level of specification varies. Practitioners may find the conceptual study findings useful in this respect, as they elaborate on the benefits and drawbacks of both more complete contract designs based on a “trust-but-verify” approach (Weeks and Feeny, 2008), and incomplete contract designs that heavily rely on informal governance mechanisms to coordinate interests and activities (Sumo *et al.*, 2016). The empirical client case study adds a dynamic perspective to the discussion. For practice, its findings imply an “inverted” approach

to contract design. Rather than crafting a rigid contract at the outset of a strategic innovation initiative, practitioners are advised to first set up a loose contract, which can be tightened during the initiative in the event of unanticipated disturbances, such as diverging strategic interests, as observed in the compass initiative.

The relationship style associated with cost-oriented outsourcing is commonly of tactical nature, characterised by a rule-based, contract-focused approach (Kedia and Lahiri, 2007). In practice, this may result in non-cooperative behaviour, discourage the alignment of mutual expectations, and ultimately inhibit innovation (Kedia and Lahiri, 2007; Lahiri and Kedia, 2009). The reviewed literature on strategic innovation in an outsourcing context consequently accentuates the vital role of relationship-building towards a partnership. In this regard, practitioners can turn to the conceptual study findings, review the integral characteristics of a partnership relationship style, and tweak their current relationship style accordingly. The eNDS initiative and robot initiative, both part of the empirical client case study, also show that partnerships inspire a sense of esprit de corps and motivate collaborative behaviour. Practitioners are therefore advised to consider introducing key relationship characteristics related to these two initiatives in particular, such as fostering a mutual perception as development partners (eNDS initiative), and project leadership teams that provide clear guidance on what lies ahead (robot initiative). Practitioners are further advised to leverage insights from the compass initiative concerning relationship-building issues. For example, a notable problem identified in this initiative is that a high level of trust was shared between most but not all involved initiative partners, which inevitably resulted in uncooperative behaviour.

With respect to knowledge sharing, practitioners from the client firm and provider need to be comfortable with openly sharing their strategic assets, knowledge and resources (Langer and Mani, 2018). This may cause serious concerns, especially in view of the considerably magnified knowledge leakage risk (Hoecht and Trott, 2006). Both sides should however note that this risk applies to the client just as much as it does to the provider. While the client may witness its domain knowledge spilling over to the provider's other clients (Hoecht and Trott, 2006; Shi, 2007), the provider is at risk of being whipsawed after introducing the strategic innovation and

seeing the client leak related knowledge to the provider's successor (Henke and Zhang, 2010). Recommendations to defuse this risk for instance include establishing relationship exclusivity and commitment by making up-front investments in the provider's proprietary technologies and process methodologies (Susarla and Mukhopadhyay, 2019), and structuring the relationship as a preferred partnership (Henke and Zhang, 2010).

Concerning organisational member involvement, the client empirical case study indicates that at the outset of a strategic innovation through outsourcing initiative, negative beliefs, especially about the need for such an endeavour, often prevail. Organisational members from multiple business functions may not only be sceptical of the promised benefits the strategic innovation brings to the table; they may also be unsure of their ability to use the solution effectively. Case study findings show that these doubts can be dissolved with systematic familiarisation efforts, particularly once prototype versions have been developed. A combination of formal classroom-style training sessions with the prototype, buddy-systems in which employees with basic IT skillsets are mentored by their digitally proficient colleagues, and on-the-job support where technically adept domain experts observe how users actually interact with the prototype in a live setting, is found to be highly effective. These interventions help sensitise organisational members to deficits of currently deployed technologies, thereby making the potential business impact of a strategic innovation more tangible. Altogether, for practitioners, this indicates that closely involving selected organisational members from the client's multiple business functions is imperative for the success of an initiative. Conversely, this also implies that isolating these organisational members from strategic innovation development efforts may stimulate internal resistance to innovation generation and adoption.

## CHAPTER 8: CONCLUSION

The topic this thesis focuses on is the emerging strategic innovation through business services outsourcing phenomenon (Weeks and Feeny, 2008; Kotlarsky *et al.*, 2015; Oshri *et al.*, 2018). Two notable research problems in the related IS sourcing body of knowledge are addressed. The first involves the absence of serious attempts to consolidate prior literature. Without a comprehensive overview of the currently fragmented research landscape, scholars lack a clear understanding of what is known in the field and what needs to be known (Webster and Watson, 2002). RQ 1 concentrates on this issue:

*RQ 1: How has existing research conceptualised the strategic innovation through outsourcing process and how have reference theories been applied?*

A conceptual study in form of a theoretical review (Paré *et al.*, 2015) is conducted (see **CHAPTER 4: Conceptual study findings**). An article sample including 95 papers, published between 1998 and 2020 in IS and related management journals, is created and analysed. The significance of this study lies in its integration of prior insights into a framework (**Figure 7**). It consists of four phases that are specific to the strategic innovation process in a business services outsourcing context. The framework also provides the basis for discussing the overall picture of the research landscape to date. Herein, attention is directed to notable differences and commonalities between traditionally cost-oriented and modern innovation-oriented outsourcing engagements, as well as to largely neglected areas that warrant further inspection. A central implication of the theoretical review is that strategic innovation through outsourcing does not constitute an entirely new phenomenon, but rather an evolution of traditional IS sourcing. Hence, early IS sourcing research should be consciously considered when endeavouring to contribute to a deeper understanding of the yet vaguely understood relationship between strategic innovation and business services outsourcing.

The second addressed research problem involves the dearth of research on organisational member attitudes towards strategic innovation through outsourcing initiatives. In IS sourcing literature, innovation is repeatedly argued to be notoriously difficult to achieve in outsourcing

engagements (Aubert *et al.*, 2015; Su *et al.*, 2016). A core issue related to this difficulty is that attitudes and behaviours of client and provider organisational members have to fundamentally change (Whitley and Willcocks, 2011). Advances in change readiness research provide useful points of departure to study this issue. Change readiness refers to a positive attitude among organisational members towards change initiatives, like strategic innovation through outsourcing initiatives, and indicates whether they will engage in supportive or resistive behaviour (Holt *et al.*, 2007; Rafferty *et al.*, 2013; Holt and Daspit, 2015). RQ 2 is formulated to gain a deeper understanding about notable factors that influence organisational member readiness for strategic innovation through outsourcing:

RQ 2: How can high degrees of organisational readiness be created for strategic innovation initiatives in outsourcing from a (a) client perspective and (b) provider perspective?

Two empirical studies of exploratory nature are conducted in response (see **CHAPTER 5: Empirical study findings – client organisational member perspectives** and **Chapter 6: Empirical study findings – provider organisational member perspectives**). One involves a case study at an Austrian care hospital that acts as a client in four observed strategic innovation through outsourcing engagements. Another involves a case study at an IT multinational provider with a branch office in the UK. Interviews constitute the primary form of data collection. Gioia *et al.*'s (2013) data analysis techniques are applied, like in the conceptual study, to develop a framework that is grounded in empirical data (**Figure 7: Strategic innovation through outsourcing: an integrative framework**). The data analysis is guided by organisational readiness for change theory (Weiner, 2009).

The framework captures notable factors in the project, organisational and market environment that influence the willingness and perceived ability of organisational members to support strategic innovation through outsourcing initiatives. This indicates that readiness evaluations are based on a variety of influences, thus reflecting a multi-influence readiness evaluation pattern. These evaluations may evidently occur in distinctive sequences. This is referred to as an evaluation sequencing pattern. The framework also indicates that the level of readiness initially secured at the outset of an initiative may sharply decline due to disturbances emerging

during actual implementation efforts. Corrective interventions are then necessary to neutralise their negative effects on initial readiness-related evaluations. This allows the detection of a readiness fragility pattern. If no appropriate measures are taken, the success of the strategic innovation through outsourcing initiative is at risk. A central implication of the empirical studies is that practitioners need to devise and deploy adequate managerial influence strategies (Armenakis and Harris, 2009) to ensure that organisational members will engage in supportive behaviour at the outset and during the implementation of a strategic innovation initiative.

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## APPENDICES

### APPENDIX I: Final sample of reviewed articles

The entries have been sorted by year of publication, from newest to oldest. Some studies feature data samples where ITO and BPO data are mixed with other outsourcing contexts, such as contract manufacturing. This has been noted in the corresponding *Outsourcing context* cells.

**Table 21:** Final paper sample list (Appendix I)

#	Year	Author(s)	Title	Journal	Focal firm	Outsourcing context	Methods	Main theoretical perspectives	Sample size	Innovation conceptualisations
1	2020	Sen, Kotlarsky & Budhwar	Extending organizational boundaries through outsourcing: toward a dynamic risk-management capability framework	Academy of Management Perspectives	Client firm	ITO and BPO	Empirical mixed methods	Dynamic capabilities perspective	113 retained cross-industry survey responses & 23 interviews	Independent innovations are new, create a new market and revenue streams
2	2019	Bui, Leo & Adelakun	Exploring complexity and contradiction in information technology outsourcing: a set-theoretical approach	Journal of Strategic Information Systems	Client firm	ITO	Empirical quantitative	Governance and capability perspectives	27 retained survey responses	Strategic innovation
3	2019	Chen & Lin	The effect of inter- and intra-organizational distances on success of offshored outsourced innovation: a configurational approach	Journal of Business Research	Service provider	ITO and BPO (and others)	Empirical quantitative	Transaction cost economics & resource-based view	Survey data on offerings from 80 service providers	Innovation through service activities including software development
4	2019	Frydinger, Hart & Vitasek	A new approach to contracts: how to build better long-term strategic partnerships	Harvard Business Review	Client firm	ITO and BPO (and others)	Not specified	Contract theory	Not specified	Jointly developed IT-based hospital billing program
5	2019	Gopalakrishnan & Zhang	Client dependence: a boon or bane for vendor innovation? A competitive mediation framework in IT outsourcing	Journal of Business Research	Service provider	ITO	Empirical quantitative	Resource dependence theory & relationship marketing perspective	120 retained survey responses	An innovative solution to a client's business problem may include a product associated with a service
6	2019	Gozman & Willcocks	The emerging cloud dilemma: balancing innovation with cross-border privacy and outsourcing regulations	Journal of Business Research	Both	ITO	Empirical qualitative	Not specified	42 interviews with a variety of stakeholders	Cloud-based alternatives to support business critical applications

7	2019	Susarla and Mukhopadhyay	Can outsourcing of information technology foster innovations in client organizations? An empirical analysis	MIS Quarterly	Client firm	ITO	Empirical quantitative	Control theory	Data extracted from multiple databases on 553 contracts	Improvements to the client's operating efficiency, business-process effectiveness and performance
8	2019	Wiener, Mähring, Remus, Saunders & Cram	Moving IS project control research into the digital era: the "why" of control and the concept of control purpose	Information Systems Research	Client firm	ITO	Literature review	Stewardship theory	Case studies reviewed from 21 papers	IS projects are central to the pursuit of digital innovation and transformation
9	2018	Choi, Ju, Kotabe, Trigeorgis & Zhang	Flexibility as firm value driver: evidence from offshore outsourcing	Global Strategy Journal	Client firm	ITO and BPO (and others)	Empirical quantitative	Real options theory	273 Wall Street Journal announcements	Innovation-type activities are key to develop future product generations
10	2018	Desyllas, Miozzo, Lee & Miles	Capturing value from innovation in knowledge-intensive business service firms: the role of competitive strategy	British Journal of Management	Service provider	ITO and BPO (and others)	Empirical quantitative	Problem-solving perspective	223 retained survey responses	New or improved service products open new markets
11	2018	Langer & Mani	Impact of formal controls on client satisfaction and profitability in strategic outsourcing contracts	Journal of Management Information Systems	Service provider	ITO	Empirical quantitative	Control theory	Quantitative data on 390 outsourcing contracts	Vendor-initiated innovations should contribute to business outcomes
12	2018	Manning, Massini, Peeters & Lewin	The changing rationale for governance choices: early vs. late adopters of global services sourcing	Strategic Management Journal	Client firm	ITO and BPO	Empirical quantitative	Dynamic capabilities perspective & resource-based view	Quantitative data on 904 sourcing projects	Satisfy new and established clients with new innovative solutions
13	2018	Oshri, Arkhipova & Vaia	Exploring the effect of familiarity and advisory services on innovation outcomes in outsourcing settings	Journal of Information Technology	Both	ITO and BPO	Empirical quantitative	Familiarity perspective	147 retained survey responses	Strategic innovation
14	2018	Zimmermann, Oshri, Lioliou & Gerbasi	Sourcing in or out: implications for social capital and knowledge sharing	Journal of Strategic Information Systems	Client firm	ITO and BPO	Empirical quantitative	Knowledge-based view & social capital perspective	150 retained survey responses	Seeking new sources of innovation may increase knowledge sharing
15	2017	Chatterjee	Strategy, human capital investments, business-domain capabilities, and performance: a study in the global software services industry	Strategic Management Journal	Service provider	ITO	Empirical quantitative	Knowledge-based view	Quantitative data on 347 projects	High value-added solutions like online customer-information tracking systems
16	2017	Lacity & Willcocks	Conflict resolution in business services outsourcing relationships	Journal of Strategic Information Systems	Both	ITO and BPO	Empirical qualitative	Conflict perspective	27 interviews	Business innovation through outsourcing was rare until recently

17	2016	Cram, Brohman & Gallupe	Information systems control: a review and framework for emerging information systems processes	Journal of the Association for Information Systems	Both	ITO	Literature review	Control theory	65 papers	Controls may influence radical innovation
18	2016	Lacity, Khan & Yan	Review of the empirical business services sourcing literature: an update and future directions	Journal of Information Technology	Both	ITO and BPO	Literature review	Not specified	174 papers	Understanding strategic innovations
19	2016	Miozzo, Desyllas, Lee & Miles	Innovation collaboration and appropriability by knowledge-intensive business services firms	Research Policy	Service provider	ITO and BPO	Empirical quantitative	Appropriability literature	223 retained survey responses	Complex solutions that meet the needs of large clients
20	2016	Su, Levina & Ross	The long-tail strategy for IT outsourcing	MIT Sloan Management Review	Client firm	ITO	Not specified	Not specified	Not specified	ITO is transformed into a driver of innovation
21	2016	Sumo, van der Valk, Duysters & van Weele	Using performance-based contracts to foster innovation in outsourced service delivery	Industrial Marketing Management	Service provider	ITO	Empirical qualitative	Transaction cost economics & agency theory	9 interviews	Supplier-led solutions support client innovation strategies
22	2016	Wiener, Mähring, Remus & Saunders	Control configuration and control enactment in information systems projects: review and expanded theoretical framework	MIS Quarterly	Client firm	ITO	Literature review	Control theory	57 papers	Indirectly refers to innovation in form of ambidexterity and adaptiveness
23	2015	Aubert, Kishore & Iriyama	Exploring and managing the “innovation through outsourcing” paradox	Journal of Strategic Information Systems	Both	ITO	Conceptual	Paradox perspective	Anecdotal evidence	Service providers as sources of systemic innovation
24	2015	Chou, Techatassanasontorn & Huang	Understanding commitment in business process outsourcing relationships	Information and Management	Client firm	BPO	Empirical quantitative	Relational view	167 retained survey responses	Outsourcing increasingly emphasises innovation
25	2015	Kotlarsky, Oshri, Lee & Jarvenpaa	Editorial: understanding strategic innovation in IT and business process outsourcing	Journal of Strategic Information Systems	Client firm	ITO and BPO	Editorial	Strategic innovation	Anecdotal evidence	Understanding strategic innovations
26	2015	Lema, Quadros & Schmitz	Reorganising global value chains and building innovation capabilities in Brazil and India	Research Policy	Client firm	ITO and BPO (and others)	Empirical qualitative	Organizational decomposition of innovation processes framework	Multiple case study of auto and software clusters in Brazil and India	Service providers increasingly engaged in high-level development activities
27	2015	Mani & Barua	The impact of firm learning on value creation in strategic outsourcing relationships	Journal of Management Information Systems	Client firm	ITO and BPO	Empirical quantitative	Learning perspective	Quantitative data on 100 US outsourcing contracts	Innovation is one of many strategic objectives that guide outsourcing

28	2015	Oshri, Kotlarsky & Gerbasi	Strategic innovation through outsourcing: the role of relational and contractual governance	Journal of Strategic Information Systems	Client firm	ITO and BPO	Empirical quantitative	Contract theory	248 retained cross-industry survey responses of European client firms	Strategic innovation
29	2014	Barua & Mani	Augmenting conflict resolution with informational response: a holistic view of governance choice in business process outsourcing	Journal of Management Information Systems	Both	BPO	Empirical quantitative	Information-processing view & neoinstitutional economics	130 retained survey responses	Outsourcing involves objectives like innovation and business transformation
30	2014	Wiener & Saunders	Forced coopetition in IT multi-sourcing	Journal of Strategic Information Systems	Client firm	ITO	Empirical qualitative	Coopetition perspective	20 interviews with employees from one client and its providers	Growing need for more flexible and innovative IT solutions
31	2013	Kibbeling, van der Bij & van Weele	Market orientation and innovativeness in supply chains: supplier's impact on customer satisfaction	Journal of Product Innovation Management	Both	ITO and BPO (and others)	Empirical quantitative	Resource dependence theory	Cross-industry survey data on 88 complete supply chains	Supplier innovativeness is a driver of client firm innovativeness
32	2013	Lacity & Willcocks	Outsourcing business processes for innovation	MIT Sloan Management Review	Client firm	BPO	Empirical mixed methods	Not specified	202 retained survey responses and 38 interviews	Improvements to the client's operating efficiency, business-process effectiveness and performance
33	2013	Manning	New Silicon Valleys or a new species? Commoditization of knowledge work and the rise of knowledge services clusters	Research Policy	Service provider	ITO and BPO	Empirical quantitative	Internationalisation theory	Data selectively extracted from surveys by the ORN	Specialised, customised knowledge services
34	2013	Mukherjee, Gaur & Datta	Creating value through offshore outsourcing: an integrative framework	Journal of International Management	Client firm	ITO and BPO	Conceptual	Organisational design & resource orchestration perspectives	Anecdotal evidence	Service providers can produce integrated, innovative solutions
35	2013	Søderberg, Krishna & Bjørn	Global software development: commitment, trust and cultural sensitivity in strategic partnerships	Journal of International Management	Service provider	ITO	Empirical qualitative	Boundary spanner perspective	17 interviews with employees from an Indian IT service provider	Clients are seeking innovative software products and business solutions
36	2013	Weigelt	Leveraging supplier capabilities: the role of locus of capability deployment	Strategic Management Journal	Client firm	ITO	Empirical quantitative	Resource-based view	Quantitative data on sourcing relationships of 964 US credit unions	Customisable supplier technology solutions

37	2012	Cordella & Willcocks	Government policy, public value and IT outsourcing: the strategic case of ASPIRE	Journal of Strategic Information Systems	Client firm	ITO	Empirical qualitative	Public value paradigm	84 interviews with UK government officials	Exemplified by e-government and NHS initiatives
38	2012	Holweg & Pil	Outsourcing complex business processes: lessons from an enterprise partnership	California Management Review	Both	BPO	Empirical qualitative	Not specified	Not specified	Innovation exemplified by a new HR platform
39	2012	Massini & Miozzo	Outsourcing and offshoring of business services: challenges to theory, management and geography of innovation	Regional Studies	Client firm	ITO and BPO	Empirical quantitative	Chandlerian theories of the firm	Quantitative data on 1271 projects by 299 US firms and 1258 projects by 334 EU firms	Innovation requires recombining knowledge and reverse knowledge transfers
40	2012	Roy & Sivakumar	Global outsourcing relationships and innovation: a conceptual framework and research propositions	Journal of Product Innovation Management	Client firm	ITO and BPO	Conceptual	Knowledge-based view & agency theory	Anecdotal evidence	Jumping from one S-curve to another curve is considered radical innovation
41	2012	Weigelt & Sarkar	Performance implications of outsourcing for technological innovations: managing the efficiency and adaptability trade-off	Strategic Management Journal	Client firm	ITO and BPO	Empirical quantitative	Transaction cost economics, capabilities-based view & knowledge-based view	132 retained responses from US banks	Customisable supplier technology solutions
42	2011	Lacity, Solomon, Yan & Willcocks	Business process outsourcing studies: a critical review and research directions	Journal of Information Technology	Both	BPO	Literature review	Not specified	87 papers published between 1996-2011	Clients are increasingly expecting innovation
43	2011	Roy & Sivakumar	Managing intellectual property in global outsourcing for innovation generation	Journal of Product Innovation Management	Client firm	ITO and BPO	Conceptual	Transaction cost economics, agency theory, dynamic capabilities & knowledge-based view	Anecdotal evidence	Jumping from one S-curve to another curve is considered radical innovation
44	2011	Su & Levina	Global multisourcing strategy: integrating learning from manufacturing into IT service outsourcing	IEEE Transactions on Engineering Management	Client firm	ITO	Empirical qualitative	Transaction cost economics	74 interviews with employees from two banks	Innovation takes many forms and encompasses both new product development and business process improvements

45	2011	Willcocks, Oshri, Kotlarsky & Rottman	Outsourcing and offshoring engineering projects: understanding the value, sourcing models, and coordination practices	IEEE Transactions on Engineering Management	Client firm	ITO and BPO	Empirical mixed methods	Not specified	263 retained survey responses & unspecified number of interviews	Collaborative innovation is required for back-office and business innovations
46	2010	Goo	Structure of service level agreements (SLA) in IT outsourcing: the construct and its measurement	Information Systems Frontiers	Client firm	ITO	Empirical quantitative	Transaction cost economics, control theory, relational exchange theory	92 retained cross-industry survey responses	Innovation plan identifies the structure and processes for introducing new innovations
47	2010	Gopal & Gosain	The role of organizational controls and boundary spanning in software development outsourcing: implications for project performance	Information Systems Research	Client firm	ITO	Empirical quantitative	Agency theory	Quantitative data on 96 projects from 10 Indian software firms	Clients and vendors interact in different ways to produce and deliver required services
48	2010	Henke & Zhang	Increasing supplier-driven innovation	MIT Sloan Management Review	Both	ITO and BPO (and others)	Not specified	Not specified	Not specified	Suppliers are recognised as having large innovation potential
49	2010	Lacity, Khan, Yan & Willcocks	A review of the IT outsourcing empirical literature and future research directions	Journal of Information Technology	Both	ITO	Literature review	Not specified	164 papers published between 1992-2010	Client's need to use outsourcing as an engine for innovation
50	2010	Lee and Kim	Implications of service processes outsourcing on firm value	Industrial Marketing Management	Client firm	ITO and BPO	Empirical qualitative	Dynamic perspective, agency theory, institutional theory	138 outsourcing announcements published between 1995-2005	Innovation requires long-term commitment of IT resources, coordination, and alignment with other business activities
51	2010	Mani, Barua & Whinston	An empirical analysis of the impact of information capabilities design on business process outsourcing performance	MIS Quarterly	Client firm	ITO	Empirical quantitative	Information processing view	127 retained survey responses	Transformational BPO can enhance competitiveness. It may deliver business level outcomes such as increased revenue and innovation
52	2010	Qu, Oh & Pinsonneault	The strategic value of IT insourcing: an IT-enabled business process perspective	Journal of Strategic Information Systems	Client firm	ITO	Empirical quantitative	Knowledge-based view	InformationWeek reports data from 1997-2000	Type III innovations are more strategic and constitute the

									on 169 client firms	core of the business
53	2010	Susarla, Subramanyam & Karhade	Contractual provisions to mitigate holdup: evidence from information technology outsourcing	Information Systems Research	Both	ITO	Empirical quantitative	Control theory	Data extracted from multiple databases on 553 contracts	ITO may involve business transformations with strategic goals
54	2010	Tiwana	Systems development ambidexterity: explaining the complementary and substitutive roles of formal and informal controls	Journal of Management Information Systems	Service provider	ITO	Empirical quantitative	Control theory	Field study data on 120 IT outsourcing projects	Custom software application to solve an idiosyncratic client business problem
55	2010	Weerakkody & Irani	A value and risk analysis of offshore outsourcing business models: an exploratory study	International Journal of Production Research	Client firm	ITO and BPO	Empirical qualitative	Value in business markets perspective	19 interviews with software providers	To gain competitive advantage vendors need to increase the value of their service offerings
56	2009	Goo, Kishore, Rao & Nam	The role of service level agreements in relational management of information technology outsourcing: an empirical study	MIS Quarterly	Client firm	ITO	Empirical quantitative	Transaction cost economics, control theory, relational exchange theory	92 retained cross-industry survey responses	Innovation plan identifies the structure and processes for introducing new innovations
57	2009	Handley & Benton	Unlocking the business outsourcing process model	Journal of Operations Management	Client firm	BPO (and others)	Empirical quantitative	Resource-based view, transaction cost economics	198 retained cross-industry survey responses	Satisfaction with service provider innovation
58	2009	Krishnamurthy, Jegen & Brownell	Strategic out-tasking: creating “win-win” outsourcing partnerships	Information and Management	Both	ITO and BPO	Conceptual	Simon's stage model of decision making	Anecdotal and experiential evidence	Providers need to introduce new technology and business solutions proactively
59	2009	Lahiri & Kedia	The effects of internal resources and partnership quality on firm performance: an examination of Indian BPO providers	Journal of International Management	Service provider	BPO	Empirical mixed methods	Resource-based view & social exchange theory	211 retained survey responses from Indian service providers and 46 interviews	Providers may utilise accumulated knowledge to create new and superior services
60	2009	Weigelt	The impact of outsourcing new technologies on integrative capabilities and performance	Strategic Management Journal	Client firm	ITO and BPO	Empirical quantitative	Resource-based view & knowledge-based view	132 retained responses from US banks	Customisable supplier technology solutions

61	2008	Avgerou	Information systems in developing countries: a critical research review	Journal of Information Technology	Service provider	ITO	Literature review	Social theory	Not specified	IS innovations involve new IT system deployment and organisational change
62	2008	Goo & Huang	Facilitating relational governance through service level agreements in IT outsourcing: an application of the commitment-trust theory	Decision Support Systems	Client firm	ITO	Empirical quantitative	Commitment-trust theory	92 retained cross-industry survey responses	Innovation plan identifies the structure and processes for introducing new innovations
63	2008	Goo, Huang & Hart	A path to successful IT outsourcing: interaction between service-level agreements and commitment	Decision Sciences	Client firm	ITO	Empirical quantitative	Relational exchange theory	92 retained cross-industry survey responses	Innovation plan identifies the structure and processes for introducing new innovations
64	2008	Leiponen	Control of intellectual assets in client relationships: implications for innovation	Strategic Management Journal	Service provider	ITO and BPO	Empirical quantitative	Property rights theory	145 retained survey responses from Finnish service providers	Innovations are typically firm-level phenomena and include significant service improvements and new service introductions
65	2008	Levina & Su	Global multisourcing strategy: the emergence of a supplier portfolio in services offshoring	Decision Sciences	Client firm	ITO and BPO	Empirical qualitative	Supply chain management perspectives	74 interviews with employees from two banks	Firms increasingly outsource to create innovative IT applications and transform broken business processes
66	2008	Levina & Vaast	Innovating or doing as told? Status differences and overlapping boundaries in offshore collaboration	MIS Quarterly	Client firm	ITO	Empirical qualitative	Practice theory	69 interviews with employees from one bank	Innovation is constantly looked for by client firms
67	2008	Safizadeh, Field & Ritzman	Sourcing practices and boundaries of the firm in the financial services industry	Strategic Management Journal	Client firm	ITO and BPO	Empirical quantitative	Transaction cost economics, resource-based view & knowledge-based view	108 retained survey responses from professionals in the financial services industry	Customised solutions offer a way to target a market that craves options beyond the available standard services
68	2008	Straub, Weill & Schwaig	Strategic dependence on the IT resource and outsourcing: a test of the strategic control model	Information Systems Frontiers	Client firm	ITO	Empirical mixed methods	Resource dependence theory & core competencies	Interviews and survey data on 54 business units in 27 multinationals	Sustaining an IT-enabled competitive advantage requires continuous innovation

69	2008	Veltri, Saunders & Kavan	Information systems backsourcing: correcting problems and responding to opportunities	California Management Review	Client firm	ITO and BPO	Empirical qualitative	Core competencies	Unspecified number of interviews	Outsourcing impeded innovation and left the client with stagnated technology and backlogged IS projects.
70	2008	Weeks & Feeny	Outsourcing: from cost management to innovation and business value	California Management Review	Client firm	ITO	Empirical qualitative	Learning curve	More than 70 interviews with client and provider representatives	Strategic innovation
71	2007	Argyres, Bercovitz & Mayer	Complementarity and evolution of contractual provisions: an empirical study of IT services contracts	Organization Science	Service provider	ITO	Empirical quantitative	Transaction cost economics & contract theory	Data on 405 contracts from one IT service provider	Projects that required more innovation involved greater technical difficulty and complexity
72	2007	Kedia & Lahiri	International outsourcing of services: a partnership model	Journal of International Management	Client firm	ITO and BPO	Conceptual	Resource-based view, transaction cost economics & resource dependence theory	Anecdotal evidence	Providers help build a new IT platform, redesign all processes, and administer programs, acting as a virtual subsidiary
73	2007	Shi	Today's solution and tomorrow's problem: the business process outsourcing risk management puzzle	California Management Review	Client firm	BPO	Conceptual	Technology design, market failure, resource dependence theory, dynamic capabilities, & complementarities in organisational design	Anecdotal evidence	Providers may offer best-in-class, and yet vanilla solutions
74	2007	Tadelis	The innovative organization: creating value through outsourcing	California Management Review	Client firm	ITO	Conceptual	Core competencies, Transaction cost economics	Anecdotal evidence	The JP Morgan Chase-IBM deal was celebrated as a ground-breaking partnership that would increase innovation
75	2006	Hoecht & Trott	Innovation risks of strategic outsourcing	Technovation	Client firm	ITO and BPO	Conceptual	Trust, collaboration	Anecdotal evidence	Innovation depends increasingly on the ability to utilise new

								and network perspective		knowledge produced elsewhere and to combine this with internal knowledge
76	2006	Hong & Zhu	Migrating to internet-based e-commerce: factors affecting e-commerce adoption and migration at the firm level	Information and Management	Client firm	ITO (and others)	Empirical quantitative	Technology diffusion theory	1,036 cross-industry survey responses	E-commerce is a Type III innovation, because it is often embedded in the firm's core business processes
77	2006	Rottman & Lacity	Proven practices for effectively offshoring IT work	MIT Sloan Management Review	Client firm	ITO	Empirical qualitative	Learning curve	159 interviews with professionals, mostly from Fortune 500 companies	Outsourcing is used to enable corporate strategies and create new business
78	2005	Davenport	The coming commoditization of processes	Harvard Business Review	Client firm	BPO	Conceptual	Not specified	Anecdotal evidence	Providers will have to find new sources of differentiation, by delivering innovative IT-enabled initiatives
79	2005	Miozzo & Grimshaw	Modularity and innovation in knowledge-intensive business services: IT outsourcing in Germany and the UK	Research Policy	Both	ITO	Empirical qualitative	Organisational design strategy	32 interviews with senior managers from the client and provider	Exemplified by new personal digital assistants, new airplane seat selection system, new inventory management system
80	2005	Miranda & Kavan	Moments of governance in IS outsourcing: conceptualizing effects of contracts on value capture and creation	Journal of Information Technology	Client firm	ITO	Conceptual	Social capital perspective	Anecdotal evidence	Value creation through innovation in outsourcing
81	2005	Van de Ven	Running in packs to develop knowledge-intensive technologies	MIS Quarterly	Service provider	ITO and BPO	Conceptual	Transaction cost economics & knowledge-based view	Anecdotal evidence	Knowledge-intensive innovations have weak appropriability regimes
82	2004	Kumar & Snavely	Outsourcing and strategic alliances for product development: a case of Banta Digital Group	Technovation	Client firm	ITO	Empirical qualitative	Not specified	Not specified	To expand its digital offerings, the client outsourced the development of new digital technologies

83	2004	Lee, Miranda & Kim	IT outsourcing strategies: universalistic, contingency, and configurational explanations of success	Information Systems Research	Client firm	ITO	Empirical quantitative	Residual rights theory	311 retained survey responses from senior executives	Providers may develop innovative IT solutions tailored to their client firms
84	2004	Linder	Transformational outsourcing	MIT Sloan Management Review	Client firm	ITO and BPO	Empirical qualitative	Not specified	More than 200 interviews	Clients want to shift spending effort on tactical activities to programs that contribute to strategy
85	2003	Choudhury & Sabherwal	Portfolios of control in outsourced software development projects	Information Systems Research	Client firm	ITO	Empirical qualitative	Agency theory	25 interviews conducted for 5 cases	Exemplified by the development of a complex IS system, and significant enhancements to a customer service system
86	2003	Levina & Ross	From the vendor's perspective: exploring the value proposition in information technology outsourcing	MIS Quarterly	Service provider	ITO	Empirical qualitative	Complementarity in organisational design & core competencies	28 interviews with client and provider employees	Client may improve its responsiveness to opportunities created by new technologies
87	2003	Linder, Jarvenpaa & Davenport	Toward an innovation sourcing strategy	MIT Sloan Management Review	Client firm	ITO and BPO (and others)	Empirical qualitative	Not specified	Unspecified number of interviews	Innovation is defined as implementing new ideas that create value
88	2002	Chesbrough & Teece	Organizing for innovation: when is virtual virtuous?	Harvard Business Review	Client firm	ITO and BPO (and others)	Conceptual	Open innovation	Anecdotal evidence	Innovations can support business strategies
89	2002	Kern, Willcocks & van Heck	The winner's curse in IT outsourcing: strategies for avoiding relational trauma	California Management Review	Service provider	ITO	Empirical qualitative	Auction theory	Case research database of 85 outsourcing deals	Suppliers may be chosen for suppliers are chosen for proactive innovation in technological applications
90	2001	Arora, Arunachalam, Asundi & Fernandes	The Indian software services industry	Research Policy	Service provider	ITO	Empirical mixed methods	Not specified	65 retained survey responses and 75 interviews with senior managers and software professionals	Customised software development involves close interaction between the development team and the end-user

91	1999	Quinn	Strategic outsourcing: leveraging knowledge capabilities	MIT Sloan Management Review	Client firm	ITO and BPO	Conceptual	Core competencies	Anecdotal evidence	Outsourcing may be leveraged for strategic benefits like innovation
92	1998	Currie & Willcocks	Analysing four types of IT sourcing decisions in the context of scale, client/supplier interdependency and risk mitigation	Information Systems Journal	Client firm	ITO	Empirical qualitative	Core competencies	Unspecified number of interviews with executives from 20 firms	Exemplified by new IT-enabled business processes like digital settlement systems and data centre modernisations
93	1998	DiRomualdo and Gurbaxani	Strategic intent for IT outsourcing	MIT Sloan Management Review	Client firm	ITO	Empirical qualitative	Resource-based view & transaction cost economics	Unspecified number of interviews with executives from 50 firms	Outsourcing can be leveraged for business impact
94	1998	Feeny & Willcocks	Core IS capabilities for exploiting information technology	MIT Sloan Management Review	Client firm	ITO	Empirical qualitative	Core competencies	Unspecified number of interviews	Suppliers may create win-win situations in which the supplier increases its revenues by providing services that increase business benefits
95	1998	Willcocks & Kern	IT outsourcing as strategic partnering: the case of the UK Inland Revenue	European Journal of Information Systems	Client firm	ITO	Empirical qualitative	Inter-organisational relationship theory	Multiple interviews with 8 participants	Exemplified by the development of several major new systems using new technologies

## APPENDIX II: Conceptual study data structure

<b>Table 22:</b> Theoretical review data structure (Appendix II)		
<b>1<sup>st</sup> order concepts with exemplary quotations</b>	<b>2<sup>nd</sup> order themes</b>	<b>Aggregate dimensions</b>
<p><i>Degree of standardisation of development activities:</i> “These [synthetic problem-solving] processes generate inductive, exploratory syntheses in identifying novel client problems and solving them through novel resource combinations and integration.” (Desyllas et al., 2018, p. 773)</p> <p><i>Innovation criticality:</i> “This was apparent in the Post Office and Eagle Star Insurance in that technical innovation was perceived as critical to the future of the business and not something that could easily be transferred to an external supplier.” (Currie and Willcocks, 1998, p. 125)</p> <p><i>Innovation customisation:</i> “Innovations are often highly specific to the individual customer.” (Lema et al., 2015, p. 1384)</p> <p><i>Innovation novelty:</i> “Through its relationships with Global Bank’s program managers, this vendor won the bank’s business by providing an IT solution localized to the Indian financial services market. The solution was built during engagements with other clients, and its reuse helped improve the time to market for Global Bank.” (Levina and Su, 2008, p. 55)</p> <p><i>Innovation perishability:</i> “In the IT sector, products and services are often intangible and perishable. For example, an innovative solution to a client’s problem may include a product associated with a service, and the process of delivering the innovation is intangible.” (Gopalakrishnan and Zhang, 2019, p. 408)</p> <p><i>Innovation predictability:</i> “While the process of routine combination is structured and deterministic, the process of novel combination is not. In other words, one knows what the final product will be in routine production and exactly what needs to be done in order to obtain the final product. In the case of innovation, however, the final product is not known <i>a priori</i>.” (Miranda and Kavan, 2005, p. 163)</p> <p><i>Innovation task controllability:</i> “Outsourcing was found to be more suited for non-core elements and structured activities that could be</p>	Task attributes	Antecedents

<p>easily controlled (Lacity <i>et al.</i>, 2008).” (Aubert <i>et al.</i>, 2015, p. 263)</p> <p><i>Innovation task embeddedness</i>: “In the average outsourcing contract, tasks are embedded and difficult to modularize (Tiwana and Keil, 2007); and when the tasks are returned after completion from a provider, they must integrate easily into the outsourcer’s existing processes in the value chain. This requirement of integration precludes any exploration and radical innovation (Benner and Tushman, 2003).” (Roy and Sivakumar, 2012, p. 522)</p> <p><i>Innovation task separability</i>: “We argue that structural separation (Baldwin and Clark, 2000; Duncan, 1976), where simpler, well-structured problems can be outsourced and more complex, ill-structured problems are kept in-house, becomes more challenging for emergent technologies when interfaces and interdependencies among problems are poorly defined.” (Weigelt and Sarkar, 2012, p. 208)</p> <p><i>Innovation task variability</i>: “High levels of process variety result in greater levels of process exceptions and deviations in the outsourced task environment and, hence, greater levels of information processing.” (Mani <i>et al.</i>, 2010, p. 42)</p> <p><i>Need identification</i>: “The client’s business domain contains large amounts of tacit knowledge that may not be adequately captured in the declarative knowledge elements traditionally used, such as a priori functional specifications.” (Gopal and Gosain, 2010, p. 964)</p> <p><i>Problem structure</i>: “Accordingly, we suggest that adaptability problems tend to be ill-structured and complex, and thus more amenable to being solved by heuristic search processes that evaluate how small changes in one subproblem impact other problem areas (Gavetti and Levinthal, 2000; Nickerson and Zenger, 2004).” (Weigelt and Sarkar, 2012, p. 194)</p>		
<p><i>Business orientation client firm</i>: “As the build-out for a long-running contract for submarines neared completion, Client C’s strategic direction was to move into marine overhaul—a market in which they had no recent presence.” (Weeks and Feeny, 2008, p. 144)</p>	<p>Organisational antecedents</p>	

<p><i>Business orientation service provider:</i> "Differentiation by service firms may involve offering leading-edge service products to customers, but can also take other forms. Some firms focus on tailoring their service offerings to meet the demands of a few highly valuable customers, thus securing long-term loyalty." (Desyllas et al., 2018, p. 773)</p> <p><i>Client firm domain knowledge absorptive capacity:</i> "We argue that market-related absorptive capacity gained in the past enhances a firm's capacity to complex problem solve and thereby mitigates the negative effect of process outsourcing on adaptability." (Weigelt and Sarkar, 2012, p. 195)</p> <p><i>Client firm financial resources:</i> "Our research strongly suggests that this [creating new IT capabilities] is very difficult for IS groups to do on their own. Most lack the necessary technical talent, management skills, and financial resources." (DiRomualdo and Gurbaxani, 1998, p. 73)</p> <p><i>Client firm IT capabilities:</i> "In some cases in-house technical capability is equal to (if not greater than) that in supplier organizations, and so to outsource a large proportion of the IT facility would not therefore achieve benefits such as access to new skills." (Currie and Willcocks, 1998, p. 125)</p> <p><i>Client firm IT absorptive capacity:</i> "For our purposes, this absorptive capacity translates into the importance of an excellent technology knowledge base within the IT function of the client and requires the employment of a number of highly skilled technology experts who disseminate their understandings through the wider organization in the unique organizational context of the client." (Weeks and Feeny, 2008, p. 135)</p> <p><i>Client firm organisational size:</i> "While large players participating in networks sharing leading edge technology could afford to stay more aloof and withhold their most novel technology solutions, small firms found that their technology solutions were prone to being appropriated by network rivals." (Hoecht and Trott, 2006, p. 678)</p> <p><i>Client firm organisational structure:</i> "A federal IT organization provides the opportunity to agree on centralization of IT activities that benefit from scale economies, alongside the</p>		
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<p>flexibility to respond to needs of business units across the firm (as demonstrated in Case 3).” (Weeks and Feeny, 2008, p. 138)</p> <p><i>Organisational familiarity:</i> “Second, past experience had taught Alpha that they needed to keep a close eye on Kappa's operations. For example, all IT initiatives have to be approved by Alpha's IT division, but since such decision-making processes are slow in large organizations like Alpha, initiatives are frequently outdated by the time the decision is made.” (Sumo et al., 2016, p. 18)</p> <p><i>Outsourcing intent evolvement:</i> “As such, contracts are often awarded on the basis of the supplier's ability to deliver outsourcing services (e.g. based on costs saving), while innovation, as a component within the outsourcing relationship, is likely to emerge later on during the relationship.” (Oshri et al., 2018, p. 204)</p> <p><i>Outsourcing intent harmony:</i> “No matter how clearly partners set expectations, define roles and specify outputs, there will be disputes – some of them quite acrimonious.” (Linder, 2004, p. 57)</p> <p><i>Outsourcing intent multiplicity:</i> “We focus on innovation that occurs within the daily processes that make up the outsourced service activities. Suppliers will generally be confronted with multiple performance outcomes (e.g., delivery, quality), which may or may not require innovation to take place.” (Sumo et al., 2016, p. 12)</p> <p><i>Provider domain knowledge absorptive capacity:</i> “Business process design knowledge represents the “prior related knowledge” (the absorptive capacity) required in a supplier who can partner in the pursuit of higher-level innovation outcomes.” (Weeks and Feeny, 2008, p. 138)</p> <p><i>Provider IT capabilities:</i> “The next step is to transform the business goals into technological specifications and develop a technological solution to the business problem identified earlier using a combination of software products that can accomplish the business objectives of the client. This requires in-depth knowledge of various technologies such as Java, Dot Net, Mainframes, Oracle Databases, ERP systems such as SAP, etc.” (Chatterjee, 2017, p. 590)</p>		
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<p><i>Provider organisational size:</i> “Overall, we find that relationship management and vendor size may help the vendor overcome some of negative outcomes that inhibit vendor innovation due to excessive client dependence.” (Gopalakrishnan and Zhang, 2019, p. 413)</p> <p><i>Proximity to the core:</i> “We consider e-commerce to be a Type III innovation, because it is often embedded in the firm’s core business processes or is extending basic business products and services, and integrating suppliers and customers in the value chain.” (Hong &amp; Zhu, 2006, p. 207)</p> <p><i>Willingness to innovate:</i> “Kappa actually lists multiple arguments for not engaging in innovation, one of which could be related to their organizational characteristics. More specifically, Kappa admits to focusing on the continuity of their services rather than on innovative activities.” (Sumo et al., 2016, p. 18)</p>		
<p><i>Business services industry commodification:</i> “As the provider population learned to commoditize a wider range of services, commoditization became a pervasive trend.” (Manning et al., 2018, p. 2308)</p> <p><i>Business services industry consolidation:</i> “Unfortunately for outsourcing firms, as the outsourcing business grows and its scope expands, so does the pace of consolidation.” (Shi, 2007, p. 35)</p> <p><i>Business services industry growth:</i> “The case study data attest to a wide and growing supply base of computer services providers – with suppliers deepening their competence and increasing their scale of operations – and the development of standard contracts and accompanying improvements in measurement and monitoring instruments.” (Miozzo and Grimshaw, 2005, p. 1434)</p> <p><i>Business services industry R&amp;D intensity:</i> “Relatively few firms have invested in R&amp;D. As long as firms primarily provided coding services to foreign customers, the need for R&amp;D was minimal as there was no new technology being developed and the services were mostly application solutions.” (Arora et al., 2001, p. 1283)</p> <p><i>Client firm marketplace turbulence:</i> “From an innovation and long-term competitiveness</p>	<p>Environmental antecedents</p>	

<p>perspective, the traditional cost concerns are far less important than the question of how to identify and to retain a company's competitive core and not to lose its future ability to compete in fast-moving and unpredictable markets." (Hoecht and Trott, 2006, p. 673)</p> <p><i>Client firm rival competitiveness:</i> "[...] competitor intensity discourages the openness to new ideas. Probably, client firms become more cost-oriented if competition is intense." (Kibbeling et al., 2013, p. 510)</p> <p><i>Client firm rival innovation networks:</i> "In a networked economy, there is hardly any choice for a firm but to have close relationships with more than one service provider." (Hoecht and Trott, 2006, p. 678)</p> <p><i>Industry attractiveness for IT specialists:</i> "Accordingly, they [providers] invest heavily to recruit suitable talent and give them the required business skills, such as effective communication, negotiation, leadership, team-building, technology, and business analysis [...]." (Mukherjee et al., 2013, p. 385)</p> <p><i>IT turbulence:</i> "Unlike business processes, IT is characterized by its more frequent and speedier changes in recent years. Taking advantage of what such dramatic improvements in the technology offer, more firms have relied on IT to re-engineer their operations, improve efficiencies, and differentiate themselves from competitors, etc." (Lee and Kim, 2010, p. 856)</p>		
<p><i>Client firm concern about capability exploitation:</i> "In P4, as an initial outcome control, C4 had developed exhaustive test plans for its own testing of the vendor-developed software. The vendor came to rely almost completely on C4 to do the detailed testing and became slack in its own testing. Consequently, none of the software would pass the test the first time around." (Choudhury and Sabherwal, 2003, p. 307)</p> <p><i>Client firm concern about escalating costs:</i> "On the other hand, any contract not fully stipulated or enforced provides room for opportunistic behaviors—for a vendor to creep up the price, work amount, or work scope. This moral hazard increases when clients are less effective in contracting with vendors." (Shi, 2007, p. 34)</p>	Risk portfolio	Arrangements

<p><i>Knowledge protection concerns:</i> “The problem of information leakage and how to control it also applies in the case of outsourcing of knowledge-sensitive business processes with high innovation potential.” (Hoecht and Trott, 2006, p. 677)</p> <p><i>Provider concerns about reduced revenue:</i> “Many BPO relationships are still priced based on resource inputs, such as the number of full-time equivalent employees required to perform the services. Although companies like the simplicity and predictability of FTE pricing, they recognize that input-based pricing can discourage providers from innovating out of fear that it will mean reduced revenues.” (Lacity and Willcocks, 2013, p. 64)</p> <p><i>Provider concerns about sunk costs due to IT development specificity:</i> “To comply with the existing IT infrastructure, suppliers had to develop customized, ad hoc systems. The unique characteristics of these developments required specific contractual protection for the suppliers against the potential loss incurred if the contract failed. The specificity of the IR systems did not offer any alternative market opportunities for EDS, and therefore increased their potential risk.” (Cordella and Willcocks, 2012, p. 299-300)</p> <p><i>Provider winner’s curse:</i> “Even more frequently, overly optimistic providers seriously underbid the real costs of the outsourced activities. It often happens when the provider’s main aim is to win the bid, rather than to make money. Consequently, the client suffers when the provider stands to make a loss.” (Veltri et al., 2008, p. 66)</p>		
<p><i>Client firm priority rank:</i> “Those customers with which suppliers have the closest working relations are more likely to be given access — sometimes exclusive — to supplier innovations before the supplier takes the technology to other customers (with which it may have less cordial working relations).” (Henke and Zhang, 2010, p. 43)</p> <p><i>Dynamic adaptation to business requirements turbulence:</i> “In addition, the service provider’s flexibility to cope with changes in the client’s requirements and in the business environment enhances BPO success.” (Chou et al., 2015, p. 34)</p>	<p>Outsourcing configurations</p>	

<p><i>Innovation development coordination:</i> “What we see is a very collaborative engagement between the client and the vendor that is only possible because of the trust and transparency already created during the collaboration processes. It makes both parties equally involved and interested in handling the project in the best possible way.” (Søderberg et al., 2013, p. 355)</p> <p><i>Knowledge concentration:</i> “[...] ill-defined problems, coupled with the need for continuous innovation, require growing reliance on diverse and heterogeneous sources of knowledge, including external experts (Yoo et al. 2012).” (Wiener et al., 2019, p. 1390)</p> <p><i>Mid-initiative partner switching:</i> “Contracts may be narrow in scope, with multiple providers being utilized to complete various tasks; the contract may allow for easy dissolution of the relationship and re-negotiation of terms with alternate providers (Rousseau and Parks, 1994). Alternatively, contracts may set up pervasive and comprehensive relationships with a single or few providers. These terms set up the level of closure within the client–provider relationship.” (Miranda and Kavan, 2005, p. 160)</p> <p><i>Operational dependency:</i> “According to transaction costs theory, to avoid lock-in situations the best way of using the market is in conditions of low uncertainty and low specificity (Williamson, 1979). In the case of IT this is the case for relatively simple, un-integrated systems. But not for complex and interdependent systems such as the infrastructure of the IR/HMRC. The result is that Accenture is still in control of part of the infrastructure. Moreover, Capgemini has employed the workforce which already serviced the contract with EDS. Once again, the complexity of the pre-existing contract between EDS and IR generated a lock-in which allowed the existing provider to opportunistically exploit the situation.” (Cordella and Willcocks, 2012, p. 304)</p> <p><i>Provider tiering/ranking:</i> “One pitfall of the long-tail strategy is that it demotivates new suppliers from investing in client relationships. Indeed, each supplier in the long tail may feel that its role is temporary and focus its best efforts on other clients that are willing to make long-term commitments. It is thus important that both business-unit managers and the sourcing-</p>		
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<p>management office incentivize suppliers to invest in the relationship. Top-down incentives should be clear: If experimental projects show positive results, the supplier will get internal referrals and potentially make its way into the mix of strategic partners.” (Su et al., 2016, p. 86)</p> <p><i>Supply base breadth:</i> “While the use of multiple suppliers may promote innovation through access to a wider set of ideas, the selective sourcing mindset is the real key.” (Weeks and Feeny, 2008, p. 137)</p> <p><i>Supply base configuration concepts:</i> “For instance, organizations with a total outsourcing model are often outperformed by organizations with a partial outsourcing or insourcing model (Lacity and Willcocks, 1998, 2001) [...]” (Bui et al., 2019, p. 333)</p>		
<p><i>Contract duration:</i> “The duration of the contract remained short. The IT market was very fast-paced, BDG did not want to get into a contract that was so long that it could potentially lock it into services that became outdated before the contract expired. The contract was no more than 2 years in duration. This would not only allow BDG out of outdated technology but would foster an environment that promoted innovation.” (Kumar and Snavely, 2004, p. 1007)</p> <p><i>Contract penalties:</i> “Contractual penalties often fail to compensate for the negative business impact from poor partner performance. Enterprises are better served by investing in their partner success. For example, incentives, such as bonus payouts, should reward partners for exceeding performance targets.” (Krishnamurthy et al., 2009, p. 48)</p> <p><i>Contract tailoring:</i> “Unilateral contracts and limited participation are indicative of market-type relationships. In such relationships, the abilities, needs, and constraints of one partner are viewed as interchangeable with those of others, making pro-forma contracts seem viable. In other words, the provider views the needs of one client as identical to another or the client views providers’ abilities and constraints as identical. Rather than attempting to involve multiple constituents in the relationship, the relationship is restricted to those immediately contracting for services.” (Miranda and Kavan, 2005, p. 155)</p>	<p>Pricing models</p>	

<p><i>Contract type</i>: “Explaining the positive effect of a joint venture contract alongside fixed-price and time and materials contracts as part of client contract portfolio scenario 2 is challenging. One possible explanation is that the presence of a joint venture contract in such a client contract portfolio stimulates the client firm to share the learning gained in the joint venture outsourcing engagement with other outsourcing engagements within the portfolio in order to improve performance and strengthen relationships with its suppliers.” (Oshri et al., 2015, p. 214)</p> <p><i>Extent of risk willing to take</i>: “In addition, we have also discussed that the supplier's degree of risk-averseness is an important variable to consider in the study of contracts and innovation, since the reward structure may not always enhance innovation.” (Sumo et al., 2016, p. 14)</p>		
<p><i>Contingency planning clauses</i>: “A key way in which parties can write more complete contracts is to include more provisions addressing contingencies that threaten the relationship. Contingency planning clauses can thus be defined as the parts of a contract that are designed to support within-agreement adjustments by proscribing the ways in which the contractual partners will deal with problematic contingencies that might arise during the execution of the contract.” (Argyres et al., 2007, p. 5)</p> <p><i>Contractual governance completeness</i>: “As also discussed, innovation by its very nature requires adaptability, flexibility, and risk taking, favoring a loose contractual regime for outsourcing contracts. At the same time, these firms need to be efficient in their management of outsourcing contracts. Suppliers have to be monitored to ensure that promises are kept and the desired goals are achieved, suggesting a tight contractual regime for these contracts.” (Aubert et al., 2015, p. 258)</p> <p><i>Contractual innovation plan</i>: “Innovation plan identifies the structure and processes for introducing new innovations but it needs to be synchronized with enforcement plans such as penalties or incentives for its effectiveness.” (Goo, 2010, p. 191)</p> <p><i>Degree of formalisation of development activities</i>: “Increased emphasis on coordination and lower levels of formalization, in addition to</p>	<p>Degree of formalisation</p>	

<p>facilitating a shared understanding of changes in the information environment of the outsourced process, help create a shared purpose that increases information-processing capabilities and minimizes conflict.” (Barua and Mani, 2014, p. 82)</p> <p><i>Extendibility clauses:</i> “When it is difficult to specify means-end transformation processes, extendibility clauses protect firms from vendor nonperformance. Greater task complexity is associated with short-term extendible contracts [...]. Extendibility provisions are important when the outsourcing initiative is part of a strategic, rather than a transactional relationship, where a vendor’s investments in problem solving and knowledge discovery are critical to success in outsourcing and where the threat of holdup may not be mitigated through extensive contractual detail alone.” (Susarla et al., 2010, p. 52)</p> <p><i>Financial incentive clauses:</i> “Bonus structures and risk-sharing mechanisms are elements that can be used to build this type of trust [motivational trust] for the relationship.” (Weeks and Feeny, 2008, p. 141)</p> <p><i>Flexibility required for development:</i> “[...] rather than having governance procedures in place that allow for quick response and dynamic adjustment of terms, outsourcing contracts often are inflexible, require substantial renegotiation and lead to dissatisfaction on both sides.” (Hoecht and Trott, 2006, p. 676)</p> <p><i>Instructive process elements:</i> “Two kinds of behavior control mechanisms were identified. The first, involving a client’s attempt to <i>specify desired vendor behavior</i>, was observed in only one case. C1 prescribed a specific development methodology in its project plan. The second kind of behavior control mechanism aimed to facilitate monitoring of vendor behavior, through either <i>direct observation</i> or <i>appropriately designed information systems</i>, such as periodic reports (P4) and conference calls (P1). (Choudhury and Sabherwal, 2003, p. 306)</p> <p><i>Monitoring intensity:</i> “For instance, in the digital era, massive amounts of process and behavioral data are continuously generated (Cable and Birkinshaw, 2017), including detailed data on programmer activities that are recorded in software development platforms. However, from a value-creation point of view, it</p>		
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<p>might not make sense to make extensive use of these data for monitoring even though they provide high behavior observability (Cable and Birkinshaw, 2017). This is because, with a value- creation control purpose, the controller would be less motivated to invest time and effort to closely monitor controllee behaviors. The controller might also want to signal that the controller does not harbor suspicions of opportunistic behavior.” (Wiener et al., 2019, p. 1394)</p> <p><i>Outcome control mechanisms:</i> “Outcome control mechanisms prespecify what the vendor should accomplish in a project. they establish the evaluation criteria by which the outputs of the vendor will be judged (e.g., milestones, delivery timetables, and budgets).” (Tiwana, 2010, p. 94)</p> <p><i>Perceived role of the contract:</i> “Detailed contracts and legal means are of course more of a background safeguard, providing contract parties with the confidence that although the law is slow and costly and seeking legal redress is not the best avenue to solve conflicts, they do have a safeguard against gross malfeasance (Sitkin and Roth, 1993; Deakin et al., 1994).” (Hoecht and Trott, 2006, p. 676)</p>		
<p><i>Autonomy required for development:</i> “The case observations lead us to conclude that although the contract is characterized by low term specificity, Kappa's autonomy in the day- to-day operations of its service is limited due to interference from Alpha's enterprise architects. This limits Kappa's ability to organize its activities as it sees best.” (Sumo et al., 2016, p. 17)</p> <p><i>Client firm management support:</i> “The biggest threat to success was the lack of executive-level IT leadership at either corporate or business unit levels of the client. Fortunately, the client's business unit head had significant personal experience in IT and he was both able and motivated to provide the necessary leadership.” (Weeks and Feeny, 2008, p. 144)</p> <p><i>Client firm strategic planning openness:</i> “For supplier involvement to occur most efficiently and effectively, direction from the customer is required. It is the customer's communication of its plans and expectations, together with the sharing of its technology road maps, that helps the supplier better to meet the customer's needs. Moreover, open and honest customer</p>	<p>Relationship management</p>	

<p>communication creates a supportive and trusting environment that facilitates and increases the supplier's commitment to the relationship." (Henke and Zhang, 2010, p. 44)</p> <p><i>Commitment:</i> "Commitment in BPO is a "forward looking" measure and more enduring over time, which is a necessary and sufficient condition for a successful BPO relationship to realize desirable strategic benefits." (Chou et al., 2015, p. 33)</p> <p><i>Common understanding:</i> "A priori specification of such standards in an outsourcing relationship requires that the parties to the contract understand how jobs are done across client-provider boundaries. Similarly, the specification of internal authority systems and dispute resolution mechanisms requires an understanding of how the other organization works and a shared understanding of how the inter-organizational relationship will function." (Miranda and Kavan, 2005, p. 159)</p> <p><i>Dedicated iterative collaboration support:</i> "The credible commitments made by the client ensure harmonious behavior by both sides, enabling iterative collaboration." (Susarla and Mukhopadhyay, 2019, p. 935)</p> <p>Evolved backing for initiatives: "Furthermore, as the vendor develops specialized resources that are tailored to existing customers, it increases asset specificity. The asset specificity is likely to discourage the vendor to learn new insights from the client outside of their current business relationship. The resultant inertia in learning creates an unproductive relationship where the vendor is satisfied with minor or no changes to existing products and services, rather than investing more in innovative solutions (Christensen <i>et al.</i>, 1998; Sobrero and Roberts, 2002)." (Gopalakrishnan and Zhang, 2019, p. 409)</p> <p><i>Governance complementarity:</i> "The overarching contribution of this study is in reconciling the opposing complements versus substitutes perspectives by demonstrating that formal and informal control mechanisms can be <i>both</i> complements and substitutes in outsourced systems development projects. The focus of this study was on explaining the effects of such interactions among formal and informal control mechanisms on systems development ambidexterity, that is, the capacity to simultaneously exhibit alignment</p>		
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<p>and adaptiveness in the systems development process.” (Tiwana, 2010, p. 115)</p> <p><i>Relationship style:</i> “There is also a risk of strained flow of innovations due to an arm’s-length relationship with a vendor, since such a relationship may encourage the vendor’s opportunistic behavior and reduce the potential payoff of innovations to the client.” (Shi, 2007, p. 31)</p> <p><i>Trust – behaviour-related and competency-related:</i> “The outsourcing organisation must at least have trust in the service provider’s competence and willingness to keep to contractual obligations.” (Hoecht and Trott, 2006, p. 676)</p>		
<p><i>Capability complementarity:</i> “The service provider should work closely with its client by taking advantage of the client’s complementary resources. The service provider’s capability to leverage complementary resources relies on its ability to develop complementary BPO processes by considering how the IT capabilities, operating procedures, and business processes between the client and the service provider can be aligned.” (Chou et al., 2015, p. 41)</p> <p><i>Client firm innovation capability:</i> “In particular, in order to achieve positive outcomes of innovation, the client firm needs to develop deep understanding of technological solutions held by the supplier and the market (Weeks and Feeny, 2008), as well as be able to re-define its innovation agenda. These two areas of knowledge, i.e. technological solutions and innovation agenda, allow the client firm to engage in a meaningful exchange of knowledge with the supplier, imperative to achieve positive innovation outcomes (ibid.).” (Oshri et al., 2018, p. 206)</p> <p><i>Composed team diversity:</i> “Software development outsourcing is a multifaceted and complex activity in which clients and vendors interact in many different ways to produce and deliver the software services required. Most outsourced software projects involve significant technical activities combined with a social process of acquiring and integrating knowledge from various stakeholders such as users, project managers, developers, and clients.” (Gopal and Gosain, 2010, p. 960)</p> <p><i>Consultancy involvement:</i> “Last but not least, interestingly, advisors usually act on</p>	<p>Knowledge combinations</p>	<p>Generation</p>

<p>behalf of the client firm; however, our study shows that, in the case of innovation, advisors may strengthen the impact of the supplier's familiarity with the client on innovation outcomes. As such, clients should be mindful that one possible benefit of contracting advisory services is to allow the advisor to work closely with the supplier in order to enhance the supplier's knowledge of the client." (Oshri et al., 2018, p. 214)</p> <p><i>Development process phases:</i> "This research defines "innovation generation" as the impact on the new product development (NPD) process for the outsourcer (e.g., Kamath and Liker, 1994; Roy <i>et al.</i>, 2004) in which providers deliver knowledge-based services. The paper assumes a typical Stage-Gate® NPD process that consists of idea generation, idea screening, concept testing, product development, test marketing, and launch (Cooper, 1998)." (Roy and Sivakumar, 2011, p. 50)</p> <p><i>Exploration and experimentation activities:</i> "In contrast, DOFs [Differentiation-oriented firms], emphasizing synthetic problem-solving processes to explore new alternatives, are likely to generate knowledge which is still at a 'pre-paradigmatic' stage (Teece, 1986, 2006). Solving novel and complex problems often involves long trial-and-error processes and complex patterns of interactions with clients (Perks, Gruber and Edvardsson, 2012). During this experimentation phase, failure occurs more frequently than success (Thomke, 2013)." (Desyllas et al., 2018, p. 774)</p> <p><i>Failure tolerance:</i> "An important consequence of greater supplier commitment is the supplier's increasing willingness to do its own communicating, openly and honestly, with the customer. Before that can occur, however, the customer must demonstrate that periodic bad news from the supplier is accepted not only as an inevitable part of doing business but also as an important element of maintaining productive and responsive working relations. The customer must therefore not use bad news from the supplier as a reason to punish it." (Henke and Zhang, 2010, p. 44-45)</p> <p><i>Formal employee training:</i> "We identified two different capabilities that are critical for success in the global IT services industry: business-domain capability and technological capability. The focal firm made deliberate investments in</p>		
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<p>general human capital with the strategic intent of developing these capabilities and competing successfully with established foreign rivals. These investments bore fruit. The results suggest that firms can develop these capabilities through formal methods, such as specialized training and evaluation, or informal methods, such as experiential learning.” (Chatterjee, 2017, p. 602)</p> <p><i>Geographical distance:</i> “Radical innovation requires flexibility, tinkering, and “skunk works” that are not amenable to control. Indeed, control, hierarchy, and bureaucracy are well known to stifle creativity and innovation (Bentley, 1990; Iwamura and Jog, 1991; Sethi and Nicholson, 2001). In global supply contexts, control may actually be less possible and therefore may aid in radical innovation.” (Roy and Sivakumar, 2012, p. 522)</p> <p><i>Interpersonal interaction opportunities:</i> “To fulfill these possibilities, successful large-scale outsourcers carefully design and implement three levels of information exchange and personal contacts among: (1) the top managers who can break bottlenecks or ensure responsiveness when lower-level misunderstandings occur, (2) champions on both sides of the relationship whose careers depend on the success of the relationship, (3) numerous bench and operating-level personnel who develop the personal relationships and knowledge exchanges that solve problems before they occur or fester. Without well-developed relations at these three levels, the tacit knowledge of how things really get done, advance warnings of problems, and rapid conflict resolutions that maintain a joint outlook disappear. And people with occasional arm’s length confrontations may dominate the relationship, making costs and apparent difficulties soar. Champions of both parties need to consciously broadcast and amplify successes internally, or resistance-minded politics will escalate inevitable minor difficulties and relationship problems to crisis levels.” (Quinn, 1999, p. 19-20)</p> <p><i>Organisational culture:</i> “Merged cultures often end up borrowing aspects of both the client’s and the provider’s cultures. In several BPO relationships we studied, the partners went so far as to brand the provider’s delivery centers with the client’s company colors, logos and office layouts. For their part, clients recognized the special holidays and festivals in the</p>		
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<p>provider's culture." (Lacity and Willcocks, 2013, p. 67)</p> <p><i>Organisational similarity:</i> "To the extent that clients and outsourcing providers operate in different industries, their identities and knowledge-bases will differ. [...] In contrast, network structures that are based on informal, interaction-based identities will facilitate a shared identity that is independent of the formal identity of the individual firms." (Miranda and Kavan, 2005, p. 157)</p> <p><i>Project leadership competencies:</i> "Selecting the proper leaders is critical. In the high-performing BPO relationships we looked at, the leaders were experienced and capable and had high levels of credibility, clout and power within their own organizations. Effective leadership pairs enjoyed working together, which some research participants described as "chemistry."" (Lacity and Willcocks, 2013, p. 68)</p> <p><i>Project management capabilities:</i> "For instance, when a client is less experienced in managing innovative sourcing, the vendor and client may perceive greater value in simultaneously making credible commitments to foster joint action as well as specifying control rights to deal with uncertain innovation outcomes." (Susarla and Mukhopadhyay, 2019, p. 939)</p> <p><i>Provider client-specific domain knowledge development:</i> "The requirement is for the supplier to develop extensive knowledge of client business processes and to be able to contribute to discussions and subsequent action plans targeted at their improvement. This represents a conscious up-front investment of resources by the supplier, but one that may be easier to make if the client and supplier are working together in "fair returns" mode [...]." (Weeks and Feeny, 2008, p. 139)</p> <p><i>Provider innovation capability:</i> "Among such [external] sources, suppliers are recognized as having especially large innovation potential because they know what the companies — that is, their customers — are doing and need and also because mechanisms for knowledge transfer from supplier to customer are typically in place." (Henke and Zhang, 2010, p. 41)</p> <p><i>Regional norms:</i> "Though it is possible to quantify the travel costs resulting from long-</p>		
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<p>distance offshoring, it is much harder to quantify the costs of “cultural distance,” namely, the cost from misaligned cultures and language barriers. The problem is that these costs are often underestimated, if taken into account at all.” (Tadelis, 2007, p. 274)</p> <p><i>Solution-search strategy:</i> ““In relation to problem-solving, DOFs [differentiation-oriented firms] tend to focus on synthetic problem-solving processes (Nickerson, Silverman and Zenger, 2007). These processes generate inductive, exploratory syntheses in identifying novel client problems and solving them through novel resource combinations and integration. These firms thrive on ambiguity or less structured environments to develop innovation.” (Desyllas et al., 2018, p. 773)</p> <p><i>Temporal logic of development:</i> “Customers involve suppliers in various stages of their products’ life cycle — from the earliest, when suppliers may provide design suggestions or even be given complete responsibility for the design, engineering and development of the new product, to later stages, when suppliers may help commercialize the product and manage after-sale product quality. Involving suppliers in the product development process and using their skills and expertise in other, less formal, collaborative processes can reap great benefits for the customer. These benefits include shortened product development cycle times, lower costs and higher-quality end products.” (Henke and Zhang, 2010, p. 44)</p>		
<p><i>Business architecture standardisation and modularity:</i> “The distinction between autonomous and systemic innovation is fundamental to the choice of organizational design. When innovation is autonomous, the decentralized virtual organization can manage the development and commercialization tasks quite well. When innovation is systemic, members of a virtual organization are dependent on the other members, over whom they have no control. In either case, the wrong organizational choice can be costly.” (Chesbrough and Teece, 2002, p. 128)</p> <p><i>Deployment speed:</i> “Second, partner usage was found to inhibit firms’ adoption of e-commerce. While using partners may speed up the development process of simple applications, more sophisticated systems would involve integration with existing IT systems and business processes, coordination</p>	<p>Architectural coordination</p>	

<p>among different functional departments in the organization, and fundamental changes in organizational structure and process reengineering. Therefore, firms that are using outsourcing partners for IT applications are likely to be late adopters.” (Hong and Zhu, 2006, p. 216)</p> <p><i>Innovation integrability:</i> “In the past, developers supporting Toyota Motor North America’s consumer portal delivery group tended to create multiple new databases for the applications they created locally. In the new governance model, Toyota created an architecture team that defined key business capabilities, as well as both technology and data standards. By adhering to architectural standards, smaller suppliers can now build new functions and applications that are integrated with Toyota’s core infrastructure and data. The shared technology and data platforms offer a wider range of partnerships and accelerate the CPD [consumer portal delivery] group’s time to market.” (Su et al., 2016, p. 84-85)</p> <p><i>Provider IT capability development:</i> “A vendor’s management practices targeted at one outsourcing-related competency tend to strengthen the other competencies. For example, the effort an outsourcing vendor makes in developing its project management methods is likely to enhance the technical competencies of its primary personnel, as well as the client-service competencies. Such complementarities may not exist for outsourcing clients whose core business is often remotely related to IT outsourcing.” (Shi, 2007, p. 33)</p> <p><i>Retained function:</i> “Interestingly, reciprocal knowledge exchange and familiarity between the client and supplier are conditional to the client’s initial investment in learning about the supplier. In this regard, the client’s familiarity with the supplier would signal strong technological knowledge within the retained organization that would allow the client firm to properly assess the range of solutions that are suitable for its business challenges and that can be either developed or sourced by the supplier.” (Oshri et al., 2018, p. 213)</p> <p><i>User adoption behaviour:</i> “Outsourcing may endow a firm with new technology applications for its customers, but these should not be equated with better performance in the market. In fact, offering new technology applications</p>		
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<p>through outsourcing can be costly if customers do not adopt the new offerings. This may be the case if outsourcing results in technology applications that are little tailored to a firm's customers. As outsourcing increases, a firm's staff may push a new technology less to their customers because they do not feel involved in the technology's success. Hence, internal staff involvement is advisable when outsourcing for a new technology in order to ensure the building of integrative capabilities related to the technology and the application of firm-specific customer knowledge." (Weigelt, 2009, p. 611)</p>		
<p><i>Affected business areas:</i> "Nowadays, innovations in outsourcing partnerships are aimed to deliver strategic impact and expected to improve the firm's business performance. In the outsourcing context, strategic innovation is achieved when a supplier designs and implements a solution for a client that completely transforms the client's approach to develop products or deliver services [...]. Such transformation may take place at the operational and/or strategic level and can be in the form of a back-office transformation or by offering a new service to customers." (Kotlarsky et al., 2015, p. 251)</p> <p><i>Business continuity reassurance:</i> "Several BPO providers in our study felt pressure to innovate for clients based on fear of competition. Although the particular contract did not specify anything about the need to innovate, one service provider noted, "In my mind, if we don't innovate, at the time of contract renewal the client will take this business somewhere else if we can't prove that we are delivering value beyond transactions." Providers see innovations as a way to differentiate their services in a highly competitive market. As one said, "It is part of the value added that we bring. We are constantly challenging ourselves to step up our game to improve all the time and adding value to the client's business. In doing so, we are also creating some offerings that are very different than conventional BPO."" (Lacity and Willcocks, 2013, p. 66)</p> <p><i>Expectation fulfilment:</i> "No matter how clearly partners set expectations, define roles and specify outputs, there will be disputes. When that happens, executives often adopt a "we versus they" adversarial approach and prepare to defend their terrain. Many pull out the contract in order to beat the other side over the</p>	<p>Realisable business advantages</p>	<p>Outcomes</p>

<p>head with it. In addition, a "miracles syndrome" makes this tendency even worse: Whenever executives pay for a service - even when they openly acknowledge they could not manage that service themselves - they immediately develop unrealistic expectations about what the provider can accomplish. When miracles fail to materialize, executives' disappointment turns into recriminations, and the relationship slips into adversarial wrangling." (Linder, 2004, p. 57)</p> <p><i>Materialised innovation outputs:</i> "One example of strategic innovation is the development of a dashboard tool by the supplier for its client in order to allow executives to get real-time information about the state of the business." (Oshri et al., 2018, p. 204)</p> <p><i>Provider scope extension opportunities:</i> "On the other hand, it is possible that a supplier engaged in the development of a supply chain system under a time and materials contract will seek opportunities to extend the initial scope of the project by accepting the client's requests for additional functionality (Bajari and Tadelis, 2001), thus improving its project revenues (Gopal and Koka, 2012). The materialization of such opportunity to extend the scope of the strategic innovation project will be subject to the client's satisfaction with the already delivered components in terms of time, cost and quality (Gopal and Koka, 2012)." (Oshri et al., 2015, p. 206)</p> <p><i>Requirement-deployment lag:</i> "Furthermore, requirements may also change or evolve over time. The client's business domain contains large amounts of tacit knowledge that may not be adequately captured in the declarative knowledge elements traditionally used, such as a priori functional specifications." (Gopal and Gosain, 2010, p. 964)</p> <p><i>Tier ranking changes:</i> "The final piece of giving program managers from diverse business units a high level of autonomy in supplier selection for smaller projects was that program managers evangelized their success stories across the organization, promoting "their" successful suppliers among other business units. Through this distributed decision-making process, a portfolio of preferred suppliers emerged. The portfolio was regularly evaluated by the bank's sourcing-management office, which identified the top-performing suppliers across the company. The top suppliers were</p>		
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<p>then shortlisted in subsequent contracts. Over the years, some of these “new” suppliers were promoted to the list of key strategic partners.” (Su et al., 2016, p. 84)</p> <p><i>Usability:</i> “The quality and usability of software cannot be predicted in advance. Software can be “as per specification” and yet user unfriendly and clunky. The more the transition enables the provider to determine the outsourcer’s process, the better will be the quality and outcome of the provider’s output.” (Roy and Sivakumar, 2012, p. 521)</p>		
<p><i>Outcome measurement:</i> “An aerospace manufacturer worked with its BPO provider to add new key performance indicators and processes to manage third-party vendors. This allowed the client to improve customer-order fill rates for new parts from 60% to 85% and turnaround times for delivering parts to grounded vehicles from 21 hours to 17 hours.” (Lacity and Willcocks, 2013, p. 63)</p> <p><i>Relationship satisfaction:</i> “The results also reveal the curse of too much measurement in complex initiatives. The more the metrics measured, the more likely the shortfall in at least one of the parameters. Even a minor infraction is likely to have a psychological effect on client satisfaction—since the vendor is not meeting standards—and perhaps, also triggers penalty payments that hurt project profitability.” (Langer and Mani, 2018, p. 1023)</p>	Measuring value creation	
<p><i>Appropriable value:</i> “Learning and innovation are typically to a significant degree noncontractible.” (Leiponen, 2008, p. 1375)</p> <p><i>Formal appropriability mechanisms:</i> “First, we argue that although KIBS firms do not typically consider formal appropriability mechanisms (such as patents, copyrights and trademarks) to be central mechanisms for capturing value from innovation, they are however important for their innovation collaboration. We find a significant positive association between the importance of innovation collaboration and the importance of formal appropriability mechanisms in general.” (Miozzo et al., 2016, p. 1338)</p> <p><i>Informal appropriability mechanisms:</i> “Furthermore, since these service providers tend to be engaged in a close and often exploratory relationship with client firms, the ownership and division of IP rights can be unclear or subject to dispute (Den Hertog, 2000; Hagedoorn and Hesen, 2007). With the</p>	Knowledge leakage	

<p>organizational knowledge and skills that are critical to solution generation being socially embedded and closely intertwined with individual expertise (Jonsson and Foss, 2011), innovation taking place in DOFs may be better protected using informal mechanisms.” (Desyllas et al., 2018, p. 774-775)</p> <p><i>Regulatory and legal systems:</i> “The existing regulatory rules on outsourcing arrangements in financial services are based on assumptions built around large, stable, global IT infrastructures (e.g. SWIFT) and traditional business models universally shared and understood amongst industry participants. Technologies which circumvent these infrastructures and apply innovative new business models may create new risks not well understood by regulators, particularly where such firms fall outside the regulator’s jurisdiction.” (Gozman and Willcocks, 2019, p. 236)</p> <p><i>Replicability of development activities:</i> “Multi-client contracts held by the IT supplier firm also caused problems. In Case 1, UK, the supplier won a new contract with a firm in direct competition with its existing client, leading to fears among client managers of knowledge leakages and replication of IT systems that had delivered it a competitive edge.” (Miozzo and Grimshaw, 2005, p. 1433)</p>		
<p><i>Backsourcing:</i> “Chase had to reorganize twice, first for outsourcing and then for its reversal. Backsourcing called for reestablishment of IS systems, staff, and operating procedures that were jettisoned with outsourcing. The initial outsourcing impeded IS innovation and efficiency and left JP Morgan Chase with stagnated technology and backlogged IS projects.” (Veltri et al., 2008, p. 50)</p> <p><i>Client firm innovation capability lasting implications:</i> “Nonetheless, innovation requires long term commitment of IT resources, coordination, and alignment with other business activities. Relying on a third party for long term IT supports can be harmful to the firm’s innovativeness (e.g., Miozzo &amp; Grimshaw, 2005), which may even indicate that the firm is unlikely to show leaderships in innovations of its core business activities in the future.” (Lee and Kim, 2010, p. 856)</p> <p><i>Vertical integration as alternative to outsourcing:</i> “Notwithstanding the prior finding that relationships within and between firms are</p>	<p>Hollowing out concerns</p>	

<p>becoming more similar (e.g. Willcocks <i>et al.</i>, 2004), we empirically confirm that the extent of knowledge sharing is stronger in a captive than an external sourcing setting. Our study thus suggests that firm boundaries are still crucial when it comes to knowledge sharing, even in the case of captive settings where strong intra-organisational demarcations exist.” (Zimmermann et al., 2018, p. 94)</p>		
<p><i>Innovation replicability</i>: “Through its relationships with Global Bank’s program managers, this vendor won the bank’s business by providing an IT solution localized to the Indian financial services market. The solution was built during engagements with other clients, and its reuse helped improve the time to market for Global Bank.” (Levina and Su, 2008, p. 556)</p>	<p>Strategic innovation uniqueness</p>	

### APPENDIX III: Key references to 1<sup>st</sup>-order concepts

<b>Table 23:</b> 1 <sup>st</sup> order concepts, listed alphabetically with key references (Appendix III)	
<i>1<sup>st</sup> order concept</i>	<i>Key references</i>
Affected business areas	(Weeks and Feeny, 2008; Lacity <i>et al.</i> , 2011; Aubert <i>et al.</i> , 2015; Susarla and Mukhopadhyay, 2019)
Appropriable value	(Hoecht and Trott, 2006; Leiponen, 2008; Lacity and Willcocks, 2013; Miozzo <i>et al.</i> , 2016; Susarla and Mukhopadhyay, 2019)
Autonomy required for development	(Quinn, 1999; Aubert <i>et al.</i> , 2015; Sumo <i>et al.</i> , 2016; Bui <i>et al.</i> , 2019)
Backsourcing	(Tadelis, 2007; Veltri <i>et al.</i> , 2008; Gopalakrishnan and Zhang, 2019)
Business architecture standardisation and modularity	(Miozzo and Grimshaw, 2005; Shi, 2007; Krishnamurthy <i>et al.</i> , 2009; Qu <i>et al.</i> , 2010; Roy and Sivakumar, 2011; Aubert <i>et al.</i> , 2015; Su <i>et al.</i> , 2016)
Business continuity reassurance	(Henke and Zhang, 2010; Mani <i>et al.</i> , 2010; Gopalakrishnan and Zhang, 2019; Susarla and Mukhopadhyay, 2019)
Business orientation client firm	(Hoecht and Trott, 2006; Weeks and Feeny, 2008; Kibbeling <i>et al.</i> , 2013; Sumo <i>et al.</i> , 2016)
Business orientation service provider	(Arora <i>et al.</i> , 2001; Lee <i>et al.</i> , 2004; Massini and Miozzo, 2012; Kibbeling <i>et al.</i> , 2013; Manning, 2013; Kotlarsky <i>et al.</i> , 2015; Desyllas <i>et al.</i> , 2018; Manning <i>et al.</i> , 2018)
Business services industry commodification	(Davenport, 2005; Miozzo and Grimshaw, 2005; Manning, 2013; Manning <i>et al.</i> , 2018; Gozman and Willcocks, 2019)
Business services industry consolidation	(Shi, 2007)
Business services industry growth	(Miozzo and Grimshaw, 2005; Massini and Miozzo, 2012; Manning, 2013; Gozman and Willcocks, 2019)
Business services industry R&D intensity	(Arora <i>et al.</i> , 2001; Leiponen, 2008; Miozzo <i>et al.</i> , 2016)
Capability complementarity	(Miozzo and Grimshaw, 2005; Shi, 2007; Weeks and Feeny, 2008; Weigelt, 2013; Chou <i>et al.</i> , 2015; Susarla and Mukhopadhyay, 2019)
Client firm concern about capability exploitation	(Choudhury and Sabherwal, 2003)
Client firm concern about escalating costs	(Lacity and Willcocks, 2013)
Client firm domain knowledge absorptive capacity	(Weigelt and Sarkar, 2012; Chou <i>et al.</i> , 2015)
Client firm financial resources	(DiRomualdo and Gurbaxani, 1998)
Client firm innovation capability	(Quinn, 1999; Shi, 2007; Weigelt and Sarkar, 2012; Kibbeling <i>et al.</i> , 2013; Oshri <i>et al.</i> , 2018)
Client firm innovation capability lasting implications	(Miozzo and Grimshaw, 2005; Hoecht and Trott, 2006; Shi, 2007; Lee and Kim, 2010; Roy and Sivakumar, 2012; Choi <i>et al.</i> , 2018)
Client firm IT absorptive capacity	(Weigelt, 2009; Weigelt and Sarkar, 2012)
Client firm IT capabilities	(Currie and Willcocks, 1998; DiRomualdo and Gurbaxani, 1998; Miozzo and Grimshaw, 2005; Weeks and Feeny, 2008; Qu <i>et al.</i> , 2010; Oshri <i>et al.</i> , 2018)
Client firm management support	(Quinn, 1999; Miranda and Kavan, 2005; Levina and Su, 2008; Levina and Vaast, 2008; Weeks and Feeny, 2008;

	Handley and Benton, 2009; Mani <i>et al.</i> , 2010; L. P. Willcocks <i>et al.</i> , 2011; Aubert <i>et al.</i> , 2015)
Client firm marketplace turbulence	(Van de Ven, 2005; Hoecht and Trott, 2006; Veltri <i>et al.</i> , 2008; Weigelt and Sarkar, 2012; Su <i>et al.</i> , 2016)
Client firm organisational size	(Chesbrough and Teece, 2002; Hoecht and Trott, 2006; Qu <i>et al.</i> , 2010; Desyllas <i>et al.</i> , 2018; Manning <i>et al.</i> , 2018)
Client firm organisational structure	(Chesbrough and Teece, 2002; Miozzo and Grimshaw, 2005; Shi, 2007; Weigelt and Sarkar, 2012; Aubert <i>et al.</i> , 2015)
Client firm priority rank	(Choudhury and Sabherwal, 2003; Henke and Zhang, 2010; Willcocks <i>et al.</i> , 2011; Su <i>et al.</i> , 2016; Desyllas <i>et al.</i> , 2018)
Client firm rival competitiveness	(Hoecht and Trott, 2006; Tiwana, 2010; Kibbeling <i>et al.</i> , 2013)
Client firm rival innovation networks	(Chesbrough and Teece, 2002; Hoecht and Trott, 2006; Aubert <i>et al.</i> , 2015; Wiener <i>et al.</i> , 2019)
Client firm strategic planning openness	(Shi, 2007; Handley and Benton, 2009; Henke and Zhang, 2010; S�derberg <i>et al.</i> , 2013)
Commitment	(Kumar and Snavely, 2004; Miranda and Kavan, 2005; Goo <i>et al.</i> , 2008; Levina and Su, 2008; Handley and Benton, 2009; Henke and Zhang, 2010; S�derberg <i>et al.</i> , 2013; Barua and Mani, 2014; Chou <i>et al.</i> , 2015; Susarla and Mukhopadhyay, 2019)
Common understanding	(Miranda and Kavan, 2005; Van de Ven, 2005; Massini and Miozzo, 2012; Weigelt and Sarkar, 2012; Zimmermann <i>et al.</i> , 2018; Gopalakrishnan and Zhang, 2019)
Composed team diversity	(Linder <i>et al.</i> , 2003; Miranda and Kavan, 2005; Mani <i>et al.</i> , 2010; Willcocks <i>et al.</i> , 2011; Lacity and Willcocks, 2013; Barua and Mani, 2014; Su <i>et al.</i> , 2016)
Consultancy involvement	(Miozzo and Grimshaw, 2005; Oshri <i>et al.</i> , 2018)
Contingency planning clauses	(Argyres <i>et al.</i> , 2007; Goo and Huang, 2008; Goo <i>et al.</i> , 2008, 2009; Goo, 2010; Susarla <i>et al.</i> , 2010)
Contract duration	(Kumar and Snavely, 2004; Miozzo and Grimshaw, 2005; Hoecht and Trott, 2006; Lee and Kim, 2010; Susarla <i>et al.</i> , 2010; Chou <i>et al.</i> , 2015)
Contract penalties	(Goo <i>et al.</i> , 2009; Krishnamurthy <i>et al.</i> , 2009; Susarla <i>et al.</i> , 2010; Aubert <i>et al.</i> , 2015; Sumo <i>et al.</i> , 2016)
Contract tailoring	(Miozzo and Grimshaw, 2005; Miranda and Kavan, 2005; Krishnamurthy <i>et al.</i> , 2009; Roy and Sivakumar, 2011; Bui <i>et al.</i> , 2019)
Contract type	(Choudhury and Sabherwal, 2003; Kumar and Snavely, 2004; Miozzo and Grimshaw, 2005; Mani <i>et al.</i> , 2010; Holweg and Pil, 2012; Lacity and Willcocks, 2013; Barua and Mani, 2014; Mani and Barua, 2015; Oshri <i>et al.</i> , 2015; Sumo <i>et al.</i> , 2016; Bui <i>et al.</i> , 2019)
Contractual governance completeness	(Choudhury and Sabherwal, 2003; Miranda and Kavan, 2005; Hoecht and Trott, 2006; Argyres <i>et al.</i> , 2007; Shi, 2007; Weeks and Feeny, 2008; Handley and Benton, 2009; Susarla <i>et al.</i> , 2010; Mani <i>et al.</i> , 2010; Roy and Sivakumar, 2012; Aubert <i>et al.</i> , 2015; Sumo <i>et al.</i> , 2016; Langer and Mani, 2018; Bui <i>et al.</i> , 2019; Frydinger <i>et al.</i> , 2019)
Contractual innovation plan	(Goo and Huang, 2008; Goo <i>et al.</i> , 2008, 2009; Krishnamurthy <i>et al.</i> , 2009; Goo, 2010; Lacity and Willcocks, 2013; Kotlarsky <i>et al.</i> , 2015)
Dedicated iterative collaboration support	(Miranda and Kavan, 2005; Safizadeh <i>et al.</i> , 2008; Mani <i>et al.</i> , 2010; Susarla <i>et al.</i> , 2010; Lacity and Willcocks, 2013;

	Aubert <i>et al.</i> , 2015; Frydinger <i>et al.</i> , 2019; Gopalakrishnan and Zhang, 2019; Susarla and Mukhopadhyay, 2019)
Degree of formalisation of development activities	(Goo and Huang, 2008; Goo <i>et al.</i> , 2008, 2009; Goo, 2010; Mani <i>et al.</i> , 2010; Mani and Barua, 2015)
Degree of standardisation of development activities	(Choudhury and Sabherwal, 2003; Gopal and Gosain, 2010; Mani <i>et al.</i> , 2010; Roy and Sivakumar, 2011; Weigelt and Sarkar, 2012)
Deployment speed	(Hong and Zhu, 2006; Gozman and Willcocks, 2019)
Development process phases	(Miozzo and Grimshaw, 2005; Roy and Sivakumar, 2012; Aubert <i>et al.</i> , 2015)
Dynamic adaptation to business requirements turbulence	(Miozzo and Grimshaw, 2005; Hoecht and Trott, 2006; Henke and Zhang, 2010; Weigelt and Sarkar, 2012; Chou <i>et al.</i> , 2015; Su <i>et al.</i> , 2016; Oshri <i>et al.</i> , 2018)
Evolved backing for initiatives	(Weeks and Feeny, 2008; Qu <i>et al.</i> , 2010; S��derberg <i>et al.</i> , 2013)
Expectation fulfilment	(Hoecht and Trott, 2006; Hong and Zhu, 2006; Roy and Sivakumar, 2012; Su <i>et al.</i> , 2016)
Exploration and experimentation activities	(Linder, 2004; Miranda and Kavan, 2005; Hoecht and Trott, 2006; Weigelt and Sarkar, 2012; Wiener <i>et al.</i> , 2019)
Extendibility clauses	(Susarla <i>et al.</i> , 2010)
Extent of risk willing to take	(Hoecht and Trott, 2006; Roy and Sivakumar, 2012; Aubert <i>et al.</i> , 2015; Sumo <i>et al.</i> , 2016; Manning <i>et al.</i> , 2018)
Failure tolerance	(Henke and Zhang, 2010; Roy and Sivakumar, 2012; Gopalakrishnan and Zhang, 2019)
Financial incentive clauses	(Kern <i>et al.</i> , 2002; Hoecht and Trott, 2006; Weeks and Feeny, 2008; Goo <i>et al.</i> , 2009; Krishnamurthy <i>et al.</i> , 2009; Lacity and Willcocks, 2013; Sumo <i>et al.</i> , 2016)
Flexibility required for development	(Argyres <i>et al.</i> , 2007; Tiwana, 2010; Aubert <i>et al.</i> , 2015; Su <i>et al.</i> , 2016; Oshri <i>et al.</i> , 2018; Bui <i>et al.</i> , 2019)
Formal appropriability mechanisms	(Hoecht and Trott, 2006; Leiponen, 2008; Susarla <i>et al.</i> , 2010; Roy and Sivakumar, 2012; Miozzo <i>et al.</i> , 2016; Desyllas <i>et al.</i> , 2018; Susarla and Mukhopadhyay, 2019)
Formal employee training	(Henke and Zhang, 2010; Su <i>et al.</i> , 2016; Chatterjee, 2017)
Geographical distance	(Massini and Miozzo, 2012; Roy and Sivakumar, 2012; Manning, 2013; Choi <i>et al.</i> , 2018; Langer and Mani, 2018; Chen and Lin, 2019)
Governance complementarity	(Mani <i>et al.</i> , 2010; Tiwana, 2010; Oshri <i>et al.</i> , 2015; Bui <i>et al.</i> , 2019; Susarla and Mukhopadhyay, 2019)
Industry attractiveness for IT specialists	(Quinn, 1999; Kedia and Lahiri, 2007; Lacity and Willcocks, 2013; Mukherjee <i>et al.</i> , 2013; Miozzo <i>et al.</i> , 2016)
Informal appropriability mechanisms	(Miozzo <i>et al.</i> , 2016; Desyllas <i>et al.</i> , 2018)
Innovation criticality	(Currie and Willcocks, 1998; Choudhury and Sabherwal, 2003; Krishnamurthy <i>et al.</i> , 2009; Qu <i>et al.</i> , 2010)
Innovation customisation	(Arora <i>et al.</i> , 2001; Kedia and Lahiri, 2007; Shi, 2007; Weigelt, 2009; Su and Levina, 2011; Chou <i>et al.</i> , 2015; Lema <i>et al.</i> , 2015; Chatterjee, 2017; Desyllas <i>et al.</i> , 2018)
Innovation development coordination	(Kumar and Snavely, 2004; Miranda and Kavan, 2005; Weigelt and Sarkar, 2012; Manning, 2013; S��derberg <i>et al.</i> , 2013; Barua and Mani, 2014; Sumo <i>et al.</i> , 2016; Chen and Lin, 2019; Susarla and Mukhopadhyay, 2019)
Innovation integrability	(Hong and Zhu, 2006; Shi, 2007; Weigelt, 2009; L. P. Willcocks <i>et al.</i> , 2011; Cordella and Willcocks, 2012; Aubert <i>et al.</i> , 2015; Chatterjee, 2017)

Innovation novelty	(Chesbrough and Teece, 2002; Shi, 2007; Roy and Sivakumar, 2011; Weigelt and Sarkar, 2012; Desyllas <i>et al.</i> , 2018)
Innovation perishability	(Gopalakrishnan and Zhang, 2019)
Innovation predictability	(Miranda and Kavan, 2005; Hoecht and Trott, 2006; Barua and Mani, 2014; Aubert <i>et al.</i> , 2015; Kotlarsky <i>et al.</i> , 2015; Susarla and Mukhopadhyay, 2019)
Innovation replicability	(Desyllas <i>et al.</i> , 2018)
Innovation tangibility	(Miozzo and Grimshaw, 2005; Massini and Miozzo, 2012; Gopalakrishnan and Zhang, 2019)
Innovation task controllability	(Aubert <i>et al.</i> , 2015)
Innovation task embeddedness	(Roy and Sivakumar, 2012; Manning, 2013)
Innovation task separability	(Safizadeh <i>et al.</i> , 2008; Mani <i>et al.</i> , 2010; Weigelt and Sarkar, 2012)
Innovation task variability	(Susarla <i>et al.</i> , 2010; Willcocks <i>et al.</i> , 2011; Barua and Mani, 2014; Mani and Barua, 2015; Miozzo <i>et al.</i> , 2016; Desyllas <i>et al.</i> , 2018)
Instructive process elements	(Choudhury and Sabherwal, 2003; Argyres <i>et al.</i> , 2007; Tiwana, 2010; Aubert <i>et al.</i> , 2015; Chou <i>et al.</i> , 2015; Cram <i>et al.</i> , 2016; Wiener <i>et al.</i> , 2016; Susarla and Mukhopadhyay, 2019)
Interpersonal interaction opportunities	(Choudhury and Sabherwal, 2003; Linder <i>et al.</i> , 2003; Kumar and Snavely, 2004; Krishnamurthy <i>et al.</i> , 2009; Gopal and Gosain, 2010; Massini and Miozzo, 2012; S�derberg <i>et al.</i> , 2013; Lacity and Willcocks, 2013; Aubert <i>et al.</i> , 2015; Oshri <i>et al.</i> , 2018; Gopalakrishnan and Zhang, 2019)
IT turbulence	(Miozzo and Grimshaw, 2005; Argyres <i>et al.</i> , 2007; Weigelt, 2009, 2013; Lee and Kim, 2010; Weigelt and Sarkar, 2012; Kibbeling <i>et al.</i> , 2013; Su <i>et al.</i> , 2016; Susarla and Mukhopadhyay, 2019; Wiener <i>et al.</i> , 2019)
Knowledge concentration	(Hoecht and Trott, 2006; Weigelt, 2009; Gopal and Gosain, 2010; Henke and Zhang, 2010; Weigelt and Sarkar, 2012)
Knowledge protection concerns	(Miozzo and Grimshaw, 2005; Hoecht and Trott, 2006; Handley and Benton, 2009; Roy and Sivakumar, 2012; Miozzo <i>et al.</i> , 2016)
Materialised innovation outputs	(Choudhury and Sabherwal, 2003; Hong and Zhu, 2006; Weeks and Feeny, 2008; Qu <i>et al.</i> , 2010; Lacity and Willcocks, 2013; Oshri <i>et al.</i> , 2015, 2018; Gozman and Willcocks, 2019; Susarla and Mukhopadhyay, 2019; Wiener <i>et al.</i> , 2019)
Mid-initiative partner switching	(Miranda and Kavan, 2005; Veltri <i>et al.</i> , 2008; Lee and Kim, 2010; Chou <i>et al.</i> , 2015; Manning <i>et al.</i> , 2018; Gopalakrishnan and Zhang, 2019; Susarla and Mukhopadhyay, 2019)
Monitoring intensity	(Kumar and Snavely, 2004; Miozzo and Grimshaw, 2005; Shi, 2007; Weeks and Feeny, 2008; Lahiri and Kedia, 2009; Lee and Kim, 2010; Roy and Sivakumar, 2012; Lacity and Willcocks, 2013; Aubert <i>et al.</i> , 2015; Sumo <i>et al.</i> , 2016; Langer and Mani, 2018; Wiener <i>et al.</i> , 2019)
Need identification	(Choudhury and Sabherwal, 2003; Weeks and Feeny, 2008; Gopal and Gosain, 2010; Weigelt and Sarkar, 2012; Susarla and Mukhopadhyay, 2019)

Operational dependency	(Shi, 2007; Henke and Zhang, 2010; Cordella and Willcocks, 2012; Bui <i>et al.</i> , 2019; Gozman and Willcocks, 2019)
Organisational culture	(Hong and Zhu, 2006; Aubert <i>et al.</i> , 2015)
Organisational familiarity	(Choudhury and Sabherwal, 2003; Argyres <i>et al.</i> , 2007; Weeks and Feeny, 2008; Mani and Barua, 2015; Sumo <i>et al.</i> , 2016; Oshri <i>et al.</i> , 2018; Susarla and Mukhopadhyay, 2019)
Organisational similarity	(Linder <i>et al.</i> , 2003; Kedia and Lahiri, 2007; Gopal and Gosain, 2010; Lee and Kim, 2010; Lacity and Willcocks, 2013; Oshri <i>et al.</i> , 2018)
Outcome control mechanisms	(Choudhury and Sabherwal, 2003; Gopal and Gosain, 2010; Tiwana, 2010; Roy and Sivakumar, 2011; Aubert <i>et al.</i> , 2015; Wiener <i>et al.</i> , 2016; Langer and Mani, 2018)
Outcome measurement	(Quinn, 1999; Linder <i>et al.</i> , 2003; Goo and Huang, 2008; Goo <i>et al.</i> , 2009; Goo, 2010; Miozzo <i>et al.</i> , 2016; Langer and Mani, 2018)
Outsourcing intent evolvment	(DiRomualdo and Gurbaxani, 1998; Weeks and Feeny, 2008; Levina and Su, 2008; Lacity and Willcocks, 2013, 2017; S��derberg <i>et al.</i> , 2013; Aubert <i>et al.</i> , 2015; Kotlarsky <i>et al.</i> , 2015; Oshri <i>et al.</i> , 2015, 2018; Langer and Mani, 2018; Susarla and Mukhopadhyay, 2019)
Outsourcing intent harmony	(Miozzo and Grimshaw, 2005; Aubert <i>et al.</i> , 2015; Kotlarsky <i>et al.</i> , 2015; Su <i>et al.</i> , 2016)
Outsourcing intent multiplicity	(DiRomualdo and Gurbaxani, 1998; Henke and Zhang, 2010; Mani <i>et al.</i> , 2010; Susarla <i>et al.</i> , 2010; Aubert <i>et al.</i> , 2015; Mani and Barua, 2015; Sumo <i>et al.</i> , 2016; Langer and Mani, 2018)
Perceived role of the contract	(Feeny and Willcocks, 1998; Hoecht and Trott, 2006; Argyres <i>et al.</i> , 2007; Susarla and Mukhopadhyay, 2019)
Problem structure	(Weigelt and Sarkar, 2012; Barua and Mani, 2014)
Project leadership competencies	(Choudhury and Sabherwal, 2003; Kumar and Snavelly, 2004; Lacity and Willcocks, 2013; Aubert <i>et al.</i> , 2015; Oshri <i>et al.</i> , 2018)
Project management capabilities	(DiRomualdo and Gurbaxani, 1998; Quinn, 1999; Miozzo and Grimshaw, 2005; Hoecht and Trott, 2006; Weigelt and Sarkar, 2012; Kibbeling <i>et al.</i> , 2013; Chou <i>et al.</i> , 2015; Mani and Barua, 2015; Susarla and Mukhopadhyay, 2019)
Provider concerns about reduced revenue	(Henke and Zhang, 2010; Lacity and Willcocks, 2013; Oshri <i>et al.</i> , 2015)
Provider concerns about sunk costs due to IT development specificity	(Cordella and Willcocks, 2012)
Provider domain knowledge absorptive capacity	(Arora <i>et al.</i> , 2001; Kedia and Lahiri, 2007; Weeks and Feeny, 2008; Gopal and Gosain, 2010; Mukherjee <i>et al.</i> , 2013; S��derberg <i>et al.</i> , 2013; Chou <i>et al.</i> , 2015; Chatterjee, 2017; Oshri <i>et al.</i> , 2018)
Provider client firm-specific domain knowledge development	(DiRomualdo and Gurbaxani, 1998; Linder <i>et al.</i> , 2003; Argyres <i>et al.</i> , 2007; Shi, 2007; Weeks and Feeny, 2008; Roy and Sivakumar, 2012; Weigelt, 2013; S��derberg <i>et al.</i> , 2013; Chatterjee, 2017; Desyllas <i>et al.</i> , 2018; Oshri <i>et al.</i> , 2018)
Provider innovation capability	(Shi, 2007; Leiponen, 2008; Veltri <i>et al.</i> , 2008; Mani <i>et al.</i> , 2010; Lema <i>et al.</i> , 2015; Desyllas <i>et al.</i> , 2018; Gopalakrishnan and Zhang, 2019)

Provider IT capabilities	(Choudhury and Sabherwal, 2003; Levina and Ross, 2003; Davenport, 2005; Shi, 2007; Lema <i>et al.</i> , 2015; Su <i>et al.</i> , 2016; Chatterjee, 2017)
Provider IT capability development	(Arora <i>et al.</i> , 2001; Levina and Ross, 2003; Shi, 2007; Chatterjee, 2017)
Provider organisational size	(Arora <i>et al.</i> , 2001; Su <i>et al.</i> , 2016; Sumo <i>et al.</i> , 2016; Gopalakrishnan and Zhang, 2019)
Provider scope extension opportunities	(Susarla <i>et al.</i> , 2010; Willcocks <i>et al.</i> , 2011; Oshri <i>et al.</i> , 2015; Gopalakrishnan and Zhang, 2017; Manning <i>et al.</i> , 2018)
Provider strategic loyalty	(Hoecht and Trott, 2006; Lacity and Willcocks, 2013; Aubert <i>et al.</i> , 2015; Chou <i>et al.</i> , 2015; Su <i>et al.</i> , 2016; Gopalakrishnan and Zhang, 2019; Susarla and Mukhopadhyay, 2019)
Provider tiering/ranking	(Quinn, 1999; Wiener and Saunders, 2014; Su <i>et al.</i> , 2016)
Provider winner's curse	(Veltri <i>et al.</i> , 2008; Weeks and Feeny, 2008; Lacity and Willcocks, 2017)
Proximity to the core	(Hoecht and Trott, 2006; Shi, 2007; Straub <i>et al.</i> , 2008; Weeks and Feeny, 2008; Roy and Sivakumar, 2012; Aubert <i>et al.</i> , 2015)
Regional norms	(Lee <i>et al.</i> , 2004; Kedia and Lahiri, 2007; Tadelis, 2007; Levina and Vaast, 2008; Lee and Kim, 2010; S��derberg <i>et al.</i> , 2013)
Regulatory and legal systems	(Arora <i>et al.</i> , 2001; Tadelis, 2007; Avgerou, 2008; Massini and Miozzo, 2012; Manning, 2013; Choi <i>et al.</i> , 2018; Gozman and Willcocks, 2019)
Relationship satisfaction	(Mani <i>et al.</i> , 2010; Chou <i>et al.</i> , 2015; Langer and Mani, 2018; Gopalakrishnan and Zhang, 2019)
Relationship style	(Chesbrough and Teece, 2002; Kumar and Snavely, 2004; Miranda and Kavan, 2005; Tadelis, 2007; Kedia and Lahiri, 2007; Handley and Benton, 2009; Susarla <i>et al.</i> , 2010; Mani <i>et al.</i> , 2010; Su and Levina, 2011; S��derberg <i>et al.</i> , 2013; Su <i>et al.</i> , 2016; Wiener <i>et al.</i> , 2016, 2019; Bui <i>et al.</i> , 2019; Susarla and Mukhopadhyay, 2019; Frydinger <i>et al.</i> , 2019)
Replicability of development activities	(Miranda and Kavan, 2005; Weigelt and Sarkar, 2012; Barua and Mani, 2014; Mani and Barua, 2015; Desyllas <i>et al.</i> , 2018)
Requirement-deployment lag	(Gopal and Gosain, 2010; Cordella and Willcocks, 2012)
Retained function	(Currie and Willcocks, 1998; DiRomualdo and Gurbaxani, 1998; Feeny and Willcocks, 1998; Quinn, 1999; Miozzo and Grimshaw, 2005; Hoecht and Trott, 2006; Shi, 2007; Weeks and Feeny, 2008)
Solution-search strategy	(Miranda and Kavan, 2005; Weigelt and Sarkar, 2012; Barua and Mani, 2014; Desyllas <i>et al.</i> , 2018)
Supply base breadth	(Currie and Willcocks, 1998; Miozzo and Grimshaw, 2005; Miranda and Kavan, 2005; Shi, 2007; Levina and Su, 2008; Levina and Vaast, 2008; Weeks and Feeny, 2008; Su and Levina, 2011; Su <i>et al.</i> , 2016; Bui <i>et al.</i> , 2019)
Supply base configuration concepts	(Krishnamurthy <i>et al.</i> , 2009; Su and Levina, 2011; Holweg and Pil, 2012; Su <i>et al.</i> , 2016; Bui <i>et al.</i> , 2019)
Temporal logic of development	(Choudhury and Sabherwal, 2003; Miozzo and Grimshaw, 2005; Hong and Zhu, 2006)
Tier ranking changes	(Su <i>et al.</i> , 2016)
Trust – behaviour-related and competency-related	(Hoecht and Trott, 2006; Goo and Huang, 2008; Weeks and Feeny, 2008; Goo <i>et al.</i> , 2009; Henke and Zhang, 2010;

	Roy and Sivakumar, 2011; Chou <i>et al.</i> , 2015; Zimmermann <i>et al.</i> , 2018; Bui <i>et al.</i> , 2019; Wiener <i>et al.</i> , 2019)
Usability	(Hoecht and Trott, 2006; Roy and Sivakumar, 2012; Chatterjee, 2017)
User adoption behaviour	(Hong and Zhu, 2006)
Willingness to innovate	(Kumar and Snavely, 2004; Safizadeh <i>et al.</i> , 2008; Lahiri and Kedia, 2009; Kibbeling <i>et al.</i> , 2013; Lacity and Willcocks, 2013; Wiener and Saunders, 2014)
Vertical integration as alternative to outsourcing	(Miozzo and Grimshaw, 2005; Van de Ven, 2005; Safizadeh <i>et al.</i> , 2008; Straub <i>et al.</i> , 2008; Weigelt, 2009)

## APPENDIX IV: Empirical study client perspective – data structure

<b>Table 24:</b> Care hospital dataset data structure (Appendix IV)		
<b>1<sup>st</sup> order concepts with exemplary quotations</b>	<b>2<sup>nd</sup> order themes</b>	<b>Aggregate dimensions</b>
<p><i>Outdated functions overhaul:</i> “The system that we had was simply already outdated. And I think that the needs were different. To tailor this to those employees who have difficulties with the working language. But also that you simply do not have to write as much, but rather click and select. So there is that need that everything should run faster.” (Care consultant 1; eNDS initiative)</p> <p><i>Resident entertainment:</i> “He [robot] should also simply entertain, by asking funny questions or play music, or share a quote of the day.” (Executive-level manager 1; robot initiative)</p> <p><i>Safety improvement:</i> “Or also concerning the topic safety. When such a robot can be helpful and check the building to see whether a person wanders around somewhere where they do not belong, or whether someone lies in a hard-to-reach area.” (Executive-level manager 1; robot initiative)</p> <p><i>Therapeutic support:</i> “One can then initiate a dialogue in a therapeutic or care setting. So to view a picture of a village or stand in the village square. And then tell the therapist or carer how this place used to look like.” (Executive-level manager 3; VR initiative)</p> <p><i>User friendliness improvement:</i> “The old [eNDS] did not work out for some employees or was simply difficult to understand. Because of the mother tongue and the formulations for other colleagues, or the authorities that would control this.” (Head nurse 1; eNDS initiative)</p>	Expected business impact	Project-level, content-based influences
<p><i>All-in-one application:</i> “Care is completely integrated [in the eNDS], medicine is completely integrated and therapy is completely integrated. And we also have the billing system integrated.” (Executive-level manager 2)</p> <p><i>Information on demand:</i> “He [robot] also had a tablet mounted on his back. There you could play games and retrieve information.” (Executive-level manager 3; robot initiative)</p>	Appropriateness of features	

<p><i>List-based item selection:</i> “The difference to the other [old eNDS] is that you used to write a lot, formulate a lot. And one had to develop coherent sentences and there were not many suggestions. In the new [eNDS] everything is already given. This means, when I have worked on the diagnostics of a resident, it is fairly easy for me to simply tick this off and add it in the system.” (Head nurse 1; eNDS initiative)</p> <p><i>Nordic Walking group leader:</i> “We also had a resident group that would walk with two therapists around the building, so a Nordic Walking group for people with dementia. They would simply go for a walk on the ground floor. One area of application of the robot was to lead this group while playing songs from their childhood or which they might like.” (Research subsidiary project manager; robot initiative)</p> <p><i>Customised nursing classification system:</i> “The problem there [old eNDS] however is that I have care diagnoses for all settings included. And they were all included in our previous system. I then had to really single out which care diagnosis I needed to even start. And then of course I needed the many individual elements, what do I need, what don’t I need. Naturally, there were many things which we did not require.” (Care consultant 1; eNDS initiative)</p> <p><i>Point-of-interest navigation system:</i> “The idea was that the person could maybe not read street signs and does not know in which area she finds herself in, in which district. And rather to use points of interest, such as supermarkets, tobacconists, landmarks, and so on and so forth.” (Research subsidiary project manager; compass initiative)</p> <p><i>Virtual excursions:</i> “The ward managers wanted to organise more frequent excursions to museums with the residents. So this would be well received and one could more or less avoid the hassle of going to the museum, in terms of weather, trams. These dependencies could be reduced.” (Research subsidiary project manager; VR initiative)</p>		
<p><i>Contract completeness:</i> “When something does not work as expected, then we simply talk about it, and we find a solution. But this is not the case with other providers with whom we have little prior experience. This approach does not work in such cases. Here, formal</p>	<p>Formal project structure</p>	

<p>specifications are very important.” (eNDS relationship manager 1)</p> <p><i>Financial incentive clauses:</i> “This is of little importance. It is simply an order. This is how the [eNDS provider] makes business. The hourly rates are agreed on. 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.” (eNDS relationship manager 1)</p> <p><i>Fixed initiative budget allocation:</i> “We cannot offer any financial incentives, none. Rather, there is a call, for instance from the [public research funding organisation]. There will be a project about a certain topic. This for instance is called [project name] open for submissions. Target group 60 plus suffering from dementia. And the subsidy amount is for example 300,000 euros. [...] And this will then be distributed among the project partners.” (Executive-level manager 3)</p> <p><i>Single and multiple supply base configuration concepts:</i> “One has all kinds of options of how to configure this [supply base]. But when previous cooperations worked well then we do try to set up new projects with these known partners.” (Executive-level manager 3)</p> <p><i>Supply base breadth:</i> “I think there were nine partners. It was a really big project running over the course of four years.” (Research subsidiary project manager; robot initiative)</p>		
<p><i>Cognitive distance:</i> “It is relatively unproblematic with the [eNDS provider]. Simply, because we have been collaborating for such a long time already. And we have developed so many things together, that we already know what is meant and needed.” (eNDS relationship manager 1)</p> <p><i>Informal project role:</i> “The [eNDS provider] actually also views us continuously as a development partner. They also know that we have deep know-how concerning development, usability and so on, and I think that they consciously leverage this.” (eNDS relationship manager 1)</p>	<p>Relationship management</p>	

<p><i>Interpersonal interaction opportunities:</i> “We try to schedule meetings at different locations. So sometimes here and sometimes at the project partner’s offices. And yes, this is of course connected to the idea that one can say: “okay, get know our care hospital.” Sometimes to a greater extent, sometimes to a lesser. But it is definitely important to gain a clear impression of the potential users.” (Executive-level manager 3)</p> <p><i>Monitoring intensity:</i> “There were indeed issues in the [compass initiative] with the involved IT providers. Because they also had to develop outputs, but they did not prioritise the project. There, more concrete demands from the [project leader] may have been necessary.” (Research subsidiary project manager)</p> <p><i>Relationship quality:</i> “We had a very good cooperation with the [project leader], which was the lead. They also regularly updated us, like: “hello, here is the next paper or the next deliverable or report to be completed. If you have questions.” So definitely very good communication. And also very good support. When something had to be done with the robot, or an update, or issues, then they were always available.” (Research subsidiary project manager)</p> <p><i>Relationship style:</i> “And this was the first time for the team of the [project leader] that they organised such a project with such a constellation. It was nice, we could work well with them, but it was more laissez-faire, approached in a relaxed manner.” (Research subsidiary project manager; compass initiative)</p> <p><i>Self-management:</i> “They did not tell you what specific tasks you must do, but they knew how to lead the project.” (Research subsidiary project manager; robot initiative)</p> <p><i>Trust:</i> “We also have established a relationship of trust.” (eNDS relationship manager 1)</p>		
<p><i>Internal domain knowledge base:</i> “We have a very clear picture of what is feasible, what is useful, what is not feasible and what is not useful.” (Executive-level manager 3)</p> <p><i>Internal IT knowledge base:</i> “We cannot do anything technical. We rely on professional</p>	Strategic innovation resource availability	

<p>developers for programming.” (Executive-level manager 3)</p> <p><i>Partner domain knowledge base:</i> “They [eNDS provider] now also have employees with a nursing background, who bring a care-oriented focus with them. So not only coding. I noticed this recently. There was someone in a meeting who really had a nursing background.” (Care consultant 4)</p> <p><i>Partner IT knowledge base:</i> “One selects potential project partners where one believes that they are able from a technical standpoint, but also with regards to being able to collaborate.” (Executive-level manager 3)</p> <p><i>Retained IT function:</i> “Developers have a particular idea of how the end result should look like. But this is for practice, for us, not suitable. It helps a lot to have someone [internal] who can understand their jargon and translate it.” (Quality manager)</p>		
<p><i>Concept design:</i> “Here we already know what we want to develop. The question is mainly about how this should look like.” (Research subsidiary project manager; VR initiative)</p> <p><i>Content development:</i> “The [eNDS provider] provides us with the boundary conditions. So the layout possibilities, links, and so on, for the anamnesis. And the [care hospital] provides the content, by saying: “we want to query this and that in the anamnesis, with these particular values. And we want to link these with that. We want the automatic generation of a care diagnosis when this is entered.” And so on. This means that this is extensively customised to the [care hospital]. How the anamnesis looks like. And the [eNDS provider] provides the technical boundary conditions.” (eNDS relationship manager 1)</p> <p><i>Employee training course requirement:</i> “We of course also had training courses. There were training courses tailored to this particular [eNDS] initiative. I think we organised three courses. All registered nurses were more or less required to take these.” (Care consultant 1)</p> <p><i>Needs identification uncertainty:</i> “There can be needs which are not mentioned by our users, because they are not aware that these are important. But which exist in parallel. And when these are changed, then other areas</p>	<p>Strategic innovation task demands</p>	

<p>can be impacted. Or they may want something completely different to what they initially said, because you tend to speak different languages in such contexts.” (eNDS relationship manager 1)</p> <p><i>Proactive user participation:</i> “Based on my experience, user involvement during development activities is paramount. Because it is of little benefit when the IT specialist develops a programme who has little knowledge of day-to-day care activities.” (Executive-level manager 1)</p> <p><i>Prototype testing:</i> “The practicality and usability is tested and market readiness, or in other words, which obstacles in terms of adoption, understanding, and so on.” (Executive-level manager 2)</p>		
<p><i>Conflicting intents:</i> “There were different members which effectively did the same work and were almost in competition with each other.” (Executive-level manager 3)</p> <p><i>Mid-initiative partner switching difficulties:</i> “We actually do not really have an option to switch partner. We could of course say: “okay, we do not want to use this [eNDS] any longer.” The consequences however would be nearly impossible to estimate. We would have to introduce a different software solution. We would have to completely start from scratch, from the creation of a specification sheet, requests for information, we would then have to implement this. For such a project, once a decision has been made, this would take at least two years in which we would have no or no maintained software.” (eNDS relationship manager 1)</p> <p><i>Opaque intents:</i> “The other service provider, they had a smartwatch which they were keen to promote. But this was not really part of the [compass] initiative. We then said: “okay, maybe the smartwatch alternative could work.” They then introduced it, before deciding to call it off. So really different intents in terms of implementation.” (Research subsidiary project manager)</p> <p><i>Project leadership competencies:</i> “The project leadership [was a key success factor]. There were people where you saw that they knew in which direction the project should go. They were aware of the next steps, and the steps after those.” (Research subsidiary project manager, robot initiative)</p>	<p>Intent alignment</p>	

<p><i>Strategic awareness:</i> “There was a high willingness from the [eNDS provider], after they realised that they needed to make more advancements here. So this was an initiative for the [eNDS provider] which was not simply about introducing something to us, but they considered it as a development initiative that could enable them to develop a market-ready solution and then use it to acquire new clients.” (eNDS relationship manager 1)</p>		
<p><i>Digital strategy in progress:</i> “It has already been announced that we are currently in the process of planning this [digital strategy]. But it is still in its infancy.” (Executive-level manager 1)</p> <p><i>Digitalisation without prioritisation:</i> “We are somewhat limited [with regard to digitalisation], naturally because we are primarily care-oriented. Hence, for us, it is mainly about getting quicker access to data, not having to document care activities as extensively in multiple systems but rather centrally.” (Executive-level manager 1)</p> <p><i>Early adopter discouragement:</i> “We monitor these developments, but we are not early adopters. We here at the [care hospital] do not necessarily aim to be a first mover, so to say, in these [digital] technologies.” (Executive-level manager 2)</p> <p><i>Employee development opportunities:</i> “I have to say that development is highly valued here at the [care hospital]. This continuous development, not only in the area of digitalisation, but also in the care domain. This is strongly encouraged and supported.” (Care consultant 3)</p> <p><i>Geriatrics as strategic core:</i> “The core mission here at the [care hospital] is to provide support for chronically ill people.” (Executive-level manager 3)</p> <p><i>Long-term care excellency and leadership:</i> “When we say that we want to be a leader in long-term care, then we need to evaluate how we can achieve this. And this [observed strategic innovation initiatives] can be away. This is also a way which make a lot of sense, subjectively. It offers genuine benefits for the residents, enabled by technology.” (Quality manager)</p>	Strategic orientation	Internal organisational context-based influences

<p><i>Progressive corporate reputation:</i> “We work in the areas of digitalisation and also have this VR initiative. So here our organisation is really very innovative. I view this in a very positive light. This was also a reason why I came here. Because I have the impression, that we want to advance the field, to develop something. And also to collaborate with scientific research. I do not think that this is the case in other long-term care institutions.” (Care consultant 3)</p> <p><i>Research excellency in long-term care areas:</i> “One should think a bit about the future. And that is why I consider all developments in the direction of gerontological research as positive.” (Head nurse 1)</p> <p><i>Resident well-being priority:</i> “For us, we primarily concentrate on resident well-being.” (Executive-level manager 1)</p>		
<p><i>Anamnesis checks:</i> “We also changed our anamnesis in this context [eNDS initiative]. Because this used to be a mere Word document, saved as a Word file. And now we have this linked to the care process, to the care diagnoses. This was an important step, that we have the care anamnesis in digital form.” (Care consultant 4)</p> <p><i>Care planning:</i> “We created multiple subsections. These for example included personal hygiene, excretion, dressing and undressing, eating, drinking. These are derived from the twelve activities of daily living.” (Head nurse 1)</p> <p><i>Educational programmes:</i> “Especially for nursing jobs, but also concerning the medical area, there is always a lot of new knowledge emerging. Once we complete an education programme, we are still required to permanently continue our training.” (Executive-level manager 1)</p> <p><i>Human-centred activities:</i> “The very core activities, supporting older people in managing their everyday life, they cannot get that from smartphones. And for care staff it can be helpful if these activities are facilitated in the background. But holding hands when someone passes away, taking away the fear and frustration related to losing competencies. [...] This is all about the human aspect.” (Executive-level manager 2)</p>	<p>Field of business activities</p>	

<p><i>Limited time resources:</i> “It is important to have good time management, when one organises for the day, for a day shift. So how do I organise my activities, when do I have time to document? Also going to the residents, this requires good time management.” (Care consultant 3)</p> <p><i>Regular workflow interruptions:</i> “A lot has to be documented, which is tied to several obstacles. So for one thing, I may be with the patient, but I do not have the [eNDS] with me, because this is for instance only accessible at the nurses’ station. Now I have to memorise the treatment the patient received, but maybe I then have to take care of three other patients, and only then do I get the chance to document these activities. So this is where mistakes are bound to happen.” (Executive-level manager 3)</p> <p><i>Vicious cycle of documentation:</i> “The employees have to document a lot. They therefore cannot do much work with the patients, what they actually like to do. They do not get the chance to work with the patients, because then they have to document everything again.” (Care consultant 3)</p>		
<p><i>Computer literacy-dependent scepticism:</i> “I got the impression that in this initiative [eNDS], every time something new comes up, we are often faced with the expression: “again something new” and “we have always done something this particular way.” The tried-and-tested principle. This is safe. And for something new, one has to leave their comfort zone.” (Care consultant 1)</p> <p><i>Cultural heterogeneity:</i> “There are often the same people who always say the same. Those who say that we do not want this, this does not work, in no way. Meanwhile, there are others who say that this is great, how can we drive this forward?” (Care consultant 1)</p> <p><i>Failure tolerance:</i> “The end result does not have to always be a success. It can also happen that our evaluations show that we missed the needs of the target group. This is also a valuable insight. It does not always have to be positive feedback for development. It can also happen that we say: “okay, that was the wrong way, we now need to take a new path.”” (Executive-level manager 3)</p>	Organisational culture	

<p><i>Progress-driven culture:</i> “Fundamentally, the employees here are relatively open towards new initiatives, because there simply used to continuous training, change, and this simply is part of the organisation’s culture.” (Care consultant 2)</p>		
<p><i>Adeptness with digital technologies:</i> “These [care and digitalisation] are still two worlds, as of yet. I think this will merge. But currently, what we do, is focused on relationship-building, manual labour, and requires a lot of personal warmth and touch.” (Executive-level manager 1)</p> <p><i>Advancements perceived as benefit or burden:</i> “More often than not, working with the computer is still something that is perceived as a burden by employees. Typing via a keyboard is perceived as time-consuming and these are also typically people who rather prefer to work with humans than with computers.” (Care consultant 1)</p> <p><i>Appeal of the nurse as job:</i> “Working in long-term care is not very popular. Or the nursing job itself also does not enjoy a high reputation in media or in our society.” (Care consultant 1)</p> <p><i>Fears of becoming obsolete:</i> “They [seasoned employees] are of course also a kind of group that needs a bit more time or has more concerns. But may also be worried because they have never worked with such systems before. That they may consequently become obsolete or something like that. I think that there many concerns.” (Care consultant 1)</p> <p><i>Shortage occupation:</i> “There are frequent workforce bottlenecks. Nursing is a shortage occupation. Or how do they call it now? Shortage occupation.” (Care consultant 1)</p> <p><i>Workforce age gaps:</i> “You notice that the younger employees have an easier time [using new digital solutions], while the more seasoned employees have more difficulties.” (Care consultant 2)</p> <p><i>Working language proficiency:</i> “We also have many employees whose first language is not German. They voice that they have problems with certain phrasings.” (Care consultant 3)</p>	Workforce profile	
<p><i>Home care sector digital advancements:</i> “Of course, good care at home is something</p>	Competitive landscape	

<p>which the patient would typically prefer over a hospital stay. With the platformisation there still is the last-mile problem. [...] But here there can be many improvements, in this mobile setting.” (Executive-level manager 2)</p> <p><i>Long-term care sector market size:</i> “We have a government-based insurance system in Europe. So the individual purchases relatively few services himself, but rather is insured and the insurance fund or respective entity decides which services should be covered. This is different in the USA. Here, there is that with insurances. They have a far bigger private market.” (Executive-level manager 2)</p> <p><i>Private wealth of local population:</i> “We also have far less super-rich. Within the group of older people in need of care, so those hundred-thousands of aged people, they all do not have a colossal amount of financial capital.” (Executive-level manager 2)</p> <p><i>Rival organisation digital advancements – innovators:</i> “There are hospitals and medical organisations, for instance my previous employer, the [healthcare institution 1], or the [healthcare institution 2]. They are far more advanced in terms of digitalisation in the medical area. But they are also in great need of this, so in oncology, large surgeries, neurosurgeries. They are far more dependent on getting real-time data to offer the best possible treatments for their patients.” (Executive-level manager 1)</p> <p><i>Rival organisation digital advancements – laggards:</i> “One can see here is a certain openness. We also already have future projects announced. That we for example explore voice-recognition-based documentation. Such developments are also tested here. So there are many innovations that we evaluate here. Not many other institutions do so. The fewest really explore these topics. And this can go so far that really nothing is digital.” (Care consultant 2)</p>		<p>External market context-based influences</p>
<p><i>Dementia-based behaviour:</i> “There is this wandering behaviour, which can happen among people suffering from dementia. While they then need to be found, it is not like they are consciously aware of this. Which means that any idea based on self-initiative is flawed.” (Research subsidiary project manager; compass initiative)</p>	<p>Customer profiles</p>	

<p><i>Generational change:</i> “It is clear that the generation which is soon to be of senior age surely will be more IT-savvy, since they all have a laptop at home, they all browse the Internet. This means that we have to respond to this, provide this.” (Executive-level manager 1)</p> <p><i>Multimorbidity:</i> “At the moment we have residents who have around 13 CT-diagnoses on average, 13 illnesses at the same time. One speaks of multi-morbidity in such cases.” (Executive-level manager 2)</p> <p><i>Resident boredom:</i> “Boredom is a particularly common topic in long-term care.” (Executive-level manager 1)</p> <p><i>Resident cognitive impairments:</i> “It is certainly a great opportunity, also for people with cognitive impairments, so dementia, to be able to indulge in happy memories.” (Head nurse 2)</p> <p><i>Resident digital affinity:</i> “If you say: “click on this.” For us, this is obvious. I tap on this and then move my finger away again. This is not clear however for the resident who is not familiar with this technology. He taps and keeps the finger on it thinking that something must happen now. And this is only one of many examples showing that we have to tailor developments to the target group.” (Executive-level manager 3)</p> <p><i>Resident digital demands:</i> “We see that there is also demand for public Wi-Fi among our residents and patients. They want to use the Internet, they want to order online, they want to use YouTube. We need to try to establish appropriate surrounding conditions.” (Directress of care)</p> <p><i>Resident physical handicaps:</i> “With the [VR] glasses, I’m not sure whether you have ever tried them yourselves, but here it is usually the case that you navigate by using a sort of stick or be pressing and turning buttons on the glasses and so on. And that is not ideal for the person [resident].” (Executive-level manager 3)</p>		
<p><i>Care documentation as a trust-based or mistrust system:</i> “The big discussion since a couple of years in care is: what has not been documented has not happened. Right? So there is this shift, we moved from a trust-</p>	<p>Legal regulations</p>	

<p>based to a distrust-based system.” (Executive-level manager 2)</p> <p><i>Data protection and digitalisation:</i> “I’m currently contemplating whether it [data protection requirements] inhibits digitalisation. It definitely makes it more difficult.” (Executive-level manager 1)</p> <p><i>Data selection issues:</i> “which [data] do we keep, which do we not keep? Which employee data? Which resident data? Which legal data retention periods apply and is there also an applicable right to be forgotten? So this is also something that keeps us occupied, in many dimensions.” (Executive-level manager 2)</p> <p><i>Data sharing:</i> “A lot still had to be done. What do I allow the system, do I really want it, and so on. Do I really want my family to know where I currently am, even if I should have lost my sense of orientation?” (Research subsidiary project manager; compass initiative)</p> <p><i>Data storage:</i> “The robot had infrared sensors but also cameras for orientation purposes, so in this area we had to say please do not save camera data, because the ambulance is here and therefore sensitive information.” (Research subsidiary project manager; robot initiative)</p> <p><i>Legal duty to document:</i> “They [employees] have to document all of their activities. This is of course legally relevant because we simply must document everything we do.” (Care consultant 3)</p> <p><i>Legal protection of vulnerable adults:</i> “Our residents commonly fall under protection laws for vulnerable adults, meaning the adult protection laws is applicable. This can lead to the required involvement of solicitors and then it gets difficult. It gets somewhat long-winded.” (Executive-level manager 1)</p>		
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## APPENDIX V: Empirical study provider perspective – data structure

<b>Table 25: IT multinational dataset data structure (Appendix V)</b>		
<b>1<sup>st</sup> order concepts with exemplary quotations</b>	<b>2<sup>nd</sup> order themes</b>	<b>Aggregate dimensions</b>
<p><i>Business outcome-focused:</i> “Today, you talk about an outcome, business outcome, and everything else is left to you.” (IT multi relationship manager 4)</p> <p><i>Digital innovation for clients:</i> “I think a lot of things are happening on the cloud. We will see how we innovate in terms of making banks accessible to the customer more easily. So rather than going to the branches, rather than going to any other place, how a customer will have everything on hand to do banking. Okay so we are moving towards this, but there are a lot of things that need to be done. Can we do a complete cashless transaction? It's happening, but still there are people who does cash transactions. So how do you enable them to do a cashless transaction? Very important. I think it's all about the customer. It's all about customer expectations. It's all about how you make customers more enabled to do a better banking. So those are the things which are there.” (IT multi relationship manager 3)</p> <p><i>Digitally-enabled intersections:</i> “We don't do research in genetics per se, but we do research in the intersection of genetics with computer science. So how could we speed up genome tracking. So it is essentially an intersection. Technology is the key. But then we do work in areas like genetics, in medical science, in software engineering, and data analytics obviously is one of the areas. So we do multiple areas but with the intersection in computer science.” (IT multi technology manager 1)</p> <p><i>Digital transformation:</i> “Looking at an abundance of things available, building an ecosystem, being agile, looking at customer experience, personalising the service to the end user, trying to look at exponential growth. How do you go from servicing a small market to the whole world? Start looking at it from those lenses. That this change the business context is what transformation is all about.” (IT multi relationship manager 1)</p> <p><i>Leveraging digital for customer core activities:</i> “So existing customers have always been in the take of addressing the business requirement and seeing how best they can provide for it, with the focus of reducing the overall throughput or the timelines, and making things more efficient was the focus. [...] But then this entire wave around, and I can</p>	Expected business impact	Project-level, content-based factors

<p>speak more for the FinTech organisation in terms of banking and financial services. This entire wave of FinTechs emerging where the technology was a driver and the back of technology core business was being run.” (IT multi relationship manager 2)</p>		
<p><i>Contract type:</i> “So if you look at earlier there used to be fixed price projects and there used to be T&amp;M projects. So T&amp;M, okay, you give people, and you earn from them, and you are not bothered about what you are doing. Fixed price, okay fine, you have certain tasks given to you, complete the task and get paid.” (IT multi staffing manager 1)</p> <p><i>Living document:</i> “You always have specific goals and items that are predefined. The goal is obviously to go beyond and above that. So yeah, it can happen. But the minimum is there is a predefined set of achievables. But again, that can move. So if you're looking at something and say within six months we're going to get to this level of service. But if through technology or some sort of innovation that has happened, if that has been achieved within the three months then you realign on those goals and the goalposts can move. So again that comes back to the relationship that has been built at different levels. The contracts are put in place to have a framework and to have a basis. But the contract is a living document.” (IT multi HR sales manager 1)</p> <p><i>Outcome-based contract:</i> “The outcome-based model is a game changer. What it means is, I have given you a commitment and I will get paid only when I fulfil that commitment. And when I say commitment, what I mean by that is, so for example, one of our customers, we have said that we will reduce their costs by 25 percent. We will completely reimagine their technology stack in next five years’ time. Not only in the marketing and the current space but also within HR and so and so forth, so the entire spectrum of their company. And we will help their business to grow by at least 15 to 20 percent.” (IT multi staffing manager 1)</p> <p><i>Rewards tied to outcomes:</i> “We'll be saying we'll work with you, we'll help you grow, if we don't deliver what we have promised we still give you that cost benefit, but if we are able to give you what you want, then we'll also get some profit from the benefit that we have given you.” (IT multi staffing manager 1)</p> <p><i>Role of the contract:</i> “When in a business environment when you reach that stage. That is a partnership more than a supplier-client relationship. There is still a contract, there's still your various documentation that comes into play but at a higher</p>	<p>Formal project structure</p>	

level, it is then a partnership that you work with.” (IT multi relationship manager 2)		
<p><i>Informal project role:</i> “So it depends on how the customer views [IT multi]. Whether you are the strategic partner or tactical partner. If you are a tactical partner they won't share much. They will say what they want to do this year, et cetera. If you are a strategic partner which is driving their business plans, their IT plans, then they will share. Then there is something which is really business-specific and they want to keep a competitive advantage as compared to other banks.” (IT multi relationship manager 3)</p> <p><i>Relationship development:</i> “When we started off, we started off without any opportunity as such. We just had an agreement, or a master service agreement. And then we gradually evolved. [...] We have gone to the level of being a strategic partner. One of a few. I think I can say that actually we're the largest. We are the largest. We started from nothing, although there were existing suppliers in the organisation. We landed into being the largest preferred partner and also strategic in nature.” (IT multi relationship manager 1)</p> <p><i>Relationship quality:</i> “One of the things that we stand out when compared to a lot of other you know contemporary suppliers is that we when we enter into a relationship we have very long-standing relationships, and we don't generally let go of the customer, or the customer doesn't let us go because of the value that we create, and the model that we adopt in partnering with them.” (IT multi relationship manager 2)</p> <p><i>Trust:</i> “Trust is the most important factor in business. Now for us, the way we look, calculate, whether we are being trusted or not, number one, we always keep looking at growth. So if you're growing at a very healthy pace that means the sentiment in the market is yes, [IT multi] is the right partner to get associated with. Number two, we also look at our repeat business. While it would be our wish to deliver 100 percent, but, you know, there is always a possibility that we will not be able to deliver. There are possibilities that we will fail. But even if we can, if at this point we have 97, 98 percent of our business is from repeat customers.” (IT multi staffing manager 1)</p>	Relationship management	
<i>Digital at core:</i> “What does it mean to be digital? Is your back-end system resilient for it? What will it cost you to make your back-end system resilient? Because it's not just an application that is geared to the front-end, because eventually every query that comes in has to go back to your core system. And if your core system is not resilient to react, respond	Strategic innovation resource availability	

<p>within a second or so, then you are not in that space.” (IT multi relationship manager 2)</p> <p><i>Digital knowledge:</i> “We have groups within [IT multi] who support going digital. So if you want to go to cloud, analytics, insights, so there is a group available who does that. If you want to do made applications, cloud enabled, there is a group. So support-wise it is quite good. So if you want to give over thoughts to the customer, discuss about it, we are quite capable of doing that.” (IT multi relationship manager 3)</p> <p><i>Digital spine:</i> “One is the digital spine. So what we say is that organisations need to have a core digital infrastructure. So it doesn't matter whether it's outsourced, insourced, how it is. But essentially to have all the digital capabilities.” (IT multi technology manager 1)</p> <p><i>Domain knowledge value:</i> “We have a very deep knowledge of their domain, of their functioning. In some cases we actually know more about them than they know about themselves. Because they have been with us for 30 years, their executives probably for less years. And so that expectation from large service providers like us is also to be able to leverage our domain knowledge of their working to change the way that they work.” (IT multi relationship manager 1)</p> <p><i>Gluing effect:</i> “See if we were being focusing only on the technology as a company we wouldn't have been surviving so long, because the technology changes fast. So what glues us is the knowledge of the customer as well and their businesses, because we've been with them. We understood a lot of contextual knowledge so we also give a lot of importance. In fact, in our organisation, a person with a technology knowledge to a person with a domain knowledge if you start comparing the importance with say the person with the domain knowledge is more valuable than the technology. Because technology is something I can, I myself can outsource it or get it as a commodity. But not domain knowledge.” (IT multi relationship manager 4)</p> <p><i>Horizontal digital service lines:</i> “And at the end of the day the digital service lines that we have within [IT multi] which are part of our business and technology services unit, they are applicable for every industry. But you have to take it contextual in your industry balance and then take it forward.” (IT multi relationship manager 1)</p>		
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<p><i>Innovation capabilities:</i> “We have something called the [IT multi innovation] network. [IT multi innovation] network, which is open innovation working. So essentially interacting with academics like you, like Aston. Interacting with emerging tech start-up companies. We seize and funding agencies, we interact with a lot of regulatory bodies. And then of course we have about [&gt;1,000] customers across the globe. So those interactions and how it could bring in ideas from that network to our customers or vice versa. So that's the [IT multi innovation network], the open innovation network that we have.” (IT multi technology manager 1)</p> <p><i>Range of industry specialists:</i> “Now the kind of requirements that we get: we are an automotive company but we need people with banking and financial experience to manage our financial systems, we need people with supply chain to manage our logistics, to manage our sales and marketing. We need people who can help our digital marketing officer. We need people who can help our CFO. So we need financial transformation guys. If they have to procure these people and services from different, you know, from the market, it's going to take a lot of time. What we do is, we say, okay fine, you want everything? We can give you everything within the same package, because we have horizontals and then we have verticals. All these horizontals are different service lines, so if you if they want to talk about, say, what's happening in artificial intelligence, we have the entire horizontal which is predominantly focusing on artificial intelligence, machine learning, analytics, this and that.” (IT multi staffing manager 1)</p> <p><i>Technological knowledge depth:</i> “We showcase our success story, we do a lot of innovation labs where we get our customers to talk about what we are doing in innovation, what kind of products we have, what kind of things that we see happening in the market today, where the technology stack is going, and how they can stay relevant, and how they can leverage a variety of things with the technology stack today.” (IT multi staffing manager 1)</p>		
<p><i>Cross-fertilisation:</i> “A lot of times the disruption comes not from your own industry but from somewhere else. It may give you ideas, it may trigger your ideas and all that. And if you always restrict to only your own area then you may not find new ways. Sometimes what you might do in retail, it might resonate in a different environment.” (IT multi relationship manager 1)</p>	<p>Strategic innovation task demands</p>	

*Duration of transformation:* “So in most cases, from a service perspective, it would be a minimum of five years that you would have the business, that would be the contract signed up for. It's like everything. If it's not going well it could stop earlier, but there may be penalties, but also because of the extensive work that's put into the transformation, usually it's five years, 10 years, or it could be longer. The actual transformation project of migrating a technology, or upgrading tools, or a system is the shorter part. So that could be a one-off, in that they have PeopleSoft today and they want to move to Oracle, or they have SAP and they want to move to SuccessFactors. So that would be a separate project, and that project itself, again, depending on the maturity of the client, the tools that are being used or the technology that's being chosen, that project could take anything from six months to a twelve month process.” (IT multi HR sales manager 1)

*Establish right use case:* “And at the end of the day the digital service lines that we have within [IT multi] which are part of our business and technology services unit, they are applicable for every industry. But you have to take it contextual in your industry balance and then take it forward. [...] That can be applied in any industry, but how you can apply in your specific customer scenario is by trying to create these right-use cases. So that has to be enabled by our unit or from their common perspective, leverage that and take it forward.” (IT multi relationship manager 1)

*High task variety:* “See, on the innovation front, again, you can't regulate it as much because otherwise you can't let creativity flow in as easy.” (IT multi relationship manager 1)

*Needs identification uncertainty:* “Many of the times they are also not clear what they want. It's the biggest issue. So I think what is really important is where we seize that. What is it we want at the end of the day. So there are a lot of iterations that may be needed.” (IT multi relationship manager 4)

*Recombination of solution components:* “We already have a lot of things in our bag. We can actually give you like ready-to-use, plug-and-play kind of thing. If we don't have it, then we create something new for you. You can keep it if you want. If you don't want to keep it, we'll create it for ourselves, we use it for you and then we can use it for other customers also. We recover our investment accordingly.” (IT multi staffing manager 1)

<p><i>Commercial events (personalised social engagements):</i> “We have done an innovation day for them. Innovation day, so where we have showcased a lot more what is happening in the industry, cutting-edge, what we are doing in our research and innovation labs, and across various service lines that we have within [IT multi], where we are investing, and all that. So a lot of their key stakeholders had come and we also have taken some of our partners from the industry, some of the co-innovation partners that we have. So all of them, it was a day-long event where a lot of key stakeholders from their end came. So that shows what we are currently doing is just the foundation.” (IT multi relationship manager 1)</p> <p><i>Customer outsourcing maturity:</i> “I have seen customers who have actually outsourced, insourced, and again outsourced, you know, multiple levels of outsourcing. So we call that generations of outsourcing, first, second, third, fourth, fifth generation. There are customers who are, they are maybe six, seven generations of outsourcing because they might have started in the 80s and then now we are in 2020. Right? So obviously 40 years has gone by. And there are still companies still doing first generation outsourcing, can you imagine?” (IT multi relationship manager 4)</p> <p><i>Customer business strategy:</i> “There are a few customers for whom innovation is most important. Automation is most important. Reimagining their processes policies is most important. There are few customers who are okay with us partnering with them to get scale that they want. But there are also a few customers who come to us for price optimization. So all those combinations, all sorts of customers are there.” (IT multi staffing manager 1)</p> <p><i>Customer change mindset:</i> “I think the biggest factor where we have seen the innovation and reimagination failing is because of the resistance of change. And that is because of people's resistance to change. Work force, management, shareholders, and so and so forth. Because the moment you create a process roadmap or technology framework that will eliminate dependencies, that will build a huge amount of transparency, and that might lead to some job losses, resistance comes in play.” (IT multi staffing manager 1)</p> <p><i>Industry data showcasing and benchmarking:</i> “We said that we believe that when they look at the industry data, because they know their data as to how they are operating, how they're performing,</p>	<p>Intent alignment</p>	
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<p>they can see that they are way below or behind in terms of where we need to be. And then they had asked us to sort of work with some of their teams, predominantly the finance teams, and they asked us to do a bottom-up view, looking at their own data. And then we do something called a benchmarking exercise.” (IT multi relationship manager 1)</p> <p><i>Leadership buy-in:</i> “Usually strategic don't happen at the operational level. And strategic interactions are only at senior management and executive level. It is never below. The interactions at middle management and bottom layers are usually operational and tactical. Nothing beyond that. And the strategic interactions only happen at an executive level.” (IT multi relationship manager 1)</p> <p><i>Mindshare:</i> “It is equally important as an SI [Service integrator] that you keep reaching out to your customers, to keep feeding them with various things that is possible, to be done, working along with us. So when the time is right, they reach out for us. So it is important for us to be in the top recall of the customers, because most of these customers are not just working with [IT multi], they're working with a whole lot of other SIs as well. So while you make sure delivery is up, top notch, and is being addressed, gaining the mindshare of the customers is equally important on how you align with their business strategies.” (IT multi relationship manager 2)</p> <p><i>Value mapping:</i> “So we have to do some level of mapping to their vision. So that they're not seeing you as not relevant. You have to be relevant for them. And how do you make yourself relevant is being close to them and being contextual to whatever you're trying to present. So anything and everything that you're trying to present in any of the areas, you have to ensure that you're highly contextualising to their environment.” (IT multi relationship manager 1)</p>		
<p><i>Closer to the core:</i> “Many other times it so happens that we engage on a more cost efficiency program but really you know the natural progression is towards involving transformation programs and innovation programs so that we can contribute to their transformation itself rather than as a simple supplier and vendor type of engagement.” (IT multi relationship manager 4)</p> <p><i>Corporate strategy:</i> “That entire cost benefit is gone. Now it's all about how you can generate value. Because if I look at the price point, you won't believe there are times where [IT multi] pricing is equal and or more than a US-based company or a</p>	Strategic orientation	Organisational context-based conditions

<p>Europe-based company. So the cost arbitrage is no longer a game changer, or no longer beneficial to companies with operations in India because everybody has operations in India. You tell me one single IT company that doesn't have big operations in India, or in Philippines, or in Mexico. They have, all of them. So cost is no longer an element to decide whether you want to work with the company or not. What's important today is, can you create and co-create value? And customers are okay to pay for it." (IT multi staffing manager 1)</p> <p><i>Digital ecosystem potential:</i> "So, in the past organisations would look at their vertical supply chain and try to make that all digital, make it all optimized. So it would take organisations, it would take an insurance company for example. The supply chain starts on the customer on one end and then goes down right to the regulator on the other end. But it's a vertical supply chain, so every component in that, every partner in that, they try to integrate and have digital capabilities amongst themselves. But the ecosystem story talks about how can you build that horizontal integration? Which essentially means you're an insurance company, but can you build a linkage to an auto company?" (IT multi technology manager 1)</p> <p><i>End-customer focus:</i> "What is I think the biggest trend, is trying to figure out new business models based on the same customer being serviced by two different industries. So we know that the same customer goes to a bank for doing some services, probably goes to a retailer to do some services, and banks and retailers, there is some kind of a link there, because if you buy something at the retailer, they will pay through a credit card and this goes through a bank. So the same customer is interacting with these two entities." (IT multi technology manager 1)</p> <p><i>Thought leadership:</i> "One is bringing thought leadership. Which is essentially looking at what customers should be doing more than what they're doing today. Because given that internally they have got their own teams and looking at innovation et cetera, what they would like to know is what they should be doing six months, one year down the line." (IT multi relationship manager 1)</p>		
<p><i>Agile work practices:</i> "I think more importantly, the biggest challenge in innovation is changing the mindset of your existing workforce. So within the company you need to change. Customers are changing very, very quickly. So you don't have to train the customer to adopt new technology or easier technology. You need to convince your own internal teams to create something which is more</p>	Organisational culture	

<p>simpler. The reason for that is because in the earlier model there used to be a control mechanism. Every individual used to participate and used to have a say in the process. In today's world, nobody has a say but they have a role. And that's where there is a huge amount of resistance that even I want to have a say in this. That's the biggest challenge. Changing that mindset of the internal staff from being used to being in a traditional environment to being in a very agile environment where things need to be done fairly quickly." (IT multi staffing manager 1)</p> <p><i>Fail-fast mindset:</i> "If you fail quickly you have more time to go correct it and improve it, rather than the longer. [...] Failure is good, because next time you try you will do better than what you did earlier." (IT multi relationship manager 2)</p> <p><i>Formal innovation agenda items (KRAs):</i> "It's a very dynamic environment that we work in and hence we are always pushed around to keep pursuing that innovation, because even individual RM, relationship manager, KPIs [Key performance indicators] or in business development KPIs also, we have one of the KRAs [Key result areas]. What is the innovation that you have brought into the business? So that then acts as a baseline for cumulative." (IT multi relationship manager 2)</p> <p><i>Leading by example:</i> "Number one, you know. You have to lead by example. So we have an internal target to become an [IT multi strategic target] by 2020. So even if you look at this office, you know, the kind of setup that you see, the setup is aligned to the agile setup. You have meeting rooms here. There are open meeting rooms there and so on and so forth." (IT multi staffing manager 1)</p> <p><i>Performance measurements:</i> "So innovation plays a significant role. So if you see the strategic relationship that we have, many of them will be measured in multiple dimensions. Okay. And innovation is one. So unless, because it was not the case about 4, 5 years back. Yeah. It was more about the value generated out of all the savings that you have driven, efficiency and things like that. Today, the measurement of the relationship maturity innovation is a key dimension. Hence, people like us, when we actually drive our businesses, we give a special attention to them saying that how we are able to innovate." (IT multi relationship manager 4)</p> <p><i>Time zone differences exploitation:</i> "So you don't need to have all your teams sitting together and brainstorming. You can still do it across several</p>		
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different locations. Not only remotely across time zones, but multi locations. So you can have three locations, four locations. Doing the same thing that you were trying to do at one place. Because that concept of doing everything in one place is not scalable.” (IT multi technology manager 1)

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