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Thesis on:

A Service Ecosystem Perspective on the Broader Contribution
of Front-line Employees to the Service Innovation Process

For the part fulfilment of the degree of Doctor of Philosophy (Ph.D.)

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I declared the whole thesis word count is: **90,773**

Declaration

I declare the work presented in this thesis is all my own work

Signed: *Mark Thurgood*

ABSTRACT

Traditionally front-line employees who represent their organisation to customers have only been utilised in ideas generation, service design and implementation in the service innovation process. Building on theory from a service-dominant logic service ecosystems perspective, at a meso-level and micro-level, this thesis explores how front-line employees can broaden their contribution to the service innovation process through improved organisational understanding and recognition. This is centred on concepts of organisational arrangements, staff allocation, and staff skills and knowledge. These when combined promote a service ecosystems view.

This thesis argues that it is only through taking this perspective that organisations can extensively maximise and benefit from front-line employees' customer relationship know-how, to improve customer value and customer co-creation, and thus service delivery to advance competitive advantage.

Data collection was via semi-structured interviews with 42 managers, consultants and front-line employees. All participants had many years of experience undertaking service delivery and service innovation. These insights, knowledge and expertise could be elicited. Targeted organisations for the research were based in the UK finance, health and university sectors, as these types of organisations characteristically display a strong service delivery and service innovation ethos.

Empirical data analysis discovered organisational arrangement themes: culture appreciation; strategy engagement; and systems context. Staff allocation themes: management vision, promote learning, assessing staff allocation. Staff skills and knowledge themes: knowledge sharing, customer domain expert and lessons learnt.

The contribution includes empirical data findings and a new theory based on service-dominant logic focused on front-line employees. A series of conceptual models on the broader contribution of front-line employees in the service innovation process are proposed to assist organisational practitioners and academics in the improvement of service innovation outcomes.

Keywords: Front-line employees, Service innovation, Service-dominant logic, Service ecosystems, Empirical data analysis, Theory and conceptual model construction.

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This thesis is built on the research of many leading academics in the field of service-dominant logic, service ecosystems, service innovation and front-line employees.

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Table of Contents

ABSTRACT	2
LIST OF FIGURES.....	14
LIST OF TABLES	18
THESIS STRUCTURE	21
Chapter 1: INTRODUCTION	22
1.1- Motivation for this Research	23
1.1.1 Motivation	23
1.1.2 General observations for this research	26
1.2- Approach to the Research	28
1.2.1 The research ontology, epistemology and methodology.....	28
1.3- Exploration Journey for this Research	29
1.4- Research Justification for this Thesis	32
1.4.1 Research Justification: Context	32
1.4.2 Research justification: A front-line employees - The phenomena of interest.....	34
1.4.3 Research justification: Service innovation	36
1.4.4 Research justification: Service ecosystems.....	39
1.4.5 Research justification: An organisation and the front-line employees contribution perspective.....	40
1.5- Research Questions	43
1.5.1 The research contribution	43
1.5.2 The context of research questions.....	46
1.5.3 The importance of culture, staff allocation, and staff skills and knowledge	48
1.5.4 Challenge of uniqueness, novelty, and contribution for this research .	50
1.6- The Literature Review Context Overview.....	56
1.6.1 The theoretical framework for this thesis	56
1.6.2 The conceptual framework for this thesis	61
1.7- Summary of Chapter One (Introduction).....	65

Chapter 2: LITERATURE REVIEW.....	67
2.1- Introduction to Literature Review	68
2.2- Literature Review and Foundation for Theory and Concept Building	69
2.3- Service Innovation Concepts	71
2.3.1 Introduction.....	71
2.3.2 Paradigms on Service Innovation	71
2.3.3 Traditional paradigms to service innovation.....	75
2.3.4 Service innovation and the technologist paradigm	79
2.3.5 The dominant perspective on front-line employees' contribution	85
2.4- Service-dominant Logic and Service Innovation Concepts	90
2.4.1 Introduction.....	90
2.4.2 A service-dominant logic paradigm to replace the goods-dominant logic view	90
2.4.3 Taking a service-dominant logic paradigm to service innovation	94
2.5- Service-dominant Logic and the Broader Contribution of Front-line Employees to the Service Innovation Process	105
2.5.1 Introduction.....	105
2.5.2 Service-dominant logic utilised in this research	105
2.6- The Concept of Organisational Arrangements in the Service Innovation Process	109
2.6.1 Introduction.....	109
2.6.2 Organisational arrangements environment.....	109
2.6.3 Organisational arrangements and the social situation	113
2.6.4 Organisational arrangements and culture values	115
2.7- The Concept of Staff Allocation in the Service Innovation Process.....	118
2.7.1 Introduction.....	118
2.7.2 Undertaking staff allocation	120
2.8- The Concept of Skills and Knowledge in the Service Innovation Process	125
2.8.1 Introduction.....	125
2.8.2 Skills and knowledge: The focus on knowledge practices	126
2.8.3 Skills and knowledge: The focus on communication practices	129
2.8.4 Skills and knowledge: The focus on learning practices.....	131

2.9- The Concept of Service Ecosystems in the Service Innovation Process	134
2.9.1 Introduction.....	134
2.9.2 Service ecosystems perspective – Organisational arrangements	135
2.9.3 Service ecosystems perspective – Staff allocation	137
2.9.4 Service ecosystems perspective: Skills and knowledge	139
2.9.5 Service ecosystems perspective: A systems perspective.....	141
2.9.6 Service ecosystems: A better service innovation outcome	144
2.10- Exploring and Discovery: The Research Gap in Knowledge	145
2.10.1 Introduction.....	145
2.10.2 The knowledge gap: The organisational context	147
2.10.3 The knowledge gap: Thesis research question	149
2.10.5 The knowledge gap: Research question 2.....	154
2.10.6 The knowledge gap: Research question 3.....	157
2.10.7 The gap in knowledge – A short commentary.....	160
2.11- Summary of Chapter Two (Literature Review).....	162

Chapter 3: RESEARCH DESIGN and METHODS.....	165
3.1- Introduction to Research Design and Methods.....	166
3.2- The Research Approach to Research Design and Methods	168
3.2.1 The research design	168
3.3- Existing Knowledge and Perceived Research Problem	173
3.4- The Research Paradigm for this Research	179
3.5- The Research Approach to Research Questions	185
3.6- The Research Approach to Data Collection.....	187
3.6.1 Interview setting and interview questions	187
3.6.2 Interview questions used for data collection (rationale)	189
3.6.3 Approach to sample size and saturation.....	196
3.6.4 Selection of organisational participation	198
3.6.5 Selection of participants for interviews.....	202
3.7- The Research Approach to Data Analysis	212
3.7.1 From observation to research findings.....	212
3.7.2 Introduction to data analysis in qualitative research	214
3.7.3 Building themes for this research	215
3.8- Data Analysis using Code Book Development.....	220
3.8.1 Code book development and research context	221
3.9- Assessment of the Quality of Research.....	240
3.9.1 Assessment criteria for this research.....	240
3.9.2 Discussion on credibility and dependability for this research.....	241
3.9.3 Discussion on the adequacy of evidence for this research	248
3.10- Consideration of Research Ethics.....	252
3.10.1 Discussion on research ethics	252
3.10.2 Discussion on the ethics of this research.....	256
3.11- Summary of Chapter Three (Research Design and Methods).....	258

Chapter 4: DISCUSSION AND FINDINGS	261
4.1- Introduction to Discussion and Findings	262
4.2- Thesis Research Question	264
4.2.1 Discussion of empirical data findings: Research question	264
4.3- Research Question 1 (Organisational arrangements – Meso-level)	267
4.3.1 Discussion of empirical data findings: Research question 1	267
4.3.2 Research question 1 (Culture Appreciation – Meso-level).....	269
4.3.3 Research question 1 (Strategy Engagement - Meso-level)	275
4.3.4 Research question 1 (Systems Context – Meso-level)	283
4.4- Research Question 2 (Staff allocation – Meso-level)	290
4.4.1 Discussion of empirical data findings: Research question 2	290
4.4.2 Research question 2 (Management Vision – Meso-level).....	292
4.4.3 Research question 2 (Promote Learning - Meso-level).....	299
4.4.4 Research question 2 (Assessing Staff Allocation – Meso-level)	306
4.5- Research Question 3 (Skills and knowledge - Micro-level)	313
4.5.1 Discussion of empirical data findings: Research question 3	313
4.5.2 Research question 3 (Knowledge Sharing – Micro-level)	315
4.5.3 Research question 3 (Customer Domain Expert – Micro-level)	323
4.5.4 Research question 3 (Lessons Learnt – Micro-level).....	334
4.6- A Service Ecosystems Perspective	341
4.6.1 Introduction.....	341
4.6.2 Service ecosystems perspective – A consolidation	342
4.7- Empirical Data Analysis: Consideration of Potential Outliers	344
4.7.1 Introduction.....	344
4.7.2 Values of staff contribution	344
4.7.3 Management change.....	346
4.7.4 Customer participation perspective	348
4.8- Summary of Chapter Four (Discussion and Findings)	350

Chapter 5: CONTRIBUTION	352
5.1- Introduction to Contribution	353
5.1.1 Contribution of the research	353
5.1.2 Empirical research data contribution	354
5.1.3 Theory building contribution.....	355
5.1.4 Conceptual model contribution	356
5.2- Contribution from Empirical Data Analysis	357
5.2.1 Contribution: Research question 1	357
5.2.2 Contribution: Research question 2	359
5.2.3 Contribution: Research question 3	361
5.3- Contribution to Theory from this Research.....	366
5.3.1 Theory building for this thesis	366
5.3.2 Contribution to theory	367
5.3.3 Contribution to theory practice.....	369
5.4- Contribution to Practice at a Conceptual Model Level	371
5.4.1 Introduction.....	371
5.4.2 Process Model - Service ecosystems perspective: Organisational arrangements	373
5.4.3 Process Model - Service ecosystems perspective: Staff allocation ..	378
5.4.4 Process Model - Service ecosystems perspective: Staff skills and knowledge	383
5.4.5 Process Model – Service ecosystems perspective: Systems approach	388
5.5- Summary of Chapter Five (Contribution).....	393

Chapter 6: CONCLUSION	394
6.1- Introduction to Conclusion	395
6.2- Conclusions to the Research.....	396
6.2.1 A brief commentary research aim	396
6.2.2 A brief commentary on the research perspective	398
6.2.3 A brief commentary on the research approach	398
6.2.4 A brief commentary on the empirical approach to the research.....	399
6.2.5 A summary of empirical data discovered: Research questions	400
6.2.6 A service-dominant logic building theory perspective on the research	407
6.2.7 A note on the conceptual model perspective	407
6.2.8 Body of knowledge	408
6.3 Further thoughts on the research.....	409
6.3.1 Introduction.....	409
6.3.2 Further methodologies.....	409
6.3.3 Further insights on data collection	411
6.3.4 Further insights on the data analysis	412
6.3.5 Management further insights	413
6.3.6 Front-line employees' further insights	414
6.3.7 Service Innovation consultants further insights.....	415
6.4- Limitations and Future Research	416
6.4.1 Limitations of the research.....	416
6.4.2 Additional further research.....	417
6.5- Summary of Chapter Six (Conclusion).....	421

Chapter 7: REFLECTIONS	422
7.1- Introduction to reflections.....	423
7.2- Reflections on this Research: A Commentary	424
7.3- What Could Have Been Done Differently: Lessons learnt?.....	427
7.4- Finish of a Personal Journey	428
7.5- Final Research Acknowledgements	430
7.6- Summary of Chapter Seven (Reflections).....	431
BIBLIOGRAPHY.....	432
APPENDICES.....	457
Appendix A: Definitions used throughout this thesis.....	457
Appendix B: Systems map of thesis context.....	464
Appendix C: Extended case study of organisational arrangements	465
Appendix D: Participant: Consent form	467
Appendix E: Information sheet for participants	468
Appendix F: Interview questions for this research study.....	471
Appendix G: Sample extract code book for this research.....	474
Appendix H: Code book additional structure for this research	481
Appendix I: Biography	483

LIST OF FIGURES

Figure 1.1	Theoretical position underpinning to this thesis	Page 60
Figure 1.2	The literature reviewed conceptual map for this thesis (research)	Page 64
Figure 2.1	Narrative to the thesis	Page 69
Figure 2.2	Recap of literature review for this thesis	Page 144

List of Figures

Figure 3.1	The research design approach for this research	Page 168
Figure 3.2	The research philosophy approach	Page 179
Figure 3.3	Operation of observation to theory for this research	Page 212
Figure 3.4	The code to theory model	Page 218
Figure 3.5	The context of code book development in the research process	Page 221
Figure 3.6	Initial code book framing based on literature review	Page 224
Figure 3.7	Code book extract of second order codes for this research	Page 230
Figure 3.8	Code book extract of third order codes for this research)	Page 232
Figure 3.9	Issues of which and where to code transcription data research	Page 233
Figure 3.10	Data collection – Text loaded into NVIVO	Page 234
Figure 3.11	Code allocation (an example).	Page 234
Figure 3.12	Application of code book, as constructed for this research	Page 235
Figure 3.13	The interpretive process for this research	Page 236

List of Figures

Figure 4.1	Construction of discussion and findings for this research	Page 262
Figure 4.2	Organisational Arrangements - Code book extract	Page 267
Figure 4.3	Staff Allocation - Code book extract	Page 290
Figure 4.4	Knowledge-Communication-Learning - Code book extract	Page 313
Figure 4.5	What staff think about their value contribution	Page 343
Figure 4.6	Lack of front-line employees consultation	Page 345
Figure 4.7	A customer perspective on service innovation	Page 347

List of Figures

Figure 5.1	New inductive theory based on service-dominant logic	Page 366
Figure 5.2	Contribution to theory for this research	Page 369
Figure 5.3	Organisational Arrangements (based on empirical data findings)	Page 372
Figure 5.4	Staff allocation (based on empirical data findings)	Page 377
Figure 5.5	Skills and knowledge (based on empirical data findings)	Page 382
Figure 5.6	Combining previous conceptual models resolved in the findings	Page 388
Figure 6.1	Taking a service ecosystems perspective	Page 404

LIST OF TABLES

Table 1.1 Statement of research questions	Page 47
Table 2.1 Incremental and radical service innovation	Page 76
Table 2.2 Goods-dominant logic and Service-dominant logic	Page 91
Table 2.3 The research associated axioms and principles of service-dominant logic	Page 95
Table 2.4 The research explored axioms and principles of service-dominant logic	Page 108

List of Tables

Table 3.1 Key methodology papers for this research	Page 166
Table 3.2 Key existing conceptual and knowledge papers for this research	Page 178
Table 3.3 Restatement of research questions	Page 186
Table 3.4 Interview questions used for data collection	Page 195
Table 3.5 The list of interview participants for the research	Page 210
Table 3.6 Discovery of themes used in code building	Page 216
Table 3.7 Identifying themes in qualitative research	Page 217
Table 3.8 First order initial coding and development in the code book for this research	Page 228
Table 3.9 First and Second level categories (concepts) from empirical analysis	Page 237
Table 3.10 Criteria for credibility (and dependability) for qualitative research based on semi-structured interviews	Page 241
Table 3.11 Issues for credibility and dependability for audio-recording/remote interviewing	Page 242
Table 3.12 The transferability criteria of qualitative research	Page 244
Table 3.13 A summary of concepts for judgement of research	Page 251
Table 3.14 Ethical considerations for this research	Page 253

List of Tables

Table 4.1 Thematic analysis: RQ1(Culture Appreciation)	Page 269
Table 4.2 Empirical data: RQ1 (Culture Appreciation)	Page 270
Table 4.3 Thematic analysis: RQ1 (Strategy Engagement)	Page 276
Table 4.4 Empirical data: RQ1 (Strategy Engagement)	Page 277
Table 4.5 Thematic analysis: RQ1 (Systems Context)	Page 283
Table 4.6 Empirical data: RQ1 (Systems Context)	Page 284
Table 4.7 Thematic analysis: RQ2 (Management Vision)	Page 292
Table 4.8 Empirical data: RQ2 (Management Vision)	Page 293
Table 4.9 Thematic analysis data: RQ2 (Promote Learning)	Page 299
Table 4.10 Empirical data: RQ2 (Promote Learning)	Page 300
Table 4.11 Thematic analysis: RQ2 (Assessing Staff Allocation)	Page 306
Table 4.12 Empirical data: RQ2 (Assessing Staff Allocation)	Page 308
Table 4.13 Thematic analysis: RQ3 (Knowledge Sharing)	Page 315
Table 4.14 Empirical data: RQ3 (Knowledge Sharing)	Page 316
Table 4.15 Thematic analysis: RQ3 (Customer Domain Expert)	Page 325
Table 4.16 Empirical data: RQ3 (Customer Domain Expert)	Page 326
Table 4.17 Thematic analysis: RQ3 (Lessons Learnt)	Page 333
Table 4.18 Empirical data: RQ3 (Lessons Learnt)	Page 335
Table 4.19 Values of staff contribution	Page 344
Table 4.20 Management change	Page 346
Table 4.21 Customer participation perspective	Page 348

THESIS STRUCTURE

"I keep six honest serving men (they taught me all I knew); their names are What and Why and When and How and Where and Who." - Rudyard Kipling (kiplingsociety.com, 2023)

The thesis is structured as follows:

- Chapter 1: Introduction
- Chapter 2: Literature Review
- Chapter 3: Research Design and Methods
- Chapter 4: Discussion and Findings
- Chapter 5: Contribution
- Chapter 6: Conclusion
- Chapter 7: Reflections
- Bibliography
- Appendices
- Biography

Chapter 1: INTRODUCTION

“We begin, however, with primary sources written for the benefit of posterity” (Tosh, 2022, p.78)

The introduction for this thesis is constructed as follows:

- Section 1.1: Motivation for this Research
- Section 1.2: Approach to Research
- Section 1.3: Exploration Journey for this Research
- Section 1.4: The Research Justification for this Thesis
- Section 1.5: Research Questions
- Section 1.6: The Literature Review Context Overview
- Section 1.7: Summary of Chapter One (Introduction)

1.1- Motivation for this Research

1.1.1 Motivation

The motivation for the research was the thinking that front-line employees could engage, participate and be more involved in the service innovation process with their unique understanding and perspective of organisational customers (Engen, 2020, p.136). Additionally, it was only through promoting service ecosystems thinking on front-line employees that their broader and wider organisational contribution could be considered and acted upon. This would lead to the realisation and maximisation of better service innovation outcomes.

Over many years in many different organisations, I have held discussions with senior directors, middle managers and front-line employees concerning the provision of service innovation. Many front-line employees felt their *voice* was ignored, as senior and middle managers advocated the need for more reporting or technology and understood little about the work front-line employees did or their role. Their contribution to service innovation is typically limited to ideas generation, service design and implementation (Karlsson and Skålén, 2015; Engen and Magnusson, 2018).

Consulting with organisational managers in finance, health and university sectors, the default response to problems with customers, front-line employees and (or) service delivery was to implement more technology. Whereas a greater service ecosystems perspective might have saved many a failed information technology project (Lusch and Nambisan, 2015; Santos-Vijande, López-Sánchez, Pascual-Fenández and Rudd, 2021).

The initial prompting (*the why academically*) for this research was posed by the question of *why service innovation is so difficult to accomplish*. Dörner, Gassmann and Gebauer (2011) speculate on several deficiencies in management perception of service innovation. These included the lack of understanding regarding the service innovation process, the confusion regarding creating value for customers and the utilisation of organisational resources (Lusch, Vargo and O'Brien, 2007; Lusch and Vargo, 2015, p.408). Tajeddini, Martin and Altinay (2020) *simply put* the difficulty of service innovation down to the lack of perception and understanding by organisational management of the service innovation process (Vargo, Wieland and Akaka, 2015).

Further exploration of the literature highlighted front-line staff as *important actors* in the service innovation process (Engen and Magnusson, 2018). A deep appreciation by organisations of front-line employees' importance remained lacking, as it was 'taken for granted' that technology was 'obviously' the way to innovate (Cucciniello, Lapsley, Nasi and Pagliari, 2015; Kane, Nguyen, Copulsky and Andrus, 2019, p.214). Wallin and Fuglsang (2017) note, for instance, the introduction of technology in healthcare service innovation.

A further motivation for this research was the thought that front-line employees are *just as important* as technology in the service innovation process. Therefore, the focus of this research centres on the *service innovation process* and *people* rather than *technology*.

Nevertheless, as technology traditionally forms a significant part of service innovation, this thesis *does concede* some consideration of service innovation technologies relating to Customer Relationship Management (CRM) and digital engagement via social media. These technologies were conceded as they were thought to *illustrate* and *centre on the engagement* and *involvement* of front-line employees with customers. Therefore, these technologies *promote* a focus on front-line employees in the service innovation process, rather than *centre on* technology (Kristensson, 2019). Also see section: 2.3.3, service innovation and technologist perspective.

Lastly, to limit the exploration of the study this research *does not* specifically focus on *well-researched* aspects of front-line employees' organisational themes, such as *behaviour* (Browning, 2008; Kao, Pai, Lin, and Zhong, 2015; Baradarani and Kilic, 2018), *motivation* (Slåtten, Svensson and Sværi, 2011; Singh and Marinova, 2013), *job satisfaction* (Stringer, Didhan and Theivananthampillai, 2011; Kumar, Dass and Topaloglu, 2014) and *human relations practice* (Alfes, Tuss, and Soane, et al., 2013). These themes are covered by many other well-respected researchers in the field of service innovation.

1.1.2 General observations for this research

1.1.2.1 Definitions

Definitions of important terminology and concepts used in this thesis, for instance, such terms as *Customer*, *Service ecosystems*, and *Service-dominant logic* are given in Appendix A. These are offered as clarification and guidance on their utilisation in this thesis.

The term *Front-line employees* is used extensively in the plural throughout this thesis. The term defines a wide range of staff who are engaged, assist and have contact with customers in an organisational context. Also see Engen, Fuglsang, Tuominen (2023, p.363).

Throughout this thesis, the use of *service innovation* and the *service innovation process* highlights organisational innovation and change regarding service processes, systems and service concepts (Parris, Bouchet, Peachey, Arnold, 2016).

1.1.2.2 Technology observation

The concept of *people-centric* rather than a *technology-centric* perspective in service innovation is not new. This research stresses (often) that front-line employees are equally (if not more so) important to the service innovation process. This is stressed as organisations frequently default to technology when undertaking service innovation. This research places front-line employees first.

The research *does not dwell* on technology aspects such as Artificial Intelligence, Virtual Reality, Blockchain, Data warehousing and big data Cloud computing or Quantum computing. These technologies are covered in numerous leading journals. See Elia, Raguseo, Solazzo, and Pigni (2022) who consider many of these technologies.

For a discussion of technology and service-dominate-logic, reference Lusch and Nambisan (2015) in the article: '*Service Innovation: A Service-dominant Logic Perspective*'.

1.1.2.3 An observation of thesis content

The *literature reviewed* for this thesis reflects an *academic understanding* of concepts and theory. The *Research Design and Methods* chapter explores both academic best practices and the methodology undertaken for the research execution. Discussion and findings include both the academic literature reviewed and the research interpretation of data collected. The data collected is what the research participants think and believe. The Contribution chapter adds the utilisation of the research findings. The Conclusion chapter brings together an analysis based on the research.

Throughout the thesis, the emphasis is on front-line employees, service innovation and a service ecosystems perspective.

1.2- Approach to the Research

1.2.1 The research ontology, epistemology and methodology

The *ontology* for the research is socially constructed and situated. The *epistemology* context is socially subjective and lived experiences of people involved in the service innovation process. The service innovation process is embedded in the organisational change of service. Service innovation organisational managers, front-line employees, and service innovation consultants undertake these changes. Here service innovation consultants relate to external and internal organisational consultants managing organisation change.

To explore the research problem a *qualitative* and *interpretative* approach is used. This approach best explores the social, organisational and management context required to understand people's real-life experiences. Additionally, it is consistent with the study of socially situated environments in which front-line employees work.

The data collection methodology is based on a qualitative approach using semi-structured interviews. The theory concept is built utilising subjective and constructed approaches. This then forms the framework for conceptual modelling. Models are built upon inductive and interpretative methods, centred on thematic analysis of interview participant transcriptions using codes and categories to build assertions and themes.

1.3- Exploration Journey for this Research

The thesis argues that by taking a service ecosystems perspective founded on the paradigm of service-dominant logic principles and combining empirical data analysis, the broader contribution of front-line employees to the service innovation process *can be realised* by organisations. The context of *broader contribution* concerns the further involvement, influence and engagement of front-line employees in the service innovation process. Also, see the definitions in Appendix A.

Research aim: This research aims to explore and discover, how utilising a service-dominant logic and service ecosystems perspective on front-line employees in their broader contribution to the service innovation process, can lead to better service outcomes and organisational competitive advantage.

The research question and rationale for this research are given in section 1.5.

Currently, service-dominant logic gives a high-level definition of what service ecosystems are (or should look like) but does not specify (or give) *how they can be used* regarding front-line employees and their further contribution to the service process (Ng and Wakenshaw, 2019, p.201). This is an academic gap in knowledge. Further, many papers outline front-line employees' *current* contributions such as ideas, design and implementation, but *fail* to outline front-line employees' contributions beyond these concepts. They fail to consider a service ecosystems perspective.

Therefore, to bridge this gap in knowledge a service ecosystems perspective is highlighted in this thesis concerning front-line employees.

For this thesis, the choice of service ecosystems perspective is situated at a meso-level and micro-level. These levels were considered suitable in the exploration and discovery for this research, as they highlight the organisational environment in which front-line employees can more broadly contribute to the service innovation process (Lusch, Vargo, and O'Brien, 2007). Also, see Appendix B for a Systems map of these concepts.

Furthermore, it was thought the choice of the meso-level and micro-level perspective would allow the building of subjectively co-opted service innovation service-dominant logic principles. These could be employed and operationalised by organisations when considering front-line employees' contributions to the service innovation process.

Additionally taking this approach, empirical data analysis could be utilised to build and expand on meso-level (organisational arrangements and staff allocation) and micro-level (staff skills and knowledge) conceptual constructs. This would extend the work of the sustainability of service ecosystems outlined by Heige Löbler (2019, pp.360-363).

Moreover, the empirical data analysis could be utilised in a world view for organisations to take a systems joined-up approach to front-line employees' contributions. Vargo and Lusch (2017) discuss systems and ecosystems theory.

Therefore, my academic journey for this research rests with the *exploration and discovery* of the organisational environmental *understanding* and *thinking* regarding the importance of front-line employees and service innovation centred on a service ecosystems perspective.

1.4- Research Justification for this Thesis

1.4.1 Research Justification: Context

This research tackles the “*So what?*” question of front-line employees’ broader contribution to service innovation by arguing front-line employees are *not utilised* or *recognised* for the broader contribution of their skills and knowledge in the service innovation process. They are frequently overlooked, in the context of how they may be utilised in the wider organisational service innovation process and their experience and expertise concerning customers are ignored. They are infrequently consulted about how improvements to service delivery may be operationalised.

Nevertheless, in 2020, 82% of employment in the UK was services-based (Brien, 2021), so improvements to service innovation have a large impact on many people. However, service innovation remains the poor cousin to product innovation with its dedicated research and development (R&D) departments and its well-defined product launch cycles. Typical reasons for failed service innovation projects stress they are difficult to achieve (Dörner, Gassmann and Gebauer, 2011), difficult to define (Witell, Snyder, Gustafsson Fombelle and Kristensson 2016) and often complex organisational cultural problems are solved just by introducing technology (Kane, Nguyen, Copulsky and Andrus, 2019, p.159; Korper, Holmlid and Patrício, 2021).

Bitner and Brown (2008) observe in an era of increasing globalisation where services dominate the major economies (US, China, Germany, and the UK) the significance of service innovation has been comparatively *under-researched* concerning its importance.

Gallouj and Djellal (2010, pp.9-10) find this comparative lack of service innovation research surprising given its organisational and economic importance. More widely, Tidd and Bessant (2015, pp.447-448) emphasise the importance of the service economy, highlighting service innovation generally has a positive impact on national economies by promoting new skills and activities. Mustafa (2020, pp.2-3) notes that the service economy makes up nearly 80% of the wealth in developed nations, such as the US and UK.

The recent COVID-19 pandemic (2020-2022) has shown the importance of the service industry to the world's major economies with an estimated \$16 trillion (September 2020) cost to the US economy (Cutler and Summer, 2020). The lasting impact has been the closure or reduction of many service organisations in tourism, restaurants, and hospitality.

The sheer global economic value of services and the need to operationalise innovation concerning new techniques and processes makes the study of service innovation an important and active area for continuing research. Not least in permitting organisations to promote and offer greater value to their customers

Although technology plays a significant part in service innovation, this research is centred on the *human side* of service innovation organisational thinking and front-line employees in service innovation. This is often overlooked by organisational managers in their rush to implement *the latest technology* (Kane, Nguyen, Copulsky and Andrus, 2019, p.214; Kristensson, 2019; Korper, Holmlid; and Patrício, 2021).

1.4.2 Research justification: A front-line employees - The phenomena of interest

The research focus of interest for this thesis is *front-line employees*. These groups of organisational staff participate in customer service encounters and characteristically undertake customer contact duties. Typically, front-line employees have an ongoing interaction or a direct relationship with customers of an organisation. The contextual situation of front-line employees is the service innovation process. Here organisations strive to improve and deliver better services to their customers through a process of change. This change is often enabled by service innovation professionals such as in-house IT staff or outside consultants.

The academic gap explored by this research contends that there is little research on *how* organisations involve, engage, and assess front-line employees' contribution to the wider organisational environment of service innovation (Engen, Fuglsang, Tuominen, et al., 2021).

Preliminary academic literature reviewed highlighted *disjointed* organisational approaches to service innovation and service-dominant logic. This also included service ecosystems. Initial academic papers reviewed included work by Karlsson and Skålen, (2015) and Engen and Magnusson (2018) regarding front-line employees' roles. Santos-Vijande, López-Sánchez, Pascual-Fenández, et al., (2021) regarding service innovation and Koskela-Huotari, Vink and Edvardsson (2020) regarding service-dominant logic. A table of key research conceptual papers can be found in Table 3.2 of Chapter 3.

The work by (Vink, Koskela-Huotari, Tronvoll, Edvardsson and Wetter-Edman, 2021) suggests organisations tend to adopt a *fixed approach* to service innovation. For example, front-line employees *only contribute* to ideas generation (Agnihotri, Rapp, Andzulis and Gabler, 2014). Front-line employees are *only engaged* in service design (Karlsson and Skålén, 2015). Front-line employees *are utilised* in service implementation (Engen and Magnusson, 2018). Therefore, there is *no organisational systems approach* (joined-up) thinking beyond what front-line employees have *traditionally contributed* and *little* or *no* thinking on how they *might further contribute*. There is no concept of a *service ecosystems* approach (Vargo and Lusch, 2017).

A non-systems approach, as Tajeddini, Martin and Altinay (2020) alludes to, promotes little understanding of *service innovation* and front-line employees' contribution. Furthermore, as Dörner, Gassmann and Gebauer (2011) observe service innovation is already difficult to achieve.

The justification for greater academic research *is important* for the study of service innovation from the perspective of the broader contribution of front-line employees. Subsequently, important themes on the social and cultural aspects, staff allocation and staff skills and knowledge can be explored. These themes can then advance the greater comprehension of front-line employees and service innovation, and hence better service delivery experience for customers and ultimately greater competitive advantage (Lusch, Vargo and O'Brien, 2007).

1.4.3 Research justification: Service innovation

Service innovation defined by service-dominant logic, centres on *service outcomes* through the skills and knowledge of staff, with the application of organisational dynamic capabilities set by organisational culture (Lusch and Nambisan, 2015). Here dynamic capabilities are related to the thinking and allocation of front-line employees in the service innovation process (also see Appendix A for the research definition of *dynamic capabilities*).

The research execution explores service innovation and service ecosystems in the context of the wider involvement, engagement, and participation of front-line employees centring on the service innovation process. This is the background framework for this research.

Included in the research are front-line employee managers to give a greater narrative on their perceptions and understanding of front-line employees in the service innovation process. The research also includes service innovation consultants. These are the people who typically execute the organisational change of the service innovation process. They are therefore situated in the meso-level and micro-level world view of service ecosystems with their actions and decisions on staff allocation, skills and knowledge training.

Arguing from a service-dominant logic perspective, Lusch and Nambisan (2015) contend that service innovation is *service-centred* and not *goods-centred*. This concept has a profound effect on how organisations interact with their customers, and secondly a refocusing on the role of the staff, such as front-line employees.

The researcher's own professional experience in the university sector is that service innovation is *about changes* in service delivery, *and* wider customer engagement and to inform, assist and resolve issues of service delivery. This is also a central concept of the co-creation and co-production (defined in Appendix A) ethos of service-dominant logic. Also, see section 2.4.2.

A participant interviewed for this research, with over 20 years working for a global UK/IT business as a service delivery manager, noted senior managers tend to invest in marketing and ignore service innovation. Major projects invested in technology were undertaken typically to collect data on customers. Working *with* customers (service-dominant logic co-creation and customer value) were only secondary or third considerations.

An example of such technology was the introduction of a Customer Relationship Management (CRM) project (also see section 2.3.3). Additionally, the experience of another research participant was that customer data was only reported to managers to illustrate financial reporting, not customer engagement and unquestionably not for further service innovation (for a list of participants see Table 3.5, Chapter 3).

Service innovation, from being marginalised (Miles, 2000) has become enormously important. Also, see section 1.4.1. However, only *one* of the participants interviewed for this research mentioned *service innovation* by name.

This perhaps highlights service innovation as being one of the most important concepts for organisational competitive advantage which many have *never* heard of! When constructing the interview questions for this research, concepts such as *new service delivery* or *new service delivery project* were used as these are more familiar terms in practitioner usage. Also, see the interview questions rationale given in Table 3.4.

Literature-reviewed service innovation case studies include *Eataly*, *Starbucks*, *Volvo* and *Harley Davidson*. An extended case study, regarding the *Battle of Britain* is given in Appendix C. These case studies are utilised to highlight, illustrate or emphasise certain observations or points found by academics to be important. Further, front-line employees' contribution is exemplified by empirical data as discussed in Chapter 4 and Chapter 5.

1.4.4 Research justification: Service ecosystems

The term *service ecosystems* is often seen as an overloaded concept or a *buzzword* in academic research. A typical perspective is at an inter-organisational network level, such as found in Open Innovation (Chesbrough, 2003) or Strategic Collaboration (Schilling, 2020, p.167). Lusch and Vargo, 2014, p.24) view service ecosystems in terms of *actors* (this may include organisational staff) *and* institutional (organisational) arrangements (such as organisational culture). This is the perspective taken for this thesis.

Additionally, Lusch and Vargo (2014, p.24) in their definition of *service ecosystems* use the word *system* when referring to service ecosystems (see definition Appendix-A). Here *system* defines connectivity and a relationship approach (Fortune and Peters, 2005, p.49). Further, Fortune and Peters (2005, p.49) use the German word *Weltanschauung* (world view), to define a way of viewing systems and collections together rather than individually. Also see Vargo and Lusch (2017) and Checkland and Holwell (2004, p.13) regarding taking a *systems approach* to complex problems such as service innovation.

This *worldview* approach is explored for this thesis within service-dominant logic principles at a *meso-level* (organisational arrangements and staff allocation) and a *micro-level* (staff skills and knowledge) to demonstrate how these are connected and related to the broader contribution of front-line employees in the service innovation process. It should be noted factors such as suppliers, regulators and competitors which may be involved at the meso-level and micro-level have been deemed to be out of scope for the research.

1.4.5 Research justification: An organisation and the front-line employees contribution perspective

The organisational focus for the research is limited to UK organisations in the Finance, Health and University sectors as:

- A significant majority of the research undertaken into service innovation and front-line employees' is set *outside* the UK (Karlsson and Skälén, 2015).
- UK organisations highlight differing organisational cultural and social attitudes to service innovation. Also, reference 3.6.4.2 Justification for UK-based organisations.
- These organisations face similar problems in maintaining long-term relationships with customers (Hidalgo and Herrera, 2020).

Additionally, these UK organisational types were chosen as there are often significant academic researcher issues of gaining operational access to interview managers and staff involved in customer contact of customer relationship duties. These include ethical issues around access to university and health staff and confidentiality issues for financial organisations. For further discussion also see section: 3.10 on the consideration of research ethics. This often leads to a comparative academic gap in knowledge, which this research can seek to address (also see Bäckström and Bengtsson, 2019).

A problem regarding access is illustrated in the case of a customer service manager of a large UK financial organisation (with assets totalling many hundreds of billion UK pounds), managing 300 front-line employees', who when approached to take part in the research asked for a questionnaire to be forwarded.

When it was clarified that the research was situated in qualitative interviews of their real-world experiences, they were surprised as they had never been approached (and agreed) to undertake this type of research.

In the situation of universities, there are important organisational issues (ethical) concerning anonymity which generally preclude access to managers and staff from the researcher's home organisation and so make undertaking research *challenging*. However, the researcher's professional links with *many other universities* helped mitigate this issue. Moreover, the researcher's access to various health and finance organisations arises from many practitioner years working with people in these environments. This has built up a strong element of trust for the people participating in the research.

In the selection of organisations for this research, it was recognised there is much heterogeneity and generalisation across UK financial, health and university sectors and organisations. However, this generalisation across organisation types and organisations has the effect of reducing the organisational context-specific factors of the research. Furthermore, any single or few case studies would only surface local issues and only highlight local service innovation understanding, staff allocation procedures and staff skills and knowledge.

Additionally, the problems of organisational social understanding, procedures of staff allocation and skills and knowledge regarding the contribution of front-line employees, particularly from a service ecosystems perspective are common to service innovation across all the chosen organisations.

Furthermore, the positioning of these organisations undertaking customer service delivery and their requirements to undertake service innovation made them good candidates for research. Moreover, any feedback from the research would assist managers, service innovation consultants and staff in *UK organisations* in their thinking on improvements concerning service innovation and successful service delivery. The rationale for this UK organisational study is further given in section 3.6.4.2.

Organisational front-line employees for this research, include staff who manage client accounts in the finance sector. Staff in the health care sector who have direct contact with patients. University staff in professional services who have contact with students.

Examples of front-line employee managers for this research include managers who directly or indirectly manage front-line employees. Many managers for this research were senior people such as directors or department managers.

Lastly, examples of IT service innovation consultants include business consultants, IT Consultants, and IT Programme and Project Managers. These participants could offer an organisational service ecosystems perspective beyond a single department, process or team.

The total expertise and experience of all participants associated with service innovation came to an estimated 600+ years. Also, see Table 3.5 for a full list of the 42 participants for this research.

1.5- Research Questions

1.5.1 The research contribution

This section moves beyond the justification given in section 1.4 and discusses the *theoretical perspective, research gap, and empirical data collection* for the research.

The context for this thesis is the *exploration and discovery* of the broader contribution of front-line employees to the service innovation process. This is framed by utilising a service ecosystems approach. This perspective centres on better service and service delivery outcomes for customers. Also, see Appendix A for definitions of words that might be unfamiliar.

The *theoretical perspective* of the research builds on the paradigm offered by Vargo and Lusch of service-dominant logic (Vargo and Lusch, 2004). This lens champions service for customers and emphasises the rationale of service innovation to *improve* and *enhance* customer experiences. Further, taking this perspective allows the thesis to be grounded in a solid foundation of the existing body of knowledge.

For this thesis service-dominant logic principles that emphasise a *service innovation* and *front-line employees'* approach are brought together and explored. They are framed together from a system ecosystems perspective. This framing emphasises a systems approach.

This *thesis argues* that only by considering a service ecosystems perspective at a meso-level and micro-level that the organisational importance, contribution, and maximisation of front-line employees in the service innovation process be realised.

Therefore, the *research gap* offered by this research comes from the exploration of a service ecosystems perspective. This is framed on the recognition that there is *no theoretical perspective* that outlines *how* service-dominant logic principles can be utilised in organisational thinking which connects front-line employees' broader contribution to the service innovation process. Section 2.10 gives the academic research gap in knowledge.

The *empirical data collection*, for this research, is framed in the social real-world experiences of front-line employees (staff), and organisational managers with a direct relationship involving the management of front-line employees, and service innovation consultants. These people collectively have a practitioner (working) insight into the service innovation process. The data collection, therefore, allows the generalisation of the service innovation process from a multi and systems perspective rather than one single narrative or view.

Building on the empirical data and theory of service-dominant logic, a series of process conceptual models can be used to operationalise the broader contribution of front-line employees in the service innovation process. Also see section 1.6 which further outlines the theoretical and conceptual aspects.

It should be *stressed* that a service ecosystems perspective *is important*. Only through this lens, the organisational *promotion* of a *systems approach* to the broader contribution of front-line employees to the service innovation process can be operationalised. Furthermore, changes concerning contribution, maximisation and improvements within organisations can be conceptualised taking a service ecosystems perspective.

Building on the literature, a theoretical perspective and research gap leads to the construction of research questions. The specification of targeted research questions sets out to *resolve, explore, and discover* the conceptual and empirical gap in knowledge.

To undertake this task, the research questions are built on service-dominant logic principles of organisational arrangements (principle eleven), staff allocation (principle nine) and staff skills and knowledge (principle four). These then combine to give a service-centred and service ecosystems perspective (principle eight) (Vargo and Lusch, 2004, 2016).

1.5.2 The context of research questions

The main or substantive research question stresses the maximisation of the contribution of front-line employees. It is argued in this thesis this comes from taking a service ecosystems approach to the broader, wider, further contribution of front-line employees in the service innovation process.

Research questions, RQ1-RQ3 extend the main research question, with the exploration of how organisational culture, staff allocation, and skills and knowledge can improve front-line employees' contribution to the service innovation process. These questions seek to discover the socially situated experiences of staff. These include the understanding, perception, and assumptions that organisations build regarding front-line employees' broader contribution to the service innovation process.

It should be noted the text above each research question (Table 1.1) has been added to emphasise the relationship to service-dominant logic covered in the literature reviewed and to stress empirical data analysis and theory construction.

Research question: How can the broader contribution of front-line employees be maximised in the service innovation process?

Service-dominant logic: Organisational arrangements

RQ-1: How can changes in organisational culture with respect to front-line employees improve the service innovation process?

Service-dominant logic: Staff allocation

RQ-2: How can changes in organisational staff allocation of front-line employees improve the service innovation process?

Service-dominant logic: Staff skills and knowledge

RQ-3: How can better utilisation of the skills and knowledge of front-line employees improve the service innovation process?

Table 1.1 Statement of research questions.

1.5.3 The importance of culture, staff allocation, and staff skills and knowledge

The central place of *culture*, *staff allocation*, and *staff skills and knowledge* in this thesis is based on the *central place* these concepts take in service-dominant logic and service innovation. These are explored through the literature reviewed on service-dominant logic. Table 2.4 gives the service-dominant principles utilised for the research.

Some *real-world* narratives and stories include:

Culture (service-dominant logic based organisational arrangements) focuses on how service innovation is socially understood by culture, norms, and values within organisations and how front-line employees' work is understood. A case from real-world practice is at a university, where the requirement to engage students via social media was well understood. However, the cultural engagement of front-line employees in the process was not fully considered, with little follow-up of ideas generated.

Staff allocation centres on how the utilisation of front-line employees is undertaken, considered, and assessed within organisations to progress service innovation. An example includes a financial organisation where staff were allocated on their availability, not their planned availability to undertake service innovation work. Hence, the service innovation was not always successful.

Staff (front-line employees) utilise their skills and knowledge when undertaking contact, engagement, assistance, and support of customer relationships in their organisation.

A case also from practice, is where a health professional triaged telephone calls from customers to assign calls to other teams. Utilising their skills and knowledge was essential, but they were not consulted over a service innovation change in call process handling. Here their knowledge might have led to an improved service innovation process.

The narrative and stories outlined all explore the broader, wider, further contribution of front-line employees to the service innovation process. This is important as front-line employees can be utilised to deliver better service innovation outcomes and thus promote a competitive advantage. Furthermore, a service ecosystems perspective *joins up* culture, staff allocation, and skills and knowledge to promote a systems view of service innovation. Again, this gives a greater competitive advantage.

1.5.4 Challenge of uniqueness, novelty, and contribution for this research

1.5.4.1 The uniqueness and novelty of the research

This research contributes to the body of knowledge on front-line employees, service innovation, and service ecosystems. The research focuses on the requirement for organisations to take a service ecosystems approach. This stresses a systems approach. This brings front-line employees into *sharper focus* in organisations when considering customers, service innovation, and service delivery. Consequently, the focus is *not solely technology* centred.

Therefore, a novel approach is offered by this research as it argues for *less technology* with the *increased* involvement, engagement, and participation of a broader contribution of front-line employees in the service innovation process. This approach is driven by service-dominant logic principles and empirical data analysis.

This research seeks to address the gap in research with contributions based on empirical data analysis, theory building, and conceptual modelling. These contributions are further outlined in sections 1.5.4.2 through 1.5.4.4. The explored academic gap in knowledge is discussed in section 2.10.

1.5.4.2 An empirical approach building on previous research

1.5.4.2.1 A gap in empirical knowledge

A bibliometric review undertaken by Subramony, Groth, et al., (2021) highlighted less than three-hundred articles between 1980-2020 concerning front-line employees, service innovation, and service encounters. This highlighted a literature review would be feasible to undertake for a research-led degree at a Ph.D. level. This would allow for a sufficient synthesis of important concepts (theory) to be explored by the research questions and that the research remains current and ongoing in the academic field. This would also allow some sense of *backfilling* where major researchers have highlighted limitations in their research.

Although service-dominant logic discusses organisational arrangements (Vargo and Lusch, 2016), there is little empirical research as to what this actually *constitutes* in terms of the front-line employees' broader contributions to the service innovation process (Koskela-Huotari, Vink and Edvardsson, 2020).

Secondly, although service-dominant logic *alludes* to resource integration it does not go into detail about actual criteria, procedures, or assessment for staff allocation – How this is operationalised for front-line employees' and built on empirical data (Karlsson and Skälén, 2015).

Thirdly, although research highlights front-line employees' contribution to ideas generation, service design, and implementation, there is little empirical research on how they could more broadly contribute to wider organisational service innovation processes. Specifically, regarding wider organisational conversations connecting their experience, expertise, and skills, and knowledge of customers (Engen, Fuglsang, Tuominen, Sundbo, et al., 2021). Organisational conversations in this context refer to the engagement, involvement, and participation of front-line employees beyond their perceived traditional role in service innovation.

1.5.4.2.2 The UK organisational approach

The concept of organisational national culture has been studied by Hofstede, Neuijen, Ohayv, and Sanders (1990) who stress that organisational *culture* varies differently across national boundaries highlighting different aspects concerning norms, values and beliefs, and perceptions of staff involvement and engagement in their work.

As the research by Valtakoski, Reynoso, Maranto, Edvardsson and Cabera (2019) note the role of national culture for the service innovation process *does in fact matter* (Alam, 2006). Additionally, as Gonz  ller-Blanco, Coca-Perez, and Gulsado-Gonz  lez (2019) identified *different countries have different approaches to service innovation*.

Therefore, the role of national culture *has a significant influence on* UK organisations, as it impacts managers, staff, external partners, and customers in the way they understand, perceive, and view service innovation and the importance and contribution of front-line employees in the service innovation process (Schepers and Van der Borgh, 2020).

This context becomes significant, as empirical studies on front-line employees continue in Norway, Italy, and Taiwan with little significance attached to undertaking UK-based studies (also see section 3.6.4.2). This research seeks to address the bias in front-line employees' research, with a contribution based on empirical data analysis from a *UK perspective*. It should be noted the research is not a *comparative analysis* between UK organisations and organisations outside the UK. The *context* is based on purely UK organisations. Again, reference section 3.6.4.2 which gives a further rationale.

1.5.4.3 Building on service-dominant logic theory

Building on service-dominant logic theory several previous research perspectives are considered for this research:

- Work has been undertaken by Koskela-Huotari, Edvardsson, and Jonas, et al., (2016) and Taghizadeh, Rahman, Hossain, and Haque (2020) who reviewed organisational arrangement.
- Resources and staff allocation is covered with work undertaken by Peters, Löbler, and Brodie et al., (2014).
- Skills and knowledge are outlined in the work by Ordanini and Parasuraman (2011).
- A service ecosystems perspective from work undertaken by Vink, Koskela-Huotari, Tronvoll, Edvardsson, and Wetter-Edman (2021).

Taking these perspectives and building on these works, the *theory building* for this thesis involves a service ecosystems approach at a meso-level and micro-level. This approach incorporates front-line employees' broader contribution to the service innovation process constructed from the service-dominant logic principles of Vargo and Lusch (2004).

1.5.4.4 New conceptual model building

The empirical data analysis builds on and offers a unique set of conceptual model(s), which extends and explores the understanding of organisational arrangements, staff allocation, and staff skills and knowledge, as they apply to front-line employees. This is situated from a service ecosystems perspective. These series of models form the conceptual element for this thesis.

1.5.5 Bring it together as a service ecosystems perspective

This research combines empirical data, theory building, and conceptual model construction and places them in the academic context of the broader contribution of front-line employees in the service innovation process.

The thesis argues a *service ecosystems perspective is required to fully understand and make sense of the broader contribution of front-line employees in the service innovation process.*

So, lastly, why is this important? As Storey, Cankurtaran, Papastathopoulou, and Hultink (2016) argue, success in service innovation depends on organisational management's understanding of service innovation and the involvement of staff and customers. This issue is then *important academically* to research as to why service innovation is so difficult to accomplish (Dörner, Gassmann, and Gebauer, 2011; Tajeddini, Martin, and Altinay, 2020). This ultimately is the underlying academic narrative for this research.

1.6- The Literature Review Context Overview

1.6.1 The theoretical framework for this thesis

As Grant and Osanloo (2014) state: '*a theoretical framework consists of selected theory (or theories) that (underpin) thinking with regards to how you understand and plan to research your topic, as well as the concepts and definitions from that theory which are relevant to your topic*'. With this definition in mind, the central theoretical framework for this thesis is based on service-dominant logic (Vargo and Lusch, 2004).

The use of service-dominant logic (Vargo and Lusch, 2004), was thought to offer a suitable theory framework for this research as it is *service based* and *the arena* in which front-line employees operate.

Essentially, through a series of principles and axioms, service-dominant logic argues the requirement to place thinking of the provision of service (and service innovation) on the central involvement (co-creation and values) of customers. Vargo and Lusch (2004) argue much of current thinking (2004) was centred on organisational goods logic, the provision of stuff or things from a product and product innovation stance.

In this thesis, the theoretical framework explored rests on bringing together the areas of service innovation with service-dominant logic thinking and the broader contribution of front-line employees to the service innovation process. This is conceptualised from a service ecosystems paradigm. These areas are further explored in the gap in knowledge. Also, see section 2.10.

The narrative argued throughout this thesis, considers the broader (and maximise) contribution of front-line employees to the service innovation process rests on the thinking of service-dominant logic underpinning the service innovation process (Koskela-Huotari, Edvardsson, Jonas, Sörhammar, and Witell, 2016).

Moreover, this thinking must be) undertaken from a service ecosystems (service-centred) perspective (Vink, Koskela-Huotari et al., 2021). Furthermore, the study context is centred on UK finance, health, and university sectors as little service innovation and front-line employee research has been undertaken inside the UK (Schepers and Van der Borgh, 2020).

The service ecosystems approach for this thesis combines and synthesises service-dominant logic theory, organisational arrangements (meso-level), staff allocation (meso-level), and staff practices regarding skills and knowledge (micro-level) to give a system(s) socially situated understanding of how front-line employees' could more broadly contribute to the service innovation process.

The empirical analysis builds on and extends these perspectives to give a greater service ecosystems systems approach to understanding front-line employees in the service innovation process.

Service-dominant logic principles for the constructed theory, combined and central to this thesis included:

Principle eleven: Value co-creation is coordinated through actor-generated organisations and organisational arrangements, which stresses the social situation of service innovation (Vargo and Lusch, 2008; Vargo and Lusch, 2016).

Principle nine: All social and economic actors are resource integrators, based on the resource-based view (Barney, 1991) and dynamic capabilities (Teece, 2007) supporting organisations and their requirement to provide front-line employees' (staff allocation) to the service innovation process (Vargo and Lusch, 2016).

Principle eight: A service-centred view is customer-oriented and rational (Vargo and Lusch, 2016), focusing on service and the rationalised through the service ecosystems perspective (Lusch and Vargo, 2019, p.16).

Principle four: Knowledge is the fundamental source of competitive advantage (Vargo and Lusch, 2004) and is utilised both to map selected skills and knowledge practices and how taking a service ecosystem's perspective to organisational front-line employees promotes their broader contribution to the service innovation process.

The assessment *and* selection of service-dominant logic principles brought together by this research were based on preliminary literature which *indicated* high-level categories (themes) of organisational arrangements (culture), staff allocation and staff skills and knowledge *were important for* the broader contribution of front-line employees in the service innovation process (Karlsson, and Skälén, 2015; Engen and Magnusson, 2018; Löbler 2019, pp.360-363; Engen, Fuglsang, and Tuominen, et al., 2021).

Additionally, these principles *highlight* front-line employees' involvement, engagement, and their role in the service innovation process and recognise their customer contact focus and expertise. Also, see section 2.5 for the expansion of service-dominant logic principles relating to front-line employees for the thesis.

These high-level concepts form the framework of the research questions (Table 1.1 and Table 3.3) and the *discovery* of related codes, categories, and themes interpreted during the research empirical data analysis.

Chapter 4 has the findings associated with this research. Figure 1.1 provides an illustration regarding the service-dominant logic principles (theory) brought together and constructed for this thesis. This forms a new framework when considering and thinking about front-line employees' contributions to the service innovation process.

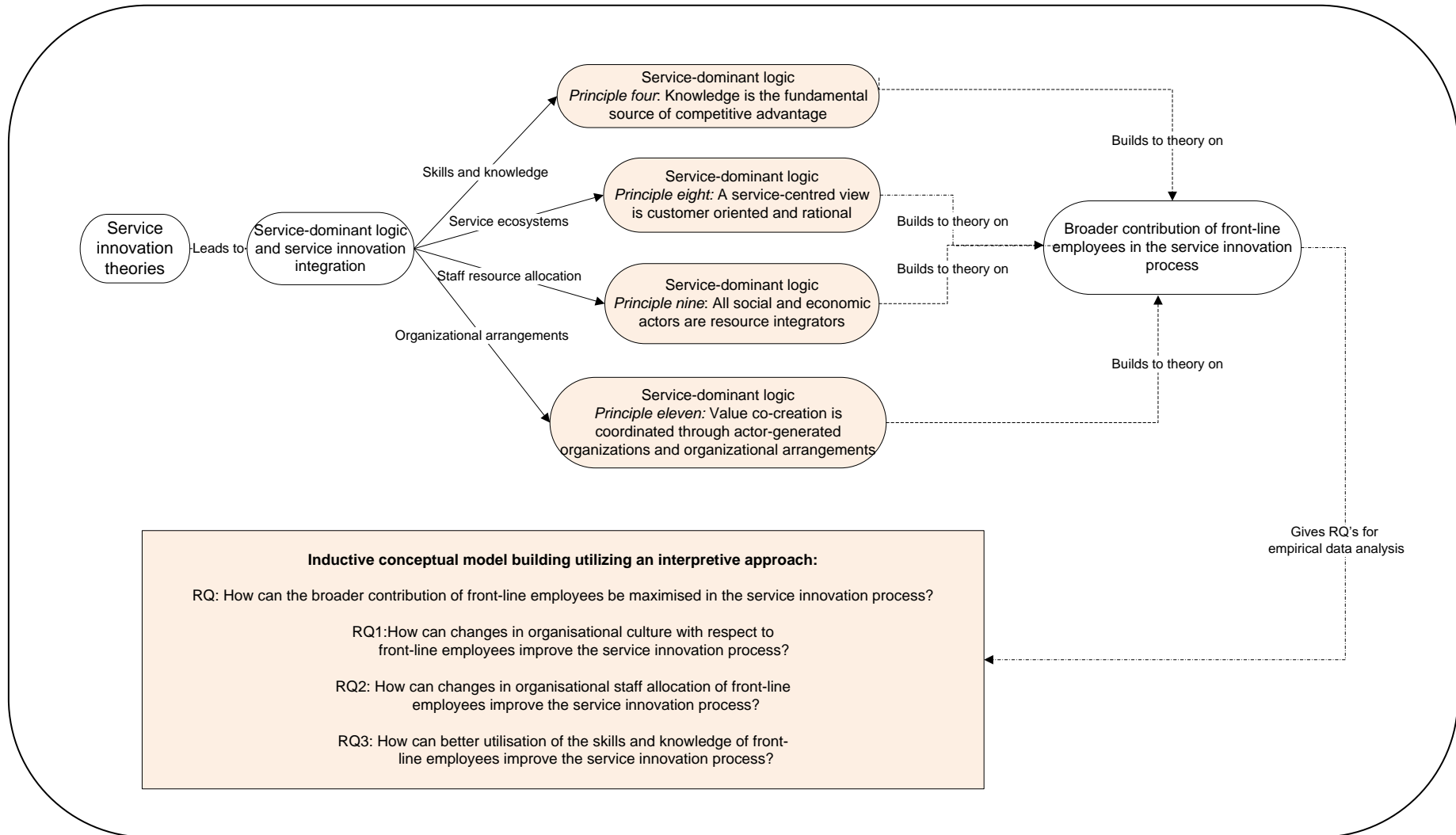


Figure 1.1: Theoretical position underpinning to this thesis.

1.6.2 The conceptual framework for this thesis

Imenda (2014) notes the frequent misunderstanding of conceptual and theoretical frameworks. For this thesis, Imenda (2014) definition of the conceptual framework will be utilised as '*bringing together many related concepts to explain or predict a given event or give a broader understanding of the phenomena of interest – or simply of a research question*'.

The conceptual theme explored for this thesis is by understanding the service innovation process, via service ecosystems, the wider consideration of front-line employees' broader contribution to the service innovation process may be gained. This view is based on organisational arrangement, staff allocation, and skills and knowledge in the context of service-dominant logic. This can lead to better service innovation process outcomes, focused on service for customers and not solely technology-focused or organisational centred.

A high-level discussion of the concepts for this thesis follows.

Service innovation concepts form the *change* in how service delivery is thought about within organisations.

Service-dominant logic invokes a *new paradigm shift* to view services, not from a goods/product stance but from a *service perspective*. This allows service innovation to be also reconceptualised.

The reconceptualization of service innovation is discussed and reviewed in the context of service-dominant logic principles.

For this thesis, service-dominant logic principles four, eight, nine, and eleven are utilised to build a theory framework to explore and discover the broader contribution of front-line employees in the service innovation process. This is undertaken in the context of a service ecosystems approach.

Service-dominant logic organisational arrangements focus on how service innovation is socially understood by culture, norms, and values within organisations and how front-line employees undertake their work.

Staff allocation outlines how the utilisation of front-line employees is undertaken, considered, and assessed within organisations to progress service innovation.

Staff practices regarding front-line employees' skills and knowledge to undertake their engagement, assistance, and support of customer relationships and the contact for organisations in their wider environment.

Service ecosystems take a service-dominant logic stance concerning organisational arrangements, staff resource allocation, and staff skills and knowledge. This gives a service-centred view of service innovation from a systems perspective. It is within this service ecosystems perspective that empirical research is undertaken to discover and explore what constitutes a practitioner's socially situated understanding of organisational arrangements, staff allocation, and skills and knowledge. This is undertaken in the context of the research questions which stress maximising front-line employees' contribution. See section 1.5 for research questions.

The academic gap in knowledge is outlined in section 2.10, with the call for additional conceptual and empirical analysis in the field of service-dominant logic, front-line employees' and service innovation. The research meets this challenge.

Chapter 5 brings the discovered concepts from the research to construct a conceptual process model. The process model is illustrated with extended case studies from the empirical data analysis.

This approach adds to the *unique* aspect of this research by bringing together interpretively considered service-dominant logic principles within a theoretical framework of front-line employees' broader engagement, participation, and involvement in the service innovation process. The emphasis is on a service ecosystems perspective.

To assist in the understanding of the concepts reviewed in this thesis, Figure 1.2 provides an outline illustration. Appendix B gives this information as a conceptual systems map, with different emphases and an illustration at a systems level.

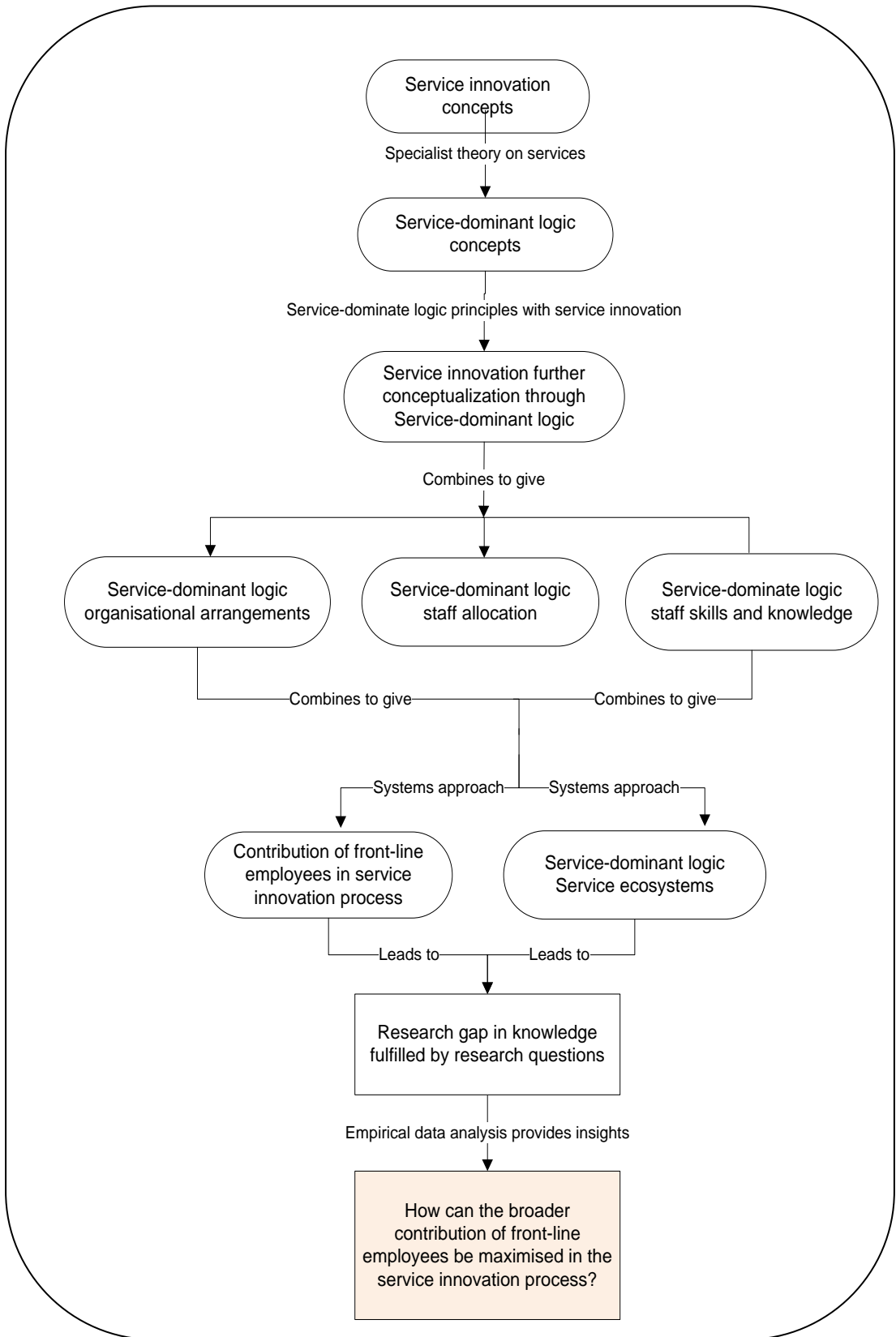


Figure 1.2: The literature reviewed conceptual map for this thesis (research).

1.7- Summary of Chapter One (Introduction)

The motivation for the research outlined in section 1.1, is that front-line employees *can more* broadly contribute to the service innovation process. The perspective is taken from a system ecosystems approach or world view. A front-line employee focus rather than a technology focus is made. However, technology such as CRM and social media *are* discussed as these technologies centre on *customers* and *services*. The realm in which front-line employees operate.

In section 1.2, the research approach is outlined through the ontology, epistemology, and methodology stance.

In section 1.3 the argument for this thesis is made. The thesis argues that taking a service ecosystems perspective, founded on service-dominant logic principles, axioms, and theory, the broader contribution of front-line employees to the service innovation process *can be realised* by organisations.

Research involves theory construction based on service-dominant logic from the literature reviewed. This is further built upon with empirical data analysis from 42 semi-structured interviews.

Introduced in section 1.4, are the research justifications for undertaking the research. These are the research context (the “So what” context); the phenomena of interest (focus on front-line employees’); service innovation; system ecosystems; and lastly the organisational (UK) situation of the research.

Additionally, 82% of employees are employed in the service sector (Brien, 2021), and the financial impact of service innovation was \$16 trillion in 2020 (Cutler and Summer, 2020).

Section 1.5 gives the research perspective and research questions. This context highlights the novelty and uniqueness of the approach; empirical data collection based on a UK organisational context; building on service-dominant logic theory and the construction of conceptual models to aid and assist academics and practitioners.

Lastly, section 1.6 outlines the theoretical and conceptual frameworks utilised for the research. A series of figures (Figures 1.1 and Figure 1.2) are used to illustrate these constructs.

The next chapter of this thesis outlines the literature reviewed for the research. The focus is on service innovation and service-dominant logic (Vargo and Lusch, 2004). These concepts are reviewed in the context of service ecosystems and the broader contribution of front-line employees in the service innovation process. This is further discussed within section 2.9 is the systems view extending service-dominant logic from a service ecosystems perspective.

Chapter 2: LITERATURE REVIEW

“An organization cannot improve that which it does not understand” (Teece et al., 1997)

This literature review for this thesis is constructed as follows:

- Section 2.1: Introduction to Literature Review
- Section 2.2: Literature Review: Foundation for Theory and Concept Building
- Section 2.3: Goods-dominant and Service Innovation Concepts
- Section 2.4: Service-dominant Logic and Service Innovation Concepts
- Section 2.5: Service-dominant Logic and the Broader Contribution of Front-line Employees in the Service Innovation Process
- Section 2.6: The Concept of Organisational Arrangements in the Service Innovation Process
- Section 2.7: The Concept of Staff Allocation in the Service Innovation Process
- Section 2.8: The Concept of Skills and Knowledge in the Service Innovation Process
- Section 2.9: The Concept of Service Ecosystems in the Service Innovation Process
- Section 2.10: Exploring and Discovery: The Research Gap in Knowledge
- Section 2.11: Summary of Chapter Two (Literature Review)

2.1- Introduction to Literature Review

This chapter forms the literature reviewed regarding the front-line employees' broader contribution to the service innovation process in service organisations. The focus is on taking a service ecosystems approach.

Service innovation concepts, service-dominant logic, organisational arrangements, staff allocation and staff skills and knowledge are reviewed as elements of service-dominant logic service ecosystems. These are highlighted in section headers.

The literature reviewed takes a service ecosystems perspective bringing together staff and organisational perceptions of the service innovation process. This perspective is built on organisational culture, staff allocation, and front-line employees' skills and knowledge. These collectively impact the effectiveness, enhancement, and improved contribution of front-line employees to the service innovation process. This then maximises the competitive advantage of the service innovation process.

This literature review highlighted an *empirical*, *theory*, and *conceptual* gap in the exploration of the broader organisational contribution of front-line employees in the service innovation process taking a service ecosystems approach.

2.2- Literature Review and Foundation for Theory and Concept Building

The literature reviewed for this thesis critiques the academic understanding of front-line employees, service innovation, and service ecosystems. This understanding then advances the current body of academic knowledge. This academic knowledge may also assist practitioners in their work. Both should read the thesis.

Figure 2.1 illustrates the narrative for the thesis literature reviewed in sections 2.3 through 2.9.

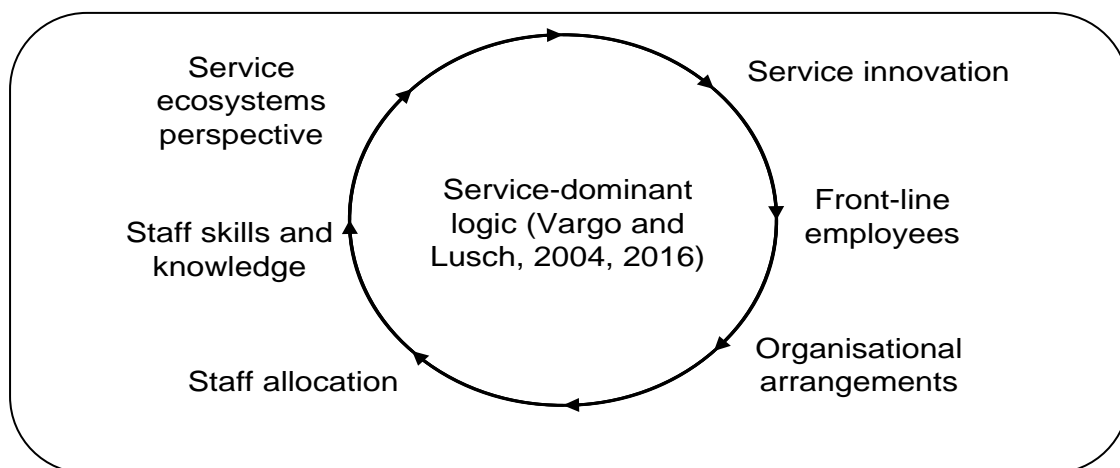


Figure 2.1: Narrative of the thesis (Adapted from Vargo and Lusch, 2017).

The literature reviewed in sections 2.3 through section 2.5 focuses on service innovation and front-line employees. These concepts form the contextual framework of sections 2.6 through 2.8 which explores literature from the perspective of service-dominant logic organisational arrangements, staff allocation, and staff skills and knowledge. A service ecosystems context is also utilised. This is further discussed in section 2.9.

Further, the literature reviewed in section 2.10 outlines the academic gap in knowledge. This is where current academic literature highlights an issue or lack of understanding. The literature reviewed presented in section 2.10 seeks to outline what *conceptual element* constitutes organisational arrangements, staff allocation, and staff skills and knowledge. Additionally, a (also see Figure 1.1 and Figure 1.2).

Research implications:

The literature reviewed for the thesis is placed in the academic context of empirical discovery, theory building and conceptual model construction. The resolution of the research questions frames the contribution of this research.

The next section begins the literature review and initially discusses service innovation regarding paradigms utilised in the service innovation that are *not specifically service focused* but have been co-opted for service innovation management. Additionally, these paradigms are *not* utilised within organisations regarding taking a service ecosystems perspective.

2.3- Service Innovation Concepts

2.3.1 Introduction

The context of this section is an academic literature review discussing *traditional* paradigms utilised by organisations for the service innovation process. These include generalist paradigms on service innovation encompassing continuous, incremental, and radical improvement. These paradigms tend to be more *product-orientated* in delivery. Other concepts more closely associated with service innovation such as service orientation, synthesise and assimilation are also considered. Service-dominant logic-associated theories such as Actor Network and Effectuation are not considered. The service innovation process forms the *organisational environment* in which front-line employees' are discussed in this thesis.

2.3.2 Paradigms on Service Innovation

A starting point for this research literature review was to explore the idea of a '*new service offering*' (Witell, Snyder and Gustafsson Fombelle and Kristensson, 2016). Further, how the concept of service innovation within organisations is operationalised. The operationalisation typically being undertaken by organisational managers, front-line employees, and service innovation consultants working together in the service innovation process (Engen and Holden, 2014; Jaaron and Backhouse, 2018).

Reviewing the academic literature on *service innovation*, Witell, Snyder, Gustafsson Fombelle, and Kristensson (2016) comment on the poor definition of *service innovation*, with divergences in meaning in both the terms *service* and *innovation*.

Witell, Snyder and Gustafsson Fombelle and Kristensson (2016) believe the most common view of service innovation settles on a definition of being a '*new service offering*'. Mele, Sebastiani, and Corsaro (2019) note theories on service innovation remain '*work-in-process*'.

Problems defining *innovation* perhaps rest with the central concept of *innovation*. One such definition of innovation comes from Schumpeter (1934) who viewed innovation from the perspective of combining new and existing knowledge in a novel combination. Up to the end of the 20th century innovation in business, was principally focused on product innovation centring on a goods-domain logic philosophy. Service innovation would largely be viewed as inhabiting a subcategory of product innovation (Martin and Horne, 1993).

An early champion highlighting a service innovation approach not based on products was Richard Barras (1986, 1990). Barras (1986) viewed service innovation as a distinct service process divergent from product innovation. In his 1986 paper, '*Towards a theory of innovation in service*'. Here Barras outlines his reverse product life cycle - Now synonymous with service innovation. Here Barras outlined organisational efficiency through incremental changes to service delivery. These are followed by more radical changes focusing on quality. Lastly, there is a focus on performance characteristics. A. Aso reference Bessant and Davis, 2007, p.75 and Djellal, 2023, p.346.

This organisational service innovation perspective differs from the then widely accepted view of organisational innovation. Traditionally, innovation centred on *new product innovation*. This is being undertaken in dedicated Research and Development (R&D) departments. Innovation so developed, then could be protected by intellectual property rights (IPR) upheld by trademark and copyright. Service innovation trademarks and copyrights are problematic to uphold which makes the innovation perceived less valuable for organisations to enforce. Flikkema and Castaldi et al., (2019) outline the differences between product and service innovation trademarking.

In Sawhney, Balasubramanian and Krishnan, (2004) opinion service innovation may add *value* to the customer activity chain by increasing the *utility value* to the customer. Here utility value stresses defined customer outcomes, logical sequencing of activities and categorisation by business sector. See Table 2.3 for service-dominant logic principles connected with these concepts.

According to Lievens and Moenaert (2000), service (and service innovation) is characterised differently from product innovation by properties such as *Intangibility, heterogeneity, inseparability, and perishability*. These characteristics are discussed further by Hipp and Grupp (2005) and González-Blanco, Coca-Pérez and Guisado-González (2019). The *intangible* nature of service innovation rests on skills and knowledge (of staff). Service innovation is easily copied or imitated. It is thus *heterogeneous*. Lastly, a service is produced and consumed at the point of delivery by the customer. Therefore, service innovation framed by service delivery becomes *inseparability and perishability*.

Additionally, service innovation has widely been defined by several key characteristics:

- *Modifying current organisational capabilities and skills* (Prajogo and Oke 2016).
- *Developing service ideas* (Woisetschläger, Hanning, and Backhaus, 2016).
- *Taking a novel approach* to a service problem (Kankainen, Vaajakallio, et al., 2012).
- *Customer involvement* in service (Alam, 2002).
- *Reproducibility*, where a service can be duplicated to many customers; (Fuglsang and Sørensen, 2011).

These characteristics and properties invariably lead to confusion in organisational management regarding service innovation goals, as they traditionally base their service understanding on goods-dominant logic product innovation (Vargo, Wieland, and Akaka, 2015).

Furthermore, work by Tether (2005) emphasised that service-orientated organisations with an *understanding of service innovation* were more adaptable to change and less R&D-driven. Tether (2005) concludes that service innovation differs from product innovation (goods-dominant logic), as service innovation highlights customer engagement and involvement (co-creation and value). This is the environment in which front-line employees operate. However, the broader, wider, and further contribution of front-line employees to the service innovation process is organisationally *often not considered*.

2.3.3 Traditional paradigms to service innovation

This section reviews the literature regarding service innovation paradigms taking a general and specialist perspective on service innovation.

General theories of service innovation can usually be classed by three paradigms of innovation which often overlap and operate together.

The first and probably the most generalist paradigm of innovation, covering both product and service innovation, is the continuous improvement paradigm (Yang, Lee, and Cheng, 2016). Organisational strategies for this include Lean (Ojasalo and Ojasalo, 2018), Six Sigma (Parast, 2011), Kaizen (Dasig, 2017), and Agile (Shore and Warden, 2008). The common factor in all these approaches is the emphasis on *Total Quality Management* (TQM) (Dasig, 2017). Work by Arshad and Su (2015) notes that *total quality management* in service innovation is typically implemented through continuous improvement with high-quality service resulting in a high degree of customer satisfaction. However, the focus is *not necessarily* on the involvement of front-line employees, service-dominant logic, or a service ecosystems perspective but on ensuring organisational staff maintain high standards in their work.

A second generalist paradigm covers an incremental-radical perspective (Engen and Holden, 2014). De Brentani, (2001) notes incremental service innovation exposes many organisational complications. Firstly, because of the lack of a tangible product (the service is the product) is it hard to demonstrate improvement. The second complication concerns how the service innovation can be differentiated from other service providers.

As De Brentani, (2001) observes tackling these factors includes an organisational understanding of customers, management of resources, and the expertise of front-line employees in the service innovation process.

A third paradigm of innovation discussed by Bessant and Davis (2007, p.72) broadly subdivides incremental and radical innovation into several areas. These are differentiated into incremental (occasional) to radical (major changes). These are illustrated in Table 2.1.

	Incremental	Radical
Product	Increase the range of service	Create new service not previously offered
Process	Improvement in delivery	Shift in approach to operational delivery. Including the role of employees in the service delivery process
Position	New market segments	Opening in new markets
Placement	New business model	Shift in mindset

Table 2.1: Incremental and radical service innovation (adapted, Bessant and Davis, 2007, p.68 Table 3.3).

Taking the observations of Bessant and Davis (2007) research by Engen and Holden (2014) looked at both *incremental* and *radical* innovation emphasising both customer and staffing competencies. Focusing on staff competencies, it was highlighted that idea generation and customer management skills and knowledge were essential for successful innovation. Further, Engen and Holden (2014) concluded staff holding a wide range of competencies significantly influenced how incremental and radical innovation could be operationalised.

Typically, in organisations the use of continuous improvement, incremental and radical innovation paradigms for service innovation are utilised when undergoing project change. However, these paradigms typically have their background principles inherited from a goods-dominant change perspective. Therefore, these paradigms *do not* necessarily include thinking on the broader contribution of front-line employees, service-dominant logic, and a service ecosystems perspective. Also see Vargo, Wieland, and Akaka (2015) who argue for a greater service ecosystems perspective outside these traditional innovation models.

Specialist paradigms more applicable to service innovation are the service orientation, synthesis, and assimilation paradigms (González-Blanco, Coca-Pérez, and Guisado-González, 2019; Djellal, 2023, p.323). Also see Djellal, Gallouj, and Miles, 2013, where Figure 1 provides an excellent diagram of the positioning of the various theories of service and service innovation. Gallouj and Savona (2009) in their writing believe when it comes to service innovation that organisational managers essentially take one of three approaches.

Firstly, the service-orientation or *demarcation paradigm* focuses more on service delivery functionality and seeks to identify service traits that can be exploited (Gallouj and Djellal, 2010, p.27 and Djellal, 2023, p.323), An example is *Starbucks* which identified pre-paid cards to purchase coffee enhancing the customer payment experience (Demirkan and Spohrer, 2016; Tajeddini, Martin and Altinay, 2020).

It is also acknowledged in wider demarcation, that service traits such as people-centered can be found in the classic demarcation *servuction* paradigm (Román, 2012).

Secondly, the *synthesis paradigm* seeks to combine both product-technology (tangible) and service (intangible) innovation in one common package (or solutions) (Gallouj and Djellal, 2010, p.27; Djellal, 2023, p.324). This is typified by servitization delivery, for example, past exponents include *Xerox* (Kowalkowski, Gebauer, Kamp, and Parry, 2017). This perspective is also typified by the aero-engine manufacturer *Rolls-Royce* who provides support and maintenance ‘*jet thrust power services*’ to airline customers – ‘*Power by the hour*’ (Tidd and Bessant, 2015, p.28).

The third, and by far the most prevalent management paradigm to service innovation is the *assimilation* (or technologist) view. This prioritizes technology as the principal factor in service innovation (Miles 2005; Witell, Snyder, Gustafsson, Fombelle and Kristensson, 2016, Kristensson, 2019; González-Blanco, Coca-Pérez and Guisado-González, 2019; Djellal, 2023, p.324). Typically, this paradigm promotes modern technology in service innovations such as Cloud computing marketing (Airbnb), AI web-service bots (Amazon), and smartphone apps (Apple) (Demirkan and Spohrer, 2016).

Research implications:

The literature reviewed in this section has considered service innovation concepts. Although technology in service innovation is widely prevalent, in this thesis (as outlined in section 1.1: Motivation for the research) only CRM (Customer Relationship Management) and social media technologies will be critically assessed in the context of service innovation, front-line employees’ and service ecosystems.

2.3.4 Service innovation and the technologist paradigm

In this section, a critique of the technologist paradigm linked to service innovation is discussed. In this context, the technologies considered for this thesis are Customer Relationship Management (CRM) and social media. These technologies are considered in this thesis, as they are believed to *illustrate* front-line employees' customer focus and engagement, and where front-line employees can potentially maximise their contribution to the service innovation process.

The assimilation (or technologist) paradigm plays a significant part in the most organisational understanding of service innovation. A major professional prompting for this research resolves around the default response from organisational managers regarding service innovation to *throw* technology to solve a problem, where a more *human-centred, front-line employees centred*, the solution would have been preferable in terms of time-cost-money (Averett, 2001; Schneider and Bowen 2019; Korper, Holmlid and Patrício, 2021). Complementing a technologist perspective, technology models focus on service innovation. One such theory offered by Hertog (2000) is based on the technology-centric framework of service, technology, service delivery, and the client interface when considering service innovation.

However, for this thesis, technology *is stressed* in the context of front-line employees with organisational services, processes, and the customer as central. Therefore, taking a solely technology focus is *not* the central concept for this thesis (Korper, Holmlid, and Patrício, 2021).

Research undertaken in CRM thinking by Cambra-Fierro, Centeno, Olavarria, and Vazquez-Carrasco (2017) highlights the need for *staff involvement* and *contribution*. The need to think about staff allocation (rationale for RQ2). Research by Patroni, von Briel, and Recker (2016) into social media highlights, front-line employees' skills and knowledge as important for the service innovation process (rationale for RQ3).

As Cambra-Fierro, Centeno, Olavarria and Vazquez-Carrasco (2017) observe in their study of Spanish banks, with the introduction of *social media* and the demand by customers for individual treatment, organisations have felt an obligation to hold more data on their customers. This is typically undertaken via a Customer Relationship Management (CRM) application database(s). A definition of CRM is offered by Verhoef and Lemon (2013) as '*a means to maintain and build relationships with customers, building customer loyalty and increase customer lifetime value*'.

According to Burton (2010), the technology side of CRM is often *over emphasised* by organisational managers. They fail to maintain and build relationships with customers (Verhoef and Lemon, 2013) and instead view CRM as a *tactical tool* built on Information Technology processes. Managers fail both to understand the *customer value* and the need to promote organisational culture allowing staff to both *contribute* and *participate* in the delivery of customer value (rationale for RQ1).

The research findings of Burton (2010) suggest it is only through the change of *understanding* and *thinking* away from a goods-dominant perspective and greater organisational thinking on staff allocation that the complete appreciation of CRM in the service innovation process will be successful (rationale for RQ). Also see Gallego-Gomez and De-Palos-Heredero et al., (2021).

An increasing customer-facing role for front-line employees in service innovation concerns digital engagement via social media. As Gunarathne, Rui, and Seidman (2018) note, digital engagement is ever-increasing as organisations connect with their customers and customer service through social media. This is highlighted in the example of the US airline industry where the prioritisation of customer complaints is based on the number of social media followers on *X (Twitter)* (Gunarathne, Rui, and Seidman, 2018).

In the hotel sector, Sarmah, Kamboj, and Kandampully (2018) discuss how the use of social media in the hospitality sector is helping Indian hotels gain feedback and engagement with their customers to enhance service innovation.

As Muninger, Hammedi, and Mahr (2019) observe, the requirement to engage with customers in service provision and service innovation via social media has *important implications* for organisations. Typically, on how senior managers implement their strategy, allocate resources, and identify staff skills and knowledge. Also, see sections 4.3 through 4.5 in the discussion and findings chapter and Chapter 5 for contribution.

Additionally, as Muninger, Hammedi and Mahr (2019) further observe, although many organisations recognise the value of social media, the understanding of organisational managers on *how to use* social media in the service innovation process remains unclear. In their study Yen, Teng, and Tzeng (2020) note strong customer engagement led to increased customer value and participation in service innovation. Also see service-dominant logic principles Table 2.3 which highlights value and co-creation.

Using a large retailer, Patroni, von Briel, and Recker (2022), in their service innovation and social media research suggest a *process systems model* to capture ideas, assess their value, and deploy ideas based on comments posted on the social media platform *Facebook*.

The capture, assessment, and deployment of many ideas generated by social media, as Patroni, von Briel, and Recker (2022) should lead to organisations reevaluating their whole service innovation process. This process should encompass the customer, senior management, service innovation consultants, and front-line employees.

Nevertheless, as Patroni, von Briel, and Recker (2022), observe many service innovation changes highlighted by social media are typically external goods-dominant service innovation. Therefore, there is still a requirement to promote internal service-dominant logic service innovation. Requirements of both external and internal service innovation highlight where front-line employees can engage and provide their customer domain expertise. Also, reference section 4.5.3.

In a previous study undertaken by Patroni, von Briel, and Recker (2016) they investigated how social media can enhance and encourage internal employees to share knowledge, collaborate, and break down barriers to service innovation. Their findings suggest *organisational understanding* of social media and how it impacted staff and service innovation was critical. How managers understood service innovation.

As Santos-Vijande, López-Sánchez, Pascual-Fernández, and Rudd (2021) state: '*Despite significant technological advances in recent decades, humans are still relevant in the innovation process*'.

A discussion of *human factors* is presented by D'Ippolito and Timpano (2016) as a case study at food retailer *Eataly*. Here *Eataly* stresses non-technology innovation in service innovation. In their research D'Ippolito and Timpano (2016) investigated how *Eataly's* core values were shaped around the innovation of intangible values such as aesthetics, creativity, imagination, and experience centred on the customer.

The analysis of D'Ippolito and Timpano (2016) findings highlighted, that *Eataly's* success was founded on establishing good relationships with partners and customers. Along with passionate staff, such as front-line employees', who cared about the service they provided.

Additional factors also included how the organisational managers promoted customer involvement and engagement rather than viewing technology as a solution to drive their business. These aspects consider the *non-technology factors*, which are often overlooked or (deliberately) ignored by organisational managers who fail to understand the importance of staff (front-line employees) or customers (Kristensson, 2019).

Research implications:

The requirement to include the broader contributions from front-line employees and to *look beyond technology* for service innovation solutions is emphasised as a central argument throughout this thesis.

In summary, this section has assessed the technologist paradigm to service innovation focusing on CRM and social media, noting the relative lack of engagement of front-line employees. The case study at *Eataly* suggests human factors, such as engagement of front-line employees are still important for service innovation success.

Therefore, the participation and involvement of front-line employees in service innovation, and their broader contribution to the service innovation process *should be* treated as urgent as major investments in *technology* for service innovation *do not* always show expected organisational returns (Lütjen, Schulz, Tietze, and Urmetzer, 2019). This as Lütjen, Schulz, Tietze, and Urmetzer (2019) observe, is the '*Service Paradox*'. Here, investments and higher costs do not lead to the expected returns and firms struggle to generate profits from their service activities (Schneider and Bowen 2019).

2.3.5 The dominant perspective on front-line employees' contribution

This section reviews the traditional goods-dominant perspective to front-line employees' contribution in many organisations undergoing service innovation. Conventionally, both the general (incremental, continuous, and radical) and special (demarcation, synthesis and assimilation) modes of organisational change fall within the goods-dominant perspective of service innovation. Here the focus is on *products*, not *service* (for an illustration of this see section 2.4.2.6). This critically leads to a *closed* perception of the contribution of front-line employees in the service innovation process. This frequently leads to *higher time-cost-resource* due to changing project scope and requirements (Schneider and Bowen, 2019).

This closed approach also suggests organisations tend to take a constrained, non-systems approach to the contribution to service innovation regarding front-line employees. The *broader contributions* of front-line employees to the service innovation process are seldom explored (Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd, 2016; Jaaron and Backhouse, 2018).

This closed approach for front-line employees leads to *only* focusing on ideas generation, service design and service innovation implementation (Karlsson and Skälén, 2015; Engen and Magnusson, 2015; Engen and Magnusson, 2018).

Focusing on ideas generation, Agnihotri, Rapp, Andzulis, and Gabler (2014) observe having the necessary staff, such as front-line employees, to provide the solutions and ideas for successful service innovation *is key* to gaining a competitive advantage.

Critically, these findings were confirmed through additional research undertaken by Mu, Bossink and Vinig (2018). In their study focusing on the Dutch healthcare system, they found where there was strong support from senior organisational management of front-line employees' ideas generation, there were better service innovation outcomes (Lages and Piercy, 2012; Melton and Hartline, 2013).

Additionally, research undertaken by Woisetschläger, Hanning and Backhaus (2016) found that where organisations *failed to recognise* the importance of front-line employees in service innovation, little or no ideas generation took place and consequently low levels of successful innovation resulted.

Research by Berry, Cadwallader, Parish and Shankar (2006), who undertook a case study of *Southwest Airlines*, noted that managers had to provide feedback on all service innovation ideas and suggestions submitted by staff, such as front-line employees, to show that the suggestion has been considered (also see D'Aurizio, 2008). The work by Berry, Cadwallader, Parish and Shankar (2006) and Engen and Magnusson (2015) stresses the requirement for organisations to *think seriously* about ideas generation as a means of service innovation (Lages and Piercy, 2012).

Focusing on service design, Rexflet, Almefelt, Zackrisson and Hallman, et al., (2011) believe the characteristics behind service, such as Intangibility and heterogeneity, makes then difficult to comprehend and understand by managers *brought-up* on the predictability of *goods-dominant* product development.

Moreover, Rexflet, Almefelt, Zackrisson, and Hallman, et al., (2011) note that although customer involvement leads to better service, this is generally 'preached' and not 'practised' by organisational managers. In their research, Yu and Sangiorgi (2018) found good service innovation design rests with thinking about the right dynamic service innovation capabilities and how these can best be utilised through front-line employees to provide the foundations for successful service innovation (Kindström, Kowalkowski and Sandberg, 2013).

Taking a service implementation perspective on service innovation, Cadwallader, Jarvis, Binter and Ostrom (2010) argue that organisational factors such as organisational understanding, manager's resource allocation and, skills and knowledge have a significant impact on front-line employees' contribution to service innovation implementation (Averett, 2001).

Further, as Sing, Akbani and Dhir (2020) contend actual service innovation implementation is often *difficult* to accomplish. In many organisations, it is typified by its *nonlinear, fuzzy, and disjointed nature*, and there is a disconnect between managers, staff, and the service innovation process. Here the reductionist (and silo-management) perception of service innovation predominates (Vink, Koskela-Huotari, Tronvoll, Edvardsson and Wetter-Edman, 2021).

Furthermore, Sing, Akbani and Dhir (2020) suggest staff such as front-line employees' role competencies (their understanding and skills and knowledge) play a large part in service innovation implementation success. Sing, Akbani and Dhir (2020) argue service innovation is just a '*desire*' to improve service without actual implementation being undertaken.

Cadwallader, Jarvis, Binter and Ostrom (2010) in their research found that organisational arrangements such as the norms and attitudes of management towards staff were significant factors for service innovation implementation success (Silke, Knippenberg and Boerner 2008).

Somech and Drach-Zahavy (2013) in their research, conclude careful organisational management thinking about staff resource allocation in teams and the associated norms and values should increase both the delivery of creativity innovation and implementation success.

The work undertaken by Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd (2016) found front-line employees, *should be perceived, and understood* by organisational managers and service innovation consultants, as *important* to the service innovation process.

Research implications:

Overall, the literature reviewed in section 2.3, connects service innovation concepts with *general* and *specialist* paradigms of service innovation. This has included general paradigms: continuous improvement; incremental and radical improvement and specialist paradigms: demarcation approach; synthesis and technologist approach.

The *technologist* paradigm is reviewed in the context of CRM and social media engagement. The context of traditional contribution (ideas, design, and implementation) of front-line employees' is also reviewed.

The narrative for this section is that the generalist and specialist service innovation concept, and especially the technologist paradigm *do not* maximise a service ecosystems perspective on the broader contribution of front-line employees to the service innovation process (Lütjen, Schultz, Tietze and Urmetzer, 2019).

Empirical data analysis might illustrate real-world experiences of service innovation, the use of service innovation practices such as continuous improvement and the utilisation of technology in the service innovation process (Interview questions Appendix-F).

The next section outlines the customer and service principles of service-dominant logic founded by Vargo and Lusch (2004) as a new way to think about *service, service delivery and service innovation*.

2.4- Service-dominant Logic and Service Innovation Concepts

2.4.1 Introduction

This section discusses an alternative to goods-dominant logic with the conceptualisation of service-dominant logic. Further sections outline service-dominant logic principles focused on the context of service innovation. These service-dominant logic principles form the *associated principles* of the research. The actual service-dominant logic principles used to frame the research are given in section 2.5

2.4.2 A service-dominant logic paradigm to replace the goods-dominant logic view

In their highly influential academic work, Vargo and Lusch (2004) argue service delivery, and by inference service innovation, should refocus from a goods-dominant perspective of innovation to a more service-dominant perspective on service.

Service-dominant logic principles outlined by Vargo and Lusch (2004, 2008, 2016) take an *alternative perspective* from established product-centred, goods-dominant, and firm centred views. These views have held sway and form much of the academic thinking on economies since Adam Smith's *'The Wealth of Nations'* (1776). Service-dominant logic focuses on the provision and perspective of *service*, not goods, products nor firm centred.

Vargo and Lusch (2004) introducing service-dominant logic, give an excellent comparison between their evolution of service-dominant logic (based on service) and goods-dominant logic (based on products). This is illustrated in Table 2.2.

	Goods-dominant logic	Service-dominant logic
Unit of exchange	People labour for goods	People's competencies (skills and knowledge)
Role of goods	Goods based on products	Service for service
Role of customer	The customer is the recipient of the goods	The customer is a co-producer of the service. Producer & Marketer interact with customer
Meaning of value	Value is determined by the producer	Value is perceived and determined by the customer based on <i>value-in-use</i> , with the producer can only make value propositions
Customer interaction	Customers are acted on to create transactions with resources	Customers are active participants in relational exchanges and coproduction
Economic growth	Wealth consists of owning, controlling and producing goods	Wealth is obtained through the application and exchange of specialised skills and knowledge.

Table 2.2: Goods-dominant logic and Service-dominant logic (adapted from Vargo and Lusch, 2004, Table 2).

Vargo and Lusch (2016) argue there is a *real need* to refocus away from this goods-dominant logic to a more service-dominant logic paradigm which emphasises: 'resource-integrating actor co-creating value through the exchange of service in nested and overlapping ecosystems that are coordinated by actor-generated organisations' (Frow and Payne, 2019, p.80).

Koskela-Huotari and Vargo (2019, p.41), leading service-dominant logic academics, believe there are several problems with goods-dominant logic. Firstly, goods-dominant logic places organisations, not customers, firmly at the centre of the market. This leads to secondly, the focus on goods or products produced or manufactured by the organisation being the centre of value creation. The customer takes no part in the value creation process. Lastly, the emphasis is focused on '*what something is worth*' rather than '*its actual value*' (Koskela-Huotari and Vargo, 2019, p.41).

Vargo and Lusch (2004) propose a fundamental change of *worldview* is required, where *service provision* is the dominant logic. They initially bring together thinking on the *resource-based view* (Grant, 1991) and *competencies* (Prahalad and Hamel 1990) and later add the requirement for the operationalisation of service-dominant logic within an organisational–institutional arrangements perspective (Vargo and Lusch, 2016). This last consideration then brings together an *institutional theory* on sense making with cultural norms, values, and beliefs (Koskela-Huotari, Vink and Edvardsson, 2020). Additionally, see Lusch and Vargo (2015, p.406) which outlines service-dominant logic as a *general foundation theory*.

Looking forward to wider academic developments and research, Vargo, Wieland and Akaka (2015) and Vargo and Lusch (2017) speculate on the future of service-dominant logic. They believe service-dominant logic will continue to evolve and see broad organisational issues such as norms and values linking to service ecosystems and service innovation as areas for academic exploration. These developments broadly underpin the theoretical and conceptual framework for this research.

Research implications:

The literature reviewed in this section outlines a comparison of goods-dominant logic to service-dominant logic. Service-dominant logic frames the theoretical and conceptual framework for this thesis.

The next section outlines service-dominant logic principles *focusing* on service innovation principles relevant to *customers* and *service*. These form the organisational backdrop in which front-line employees can more widely contribute to the service innovation process.

2.4.3 Taking a service-dominant logic paradigm to service innovation

Research by Paswan, D'Souza and Zolfagharian (2009) argue many of the general theories of service innovation, such as continuous improvement and incremental-radical innovation are derived from product-technology innovation and fail to focus on the 'service' aspect of service innovation - Intangibility, heterogeneity, inseparability, and perishability (Hipp and Grupp, 2005; Tether, 2005; González-Blanco, Coca-Pérez and Guisado-González, 2019; Tajeddini, Martin and Altinay, 2020).

A shift to a *service* perspective is offered by Vargo and Lusch (2004), with service-dominant logic. This represents an important paradigm shift in how services are perceived and are differentiated from goods and products. As such, the placement of service innovation within service-dominant logic also represents a paradigm shift away from a product innovation-centred focus on the *delivery of customer centred services*.

Table 2.3 emphasises principles of service-dominant logic (and axioms) focusing on the concepts of *service*, *value*, and *customer participation* in service delivery. The service-dominant logic principles in Table 2.3 highlight value, exchange, and co-creation. These principles form the foundation on which service innovation and service ecosystems rest and form part of the supporting contextual background for the research. Ultimately, organisations must consider these principles when undertaking service innovation. They frame the context where front-line employees can make a considerable and significant contribution to the service innovation process.

Moreover, the principles outlined in Table 2.3 gives further context in which front-line employees', service innovation and service ecosystems are explored. They link the axioms of service-dominant logic to the research executed.

Axiom/Principle	Description	Linked research principles	Linked focus in research
A1/P1	The application of specialised skills and knowledge is the fundamental unit of exchange	P4	Skills and Knowledge
P2	Indirect exchange masks the fundamental unit of exchange	P11	Organisational Arrangements
P3	Goods are distribution mechanisms for service provision	P4	Skills and Knowledge
P5	All economies are service economies	P8	Service-centred
A2/P6	Value is co-created by multiple actors, always including the beneficiary	P9, P11	Staff allocation
P7	The enterprise can only make value propositions	P11	Organisational Arrangements
A4/P10	Value is always uniquely and phenomenologically determined by the beneficiary	P11	Service-centred

Table 2.3: The research linked axioms and principles of service-dominant logic (adapted Lusch and Vargo, 2019, p.9 and Vargo, 2020).

2.4.3.1 Service-dominant Logic: Principle one/Axiom one

Principle One: The application of specialised skills and knowledge is the fundamental unit of exchange.

According to Vargo, Lusch and O'Brien (2007) it is unrealistic for organisations to remain static in the dynamic environments in which they operate. So, there is a continued requirement for organisations to invest in service innovation to deliver competitive advantage and this rests with increased skills and knowledge (Vargo and Lusch, 2004).

Further, as Lusch and Vargo (2014, p.62) observe the requirement for organisations in the provision of service, is that service is exchanged for the provision of other service. As Woodruff and Flint (2015, p.183) note fundamental to the service exchange is that *both* organisations and customers *must* understand the value of the exchange to meet the '*desire*' of each other.

2.4.3.2 Service-dominant Logic: Principle two

Principle Two: Indirect exchange masks the fundamental unit of exchange.

The concept of service exchange has become more prevalent with major companies such as *Toyota*, *Siemens* and *British Petroleum* focusing on service rather than products (Lusch, Vargo and Malter, 2006).

As Lusch, Vargo and Malter (2006) note the markets of the world are not about the exchange of goods, nor the tangible goods or products, but now are becoming more about the selling of intangible stuff, about service and the exchange of service.

Lusch, Vargo and Malter (2006) argue service exchange is about value-in-exchange dialogue and conversation with co-creating customers. Here the value is determined by the customer, through the price paid in the value-in-exchange transaction. Also see Grönroos (2007, p.27, Figure 2.1) regarding the exchange perspective.

Further, Edvardsson Tronvoll and Gruber (2010) consider how different customers perceive value-in-exchange. They argue service is exchanged for service as a socially situated and phenomenologically determined phenomenon. Moreover, Edvardsson, Tronvoll, and Gruber's (2010) stance is that service exchange is essentially embedded in social systems and should be understood as a dynamic exchange between stakeholders in the service exchange process. Chandler and Vargo (2011) consider service exchange in the circumstances of multiple actors in the value co-creation process (Vargo and Lusch, 2004).

Service exchange and value are also associated with principle ten of service-dominant logic, which sees value determined socially (Vargo and Lusch, 2004; Troccoli and Felizardo, 2020).

An alternative approach to the *value of service exchange* is offered by Hasting, D'Andrea, and Bylund (2019) of *value-dominant logic* (also see Agrawal and Rahman, 2015). Here *value of exchange* is replaced with the *value of experience*. Hasting, D'Andrea, and Bylund (2019) take the view that value is subjective and cannot be created by organisations but can only be created subjectively by an individual customer, and thus value can only be perceived and experienced in an individual's mind.

Hasting, D'Andrea, and Bylund (2019) similar to similar to Vargo and Lusch (2004), also *offer* ten foundation principles many of which parallel service-dominant logic and which they hope will allow managers to engage with customers' uncertainty in the market exchange.

Although the theory of *value-dominant logic* outlined by Hasting, D'Andrea, and Bylund (2019) provides a valuable alternative lens to service-dominant logic (Vargo and Lusch, 2004), for this research service-dominant logic is perceived as better describing the operationalisation of service and services and service innovation. Thus, insights on organisations and management practices regarding service innovation processes and the broader contribution of front-line employees.

2.4.3.3 Service-dominant Logic: Principle three

Principle Three: Goods are distribution mechanisms for service provision.

According to Lusch and Vargo (2014, p.64), goods should be viewed as a special case of a service, where the provision of goods and inventiveness rests on the transfer of exchange of service provision skills and knowledge in the provision of a service.

2.4.3.4 Service-dominant Logic: Principle five

Principle Five: All economies are service economies.

Brodie, Pels and Saren (2015, p.326) argue what is underscored by service-dominant logic in service economies is not the value exchange process as such, but the essential role of the marketing process. Lusch and Vargo (2014, p.58) contend that service is the fundamental basis of exchange in the market where co-creation of value is exchanged on a service for service basis.

They argue organisations may be viewed as places where specialised skills and knowledge are traded or performed in exchange for compensation, typically monetarily, on behalf of a service beneficiary (Lusch and Vargo, 2014, p.62).

Additionally, Prahalad and Ramaswamy (2004) believe the distinction between the roles of *producer* and *consumer* no longer exists, with customers increasingly engaged in the process of defining and creating value. The customer's *co-creation* experience becomes the basis of *value*.

2.4.3.5 Service-dominant Logic: Principle six/Axiom 2

Principle Six: The customer is always a co-creator (co-producer).

Lusch, Vargo, and O'Brien (2007) note in goods-dominant logic customers are seen as *resources to be acted on*, whereas in service-dominant logic customers are seen as *acting on other resources*. This shift in perspective as Lusch, Vargo, and O'Brien (2007) point out leads to the shift in value-creation between goods-dominant logic where customers are *marketed to* and service-dominant logic and where customers are *marketed with*.

Additionally, using service-dominant logic, Lusch and Vargo (2019, p.13) observe value *is always* co-created for the service beneficiary and this process occurs through resource integration to support service exchange (Ordanini and Parasuraman, 2011).

In their work, Bettencourt, Lusch and Vargo (2014) contend that most organisations recognise the importance of customers and that customers must be the focus of their endeavours. However, there remain problems with organisations still taking a product-centric view.

Further, Bettencourt, Lusch and Vargo (2014) give the example of the credit provider *American Express*, whilst championing a customer focus but still highlighting their service in *product-driven* terms. Additionally, Bettencourt, Lusch, and Vargo (2014) argue proper customer-centric service should be about how organisations can assist customers in their value-creation process. This should include how they resolve service issues for their customers. Typically, this is the role of front-line employees.

The shifting emphasis on customer focus also sees the customer as a co-producer (co-creator) in the service process. Here Vargo and Lusch (2004) acknowledge the inseparability and perishability of service provision, which rests on customer engagement.

Furthermore, the understanding and engagement of customers in the co-creation and value proposition is typically misunderstood by organisations and managers, who fail to recognise the central role customers play in their organisations and service delivery (Agrawal and Rahman, 2015; Heinonen and Strandvik, 2015). An alternative perspective for thinking about co-creation and value proposition is Customer-dominant logic, which emphasises the key role of the customer, moving the focus from goods-dominant and service provision to a customer provision perspective (Heinonen and Strandvik, 2015).

However, for this research, the lens is centred on a *service perspective* which service-dominant logic gives. This focuses on the provision of a *service to customers* and the requirement to undertake *service innovation* to gain better service delivery outcomes and thus a competitive advantage.

2.4.3.6 Service-dominant logic: Principle seven

Principle Seven: The enterprise can only make value propositions.

According to Vargo and Lusch (2004), customers are always co-creators of value being the key resource in the co-production of a service. Witell, Kristensson, Gustafsson and Löfgren (2011) divided co-creation into service between *for use* by a specific customer aimed at their own benefit and *for others* which is aimed at creating value for other customers.

They find that customers co-create *for use* by direct input into the service provision with their own time, effort, and skills. This is service *with the customer*, instead of *service for the customer*. Other researchers' emphasis *for other aspects* of co-creation highlights the application of organisational resources in the undertaking of co-creation and the value of service provision (Vargo and Lusch, 2008; Siltaloppi, Koskela-Huotari and Vargo, 2015).

The working *with* and *for* the customer to deliver services rests with the bringing together of *all* organisational staff in the successful service delivery to the customer. Service innovation in this respect is the discovery and exploitation of the customer experience for a competitive advantage (De Jong and Den Hartog, 2007; Zhao, Yan and Keh 2018; Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd, 2021). The joined-up, systems position on service innovation is argued in this thesis through a service ecosystems perspective. This is reviewed in section 2.9.

2.4.3.7 Service-dominant logic: Principle ten

Principle Ten: Value is always uniquely and phenomenologically determined by the beneficiary.

As principle ten outlines, value is always uniquely and phenomenologically determined by the beneficiary (Vargo and Lusch 2008; Vargo and Lusch 2016). In practice, this means the consumer or customer of the service defines the social value of the service. How organisations discover the social value of a service for their customers, is often difficult as the customers may not know what they want or have time to articulate their requirements.

Nevertheless, as Gorry and Westbrook (2011) found in their research, understanding customers through listening, engaging and building up customer relationships through customer stories *does significantly offer organisations* important feedback on what customers think of their service. This was found predominately through front-line employees' engagement with customers.

To understand customer values, the classic study by Schouten and McAlexander (1995) on US motorcycle manufacturer *Harley Davidson*, emphasises the need for organisations to engage and build relationships with their customers, leading to better service delivery and service innovation.

In their research, Schouten and McAlexander (1995) investigated through ethnography studies how *Harley Davidson*, responded to their customer cultural identity. This resulted in the establishment of a *Harley Davidson Owners Group*. This has allowed the *Harley-Davidson* company to build up strong customer loyalty and branding awareness, and a strong customer focus on customer values.

2.4.3.8 Service-dominant logic: Summing up service, the customer and service innovation considerations

As noted, at the beginning of this section service-dominant logic principles focus on service and customers. Service innovation processes centred on organisational change in service with the application of knowledge in exchange (principle one) and provision of service (principles three and five). Further, organisational service innovation is also undertaken to improve value in service exchange (principle two), value propositions (principles six and seven), and determination of value by the customer (principle ten).

The focus of service and service innovation rests on the customer, with the engagement of front-line employees seen as vital in this relationship (Melton and Hartline, 2010; Cambra-Fierro, Melero-Polo and Vázquez-Carrasco, 2014). However, as Lages and Piercy, 2012 and Engen and Magnusson, 2015 argue organisations often fail to consider front-line employees' engagement with the customer as 'important'.

Nevertheless, Škudienė, Everhart, Šepikaitė and Reardon (2013) observe the perceived service value of the service is often only determined by contact with front-line employees. Front-line employees therefore should be understood and recognised as important in adding organisational service value to the customer (Dagger, Danaher, et al., 2013. Also, reference Chapter 4 of this thesis which has the research findings.

This is emphasised by Storey, Cankurtaran, Papastathopoulou, and Hultink (2016) who observe a key success factor for better service innovation outcomes is the contribution of front-line employees in the engagement with customers. Furthermore, Storey, Cankurtaran, Papastathopoulou and Hultink (2016) noted internal culture, practices, and knowledge as other key service innovation success factors.

Research implications:

The literature reviewed in this section has focused on service-dominant logic principles centred on customer concepts such as *co-creation* and service concepts and *value* propositions. These are important as they frame the context in which organisations strive through service innovation to deliver a better service to their customers.

Empirical data analysis observations might illustrate thinking on customer and service innovation processes, which highlight the importance of front-line employees' contribution in a wider organisational context.

Service-dominant logic connecting front-line employees' broader contribution to the service innovation process is reviewed in the next section. These are service-dominant logic principles four, eight, nine, and eleven and are used to frame the context and outline theory for this thesis.

2.5- Service-dominant Logic and the Broader Contribution of Front-line Employees to the Service Innovation Process

2.5.1 Introduction

This section reviews literature based on service-dominant logic principles and axioms which are utilised (subjectively and interpreted) to illustrate how taking a service ecosystems perspective to organisational front-line employees can assist in their broader service innovation contribution (beyond ideas, design, and implementation) in the service innovation process (as defined by Engen and Magnusson, 2018).

2.5.2 Service-dominant logic utilised in this research

Although other alternative service theories, such as *Value-dominant logic* (Hasting, D'Andrea, and Bylund, 2019) and approaches based on *technology* (Hertog, 2000; Ryu and Lee, 2018) have been used as categorisations or explanations of service innovation, service-dominant logic remains a very active area of academic research in the field of service and service innovation.

Korper, Holmlid, and Patrício (2021) believe the solution to a definition of service innovation, at least from a service-dominant logic perspective, comes from a better understanding of the *participants* in resource integration, service design, and value creation as viewed from a customer perspective. The emphasis on a customer perspective highlights where front-line employees can more broadly assist, participate, and engage.

Tronvoll, Brown, Gremler, and Edvardsson (2011) believe the problems with service innovation definition come from its foundation in *operations* and *marketing*. They contend that many studies on service innovation have tended to stress *quantitative* thinking from a goods-dominant perspective.

Furthermore, Tronvoll, Brown, Gremler, and Edvardsson (2011), argue academic studies on service innovation must take a more pragmatic attitude stressing a greater qualitative, sociological, and broader management perspective. This is the approach utilised for this research.

Moreover, González-Blanco, Coca-Pérez, and Guisado-González (2019) expanding the systems perspective, *stress* service innovation requires an integrative approach comparable to the resource-based view (Grant, 1991). Both require combining organisational resources, such as staff resources, to obtain a competitive advantage. Also see Ngo and O’Cass (2009).

Thinking about staff allocation must certainly include thinking about staff skills and knowledge. For service innovation, this thinking must also include how front-line employees can more broadly contribute based on their skills and knowledge via their customer contact role.

Taking a service ecosystems perspective to service innovation stresses the involvement and contribution of front-line employees must be viewed as a *key component* by organisational managers. This thinking is then a key rationale for undertaking this research.

Additionally, thinking about organisations, staff allocation, and skills and knowledge promotes a world view on how these concepts can be rationalised and operationalised. This research worldview is based on a service ecosystems perspective. Again, this thinking is a key rationale for undertaking this research.

For this research, Table 2.4 *constraints* the academic focus of service-dominant logic principles and axioms, based on the preliminary literature reviewed and the formulation of the research questions (section 1.5). They also form the *theory framework* contribution (Chapter 5) of the service ecosystems perspective.

The principles and axioms outlined are thought best (subjectively and interpreted) to illustrate how taking a service ecosystems perspective to organisational front-line employees can assist in their broader service innovation contribution (beyond ideas, design, and implementation) in the service innovation process (as defined by Engen and Magnusson, 2018).

Lastly, the principles in Table 2.4, are assessed and justified from the perspective that organisational arrangements form the working environment in which front-line employees operate. Moreover, staff allocation highlights the process, procedures, and thinking behind the organisational change, and staff skills and knowledge are based on how service innovation can be operationalised.

Table 2.4 outlines the focus of service-dominant principles utilised for this research. The research concepts in Table 2.4 are further discussed and elaborated in the remaining sections of this thesis.

Axiom/Principle	Description	Associated principles	Section reference	Research concepts
A5/P11	Value co-creation is coordinated through actor-generated organisations and organisational arrangements	P2, P6, P7, P10	Section 2.6	Service ecosystems (Organisational arrangements)
A3/P9	All social and economic actors are resource integrators	P6, P10	Section 2.7	Service ecosystems (Staff allocation)
P4	Knowledge is the fundamental source of competitive advantage	P1, P3	Section 2.8	Service ecosystems (Skills and knowledge)
P8	A service-centred view is customer-oriented and rationale	P5	Section 2.9	Service ecosystems (Systems)

Table 2.4: The research explored axioms and principles of service-dominant logic (adapted Lusch and Vargo, 2019, p.9 and Vargo, 2020).

Research implications:

In summary, this section has outlined the axioms and principles of service-dominant logic which are utilised in this thesis in conjunction with the broader contribution of front-line employees in the service innovation process taking a service ecosystems perspective.

These principles are now discussed further in the following sections of this thesis.

2.6- The Concept of Organisational Arrangements in the Service Innovation Process

Principle Eleven/Axiom 5: Value co-creation is coordinated through actor-generated institutions (organisations) and institutional (organisational) arrangements (Vargo and Lusch, 2016).

2.6.1 Introduction

This section of the literature review considers the service-dominant logic principle of organisational arrangement at a service ecosystems meso-level. To limit the scope of organisational arrangement, the section focuses on sense making, create meaning, and making sense within organisations. These approximate the organisational culture rules, norms and beliefs in which the service innovation process and front-line employees operate.

2.6.2 Organisational arrangements environment

According to Vargo, Akaka, and Wieland (2020), organisational arrangements can be viewed as organisational social norms (culture) and conceptualised around staff and resources management. Further, Vargo and Lusch (2016), view organisational arrangements as focusing on rules (sense making), norms (create meaning) and beliefs (narratives) as essential in the service innovation process. (Mele, Sebastiani and Corsaro, 2019; Koper, Holmlid and Patricio, 2021; Voronov and Weber, 2020).

A sense making perspective is assumed by leading academics Mele, Sebastiani, and Corsaro (2019) as they believe service innovation to be a means of creating new value propositions from the integration of resources, such as front-line employees, and by actors such as managers, in a socially constructed organisational environment.

However, as Weick, Sutcliff and Obstfeld (2005) observe social understanding in organisations is problematic with many different positions, views, and interests being politically contested to reach a consensus or agreement on how to act. This observation is significant, as the views of managers on the role of front-line employees are frequently politically contested. This then impacts the social understanding and thinking of the contribution and broader contribution by front-line employees in the service innovation process.

Work undertaken by Vink, Edvardsson, Wetter-Edman, and Tronvoll (2019) on *create meaning* takes the perspective of mental models, seeing 'mental models as involving actors assumptions and beliefs about how something works and how to act based on that understanding'.

The building of mental (and conceptual) models can help organisational managers, service innovation consultants, and front-line employees understand the social reality in which they work, without having directly experienced an event or action (Johnson-Laird, 2010). Further, as Kleinaltenkamp (2019, p.269) observes it is only through the process of building mental models that managers and staff within organisations, can subjectively interpret organisational rules and norms which make up organisational shared values and visions. It is these values and visions that relate directly to the perception of front-line employees and their contribution to the service innovation process.

However, as Vink, Edvardsson, Wetter-Edman and Tronvoll (2019) further argue mental models can also lead to inappropriate *worldviews* as they are often fragmentary and incomplete descriptions of the world based on arbitrary and inconsistent assumptions (Johnson-Laird, 2010). It is only after a manager (or many managers or organisational staff) consciously determines an inconsistent *worldview* that a shift in mental models may be possible (Murray and Byrne, 2013).

Taking a service innovation perspective, it is the building *and* rebuilding of the mental model which leads to changes in organisational processes and procedures of service. This as Korper, Holmlid and Patrício (2021) contend is the missing link in the creation of meaning in service innovation.

As Vink, Edvardsson, Wetter-Edman and Tronvoll (2019) additionally note, the reshaping of mental models is particularly important regarding service design, where new value co-creation is being considered and change is required. In this context, the reshaping of mental models can highlight rethinking the broader contribution of front-line employees in the service innovation processes. The wider engagement of front-line employees leads to better outcomes in the service innovation process (Storey et al., 2016).

Lastly, the paper by Balogun and Johnson (2006) emphasises the pivotal role of create meaning undertakes between individuals and groups in organisations. However, they contend that although senior managers may have the power-control to initiate action, it is the *organisation's narrative* that is important *and* how people interpret actions within their own reality and understanding.

Kankainen et al., (2012) take a storytelling approach when discussing service innovation design. They start from the premise of collecting stories of *service use* from a customer perspective (Customer Journeys). This process then forms part of the prototype service design. The role of front-line employees with their contribution and broader contribution is essential. Their stories and insight supply the necessary customer contribution narrative, context of the service and ideas and problems situation. Also, . Reference Chapter 4 on discussion and findings.

Furthermore, as paraphrasing Kankainen et al., (2012) elegant describe '*Storytelling in service innovation provides the imagery for the service experience to be imagined, the environment to be pictured and the actions and processes to be made real for customers, managers, and front-line employees.*

2.6.3 Organisational arrangements and the social situation

Work by Maitlis and Christianson (2014) considers sense making in organisations as the keystone to other organisational processes and routines. These include processes and routines such as learning, change, and people's understanding of novel, ambiguous or confusing events such as service innovation.

As Karl Weick (1995, pp.135-136) in his book '*Sensemaking in organizations*' writes sense making in organisations is built on what people do to tie their actions and beliefs together so they can interpret and understand organisational reality to make decisions and solve problems. Also, see Appendix C for an extended case study discussing organisational arrangements from a systems perspective.

Organisational social situation concerns how an organisational environment determines and influences actions and relationships, and how they broadly coordinate human behaviour in socially ordered systems (Greenwood, Oliver, Suddaby and Sahlin, 2008, p.5).

In an organisational setting, Mele, Sebastiani, and Corsaro (2019) investigated how social reality is created by the various actors during *organisational discourse*, and found it is through organisations that participants in service innovation, such as managers and front-line employees, make sense and legitimise meaning, control, and value(s) of their social reality (Edvardsson, Tronvoll, and Gruber, 2010).

Moreover, Mele, Sebastiani, and Corsaro (2019) stress a *process view* of social reality which is constructed by individuals and groups engaging in social interaction and practices. In the social situation of service innovation, this allows for stories and narratives to be constructed around service innovation and organisational resources management in a way that emphasises co-creation and collaboration (Edvardsson and Tronvoll, 2013; Mele, Colurcio and Russ Spena, 2014; Lusch and Nambisan, 2015). Voronov and Weber (2020) conclude it is only through the study of people, such as front-line employees, that we can hope to understand actions that take place in organisations.

However, it remains *unclear* what organisations believe are the most important factors in the *understanding* of service innovation. This also includes the contribution and broader contribution made by front-line employees in the service innovation process (Russo Spena, Mele, and Nuutinen, 2017; Engen, Fuglsang, Tuominen, et al., 2021).

Lastly, a case study from Svahn, Mathlassen, and Lindgren (2017) at car manufacturer *Volvo*, found that organisations needed to constantly challenge their existing thinking, adopt a more system-integrated approach, and think more from a people-centric, less technology-centred perspective to gain a better understanding of their innovation processes. This case study's findings showcase the argument for this research. It is only by taking a more systems (service ecosystems) approach, which includes a change of organisational (socially situated understanding) arrangements that the broader contribution of front-line employees in the service innovation process can be realised (Koskela-Huotari, Edvardsson, Jonas, Sörhammar, and Witell, 2016).

2.6.4 Organisational arrangements and culture values

The association of service-dominant logic, service innovation, resource-based view and organisational culture values has been linked by Taghizadeh, Rahman, Hossain and Haque (2020), in their study of the banking sector in Bangladesh. They sought to study how organisational cultural traits connected with service innovation of effectiveness, cooperation, consistency, and innovativeness had on wider organisational performance.

In their research, Taghizadeh, Rahman, Hossain and Haque (2020) argue that organisational culture is an intangible resource based on the norms, values, and beliefs of institutions (Vargo, Wieland and Akaka, 2014; Vargo and Lusch, 2017). Therefore, cultural traits have a *direct impact* on service ecosystems' approach to organisational arrangements and staff allocation and social understanding in which service innovation is undertaken.

Further research, focusing on the hotel industry in Spain, Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd (2021) note a cultural understanding of service innovation *remains rare*. Their research highlighted factors such as senior management support of social factors, organisational cross-communication, and the involvement of front-line employees in both design and implementation as vital for success in the service innovation process. Furthermore, Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd (2021) emphasise the requirement to *promote* service ecosystems. This is central to this thesis argument.

These findings are further built on by Yang, Luu and Qian (2022) when investigating the Chinese hospitality sector. They found a direct link between service innovation and the development culture of teams and individuals in the wider organisational environment was important (also see research discussion and findings section 4.3 on systems context).

Moreover, work in the Australian health (hospital) sector by Harrison, Chauhan, Le-Dao, Mindashian, et al., (2022) investigating the cultural setting of service innovation, highlighted the need for organisational managers to engage staff through delegation and trust. Additionally, managers should promote a greater awareness of organisation change. All these factors can be applied to front-line employees. Also see the research discussion and findings, particularly sections 4.3 through 4.5 on culture appreciation, management vision, and lessons learnt.

Research implications:

The literature reviewed in section 2.6 has discussed organisational arrangements, outlining the social situation and culture regarding the organisational management of front-line employees. These are important concepts to explore, as organisational arrangements form the foundation of social understanding (sense making, create meaning and making sense are defined in Appendix A) and experiences of how service innovation is operationalised. Therefore, impacts how front-line employees” are engaged and understood in their role as customer relationship staff. Organisational arrangements form a meso-level service ecosystem perspective.

Synthesis from the literature reviewed, combining social situation and culture, gives a service innovation and front-line employees' perspective regarding organisational arrangements concerning service-dominant logic principle eleven (Vargo and Lusch, 2016). This then complements a systems *and* service ecosystems thinking approach (Vargo and Lusch, 2017).

Empirical data analysis ought to discover and illustrate from an organisational perspective themes regarding front-line employees' broader contribution to the service innovation process. Themes might include social and cultural understanding. Interview questions to elicit this should focus on cultural understanding. Also, see the interview questions given in Appendix F.

2.7- The Concept of Staff Allocation in the Service Innovation Process

Principle Nine: All social and economic actors are resource integrators (Vargo and Lusch, 2004).

2.7.1 Introduction

Principle nine contends that for service provision to operate effectively other social and economic factors such as public, private and market resources must be marshalled (Vargo and Lusch, 2004, Ho, Chung, Kingshott, and Chiu, 2020).

However, in the context of this thesis service-dominant logic principle nine has been limited to the context of actors (front-line employees) and resource integrators (organisational managers). The organisational context is limited to the support of processes, procedures, and routines for assessing staff allocation. This then allows the manageable literature review of front-line employees' (staff) allocation and their broader involvement, facilitation, and engagement in the service innovation process. The discussion of staff allocation forms a meso-level perspective in this thesis service ecosystems approach.

As, Lütjen, Schulz, Tietze, and Urmetzer (2019) observe, it is through the 'fuzzy' nature of service provision that 'fuzzy' thinking concerning staff allocation is undertaken. Nevertheless, it is imperative for all organisations to fully exploit all internal resources, in this instance front-line employees, to increase their service innovation success. However, as highlighted by Engen and Magnusson (2018), organisational managers often find it '*challenging*' when thinking about resource allocation.

In the consideration of staff resource allocation, there may also be limitations from a customer perspective, such as time or ability to participate through skills and knowledge (Gebauer and Reynoso, 2013) or constraints from organisational staff, including front-line employees, who lack appropriate innovation-based skills and knowledge (Gupta, Smith, and Shalley, 2006).

In both cases, Witell, Gebauer, et al., (2017) suggest organisations resort to a *bricolage approach* to service innovation. Here bricolage refers to someone who uses 'whatever is at hand' at both an Individual and organisational level (Baker and Nelson, 2005; Salunke, Weerardena and McColl-Kennedy, 2013).

Peters, Löbler, and Brodie et al., (2014) in their paper '*Theorizing about resource integration through S-D Logic*', comment on how resource integration refers to how organisations integrate and transform competencies, such as skills and knowledge embedded in front-line employees', into service and service systems. Peters, et al., (2014) note that resources cease to become a resource if a resource is not used or recognised in service.

This is further emphasised by Löbler (2019, p.362), who notes when discussing resources in the context of service ecosystems, resources only 'become' resources when they are recognised and utilised (allocated). The recognition of front-line employees in their broader contribution to the service innovation process rests with an understanding of service innovation *and* the requirement to allocate staff (Kleinaltenkamp, Brodie, Frow, Hughes and Peters et al., 2012; Edvardsson and Tronvoll 2013; Bäckström and Bengtsson, 2019).

2.7.2 Undertaking staff allocation

The *assessment* and *involvement* of front-line employees in service innovation is underscored by an observation from Lütjen, Schulz, Tietze, and Urmetzer (2019). Here they argue there has been little research as to what organisations *think* are central capabilities for service innovation. This also includes front-line employees' broader contributions.

The concepts of resource allocation (staff allocation) can be framed within the principles of Teece, Pisano, and Shuen (1997) in the form of *dynamic capabilities* (see Appendix A for thesis definition) who state: '*The (organisations) ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments*' (also see Prahalad and Hamel, 1990, Teece, 2007, Bäckström and Bengtsson, 2019). Here capabilities mean the ability of organisations to utilise (allocate) their resources, such as front-line employees, to secure a competitive advantage (Barney, 1991).

Taking a dynamic capabilities approach to innovation (service innovation) a study undertaken by Bäckström and Bengtsson (2019) highlighted both the importance of front-line employees in the innovation process *and* secondly the need to think about allocation and involvement of front-line employees early in the service innovation process. Taking this approach can maximise innovation benefits and hence competitive advantage (Karlsson and Skälén, 2015; Ommen, Blut, Backhaus and Woisetschläger, 2016). However, as Bäckström and Bengtsson (2019) also highlight, there is limited research on the *actual thinking* and *processes* behind the wider involvement of staff in business innovation projects.

In the context of the service innovation process, a framework assessing resource allocation (including staff allocation) based on organisational capabilities is outlined by Daniel Kindström, Christian Kowalkowski and Erik Sandberg (2013) in their paper '*Enabling service innovation: A dynamic capabilities approach*'. In their paper, they propose a service innovation support structure of organisational micro-foundational routines and procedures: *Sensing*, *Seizing* and *Reconfiguring*. These can also be utilised to support resource allocation thinking on the broader contribution and involvement of staff (front-line employees) in the service innovation process.

Kindström, Kowalkowski, and Sandberg (2013) view *sensing* as involving the organisational manager's ability to gather information and assess the opportunities for broader service innovation based on customers, employees, or market factors. The micro-foundations for sensing included the discovery of customer value, internal employee perception of service delivery (Engen and Magnusson, 2018) and wider technology adoption and integration (Lusch and Nambisan, 2015).

Further, Kindström, Kowalkowski and Sandberg (2013) conceive *seizing* as an organisations ability to exploit a new opportunity discovered by the sensing activities. These include micro-foundation factors such as new business models or the management of service infrastructure and delivery process based on the service platform and service ecosystems concepts (Lusch and Nambisan, 2015).

Lastly, Kindström, Kowalkowski and Sandberg (2013), view *reconfiguring* as the ability for organisations to successfully adopt *and* integrate the *sensing* and *seizing* activities needed for service innovations into the wider organisational (service ecosystems) environment. Micro-foundations factors for reconfiguring include the challenges of conceptualizing service innovation (Barcet 2010, p.54) and organisational managers' understanding of the service innovation process (Lusch and Nambisan, 2015).

Reconfiguring highlights the necessity for organisations to understand the importance of front-line employees and so the *assessment* and *involvement* of front-line employees' broader contribution to service innovation (Cadwallader, Jarvis, Binter and Ostrom, 2010, Gambarotto and Cammozzo, 2010, Chen, Kerr, Tsang and Sung, 2015).

Taking a complementary approach to Kindström, Kowalkowski, and Sandberg (2013) paper and adopting a service-dominant logic co-creation view of dynamic capabilities Kim, Song and Triche (2015) propose an integrative (systems) framework approach to service innovation. They view dynamic service capabilities from the perspective of integration, reconfiguration, and extraction.

According to Kim, Song, and Triche (2015), *integration* capabilities are the blend of resources and practices which create value for an organisational, customers and stakeholders and are built on via the participation of staff, such as front-line employees, customers and stakeholders in the co-creation process (Lusch and Nambisan, 2015).

Kim, Song and Triche (2015) view, *reconfiguration* capabilities as focusing on the competencies available within an organisational, such as knowledge, learning and technical abilities (skills) for the long-term support of service innovation.

Lastly, *extraction* capabilities rest on the organisations' ability to extract and create new service delivery openings based on existing services and to make the new service innovation operational. Again, these include important resource themes such as staff allocation and knowledge, learning and communication practices (Vargo and Lusch, 2004, Maitlis and Christianson, 2014, Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd, 2021).

There is much in common between Kim, Song, and Triche (2015) and Kindström, Kowalkowski and Sandberg's (2013) views on dynamic capability, resource integration and the background of service innovation. Both authors consider the importance of co-creation, effective participation, and the ability to exploit new openings. Differences rest on what constitutes reconfiguring resources.

Evaluating the work of both Kindström, Kowalkowski and Sandberg (2013) and Kim, Song and Triche (2015) consideration of front-line employees' contribution to service innovation becomes important to fully exploit organisational resources and thus deliver better service to customers (Kleinaltenkamp, Brodie, Frow, Hughes and Peters et al., (2012). Additionally, Zawislak et al., (2023, p.361) note dynamic capabilities have now become a key concept of competitive advantage for service organisations.

Research implications:

The literature reviewed in section 2.7 has focused on the staff allocation (of front-line employees') It has reviewed at a high level what capabilities support staff allocation assessment and thinking on how organisations may increase the broader contribution of front-line employees' involvement in the service innovation process.

Synthesising the analysis of dynamic capabilities of Kindström, Kowalkowski and Sandberg (2013) with resource consideration and assessment of front-line employees' broader contribution to the service innovation process allows contextual thinking which supports organisation managers in staff allocation. Here sensing capabilities, are consistent with the assessment of opportunities. Seizing capabilities applying and exploiting new opportunities, and reconfiguring capabilities, the conceptualising of service requires management to articulate the new service vision. Thus, for this thesis front-line employees' allocation then resolves the presence of service-dominant logic principle nine, all social and economic actors are resource integrators (Vargo and Lusch, 2004).

Empirical data analysis might discover themes on what organisational processes, routines, and procedures for staff allocation are significant and thinking regarding front-line employees' broader contribution to the service innovation process as important. The next section 2.8, reviews literature applicable to front-line employees' skills and knowledge at a micro-level of service ecosystems. This includes knowledge, communication and learning. These concepts are based on core competencies as discussed by Prahalad and Hamel (1990). Reference Appendix A for definitions.

2.8- The Concept of Skills and Knowledge in the Service Innovation Process

Principle Four: Knowledge is the fundamental source of competitive advantage (Vargo and Lusch, 2004).

2.8.1 Introduction

This section outlines the importance of *adding* front-line employees' skills and knowledge to organisational arrangements and staff allocation giving a service ecosystems approach to the broader contribution of front-line employees in the service innovation process. Skills and knowledge reviewed in this section are framed as knowledge, communication, and learning practices for service innovation.

Akenroye and Kuenne (2015) utilising a systemic review of service innovation practices, found knowledge management (knowledge reuse and knowledge sharing) as a key supporting practice (Kim, Koo, and Han, 2021).

Additionally, other key service innovation practices included effective communication (Gambarotto and Cammozzo, 2010; Malhotra and Ackfeldt, 2016) and learning (Gomes, Seman, Berndt, and Bogoni, 2022). All these practices highlighted where the service innovation process could be made more effective and so, lead to better service innovation outcomes. Furthermore, the classic paper by Prahalad and Hamel (1990), highlights knowledge, communication, and learning as core competencies for all organisations.

2.8.2 Skills and knowledge: The focus on knowledge practices

Taking a knowledge perspective can be utilised to highlight how the broader contribution of front-line employees could make the service innovation process more effective. Knowledge and the use of knowledge are at the heart of competitive advantage (Ordanini and Parasuraman, 2011).

As Ballantyne and Varney (2015, p.231) argue it is the *renewal* of knowledge which is important for organisations. This is based on the skills and ideas of staff. The application of ideas and innovation with the increased power of information processing through technology *know-how*, has led to organisations having to rapidly adapt to dynamic and evolving market environments.

Organisation competitive advantage typically rests on their ability to manage operant resources (knowledge and skills) in the enhancement of processes and procedures which deliver value to customers (service innovation) (Löbner, 2019, p.362). The role of organisational management thus becomes how best to utilise and allocate specialist operant resources (for example front-line employees) in any given operand resource circumstances (for instance technology usage) (Vargo and Lusch, 2004).

Knowledge, knowledge management and knowledge and skills are a recurring theme in service-dominant logic. This is particularly highlighted in principle one and principle four (Table 2.3 and Table 2.4). According to Lusch, Vargo and Malter (2006), the key organisational competencies for service include knowledge sharing, learning and collaboration, all of which are dependent on organisational culture (norms, values and beliefs) and allocation priority of resources set by organisational management.

Chua and Banerjee (2013) undertaking a case study at *Starbucks* focused on the importance of knowledge management centred on a service-centred perspective. Here, Chua and Banerjee (2013) investigated the importance of *Starbucks's* knowledge management strategy in delivering new service innovation to their customers.

To undertake their research Chua and Banerjee (2013) split their study into three categories employed by *Starbucks*: knowledge for customers, knowledge from customers and knowledge about customers. Utilising these categories allowed *Starbucks*, firstly to engage its customers as co-creators, via the submission of new ideas on service and coffee products. Secondly, feedback on existing service and staff was captured. Thirdly, to publicise knowledge and information to customers to help them enjoy their *Starbucks* experience. By 2019, as Muninger, Hammedia, and Mahr (2019) observed, over 300 customers' ideas had been implemented by Starbucks management.

Furthermore, Chua and Banerjee (2013) found that *Starbucks's* knowledge management systems offered it a large competitive advantage as it stored vast amounts of information about the interaction of staff and customers, which could then be easily utilised by *Starbucks* managers.

As Chua and Banerjee (2013) conclude *Starbucks's* shift from a coffee (goods) *product* centric view to a customer *service* centric view came with *Starbucks* management taking a systems, joined-up approach to knowledge management in managing information from, for and about their customers.

The application of knowledge is an important attribute for front-line employees. Front-line employees' through virtue of their ongoing relationship and contact with organisational customers readily become customer (customer domain) subject matter experts.

Investigating service innovation and knowledge management, Migdadi (2021), highlights the requirement for customer engagement. Hidalgo and Herrera (2020) also note, that for innovation management in knowledge-based organisations (such as finance and healthcare), there is a strong necessity for front-line employees to assist and connect with customers and apply their skills and knowledge in the value and co-creation process. Also see Miles (2023, p.439) who notes the need for (service) innovation to solve business problems, where knowledge management is essential.

2.8.3 Skills and knowledge: The focus on communication practices

Taking a communications perspective to service innovation, a case study undertaken by Lievens, Moenaert and Jegers (1999) in the Belgium financial sector, found for successful service innovation to occur there was not only a need for good external communication with customers, but also good internal organisational communication practices. This was also the case in the university sector by Gambarotto and Cammozzo (2010).

The requirement for good internal communication practices was also highlighted by Eskelinen, Rajahonka, Vilman and Santti (2017), who in their research, found there was a requirement for effective communication in the design stage of the service innovation process.

Research undertaken by Chiu (2018) reviewed the role of managers both in the context of strategic innovation implementation and motivation. According, to Chiu (2018) the most successful innovation implementations came where organisational managers utilise a persuasive strategy. They give the example of an enhanced communication strategy to engage staff that matched employees' intrinsic motivation.

In their study of organisations in South Korea, Suh, Harrington and Goodman (2018) found that communication within organisations was linked to senior management practices regarding the articulation of their value and visions of service innovation and how they could actively engage with staff, such as front-line employees. This had a beneficial effect on staff involvement and contribution such as ideas generation, implementation and motivation (Artusi and Bellini, 2021).

Moreover, Suh, Harrington and Goodman (2018) also found where there was a good relationship and engagement between senior management and staff the implementation of service innovation projects became more successful.

Additionally, Artusi and Bellini (2021) found good engagement and communication with front-line employees by organisational managers lead to a greater understanding of the service innovation process in both its conceptualisation and implementation. Communication between senior management and front-line employees' was also found to be a *significant factor* in successful service innovation by Santos-Vijande, López-Sánchez and Rudd (2021).

2.8.4 Skills and knowledge: The focus on learning practices

Taking a learning perspective on service innovation, Xie, Wang and García (2021) define learning practices as: '*The learning potential intrinsic to the knowledge and skills of professionals and managers in processes (and) practices used in organisations*'. This can be seen to include front-line employees, managers and service innovation consultants in the broad organisational context and specifically in service innovation.

Earlier work by Melton and Hartline (2013) found the contribution of learning from front-line employees had a large impact on new service design success and as such was a key organisational resource factor.

Further, Melton and Hartline (2013) in their findings suggest there is a strong link between learning practices and organisational shared vision, culture and knowledge sharing connected with service innovation. Additionally, there was a need for organisational managers to *change their mindset* about front-line employees, customer requirements and communication to enable successful service innovation.

The works by De Jong, Schepers, Lages and Kadić-Maglajić (2021) and Garavan, Koukpaki, Darcy, O'Brien, Oyedijo and Adams (2022) highlight the important role of organisational managers have in the promotion of learning concerning front-line employees. Noting with increased learning front-line employees were able to engage in a wider organisational environment beyond typical service innovation processes.

Work by Gomes, Semen, Berndt, and Bogoni (2022) collaborated on these findings, suggesting organisational managers *need* to promote learning practices to achieve service innovation goals and wider organisational success. Factors such as knowledge, participative decision-making, and the promotion by senior managers of an open organisational culture could broadly assist this success.

Furthermore, Xie, Wang and García (2021) broadly found with increased learning practices, also comes increased customer relationship building and customer involvement in the service innovation process, promoting more success. This requires organisational managers to understand both the customer and their staff, such as front-line employees.

Learning is strongly associated with principle four of service-dominant logic where knowledge is the source of competitive advantage (Vargo and Lusch, 2004). Therefore, organisational managers should as the research by Melton and Hartline (2013) suggests, be obligated to promote and understand the learning practices of staff.

Research implications:

The literature reviewed in section 2.8 has focused on staff knowledge, and communication learning practices within an organisational environment, which are important within the context of front-line employees' broader contribution to the service innovation process through both the involvement and requirement to think about staff resource allocation.

Synthesis of skills and knowledge regarding practices of staff knowledge, communication and learning for this thesis, resolves the inclusion of service-dominant logic principle four, as knowledge is the fundamental source of competitive advantage (Vargo and Lusch, 2004).

Empirical data analysis should discover socially situated organisational thinking and understanding regarding the front-line of what organisations believe to be key knowledge, learning and communication practices connecting front-line employees to contribute to the service innovation process further and more broadly. Skills and knowledge form a micro-level perspective on service ecosystems thinking for this thesis.

The next section reviews the literature regarding principle eight (Vargo and Lusch, 2004) and a service ecosystems focus (Ng and Wakenshaw, 2019, p.199). This perspective is important as it highlights *thinking* about a *systems understanding* of the broader contribution of front-line employees to the wider organisational service innovation process. The literature reviewed in the following section further contextualises the principles of service-dominant logic and the research aims outlined for this research.

2.9- The Concept of Service Ecosystems in the Service Innovation Process

Principle Eight: A service-centred view is customer oriented and rational (Vargo and Lusch, 2004).

2.9.1 Introduction

This section provides a literature review on the importance of service ecosystems thinking in the service innovation process and front-line employees' broader contribution. Taking this perspective at a *meso-level* and *micro-level* allows a service ecosystems to be defined in terms of organisational arrangements (culture) and staff allocation processes at a meso-level (organisational level), and staff skills and knowledge at a micro-level (individual level).

Ng and Wakenshaw (2019, p.199) note the shift of service-dominant logic to a systems and service ecosystems perspective allows a wider world view (*Weltanschauung*) both internally and externally of markets, and so consequentially service delivery and service innovation (Akaka and Vargo, 2015).

Many articles on service ecosystems look at the network relationships of service ecosystems at a *mega* or *macro* level from the perspective of organisations involved in service innovation (Dedehayir, Ortt and Seppänen, 2017, Lütjen, Schulz, Tietze and Urmetzer, 2019). As Lusch and Vargo (2014, p.182) observe, service ecosystems can be defined in many ways. For this thesis, as Frow and Payne (2019, Figure 5.1 p.85) illustrate, service ecosystems can also be defined at a *meso-level* and *micro-level*.

2.9.2 Service ecosystems perspective – Organisational arrangements

This section takes a service ecosystems perspective with a focus on organisational arrangements (meso-level), at a meso-level, centred on the service innovation process.

In a case study at *IKEA*, Edvardsson and Enquist (2011) argue for service innovation to succeed, organisations must look beyond technology and promote cultural aspects of service-dominant logic principles. Edvardsson and Enquist (2011) found this promotion needed to be based on core concepts of service-dominant logic co-creation, and resource integration and inclusive of organisational norms, values and beliefs. A service ecosystem perspective. Also see Korper, Holmlid and Patrício, (2021).

Additionally, Edvardsson and Tronvoll (2013) believe service innovation thinking should start with an understanding that service innovation is essentially a connected socially situated system embedded in rules, norms and beliefs. Edvardsson and Tronvoll (2013) give the example of *Apple* where the understanding of both the social situation of service innovation combined with an understanding of staff resourcing (beyond technology resourcing alone) has led to high levels of successful service innovation.

Furthermore, research undertaken by Engen and Magnusson (2018) who undertook 50 semi-structured interviews with front-line employees, managers and back-office staff, found combining management cultural insights and the role of front-line employees was vital to service innovation success.

In their findings Engen and Magnusson (2018) report that: *'Employees often do not feel that they are engaged or participate in innovation activity. This can be due to the lack of a holistic understanding of the innovation project....'*

Research implications:

This section has highlighted, that in the context of service ecosystems, there is a need to consider at a meso-level organisational arrangement perspective to front-line employees' broader contributions.

Interview questions based on the literature reviewed can ask about the social setting and involvement of front-line employees in the service innovation process. Interviewed participants can be asked about their *real-world experience* and the cultural setting of the organisation.

Empirical data analysis should highlight socially situated systems thinking regarding service innovation processes. This might include themes concerning culture awareness and/or cultural context of service innovation and front-line employees' broader contribution.

2.9.3 Service ecosystems perspective – Staff allocation

This section reviews the literature concerning the staff allocation, at a meso-level, in the service innovation process from a meso-level service ecosystems perspective.

When discussing resource management from a service-dominant logic perspective, Amould (2006), highlights the strategic nature of resources typically centred on the resource-based view (Grant, 1991; Barney, 1991).

Peters (2019, p.343) argues that by taking a resource-based approach organisations may gauge their dynamic capabilities to assess their staff (front-line employees') knowledge, skills and inventiveness required for service delivery (service innovation) and competitive advantage (Bäckström and Bengtsson, 2019). Vargo and Lusch (2011) also highlight the requirement to think about organisational resources, such as front-line employees, from a dynamic perspective (also see section 2.7 on dynamic capabilities).

As highlighted by Edvardsson and Tronvoll (2013) where organisations undertook a service ecosystems approach to service innovation, thereby understanding the concepts of service innovation, plus organisational arrangements, plus an assessment of staff allocation, this can lead to better service delivery outcomes.

An organisational understanding of service innovation (staff) resourcing was also found to be important by Korper, Holmlid, and Patrício (2021). They observed where specific (service) and innovation-based (dynamic) capabilities, were assessed there were also better service innovation outcomes.

However, organisational managers are often unaware of what staff competencies are required when thinking about their involvement in service innovation (Lütjen, Schulz, Tietze, and Urmetzer 2019).

Additionally, as Witell, Gebauer, Jaakkola, Hammedi, Patrico and Perks (2017) contend many organisations operate under staff resource constraints limiting service innovation.

Research implications:

The literature reviewed in this section specifically links to interview questions concerning the involvement and management of new service delivery or service innovation projects. These may highlight organisational thinking behind staff resource allocation, specifically engagement or the contribution required for a successful outcome.

Empirical data analysis might highlight factors supporting staff allocation in the service innovation process. These might be factors such as what routines and procedures might contribute to the assessment of thinking about front-line employees' staff allocation.

2.9.4 Service ecosystems perspective: Skills and knowledge

This section reviews literature from a micro-level service ecosystems perspective with the inclusion of front-line employees' skills and knowledge at a micro-level.

The work undertaken by Chandler, Danatzis, Wernicke, Akaka, and Reynolds (2019) recognises there may be a clear organisational understanding of the service innovation process. This includes organisational arrangements and the assessment of staff resources such as front-line employees' availability. This did not necessarily mean there was a consensus on the accomplishment of the service innovation journey with many differing views, stances, and issues (also section 2.6 on mental models).

As Chandler, Danatzis, Wernicke, Akaka, and Reynolds (2019), state: '*... Managers must recognise that innovation is in the eye of the beholder. While one beholder can view an issue as a problem, another can view the same issue as a solution.*'

Nguyen, Ngo et al., (2018) research on internal organisational knowledge sharing concluded that knowledge sharing has a *measurable impact* on organisational innovation but this had to be actively promoted and managed. An agreed consensus had to be agreed.

Additionally, further research undertaken by Kim, Koo, and Han (2021) on front-line employees and knowledge management agreed that it was *important* for front-line employees to be keenly involved and managed in the service innovation process.

However, organisational front-line employees' skills and knowledge in their broader contribution to the service innovation process are typically dismissed by managers. Their contribution is viewed in a non-systems manner and forgotten, discounted or overlooked. A service ecosystem perspective is not considered (Santos-Vijande, López-Sánchez and Rudd, 2016; Vink, Koskela-Huotari, and Tronvoll, et al., 2021).

Additionally, Migdadi (2021) found that it was only through the successful application of knowledge management strategies across the organisation, and this included knowledge reuse and sharing of knowledge, that service innovation outcomes were improved.

Research implications:

The literature reviewed in this section has centred on service innovation from a service ecosystems approach regarding front-line employees' skills and knowledge.

Empirical data analysis could highlight knowledge-sharing practices and other front-line employees' skills and knowledge practices across the organisation. Interview questions should ask about these practices and front-line employees' broader contribution to the service innovation.

2.9.5 Service ecosystems perspective: A systems perspective

This section reviews literature taking a service ecosystems systems approach. The requirement for a systems perspective to service innovation has been discussed and highlighted as important by Vargo and Lusch (2011).

Jaaron and Backhouse (2018), believe analysis of service innovation should be based more on a *systems perspective* when it comes to operations and design thinking. They stress the inclusion of organisational processes *and* engagement with the customer as essential to the service innovation process. This perspective is based on an organisational understanding of service innovation. Again, front-line employees must be key in this thinking.

At a meso-level, Edvardsson and Tronvoll (2013) use service-dominant logic to frame service innovation as a change in either resources or the change in norms and values. These changes typically might be the allocation of staff or what managers think about the role of front-line employees.

These changes reference service-dominant logic principle nine, which outlines staff resource integration (Vargo and Lusch, 2016) and principle eleven organisational arrangements (Vargo and Lusch, 2008).

Additionally, at the meso-level to assist in the staff allocation process a dynamic capabilities approach is outlined by Kindström, Kowalkowski and Sandberg (2013) and Kim, Song and Triche (2015) and Lusch and Nambisan (2015). This references service-dominant logic principle nine (Vargo and Lusch, 2004).

Taking a perspective at a micro-level, with a greater focus on the skills and knowledge of front-line employees, Ordanini and Parasuraman (2011) research highlights the essential part that skills and knowledge play in the service innovation process. This references service-dominant logic principle four (Vargo and Lusch, 2004).

These separate service ecosystems perspectives highlight the complex nature of service innovation and the role of front-line employees. Combining these service ecosystem perspectives can then allow a *systems view* of the service innovation process at a service-centred level. Indeed, Chih, Zwikael and Restubog (2019) argue a more holistic view utilising service-dominant logic can assist organisations in their understanding complex of projects – Such as service innovation.

Moreover, Koskela-Huotari, Patrício, Zhang, Karpen et al., (2021) argue it is only by taking a service ecosystems perspective, utilising a systems approach to service innovation, that thinking on service, service design and systems design that better service innovation outcomes impact competitive advantage and true value is added for customers (service-dominant logic principles: six, seven and ten, Vargo and Lusch, 2004, 2016).

Research implications:

The literature reviewed in this section has focused on service innovation from the service ecosystems perspective at a meso-level and micro-level.

Empirical data analysis could highlight specific connections between organisational arrangements, staff allocation and front-line employee practices. So, when these views are considered together, they give an organisational service ecosystem worldview (*Weltanschauung*).

2.9.6 Service ecosystems: A better service innovation outcome

The argument for this thesis is that only by *taking a service ecosystems perspective, that the broader contribution of front-line employees to the service innovation process be realised*. This results in better service innovation outcomes, such as enhanced service and service delivery, with wider customer engagement and value (co-creation) and so, competitive advantage (Edvardsson and Tronvoll 2013; Koskela-Huotari, Patrício, Zhang, et al., 2021; Vink, Koskela-Huotari, Tronvoll et al., 2021).

Figure 2.2 gives a recap of the literature reviewed and highlights the next section regarding the research questions and the research gap in knowledge.

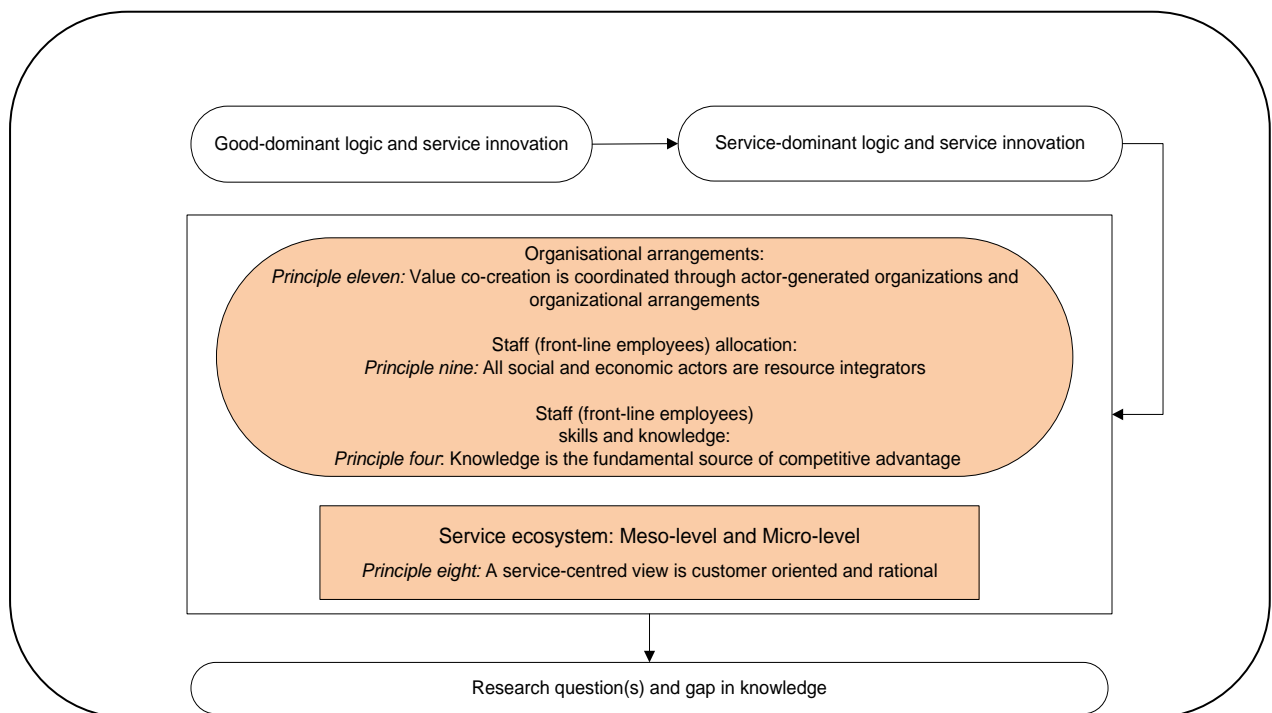


Figure 2.2: Recap of literature review for this thesis.

The literature reviewed in sections 2.1-2.9 has focused on a service ecosystems approach at a meso-level and micro-level for front-line employees' broader contribution to the service innovation process.

2.10- Exploring and Discovery: The Research Gap in Knowledge

2.10.1 Introduction

This section discusses the academic gap in knowledge. The aim of the research is restated as:

This research aims to explore and discover, how utilising a service-dominant logic and service ecosystems perspective on front-line employees in their broader contribution to the service innovation process, can lead to better service outcomes and organisational competitive advantage.

To resolve the academic gap in knowledge, the research aims to *build upon* the many observations made by leading academics in the field of service innovation and service-dominant logic, for instance, but not limited to: Vargo and Lusch (2004, 2016); Karlsson and Skålén (2015); Engen and Magnusson (2018); Lütjen, Schulz, Tietze and Urmetzer (2019); Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd (2021).

Previous work undertaken in the research field includes Edvardsson and Enquist (2011) on organisational arrangement. Staff allocation (Bäckström and Bengtsson, 2019) and skills and knowledge (Kim, Koo and Han, 2021). Additionally, Chandler, Danatzis, Wernicke, Akaka and Reynolds (2019) undertook work on building service ecosystems perspectives.

The execution of this research resolutions the gap in knowledge by utilising empirical (observations) data collection from organisational managers, service innovation consultants, and front-line employees.

The data collection should explore front-line employees' and service innovation *understanding* at a meso-level and micro-level (Edvardsson and Tronvoll, 2013; Koskela-Huotari, Patrício, Zhang, Karpen, et al., 2021). Further, the data collected should also illustrate organisational *thinking* on service-dominant logic, organisational context, and service ecosystems (Vargo and Lusch, 2017). Furthermore, the data collection should also resolve the knowledge gap regarding *building theory* from a service-dominant logic service ecosystems perspective and the broader contribution of front-line employees to the service innovation process.

Additionally, the creation of a theory framework built interpretively and subjectively on the concepts of service-dominant logic may also then be utilised with data collected for conceptual process model construction.

2.10.2 The knowledge gap: The organisational context

The stated aim of this research is to explore the academic gap in knowledge based on service-dominant logic, service ecosystems and service innovation and front-line employees. The organisational focus for this research rests on three organisational sectors:

- Financial organisations.
- Health and healthcare organisations.
- University organisations.

The focus on financial, health, and university organisations was chosen because these organisations have a similar robust requirement to solve complex issues which are involved within the service delivery and (or) service innovation process (Sundbo, 1997). These conditions include the requirement to manage customer knowledge (Hosseini, Tekmedash, Karami, and Jabarzadeh, 2019), and the need to communicate this knowledge organisational wide (Ode and Ayavoo, 2020). Furthermore, the necessity to engage with customers efficiently and effectively in many transactions over a long period, typically many years (Vargo, Wieland, and Akaka, 2015).

Moreover, exploration of the financial, health, and university sectors were chosen for the comparative lack of qualitative (interview) studies of front-line employees in these sectors. A gap in knowledge. However, Melton and Hartline (2013) have undertaken a *quantitative* investigation in all three sectors. In their research, they concluded there was a need for additional research on the allocation of internal resources and the need for cross-functional teams involving front-line employees in both learning and knowledge sharing.

Academic research undertaking qualitative exploration in the financial sector includes Stringer, Didhan, and Theivananthampillai (2011) who studied the *motivation* of front-line employees in Australasia, whilst Zhao, Yan, and Keh (2018) studied front-line employees in the service encounter in China.

Wallin and Fuglsang (2017) in their qualitative research on Dutch health care, observe there have been relatively few papers that have studied service innovation from an organisational arrangement and management understanding of service innovation.

Lastly, qualitative research on front-line employees in the university sector is typified by Gorospe, Rabanal, and Talosa (2021) who studied the *satisfaction* of university front-line employees in the Philippines.

Research implications:

In all three organisational sectors considered for this research, there is an outstanding academic requirement in the field of front-line employees and service innovation to explore and discover: The context of organisational social understanding; Organisational understanding regarding staff allocation; The utilisation of staff skills and knowledge.

This is highlighted by Karlsson and Skälén (2015), in their discussion on management implications where they state: '*Managers must know that front-line employees' are one of the main service innovation resources'*.

2.10.3 The knowledge gap: Thesis research question

Thesis research question RQ: How can the broader contribution of front-line employees be maximised in the service innovation process?

The principal research question aims to explore and discover how front-line employees maximise their broader contribution to service innovation and their participation, role, and engagement in the service innovation process (Schepers and Van der Borgh, 2020; Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd, 2021).

Taking a service innovation perspective, Bäckström and Bengtsson (2019) highlight the need for organisations to think about front-line employees during the service innovation process and not see them just as *cost centres* or solely as *ideas generators*. They urge more research should be undertaken to explore the contributions made by front-line employees. Furthermore, Bäckström and Bengtsson (2019) highlight current research tends to focus on areas such as in *hospitality* and *retail* sectors and suggest this should be extended to other organisational sectors (Hu, Horng, and Sun, 2008; Engen and Magnusson, 2015; Karlsson and Skålen, 2015).

Additionally, Tajeddini, Martin and Altinay (2020) highlight the need for organisations to think beyond traditional (non-systems and fixed) management approaches when dealing with front-line employees' contributions. Moreover, a review undertaken by Koskela-Huotari, Vink, and Edvardsson (2020) highlighted the need for more empirical data research connecting organisations and service-dominant logic.

Building on service-dominant logic, a contention for this research is that organisations lack the understanding regarding service-dominant logic principle eleven: ‘value co-creation is coordinated through actor-generated organisations and organisational arrangement’ (Lusch and Vargo, 2019, p.18).

Additionally, there is also a requirement for organisations to think about service-dominant logic principle nine: ‘*all social and economic actors are resource integrators*’ (Vargo and Lusch, 2004). Moreover, organisations must consider the skills and knowledge of their front-line employees when it comes to the operation of service innovation. This is service-dominant logic principle four: ‘*Knowledge is the fundamental of comprehensive advantage*’ (Vargo and Lusch, 2004).

Furthermore, there is a requirement to think about service innovation from a service-centre (service ecosystems) perspective. This is highlighted by service-dominant logic principle eight: ‘*A service-centred view is customer oriented and rationale*’ (Vargo and Lusch, 2004).

Research implications:

Therefore, in response to these observations, this research seeks to explore and discover the importance of the contribution and understanding of front-line employees in the service innovation process. This is via empirical data collection in the UK finance, health, and university organisational sectors.

2.10.4 The knowledge gap: Research question 1

Thesis research question RQ1: How can changes in organisational culture concerning front-line employees improve the service innovation process?

The successful involvement of front-line employees in service innovation has long been recognised (De Brentani, 2001), and their involvement in the innovation process is seen as a key component within organisations (De Jong and Den Hartog, 2007; Bowen, 2016).

This staff involvement (and contribution) as Lusch and Vargo (2019, p.11) acknowledge needs to be integrated and managed. This is highlighted in service-dominant logic principle nine, where all social and economic actors are resource integrators (Lusch and Vargo, 2019, p.14).

However, as Siahtiri (2018) notes although there is increasing acknowledgement of the importance of front-line employees, there seems to be little academic research specifically focusing on front-line employees' surrounding cultural understanding, management practice and organisational processes. This is especially true of front-line employees' engagement, involvement and contribution to the service innovation process (Hsiao Lee and Hsu, 2017; Koskela-Huotari, Vink and Edvardsson, 2020).

Tajeddini, Martin, and Altinay (2020) argue where front-line employees are well managed their importance to the service innovation process is better understood. Additionally, there is often a direct link between improved customer co-creation, increased customer value propositions, and enhanced customer relationships. Also reference Gruner and Homburg (2000) and Zhao, Yan, and Keh (2018).

These findings are broadly endorsed by Santos-Vijande, López-Sánchez, Pascual-Fernández, and Rudd (2021). They equally agree front-line employees are in a *unique position* in the service innovation process through their contribution of expert advice and guidance to the service innovation effort. Where the positive contribution of front-line employees to the service innovation process is recognised; however, there remains an organisational cultural gap in this recognition. Also see Engen, Fuglsang, Tuominen, et al., (2021).

Further, although many researchers have focused on the contribution of front-line employees in the service innovation process, these have typically involved ideas generation (Woisetschläger, Hanning and Backhaus, 2016), service design (Santos-Vijande, López-Sánchez and Rudd, 2016) and service innovation implementation (Sing, Akbani and Dhir, 2020). A wider service ecosystems perspective, linking organisational cultural understanding, staff allocation, and skills and knowledge to the contribution of front-line employees in the service innovation process would seem to be missing (Bäckström and Bengtsson, 2019; Engen, Fuglsang, Tuominen, et al., 2021).

Specific gaps in knowledge (Organisational arrangements – Meso-level):

- Siahtiri (2018) notes there is little research on the *cultural understanding* of organisational processes that allow for the wider contribution of front-line employees in the service innovation process. Schepers and Van der Borgh, (2020) highlight a UK perspective.

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- Engen, Fuglsang, Tuominen et al., (2021) point to the requirement for exploring the *organisational cultural gap* in the recognition of front-line employees in the service innovation process.
 - Koskela-Huotari, Vink and Edvardsson (2020) focus on the requirement for more empirical data research concerning organisational understanding and service-dominant logic.

Research implications:

Research interview questions might resolve where front-line employees currently contribute. This may highlight *other areas* in which they could contribute. Managers understanding of the role of front-line employees and improved contribution of front-line employees in the service innovation, specifically through organisational cultural understanding.

Research empirical data analysis on organisational understanding and service-dominant logic as highlighted by Koskela-Huotari, Vink, and Edvardsson (2020) should *explicitly highlight* categories, themes, and conceptual understanding by front-line employees, managers, and service innovation consultants. This then builds a meso-level analysis in forming a service ecosystem perspective.

Discovered categories, themes, and concepts might then be utilised for conceptual model building. Reference should be made to Chapter 5 for conceptual models.

2.10.5 The knowledge gap: Research question 2

Thesis research question RQ2: How can changes in organisational staff allocation of front-line employees improve the service innovation process?

Karlsson and Skålen (2015) stress in their research, the need for front-line employees to be involved at all stages of the service innovation process; however, as they conclude managers seldom consider including front-line employees as an important resource for successful service innovation. Many studies highlight certain aspects of front-line employees' participation (Cadwallader, Jarvis, Binter, and Ostrom, 2010) in a customer context (Karlsson and Skålen, 2015), or a team context (Yang, Lee, and Cheng, 2016).

However, there is an explicit requirement to explore and discover *what facilitates* the staff allocation process for the contribution of front-line employees in the service innovation process. Additionally, Karlsson and Skålen (2015) note the need for more empirical data analysis of front-line employees' in service innovation.

In their research, Cadwallader, Jarvis, Binter, and Ostrom (2010) found that while organisational managers often acknowledge the participation of front-line employees, they often fail to understand front-line employees' commitment and motivation early on during the service innovation process. This often led to less successful innovation, with additional time in design and money, and greater resistance to change during later stages of new service introduction (Averett, 2001).

As Bowen (2016) argues the focus on the customer role in co-creation and co-production in mainstream service innovation research *fails to fully acknowledge* the role of front-line employees. Their wider engagement, participation, and broader contribution to the service innovation process are rarely considered by organisational managers. This leads to little or no research prioritisation by academics.

Where front-line employees' contribution was considered, Engen and Magnusson (2018) found many researchers focus on ideas generation (Schepers, Nijssen and Van der Heijden, 2016) and the implementation process (Cadwallader, Jarvis, Binter and Ostrom, 2010).

Engen and Magnusson (2018) argue to *fully understand* how front-line employees add value to service innovation, a *wider appreciation* must be considered (Sundbo, 1997; Melton and Hartline, 2010; Engen, Fuglsang, and Tuominen et al., 2021).

The need to understand what supports staff allocation of front-line employees' contribution in the service innovation process becomes important, as highlighted by principle four, knowledge is the fundamental source of competitive advantage (Vargo and Lusch, 2004) and principle nine, all social and economic actors are resource integrators (Vargo and Lusch, 2008; Vargo and Lusch, 2016).

Specific gaps in knowledge (Staff allocation – Meso-level):

- Engen and Magnusson (2018) highlight the requirement to understand front-line employees' allocation in the wider context of the service innovation process.

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- Karlsson and Skålén (2015) note the need for more empirical data analysis on front-line employees' (*what facilitates*) allocation in the service innovation process. Also see Engen and Magnusson (2018), who highlight empirical analysis.

Research implications:

Therefore, there is a *real need to explore* how can organisational front-line employees maximise and more broadly contribute to the service innovation process in more detail. This is beyond the important studies of Karlsson and Skålén (2015); Engen and Magnusson (2015) and Engen and Magnusson (2018).

Interview questions for interview participants might ask about management's understanding of the role of front-line employees. The engagement and involvement of front-line employees. The routines and procedures associated with the staff allocation process.

The empirical data analysis should highlight what processes and routines promote staff allocation regarding the broader contribution of front-line employees to the service innovation process. This analysis can then give a wider view of service ecosystems at a meso-level. The promotion of meso-level understanding within organisations becomes important in the context of front-line employees in the wider service innovation process and the wider organisational environment.

The analysis might extend categories, themes, and concepts connected to assessing front-line employees' staff allocation. These categories, themes, and concepts could then be utilised for constructive conceptual model building. For research contribution see Chapter 5.

2.10.6 The knowledge gap: Research question 3

Thesis research question RQ3: How can better use of the skills and knowledge of front-line employees improve the service innovation process?

The skills and knowledge of front-line employees can have a widespread impact on an organisation's relationship with customers on both internal and external innovation projects such as might be undertaken with Open innovation (Chesbrough, 2003).

Engen and Magnusson (2018) found much front-line employees' service innovation research tended to concentrate on individual front-line employees' attributes such as knowledge management and sharing (De Jong and Den Hartog, 2007; Hu, Horng and Sun, 2008), customer insights (Karlsson and Skålen, 2015) and creativity (Yang, Lee and Cheng, 2016). However, this research did not acknowledge the underlying service ecosystems or systems aspects required to understand the broader contribution of front-line employees to the service innovation process.

Furthermore, as Lages and Piercy (2012) note regarding *Singapore Airlines*, front-line employees are ideally placed to collect information about customer preferences. This expertise can then provide important feedback on customers to organisations on issues connecting service delivery with service innovation.

Work by Tajeddini, Martin, and Altinay (2020) conclude the benefits realised by service innovation are only achieved after *long-term skills investment* in organisational *people such as* front-line employees. This includes training, learning, and creativity with the *addition* of technology, but *not* solely focusing on technology.

This highlights service-dominant logic principle four that knowledge is the fundamental source of competitive advantage (Vargo and Lusch, 2004) and additionally an enabler of good service innovation outcomes.

In organisational sectors such as finance and health, front-line employees typically possess fundamental domain knowledge and expertise that ultimately govern the quality of service delivered to the customer and the success of the service innovation process. Tajeddini, Martin and Altinay (2020) emphasise skills and knowledge improve organisational competencies such as better knowledge management (Johannessen, Olsen, and Olaisen, 1999), management of idea generation (Lages and Piercy, 2012) and improved organisational creativity (Schemmann, Herrmann, and Chappin et al., 2016). These can ultimately lead to *more successful service innovation outcomes*.

Specific gaps in knowledge (Skills and knowledge – Micro-level):

- Tajeddini, Martin, and Altinay (2020) highlight there is a requirement to further explore front-line employees’ skills and knowledge to enhance the service innovation process.
- Engen, Fuglsang, and Tuominen et al., (2021) highlight the need for more empirical data analysis on front-line employees in contributing their skills and knowledge as innovators.

Research implications:

Empirical data analysis should conceptualise what staff skills and knowledge regarding the broader contribution of front-line employees can improve the service innovation process outcome.

This is highlighted by principle four, knowledge is the fundamental source of competitive advantage (Vargo and Lusch, 2004).

The conceptualisation can then be used to build a process model. See the research contribution in Chapter 5. Here a process model is defined as '*business processes to make [service innovation] more effective and efficient in terms of time, cost, quality, and flexibility*' (Kumar et al., 2022).

2.10.7 The gap in knowledge – A short commentary

The resolution of the knowledge gap for this research falls into empirical, theory, and conceptual model building. Also, see section 2.2 which broadly outlines the narrative for the thesis.

The initial literature review forms a framework for the discussion of service-dominant principles through the central role of front-line employees' broader contribution to service innovation taking a service ecosystem perspective.

For this research, a service-dominant logic perspective focusing on, *principle eleven* can be utilised to explore service innovation culture regarding rules, norms, and narratives. This is set in the context of front-line employees' being important for service innovation organisational arrangements. This context highlights the requirement to think about staff allocation (*principle nine*) and a service ecosystems perspective (*principle eight*) on what skills and knowledge (*principle four*) front-line employees can more broadly and maximise their contribution to make the service innovation process more effective.

The promotion of meso-level and micro-level understanding within organisations is important to view front-line employees' broader contribution to service innovation from a wider service ecosystem perspective. This impacts the wider organisational environment, wider service innovation processes and procedures, and the wider involvement and participation of people through skills and knowledge to improve service innovation. This is essentially the knowledge gap.

The empirical data collection resolves the knowledge gap in the exploration and discovery of the broader contribution of front-line employees in service innovation.

The theory knowledge gap comes the extending the service-dominant logic theory framework of *organisational arrangements*, *staff allocation*, and *staff skills and knowledge practices*.

Conceptual model building is constructed from *empirical data analysis*, concerning the rationale of what conceptual elements constitute organisational arrangements, staff allocation, and staff skills and knowledge practices from a front-line employees' perspective.

The next section of this chapter outlines in summary the literature reviewed for the research.

2.11- Summary of Chapter Two (Literature Review)

An introduction to the literature review is offered in section 2.1 and section 2.2.

Section 2.3 outlines Initial service innovation thinking, reviewing such paradigms as continuous improvement, and incremental and radical improvement. These paradigms form the foundation of many interview questions as they are well-known and recognised by service innovation practitioners when thinking about service innovation change.

However, these concepts take their perspective from product innovation and goods dominant logic. Researchers such as Tajeddini, Martin, and Altinay (2020) argue that service innovation should focus on ‘*service*’ and Jaaron and Backhouse (2018) stress the involvement of ‘*customers*’ in the service innovation process.

Two technologies related to front-line employees’ work with customers are reviewed in the context of the *technologist approach* to service innovation. These are CRM and social media technologies. These are considered as they *stress* the customer relationship and contact with customers undertaken by front-line employees in service delivery and service innovation. An outline of traditional front-line employees’ role in service innovation is given through Ideas generation, Service design and Implementation.

Section 2.4 highlights work by Vargo and Lusch (2004) on service-dominant logic, and is reviewed at length, as it proposes a *paradigm shift* based on a series of principles and axioms, which moves the focus of product innovation and goods logic to *service focus* and *customer* logic perspective.

Service-dominant logic stresses a *different* perspective to think about service. This also results in *different* thinking regarding the paradigm on which service innovation processes may also be viewed. This includes thinking of customer value, co-creation of service with the customer, and exchange of service. This all impacts on the perception of service innovation and the contribution of front-line employees.

Section 2.5 explored front-line employees concerning their broader contribution to the service innovation process. Four *service-dominant logic principles* are discussed. These are outlined in Table 2.4.

Initially reviewed are service-dominant logic organisational arrangements. This is in section 2.6. These are reviewed at length as it is within the organisational arrangements, the social and cultural situation and the understanding of the service innovation process is socially constructed. This is service-dominant logic principle eleven (Vargo and Lusch, 2016). This supports such thinking and social situation and cultural value, allowing the broader contribution of front-line employees to the service innovation to be considered.

As discussed in section 2.7, staff allocation in the service innovation process is reviewed to bring together the resource-based view of capabilities and competencies of Grant (1991) and Barney (1991) when thinking about where organisational front-line employees broader contribute to the service innovation process be made. This is service-dominant logic principle nine (Vargo and Lusch, 2004).

The importance of skills and knowledge practices of front-line employees to the service innovation process are reviewed in the context of service-dominant logic principle four (Vargo and Lusch, 2004). This is discussed in section 2.8 and includes knowledge communication and learning.

The introduction of a service ecosystems approach is outlined in section 2.9. **This** brings together service (and service innovation) concepts with organisational arrangements, thinking on staff allocation (meso-level), and front-line employees' skills and knowledge practices (micro-level) to promote a systems insight to assist organisational understanding of the service innovation process. This promotes thinking on how front-line employees could more broadly contribute to the service innovation process.

These concepts *are* important as they also form a central theme in service-dominant logic thinking on service ecosystems. These concepts then promote a service ecosystems (systems) perspective on how service delivery can be operationalised.

Section 2.10 discusses the gaps in knowledge, which the research questions seek to explore and discover. These are constructed around *organisational arrangements*, *staff allocation* and *staff skill and knowledge*. Specific gaps in knowledge are outlined.

Further also in section 2.10, a commentary outlines the gaps in knowledge for the research.

The next chapter (Chapter 3) of this thesis outlines the research design and methodology utilised to execute the research. This includes sections on how the chapter is structured, the overall paradigm of the research, data collection, and data analysis (via thematic codebook analysis). It also includes sections assessing the *quality* of the research and most importantly *research ethics*.

Chapter 3: RESEARCH DESIGN and METHODS

“To codify is to arrange things in a systematic order, to make something part of a system or classification, to categorise” (Saldaña, 2016, p.9)

This Research Design and Methods chapter is broken down as follows:

- Section 3.1: Introduction to Research Design and Methods
- Section 3.2: The Research Approach to Research Design and Methods
- Section 3.3: Existing Knowledge and Perceived Research Problem
- Section 3.4: The Research Paradigm for this Research
- Section 3.5: The Research Approach to Research Questions
- Section 3.6: The Research Approach to Data Collection
- Section 3.7: The Research Approach to Data Analysis
- Section 3.8: Data Analysis using Code Book Development
- Section 3.9: Assessment of Quality for Research
- Section 3.10: Consideration of Research Ethics
- Section 3.11: Summary of Chapter Three (Research Design and Methods)

3.1- Introduction to Research Design and Methods

This chapter discusses the research design and methods used to execute this research. The research questions are stated based on the gaps in knowledge and the literature review undertaken. The research paradigm is outlined, which for this research is inductive and interpretative based. Data collection was undertaken via semi-structured interviews with participants selected from the UK financial, health, and university sectors. Data analysis was undertaken via NVIVO CADQAS (Computer-Assisted Qualitative Data Analysis), allowing for categories and themes to be discovered, thus giving the inductive nature of the results of this research. Research quality and research ethics are also discussed (section 3.10).

After initial thought on how to structure the research methodology, Table 3.1 gives key methodology papers utilised to structure this thesis and operationalise the research.

Research Design and Methods	
Maxwell, J. (2008). 'Designing a Qualitative Study', in The Sage Handbook of Applied Social Research Methods	Joseph Maxwell (2008) presents a model, which outlines research design for qualitative research. This model has been adapted as a framework for discussing the research methodology for this research.
Morrow, S. (2000). 'Quality and Trustworthiness in Qualitative Research in Counselling Psychology', <i>American Psychological Association</i> , pp.250-259.	Susan Morrow (2000) discusses the trustworthiness of qualitative research practices and notes there are no standard models for undertaking qualitative research. The model outlined by Morrow (2000) is used as a framework for this research.
Roberts, K., Dowell, A. and Nie, J-B. (2019). 'Attempting rigour and replicability in the thematic analysis of qualitative research data; a case study of codebook development', <i>BMC Medical Research Methodology</i> , 19, 66.	Roberts et al., (2019) navigates challenges to thematic analysis. Roberts, Dowell, and Nie's (2019) paper discusses and outlines this research in the development of code books.

Table 3.1: Key methodology papers for this research.

It should be noted that many literature references are used throughout the chapter to highlight good research practices and how practices are met in the research and to highlight the methodology practices used.

Additionally, literature references are used extensively to illustrate the context within the methodological approach undertaken, and in the discussion of the steps followed. This includes design, collection, and data analysis. This then allows the research findings and contribution to be discussed and outlined providing the provision of new and unique knowledge. In summary, the methodology practices, and approach used for the research are very briefly outlined.

The next section outlines the research approach undertaken to design and methods for the research undertaken. This builds on a model outlined by Joseph Maxwell (2008).

3.2- The Research Approach to Research Design and Methods

3.2.1 The research design

According to Reybold, Lammert, and Stribling (2012), well-executed qualitative research rests on the fusion of planning and data discovery. As Kross and Giust (2019) observe the need for a research design is important as *'research questions, data collection methods and interpretation of results are all interrelated ...'*.

The basic methodology approach for this research rests with a model outlined by Joseph Maxwell (2008) in the article: *'Designing a Qualitative Study'*. This is illustrated in Figure 3.1. Maxwell (2008) notes qualitative research needs to remain flexible in design and construction and considers there is *'no right model'* for qualitative research. This is due to the many different research approaches, for example, observation, case studies, and interviews. For this research, an adapted Maxwell (2008) model is used to aid clarification and highlight important considerations for research design.

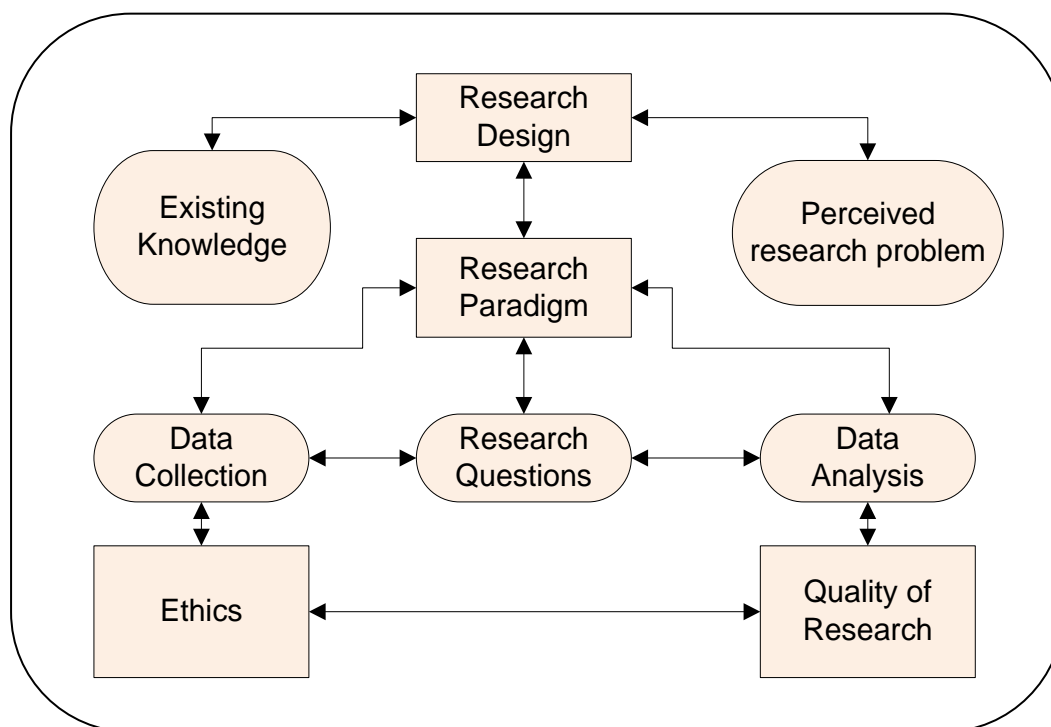


Figure 3.1: The research design approach for this research (adapted from Maxwell, 2008, Figure 7.2).

Utilising the approach, as outlined in Figure 3.1, the research problem is highlighted by the gap in existing knowledge brought into focus by the perceived problem. For this research, reasons include a better understanding of service innovation from an organisational and management perspective and the importance of front-line employees in the service innovation process taking a service ecosystems perspective.

Existing knowledge comes from undertaking a literature review to explore what has been published. For this research, the theoretical framework is based on service-dominant logic (Vargo and Lusch, 2004, 2016). A conceptual process model is constructed from empirical data to extend the proposed academic framework.

According to Maxwell (2008), the research design is about putting a framework in place to support the concepts, expectations, and theories that support the research to be undertaken. Additionally, as Maxwell (2008) observes one of the most critical decisions in research design is the paradigm (or paradigms) used to undertake the research. This also leads to how the validity of the research may be judged and assessed (Maxell, 2008).

3.2.2 The research methods execution

The research takes an inductive, interpretive approach that explores the socially situated and socially lived experiences of organisational managers and front-line employees. Hatch and Yanow (2003, pp.63-87) note that interpretivist research addresses the need to investigate *what is meaningful to people in their social situations*.

In the context of Figure 3.1, Maxwell (2008) argues research questions must be general enough not to exclude important areas of research and specific enough to allow framing of the research in areas such as data collection.

According to Kross and Giust (2019), although there is limited literature on how to frame research questions in qualitative research, they undoubtedly play a vital role in research design as they provide a focus and structure for the research. Research question formation and outline are given in section 3.5.

The empirical data research setting for this study is based on an interviewing methodology. This allows for the exploration of thinking on front-line employees' contribution to service innovation, and additionally for the exploration of socially situated lived experiences of participants (Section 3.4). The use of semi-structured questions were used as it allowed participants to choose how they answered the questions and did not constrain them into limited closed answers. The participants could speculate on practice, whilst the theory is the aim of this research. See section 3.9 on the assessment of quality for this research.

The empirical data analysis of the research is important, as it is used to generate the findings, contributions, and conclusions (Chapter 4, Chapter 5, and Chapter 6). Data analysis for this research is based on thematic analysis to build themes and categories to give general assertions to build theory and conceptual model building. Also, see section 3.8 and Chapter 5. This is in line with the inductive nature of the research. Analysis was undertaken with the assistance of NVIVO CADQAS (Computer Assisted Qualitative Software Data Analysis) software.

As qualitative research invariably involves people, the subject of ethics is an important topic to consider when undertaking research design. Undertaking this research involved a lengthy ethic clearance procedure (training, multiple ethical justification consent forms) to establish no reputational damage would be suffered by the researcher, participants, or the organisations involved with the research. Also, see section 3.10 for a discussion on ethics.

There would seem to be *no standard model* for undertaking qualitative research. The adapted model from Morrow (2008) is used as *best practice* from literature to explain the methodological approach undertaken for this research.

The use of the research design model by Morrow (2008), helped significantly in this research to highlight areas that need special consideration, especially concerning important research subject areas such as quality of research and research ethics, for the research to be undertaken successfully.

In summary, an adapted model from Joseph Maxwell (2008) is used to frame the research design and methods for the research undertaken.

The next section reviews the existing knowledge and perceived research problem for this research. This includes key academic papers consulted during the research execution.

3.3- Existing Knowledge and Perceived Research Problem

The work of Karlsson and Skälén (2015), Santos-Vijande, López-Sánchez and Rudd, (2016), and Engen and Magnusson (2018) form some of the key subject papers for this research as they centre on front-line employees in the service innovation process.

The theoretical foundation is covered using service-dominant logic (Vargo and Lusch, 2004, 2008, 2016) with the role of organisations in service innovation being discussed by Vargo, Akaka, and Wieland (2020) and Santos-Vijande, López-Sánchez, Pascual-Fernández, and Rudd (2021). All these academic works highlight it is essential to take a service-dominant logic perspective to appreciate service delivery and by inference service innovation (Lusch and Vargo, 2019, p.8).

Furthermore, focusing on service promotes organisational systems thinking on customer co-creation and value. These are outlined in section 2.4, with the utilisation of research principles in section 2.5 (Vargo and Lusch, 2004, 2016). Promoting systems thinking, leads to a service ecosystems perspective as discussed by Vink, Koskela-Huotari, Tronvoll, et al., (2021).

Lastly, academic research by Koskela-Huotari, Edvardsson, Jonas, Sörhammar, and Witell (2016) and Voronov and Weber (2020) stress that it is only through taking a qualitative approach that researchers can expect to explore socially constructed concepts, narratives, and socially situated experiences such as service innovation. However, it is acknowledged many researchers *do not* use a qualitative approach, to service innovation research. This might be because they are *rechecking* or *explaining* a service innovation phenomenon. In these instances, a qualitative approach might not be the most suitable approach. Also see section 3.4- The Research Paradigm for this Research, for a discussion on research approaches.

The perceived research problem (or knowledge gap) is resolved by empirical data collection and analysis of participants' understanding of front-line employees in the service innovation process. Table 3.2 highlights some key papers consulted for this research to establish existing knowledge and perceived problems.

Some of the key academic papers utilised for this thesis	
Service innovation and service-dominant logic	
Lusch, R, and Nambisan, S. (2015). 'Service innovation: A Service-dominant Logic Perspective', <i>MIS Quarterly</i> , 39(1), 155-176.	<p>Lusch and Nambisan (2015) discuss service innovation from the perspective of service-dominant logic.</p> <p>This is a core concept for this research, as organisations shift from a goods-dominant view to a customer and resource integration process view, with front-line employees centre stage in customer service provision.</p>
Vargo, S. and Lusch, R. (2004). 'Evolving to a New Domain Logic for Marketing', <i>Journal of Marketing</i> , 68, 1-17.	<p>This paper sets out the core principles and axioms of service-dominant logic, as a new perspective to think about the delivery of service to customers.</p> <p>This impacts how service innovation should be undertaken, executed, and conceptualised. The consideration of front-line employees is an important part of this paradigm shift.</p>
Organisational arrangements	
Koskela-Huotari, K., Edvardsson, B, Jonas, J., Sörhammar, D., and Witell. L. (2016). 'Innovation in service ecosystems - Breaking, making, and maintaining institutionalized rules of resource integration', <i>Journal of Business Research</i> , 69(8), 2964-2971.	<p>The authors argue through service-dominant logic, the importance of the organisational environment to the integration (and allocation of staff) resources from a service-based perspective.</p> <p>This research explores the author's concepts through the broader contribution of front-line employees' emphasising a service ecosystems approach is required for service innovation.</p>
Santos-Vijande, M, López-Sánchez, J., Pascual-Fenández, P., and Rudd, J. (2021). 'Service innovation management in a modern economy: insights on the interplay between firms' innovation culture and project-level success factors', <i>Technological Forecasting & Social Change</i> , 165, 1205672.	<p>The authors contend there is a requirement to study service innovation within the context of organisational culture and projects. They investigate front-line employees from the perspective of process characteristics for service innovation success.</p> <p>This research extends this study by broadly exploring the impact front-line employees have on service innovation, the understanding of organisational on the role of front-line employees, and the role of culture in an organisational context.</p>

Staff allocation	
Kindström, D, Kowalkowski, C, Sandberg, E. (2013). 'Enabling service innovation: A dynamic capabilities approach', <i>Journal of Business Research</i> , 6(8), 1063–1073.	<p>Kindström et al., (2013) discuss a framework where dynamic capabilities might be viewed in the context of resource allocation in the service innovation process.</p> <p>For this thesis, the allocation of front-line employees in the service innovation process is argued as depending on an understanding of front-line employees' contribution to the service innovation process. This leads to the recognition that front-line employees can be allocated and participate, involved, and engaged in additional roles, beyond traditional ideas, design, and implementation.</p>
Engen, M, Fuglsang, L, Tuominen, T, Sundbo, J., et al (2021). 'Conceptualising employee involvement in service innovation: an integrative review', <i>Journal of Service Management</i> , 32(5), 702-751.	<p>The researchers undertake an extensive review of the literature concerning the involvement of employees in the service innovation process and find the need for more research regarding the contested concept of what employee involvement entails.</p> <p>This thesis argues by taking a service-dominant logic and service ecosystems approach, the social understanding, staff resource allocation and practices of front-line employees in a broader organisational service innovation process can be made.</p>
Staff skills and knowledge	
Ordanini, A., and Parasuraman, A, (2011). 'Service Innovation Viewed Through a Service-dominant Logic Lens: A Conceptual Framework and Empirical Analysis, <i>Journal of Service Research</i> , 14(1), 3-23.	<p>Service-dominant logic proposes that skills and knowledge practices lay at the heart of service exchange (principles one and two, Vargo and Lusch, 2004). Ordanini and Parasuraman (2011) discussing management implications believe organisations should take a wider perspective to thinking on service and service innovation, rather than a traditional narrow view of change.</p> <p>This thesis, through empirical data analysis, seeks to discover what knowledge practices might be related to front-line employees' broader contribution In the service innovation process.</p>

<p>Xie, X., Wang, H., and García, J (2021). 'How does customer involvement in service innovation motivate performance? The roles of relationship learning and knowledge absorptive capacity, <i>Journal of Business Research</i>, 136, 630-643.</p>	<p>Xie, Wang, and García, J (2021) look at the practices around learning and knowledge concerning customer engagement (co-create and customer value). They find both learning and knowledge need to be considered (together) to improve service innovation outcomes.</p> <p>The empirical data analysis seeks to discover what co-create and customer value practices might be relevant to front-line employees' broader contribution to the service innovation process.</p>
<p>Suh, J., Harrington, J., and Goodman, D. (2018). Understanding the Link Between Organizational Communication and Innovation: An Examination of Public, Nonprofit, and For-Profit Organizations in South Korea', <i>Public Personnel Management</i>, 47(2).</p>	<p>Organisational communication practice highlights the priority that organisations place on processes, routines, and procedures of change. This impacts thinking on the level of (service) innovation.</p> <p>This thesis reflects on the nature of the communication practice in the service innovation process, with an emphasis on front-line employees.</p>
<p>Service ecosystems</p>	
<p>Vargo, S, Wieland, H, and Akaka, M. (2015). 'Innovation through institutionalization: A service ecosystems perspective', <i>Industrial Marketing Management</i>, 44(1), 63–72.</p>	<p>These leading authors of service-dominant logic discuss from an organisational perspective their initial thinking on service ecosystems.</p> <p>This research builds on the authors' thinking by extending the concepts to front-line employees' broader contribution to the service innovation process utilising a service ecosystems perspective.</p>
<p>Lütjen, H., Schultz, C., Tietze and Urmetzer, F. (2019). 'Managing ecosystems for service innovation: A dynamic capabilities view,' <i>Journal of Business Research</i>, 104, 506-519.</p>	<p>Here Lütjen et al., take a multi-view of service ecosystems from the perspective of service innovation and dynamic capabilities Lütjen et al., argue the requirement to understand the service innovation process and the requirements to undertake service innovation (dynamic capabilities).</p> <p>This research explores how front-line employees could more broadly contribute to the service innovation process, based on organisational arrangements, staff resource allocation, and front-line employees' skills and knowledge practices.</p>

Front-line employees	
Engen, M, and Magnusson P. (2018). 'Casting for service innovation: The roles of front-line employees', <i>Creativity and Innovation Management</i> , 27, 255-269.	Engen and Magnusson (2018) consider front-line employees from the perspective of the roles they undertake. This research extends this study by exploring how front-line employees' participation can more effectively be utilised within organisations and by managers.
Karlsson, J., and Skålén, P. (2015). 'Exploring front-line employee contributions to service innovation', <i>European Journal of Marketing</i> , 49(9/10), 1346-1365.	Karlsson and Skålén (2015) study front-line employees in service innovation from the perspective of how they contribute to service innovation. In this research, this concept is explored more widely to study front-line employees' contribution from a broader organisational and management perspective, beyond ideas, design, and implementation. This is discovered by empirical data analysis. Service-dominant logic is used for the theoretical building
Bäckström, I., and Bengtsson L. (2019). 'A mapping study of employee innovation: Proposing a research agenda', <i>European Journal of Innovation</i> , 22(3), 468-492.	Bäckström and Bengtsson (2019), argue that more research is required on front-line employees as organisations need to understand front-line employees within an organisational context In part response to Bäckström and Bengtsson's (2019) call for more research on front-line employees. This research explores front-line employees' broader contribution within organisations regarding the service innovation process.

Table 3.2: Key existing conceptual and knowledge papers for this research.

3.4- The Research Paradigm for this Research

This section briefly outlines the research paradigms of abduction, deduction and induction. The research paradigm typically establishes the type of research being undertaken. Deduction research typically follows a scientific, quantitative approach found in most *non-social research* studies. The deduction approach may also be found in qualitative research often through the lens of *statistical investigation*. Abduction research uses a mixture of both induction and deduction methodology. Lastly, inductive approaches are typically centred on qualitative studies, exploring *social phenomena* through *observation* and *patterns*.

As O’Leary (2017, p.132-133) observes, deciding the research paradigm for the research execution can be problematic. The choice of paradigm dictates the research questions being asked with their associated worldviews, assumptions, and objectivity of what counts as knowledge. Figure 3.2 illustrates the common approaches to undertaking research concerning abduction, deduction, and induction.

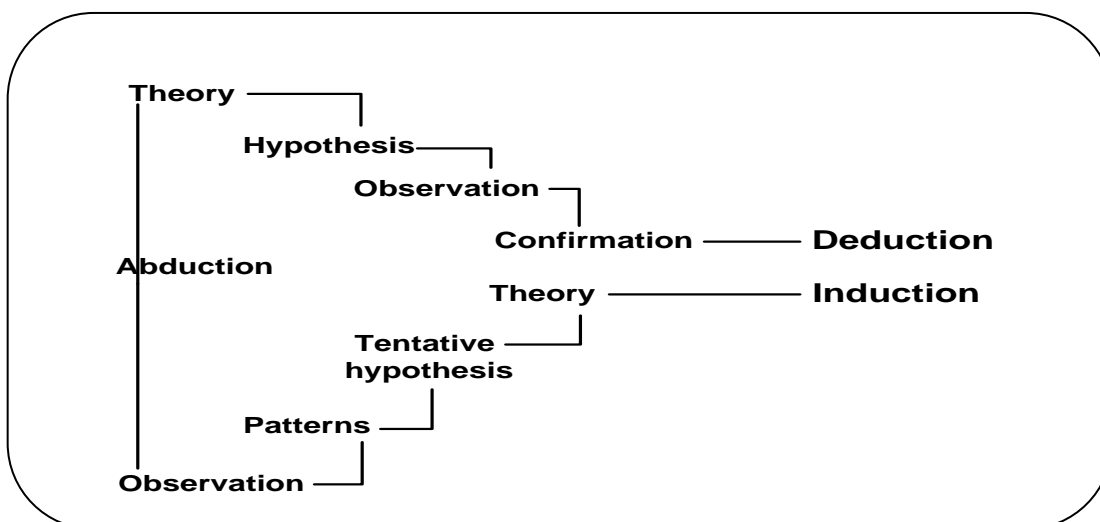


Figure 3.2: The research philosophy approach (adapted Mantere and Ketokivi, 2013).

A deductive approach typically follows a positive (post-positive) approach, such as proposed by Karl Popper (1934) who championed scientific and social progress based on the criteria of '*falsification*' following empirical and tested experience. Theories are tested from a modification and/or manipulation of data centred on units of quantity, such as statistical analysis. Although it is recognised many researchers *do undertake* research on service innovation utilising a post-positive approach. This approach was rejected, for this study as the research *does not centre* on *statistical analysis* nor the *falsification criteria*.

An abduction approach takes a deductive *and* inductive approach. Saunders, Lewis, and Thornhill (2019, pp.155-160) outline this approach as repeatedly switching between data to theory (inductive) and theory to data (deductive). They describe the abduction approach as closely akin to project management research which explores events, identifies themes and patterns, and uses this knowledge to speculate, test, and put forward new actions. It is acknowledged that many researchers focusing on service innovation use an abduction approach. The research is typically based on finding alternative explanations and best fit to data from unexpected observations.

However, for this research, the abduction approach was rejected. The data collected was to be utilised to discover new themes and patterns, and *not explicitly* to offer alternative explanations for unexpected observations. This was beyond the scope of the research (questions).

An inductive research approach typically takes an *interpretive approach* to *build a theory* based on *observable phenomena*. Martin Heidegger (1938, pp.147-157) stressing an interpretative approach to organisational social research highlights the different layers of *understanding* and *interconnectivity* of world views (*Weltanschauung*).

These rest on the *lived experience of participants* allowing for the emergence of new *meanings* and *understanding* (Crotty, 1998, p.78; Kremer, 2014, p.63-80). Theories are constructive from a *subjective understanding* of data centred on *qualitative views, opinions* and *narratives* (Hatch and Yakow, 2009, pp.63-87).

Therefore, an inductive approach is utilised for this research, as it was adjudged to match the task of *exploring, discovering, and understanding* complex socially situated experiences connected within the scope of service innovation, front-line employees' and service ecosystems being studied.

Supporting, the research perspectives are the basic assumptions of each research paradigm: Ontology (what counts as real); Epistemology (what counts as knowledge), and Methodology (what counts as a question).

Ontologically, interpretive research is constructive, focusing on the subjective reality of social phenomena. Epistemologically, interpretive research emphasises socially situated findings and an understanding of the social context.

Crotty (1998, p.67-68) outlines the foundation of modern Interpretivist research lies in the work of Max Weber, who stressed the *Verstehen* (Understanding) in social science, rather than the *Erklaren* (Explaining) approach followed by the natural sciences.

Methodologically, interpretative social science employs Weber's perspective of 'Verstehen' centred on the meaning and values in a social context. Research techniques to explore this perspective include interviews, case studies, and observations. These essentially highlight narratives and descriptions.

Undertaking an interpretative approach for this research, allowed *theory construction* and for *the exploration and creation of new meaning*. This focuses on the social understanding of managers, service innovation consultants, and front-line employees involved with service innovation from their perspective of their socially situated worldview of reality.

Data collection (semi-structured interviews) for this research was fundamentally qualitative. This allowed the *capture and understanding* of organisational arrangements, staff resource allocation, and skills and knowledge based on participants' articulated *world view* from their *shared values, shared beliefs and narratives*. This allows empirical analysis (and interpretation) of the data collected to *build* patterns, assertions and theories (also see Figure 3 2). Utilising this method differs from a deductive approach where theory *explains* the data.

Qualitative approaches considered and rejected as impractical for this research included *onsite observations* and *questionnaires*. Onsite observations were prohibited at the time of research due to UK government COVID-19 regulations. Questionnaires were rejected due to their poor response rate and their *structured nature*. They were unable to capture the *richness* of the narrative concerning participants' real-life social experiences (Cameron, 2011, pp.456-457).

A comparative (or relationship) approach comparing the organisational sectors was rejected since greater *background data* would be required from each organisation to make a valid comparison. This would have raised confidence (ethical) issues.

Additionally, the research was undertaken on *staff within organisations* undertaking *service innovation*, not the *organisations* themselves. Granted staff operate in an organisational situation and a context of a service ecosystem. However, utilising a comparative organisational approach for this research would have highlighted *different individual* organisational approaches.

This is not the research goal as the research aimed to study *broader concepts, not individual approaches*. This is important as the *context* for the research is to *explore* and *discover* the *concepts* of front-line employees' broader contribution to the service innovation process from a service ecosystems perspective. Also, reference section 1.6- The Literature Review Context Overview.

Taking a comparative approach might be a future research project which *could* investigate differences in organisations to front-line employees' engagement and participation in the service innovation process.

Lastly, when thinking about collection data problems with a quantitative approach are highlighted by Bueno, Weber, Bomfim, and Kato (2019). They reviewed academic research on customer experience and found nearly 60% of researchers created a quantitative measurement scale. Whereas perhaps a better measure of customer experience would be a qualitative approach to expose customer interactions.

In summary, the research for this study is qualitative, as it seeks to explore the socially situated real-world (through semi-structured interviews) experiences of the participants. The principles of the research conducted with an inductive approach are outlined. This is the research paradigm associated with this research, being inductive, and interpretative in execution.

The next section outlines the research approach to the research question. This also includes a restatement of the research questions in the context of service-dominant logic principles utilised as the theory framework and theory inductive building for this research. Also, reference section 1.5.1 which discusses the rationale for the theory framework for this research.

3.5- The Research Approach to Research Questions

The research questions explored for this research are centred on front-line employees (staff), organisational managers, and service innovation consultants in UK organisations (finance, health, and university sectors) who collectively form the participants in the organisational service innovation process. Both research questions and interview questions are based on the literature reviewed to surface a knowledge gap (see Chapter 2, section 2.10).

The research question *extends the theory framework*, built from the literature reviewed, by further exploring concepts contributing to a service-centred (service ecosystems) perspective on how the broader contribution of front-line employees can be maximised in the service innovation process (Table 1.1 and Table 3.3). Empirical data analysis aims to discover what concepts might constitute organisational arrangements, staff resource allocation, and skills and knowledge practice concerning front-line employees.

Important papers reviewed for this thesis have already been outlined in section 3.3. However, for the research questions important papers by Engen and Magnusson (2015), Karlsson and Skålen (2015), and Engen and Magnusson (2018) were consulted as they discuss and highlight front-line employees' role in the service innovation process. Additionally, extending the exploration and discovery of the service-centred (service ecosystems) concepts papers by Vink, Koskela-Huotari, and Tronvoll, et al., (2021).

There were problems phrasing the wording for the research questions to emphasise the areas of research to explore. There was much consultation with colleagues, iteration and thesaurus checking before a final version was settled upon. Particularly problematical was the main research question, which needed to bring out the concept of broader, wider engagement of front-line employees in their contribution to service innovation. The wording '*maximised*' was chosen to express this concept.

Table 3.3 is a restatement of the research questions.

Research question: How can the broader contribution of front-line employees be maximised in the service innovation process?

Service-dominant logic: Organisational arrangements

RQ-1: How can changes in organisational culture concerning front-line employees improve the service innovation process?

Service-dominant logic: Staff allocation

RQ-2: How can changes in organisational staff allocation of front-line employees improve the service innovation process?

Service-dominant logic: Staff skills and knowledge

RQ-3: How can better utilisation of the skills and knowledge of front-line employees improve the service innovation process?

Table 3.3 Restatement of research questions.

The next section outlines the data collection utilised for the research. This includes participant and organisation selection.

3.6- The Research Approach to Data Collection

3.6.1 Interview setting and interview questions

Due to UK government restrictions on the movement and contact of people during the COVID-19 (pandemic) crisis, all the interviews were remote, using online video conferencing (for example Zoom, Microsoft Teams) or telephone. In practice this meant all interviews were undertaken with participants working from their own homes. Research by Holt (2010) and Trier-Bieniek (2012) highlighted that there should be no significant difference in the quality and richness of data obtained from remote interviews (telephone or online), in comparison to face-to-face interviews. Advantageously, the use of remote interviewing allowed for several interviews to be held outside office hours.

This reduced the time pressure for participants to respond to emails and other work meetings. This scheduling also allowed the interviewing of participants who otherwise would be difficult to interview, as they were not office-based or geographically dispersed, as commented on by Deakin and Wakefield (2014).

The broad development of interview questions followed the main themes of this research on the service innovation process, the broader contribution of front-line employees to the service innovation process and a service ecosystems perspective built on service-dominant logic. Detailed construction of interview questions involved the review of literature and key papers such as Vargo and Lusch (2004); Karlsson and Skålén (2015); Santos-Vijande, López-Sánchez, and Rudd (2016) for concepts which could be further explored.

The interview questions were made general in scope to allow participants to answer the questions as they saw fit (Easterby-Smith, Thorpe and Jackson, 2012, p.130). However, where further elaboration or the participant needed clarification on a question the interview prompts were used. Occasionally, the question was simplified further.

However, if the interview questions were to be cast again, there would be more emphasis on service ecosystems (such as success factors at the meso-level and micro-level) and systems approach (factors inhibiting such an approach) to elicit targeted responses.

Table 3.4 has a breakdown of the Interview questions asked and Appendix F has an extended list of the interview questions, including interview prompts for clarification.

3.6.2 Interview questions used for data collection (rationale)

Interview Question	Rationale for question
<p>IQ-1: Please can you tell me something about your role in the area of service delivery and perhaps a little about service delivery in your institution? Please can you tell me a little bit about your key responsibilities in service delivery?</p>	<p>a) <i>Troccoli and Felizardo (2020): The phenological nature of service-dominant logic.</i></p> <p>b) <i>Kankainen et al (2012): Innovation through storytelling.</i></p>
	<p>Research Question: RQ Rationale: The socially situated real-world experiences of participants for their duties and roles in their organisations.</p>
<p>IQ-2: From your own experience can you say more about the introduction of a new services you have been involved with? - Can you tell me what made this successful or unsuccessful?</p> <p>IQ2a- Was it a continuous improvement or a major project?</p>	<p>a) <i>Malhotra and Ackfeldt (2016): Front-line employees' and the requirement for internal communication to promote successful service innovation.</i></p> <p>b) <i>Ommen, Blut, Backhaus and Woisetschläger (2016): Factors for successful participation in service innovation.</i></p> <p>c) <i>Kristensson (2019): Both technology and customers are required for service innovation to be successful.</i></p> <p>a) <i>Engen and Holden (2014): The role of key competencies in service innovation.</i></p> <p>b) <i>Yang, Lee and Cheng (2016): Front-line employees' competencies in continuous improvement.</i></p>

	<p>Research question: RQ1, RQ2 Rationale: The requirement for the thinking and allocation of front-line employees to service innovation and not just technology. The associated question is a probing question regarding the context and concepts of service innovation.</p>
<p>IQ-3: Do you believe staff or technology are the key elements in new service delivery? - And why do you think this?</p>	<p><i>(a) Gonz�ller-Blanco, Coca-Perez and Gulsado-Gonz�llez. (2019): Technology and staff should be developed together – Different countries have different approaches to service innovation (UK).</i></p>
	<p>Research question: RQ2, RQ3 Rationale: Thinking behind the service innovation process. Concerning staff, both the rationale behind staff allocation and the skills and knowledge of front-line employees. From a technology perspective, why is this important? The participant may also mention other connected issues they think important</p>
<p>IQ-4: Thinking about your involvement in new projects for new service delivery, what do you think are key project elements? - For example, how are staff involved and engaged with the project?</p>	<p><i>(a) Karpen, Bove and Lukas (2012): Systems approach is required for service innovation strategy</i></p> <p><i>b) Melton and Hartline (2013): Involvement of front-line employees in project teams increases the efficiency of service innovation.</i></p>
	<p>Research question: RQ1, RQ2 Rationale: This is asking the participant to elaborate on engagement in service innovation. This asks the participant to take a wider (systems) perspective on the service innovation process.</p>
<p>IQ-5: Please can you tell me who you think contributes the most to the new service delivery process? Why do you think this?</p>	<p><i>a) Ordanini, and Parasuraman, (2011): Front-line employees have a positive impact on service innovation.</i></p>

	<p>Research question: RQ2 Rationale: The question is asking about contributions to the service innovation process.</p>
<p>IQ-6: Please can you tell me more briefly any story where a manager or member of staff has made a difference to a new service delivery project and how?</p>	<p><i>a) Engen and Magnusson (2018): The role of front-line employees in service innovation.</i></p>
	<p>Research question: RQ1, RQ2 Rationale: The sense making organisational understanding of service innovation. The participants can also think beyond the constraints of narrow definitions of service innovation.</p>
<p>IQ-7: What do you understand the role of managers should to be in a new service delivery project?</p>	<p><i>a) Vargo and Lusch (2004): Managers as resource integrators in the service innovation process.</i></p> <p><i>b) Engen and Magnusson (2015): The role of managers in service innovation.</i></p> <p><i>c) Lütjen, Schulz, Tietze and Urmetzer, (2019): Managers' understanding of service innovation.</i></p>
	<p>Research question: RQ1, RQ2, RQ3 Rationale: This is particularly relevant to the perceived importance of service innovation in the broader organisational context.</p>
<p>IQ-8: Thinking about staff who deliver a service (front-line employees) What do you think managers' views on</p>	<p><i>a) Dagger, Danaher, et al., (2013): The important role front-line employees play in service innovation.</i></p>

front-line employees might be?	<i>b) Karlsson and Skålen (2015): Institutional manager's understanding of the role of front-line employees in service innovation.</i>
	Research question: RQ2, RQ3 Rationale: The question relates to what managers think the contribution of front-line employees to the service innovation might involve.
IQ-9: Where do you think front-line employees play the most important part in the new service delivery (innovation) process - Please can you tell have you acted on a suggestion or idea from a customer which has resulted in a new service delivery project?	<i>a) Lages and Piercy (2012): Front-line employees' contribution to customer service improvements.</i>
	Research question: RQ2 Rationale: An understanding of the contribution of front-line employees to the service innovation process. The associated part of the question is asking about co-creation with customers.
IQ-10: Again, thinking about front-line employees, please can you tell me who do you consider as a front-line employee in the new service delivery process and why so?	<i>a) Melton and Hartline (2013): Front-line employees' involvement in service innovation.</i>
	Research question: RQ1, RQ3 Rationale: This is asked with respect to any wider contributions from organisational staff regarding customer engagement and service innovation. This allows the participant to <i>think beyond the typical role</i> of front-line employees.

<p>QI-11 How can you improve the engagement of front-line employees in a new service delivery project?</p>	<p>a) Santos-Vijande (2016): <i>Front-line employees' participation in service innovation is fundamental to the success of any new service innovation project.</i></p>
	<p>Research question: RQ Rationale: The question relates to <i>thinking about the broader contribution</i> of front-line employees in the service innovation process.</p>
<p>IQ-12: What skills and knowledge do you think contribute to the new service delivery process? Both from your own level and people whom you work with?</p> <p>IQ-12a- What learning would you like see for new service delivery?</p>	<p>a) Vargo and Lusch (2004): <i>Knowledge and skills are important to the service innovation process.</i></p> <p>b) Lusch, Vargo, and O'Brien (2007): <i>Institutional knowledge is vital for service innovation.</i></p> <p>a) Tajeddini, Martin and Altinay (2020): <i>The need for organisational learning in the service innovation process.</i></p>
	<p>Research question: RQ2, RQ3 Rationale: The skills and knowledge required of front-line employees regarding service innovation.</p>
<p>IQ-13: How would a better understanding of the new service delivery process help you and your institution deliver better services to customers? How could this be implemented?</p> <p>IQ-13a- How would a better understanding of organisational culture have played a part in the new service process and delivery to customers?</p>	<p>a) Engen and Magnusson (2018): <i>Understanding the role of front-line employees enhances service delivery and customer engagement.</i></p> <p>b) Lusch and Vargo, (2015): <i>Resource integration and improvements to service innovation.</i></p>

	<p>a) <i>Lusch, Vargo and Malter (2006): Service is based on organisational culture which highlights front-line employees' engagement with the customer.</i></p> <p>b) <i>Schneider and Bowen (2019): The culture of organisations in the service sector.</i></p> <p>c) <i>Schepers and Van der Borgh (2020): How national culture alters the front-line employees' role process.</i></p>
	<p>Research question: RQ1, RQ2 Rationale: Thinking about staff resource allocation within organisational arrangements in which service innovation is understood and undertaken.</p>
<p>IQ-14: What new service delivery processes would you like to change in your institution? What management best practices would you like to highlight for new service delivery?</p>	<p>a) <i>Wallin and Fuglsang (2017): Organisational rules making up service innovation.</i></p> <p>b) <i>Lusch and Vargo (2019): The importance of organisations in the provision of service (and service innovation).</i></p>
	<p>Research question: RQ1, RQ2, RQ3 Rationale: The successful (better) outcome of service innovation.</p>
<p>IQ-15: Is there anything you would like to add with respect to management thinking on front-line employees' in service innovation process or projects?</p> <p>IQ15a: Do you work for or with customers?</p>	<p><i>This question asked if the participant could supply any further information, which had not been elicited in the interview. Essentially what other information can you supply, which has not been covered by the previous questions – Which has not already been asked?</i></p> <p><i>This question was asked to uncover the service-dominant logic principle of co-creation (where time permitted).</i></p>

	<p>Research question: RQ1, RQ2, RQ3</p> <p>Rationale Catch-all question on the thinking of the participant, regarding any further thoughts</p> <p>Answers <i>might perhaps</i> include:</p> <p>(a) How <i>other staff</i> might be better integrated into the service innovation process</p> <p>(b) Other factors important to the service innovation, such as the promotion of employee participation within organisations.</p> <p>(c) Aspects of cost/saving or expense of using front employees in the service innovation process.</p> <p>The associated question is asked regarding customer co-creation service delivery and customer value (service-dominant logic principles).</p>
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Table 3.4: Interview questions used for data collection.

3.6.3 Approach to sample size and saturation

The sample size and saturation of participation remain a relatively contentious area in the study of qualitative research. Nevertheless, this research aimed to interview 40 participants, as this is often seen as the data saturation point required for thesis-level research and where no new analytical codes were generated (Baker and Edwards, 2012 Ando, Cousins and Young, 2014).

Saunders and Townsend (2016) in their research into organisational interviews found that a figure for participation was given, only 72% of the time, this averaged 32 participants. A total of 42 participants took part in the research.

Principal participants for this research equalled 28 interviews, which included organisational managers with service innovation experience (16) and front-line employees with service innovation experience (12). This approach is also congruent with existing research in the study of front-line employees undertaken by Karlsson and Skälén (2015) who interviewed a total of 20 participants and the recommendation of Guest, Bunce and Johnson (2006), who also recommended at least 20 participants.

The remaining 14 participants (giving 42) for this research included service innovation consultants working within the field or experience of service innovation. The inclusion of these participants allowed for a wider exploration of front-line employees' contribution, participation, and involvement in the service innovation process. Additionally, it allowed a greater exploration of associated service-dominant logic concepts, such as understanding of culture, staff allocation and skills and knowledge.

For each organisational type (finance, health and university) a minimum number of 12 participants were interviewed for this research. This was adjudged to be sufficient for data saturation based on the guidance of Bunce and Johnson (2006); Ando, Cousins and Young (2014); Guest, Namey and Chen (2020) and Business Research Methodology (2022), who recommended least 12 interviews for sufficient data capture.

Therefore, for this research, a figure of 36 participants was taken to give the data saturation point, where no new analytical codes were generated. Nevertheless, the selection of 42 participants were chosen for this research to ensure actual data saturation was exceeded to give confidence in the data sample collected.

Additionally, as noted by Saunders and Townsend (2016), the figure of 42 participants far surpasses the average of 32 and passes the expectation of 40 participants for PhD thesis level research.

3.6.4 Selection of organisational participation

3.6.4.1 Inclusion of organisational participants

The selection of organisations, for this research, was made generic to include SMEs and large organisations. This selection allowed for the differences in organisational and management structures found in undertaking service innovation. The research could then capture a broad range of organisational cultures, service innovation approaches and perceptions of front-line employees. SMEs ranged in size from under 50 staff, to large organisations with over 5,000+ staff.

Additionally, organisational size and comparisons between individual organisations were the major research selection factors for organisations. Reference section 1.4.5 (*Research justification: An organisation and the front-line employees*) and section 3.6.4.2 (Justification for UK-based organisations – A Further Rationale) which further expands on selection criteria.

All chosen organisations were UK-based or had a significant presence in the UK, to reflect a UK organisational perspective (Hatch, 2018, pp.200-201).

The selection of finance, health and university organisations, follows the rationality given by Melton and Hartline (2013) who observe all these organisations have similarly high levels of engagement in service innovation.

Therefore, the focus on these organisational sectors allowed the generalisation of the empirical data analysis to highlight engagement with service innovation and not a focus on the organisations themselves.

The inclusion of many different organisations (data sources) acknowledges a triangulation requirement of validity in qualitative research as offered by Carter, Bryant-Lukosius, and DiCenso, et al., (2014) regarding using multiple sources to gain insights into the research being explored. Also see section: 3.9 Assessment of the Quality for Research. Nevertheless, multiple data sources in this research are defined as *many* participants interviewed from *many* organisations.

3.6.4.2 Justification for UK based organisations – A Further Rationale

The lack of research regarding a UK context, for such staff as front-line employees, is important as Mary Jo Hatch (2018, pp.200-201) in her book '*Organization Theory (4th ed)*', discusses. Here the work of Hofstede illustrates countries such as Norway, Italy and Taiwan and to a lesser extent, Sweden has different *uncertainty* and *power* dimensions and widely different *individual* and *masculinity* dimensions than the UK.

These different (organisational) dimensions highlight different organisational arrangements. This includes organisations' cultural understanding and thinking (*the way we do things around here*). Therefore, how service innovation is perceived and operationalised. This perception also includes allocation and the role of front-line employees in the service innovation process. Academically, national culture factors were also highlighted as important for service innovation by Ordanini and Parasuraman (2011) in their management implications as requiring *further study*.

Additionally, taking a UK perspective on the role of front-line employees in service innovation becomes important because of the different focus on organisational dimensions found in different countries. This is highlighted by Eurofound (2017, p.29) when mapping dimensions of organisational factors across Europe. It was found different countries place different emphasis on factors which they believe as important. In the UK this included slightly above the European average on employee participation.

This is significant as the difference in country perceptions of front-line employees frame how they are understood and precepted in the service innovation process (Alam, 2006; Valtakoski, Reynoso, and Maranto, et al., 2019). Therefore, the discovery of the broader contribution of front-line employees in the service innovation process focusing on UK organisations becomes an *important* question to explore.

The context for this research is *not a comparison* of UK organisations. The context is front-line employees working in service innovation organisations in the UK.

3.6.5 Selection of participants for interviews

The selection of participants for this research was based on factors such as non-probability sampling based on participant convenience, and purposive and snowballing sampling (Business Research Methodology, 2022).

As Roberts, Dowell, and Nie (2019) note true randomness is seldom feasible or necessary. The selection process was broadly influenced by purposive selection as participants were sourced from people who were known to have relevant experience and expertise in their field. The level of expertise of participants included experienced managers, staff and consultants from well-known and respected UK organisations; many with multi-billion-pound revenues and staff responsibilities ranging into the hundreds of people. Thus, participants knew something and were knowledgeable about the service innovation process that they were being invited to interview (Reybold, Lammert and Stribling, 2012).

Convenience sampling followed the research led by Tidd and Hull (2010, p.256), who undertook research based on previous academic associations. A similar strategy was followed by this research, where participants were initially sourced from previous professional associations.

Participants were initially sourced from known contact details (email address, telephone number) and those with known social media contact details. Furthermore, during the data collection process, snowballing selection occurred as several participants were referred from other participants who had known service innovation or service delivery experience.

Although this selection seemingly added an element of bias, this was accepted, as it would allow access to a wide range of participants where academic access would be otherwise difficult to negotiate (Qu and Dumay, 2011).

Furthermore, the initial selection benefited from the perspective that people being interviewed would have already built up a trust relationship with the interviewer, so would give a more truthful and or factual answer (Kvale, 2006; Easterby-Smith, Thorpe and Jackson, 2012, p.136; Bryman and Bell, 2015, p.492).

Additionally, all organisational participants were selected based on their experience (the average experience may have been 15 years) of working in the finance, health or university organisations and were all UK-based.

The experience of the service innovation consultants was generally high with previous roles in service innovation (service delivery) at many leading UK organisations. Service innovation consultants were typically members of the front-line employees' organisation.

However, some service innovation consultants were sourced from consultancy agencies having been co-opted for their experience, expertise and experience at delivering service innovation for similar organisations. This outside-inside perspective does not diminish their role or insight at a service ecosystem meso-level or micro-level. Furthermore, these participants could provide organisational narratives across the whole service innovation process.

The data collected also reflected a generalisability criterion in that data collection with a shared view of organisational managers, service innovation consultants and staff (front-line employees) rather than any individual group. This was through to offer a better *worldview* and *insights* into the service innovation process.

The major issue concerning the selection of participants for the research was getting people to agree to be interviewed. The actual number of potential people asked to participate in the research was 72. This represents a conversion rate of nearly 60%, (to obtain 42 interviews) where antidote evidence suggests a figure of about 10% is to be expected from non-listed contacts.

This conversion rate can be attributed to the wide professional and social relationship network of the researcher.

However, there were problems with data collection. At the very start of data collection, the first participant contacted who had agreed on a possible case study and access too many further participants suffered a brain haemorrhage and died in hospital. A second participant had recently suffered a stroke so declined.

3.6.6 Data collection process

At an organisational (meso-level) level the objective of data collection was to cover a wide range of UK organisations based in the financial, health and university sectors. UK organisations have different cultural, management and organisational dimensions from other nations, for example, North America (Hatch, 2018, pp.200-201).

In all the interviews, people participated voluntarily (participant consent form signed). The average length of the interviews was approximately 75 minutes. The shortest was 35 minutes, and three exceeded 150 minutes.

The number of interviews was 42: front-line employees (12 interviews), managers (16 managers) service innovation consultants (14 interviews). This can additionally be broken down by organisations: Finance (16 interviews), health (12 interviews) and university (14 interviews).

The total interview time from the 42 participants taking part was approximately 65 hours of feedback. Actual, time to prepare invitations for the research (accepts and declines), telephone calls, emails, reminders and acknowledgements took approximately another 185hrs (best estimate). Thus 250 hrs in total. The *lesson learnt* was not to underestimate the amount of time, effort planning, and administration needed to undertake qualitative interview research.

During data collection, there was a smaller-than-expected acceptance of university managers. This may be because the main data collection period, July-December 2021, fell during the UK holiday period or COVID-19-related issues. A larger number of front-line employees and a greater focus on a smaller number of organisations may have made the research more robust. The number of front-line employees who participated was limited due to limited organisational access. However, this was offset by the greater organisational management participation.

The person, who might have provided valuable insights and was not interviewed, was a senior NHS manager with oversight of patient experience. Two questions, that could be asked during any future research might concern organisations and national perceived differences (Interview Question: How do you think service innovation in a UK-based organisation would change if you worked in a different country?). An additional question might ask whether participants understood the concept of Service-dominant logic (Interview Question: What do you understand the concept of service-dominant logic to mean?).

The first question might allow the participant to think more broadly about service innovation in the UK and what it might mean in other countries. The second question would allow participants to demonstrate their knowledge of the theory connecting service delivery, service innovation and customers.

All the participants contributed to the research exploration and discovery of service innovation and the researcher is very grateful for their help and assistance. Interviews were undertaken for an organisational type and participant type until a minimum number (12) of interviews was reached within the overall target of 42 interviews. This is consistent with research by Guest, Namey and Chen (2020) exploring inductive thematic analysis, suggesting that 12 interviews are sufficient for qualitative analysis and Ando, Cousins and Young (2014) research suggests 40 interviews for data saturation. The list of interview participants for the research is given in Table 3.5.

Role in research	Organisational sector	Service innovation context	Research participation
Front-line employees and management (service innovation)			
Staff ^a	Finance	Business and Finance Section	Staff-1
Staff ^c	Finance	Finance Authorised Officer	Staff-2
Staff ^b	Finance	Business as Usual Engagement	Staff-3
Staff ^a	Finance	Sales Customer Experience Team	Staff-4
Staff ^a	Health	Psychology Consultant Team	Staff-5
Staff ^c	Health	District Nurse Team	Staff-6
Staff ^b	Health	Social Media Promotions Team	Staff-7
Staff ^b	Health	Marketing Campaigns Team	Staff-8
Staff ^c	University	Customer Relationships Team	Staff-9
Staff ^c	University	Student Service Team	Staff-10
Staff ^c	University	Disability Engagement Officer	Staff-11
Staff ^c	University	Estates Maintenance and Development Officer	Staff-12
Manager ^b	Finance	Digital Engagement Manager	Manager-1
Manager ^a	Finance	Director of Staff Management	Manager-2
Manager ^a	Finance	Director Accountancy Services	Manager-3
Manager ^c	Finance	Director of Banking Services	Manager-4

Manager ^c	Finance	Director Customer Service Delivery	Manager-5
Manager ^c	Finance	Manager Financial Business Processes	Manager-6
Manager ^b	Finance	Service Delivery Manager	Manager-7
Manager ^b	Finance	Financial Non-Executive Director	Manager-8
Manager ^c	Health	European Director of Staff Health	Manager-9
Manager ^b	Health	Service Delivery Manager	Manager-10
Manager ^a	Health	Director Medical Advisory Association	Manager-11
Manager ^b	Health	Customer Service Delivery Manager	Manager-12
Manager ^b	Health	UK Director of Human Relations and Staff Well-being	Manager-13
Manager ^c	University	Facilities Development Manager	Manager-14
Manager ^c	University	Director Student Processes	Manager-15
Manager ^c	University	Technology and Innovation Manager	Manager-16

28

Consultants (service innovation)

Consultant/IT ^a	Finance	Senior Business Analyst	Innovation-Consultant-1
Consultant/IT ^c	Finance	Vice-President of User Experience	Innovation-Consultant-2
Consultant/IT ^a	Finance	IT Process Change Manager	Innovation-Consultant-3
Consultant/Business ^a	Finance	Independent Management Consultant	Innovation-Consultant-4
Consultant/IT ^c	Health	Programme Manager	Innovation-Consultant-5

Consultant/Business ^b	Health	Project Manager Service Delivery	Innovation-Consultant-6
Consultant/Business ^a	Health	IS/Project Consultant	Innovation-Consultant-7
Consultant/IT ^c	University	Senior Portfolio and Project Manager	Innovation-Consultant-8
Consultant/IT ^c	University	Director of Technical Solutions	Innovation-Consultant-9
Consultant/Business ^b	University	Customer Relationship Management Consultant	Innovation-Consultant-10
Consultant/Business ^a	University	Change Consultant	Innovation-Consultant-11
Consultant/Business ^b	University	Managing Consultant	Innovation-Consultant-12
Consultant/Expert ^a	University	Previous engagement in innovation	Innovation-Consultant-13
Consultant/Expert ^a	University	Previous engagement in innovation	Innovation-Consultant-14

14

Table 3.5: The list of interview participants for the research.

Notes to Table 3.5.

- 1- Total number of participants interviewed for this research was 42.
- 2- Organisational focus was: Finance (16), Health (12) and University (14) all based in the UK.
- 3- Interviews undertaken: Staff (12), organisational managers (16), Service innovation consultants (14)
No direct customers were interviewed due to the potential sensitivity of the data collected.
- 4- All managers had direct line management authority regarding organisational front-line employees.
 There were 6 manager and staff reporting relationships (12) interviews undertaken.
- 5- a) SME (up to 250 employees') (13), b) Middle-size (251-1,500 employees') (12), c) Large (> 1,500 employees') (17).

To summarise, the selection criteria for participants to be interviewed were founded on their working in a financial, health or university sector or having many years working in these sectors. Additionally, their roles had to relate to front-line employees. The participants knew something about what they were being interviewed and could speak from *real-world* experiences.

The next section outlines the data approach undertaken for this research, including themed analysis.

3.7- The Research Approach to Data Analysis

3.7.1 From observation to research findings

Figure 3.3 illustrates at a high level how the research was inductively operationally undertaken, progressed and constructed.

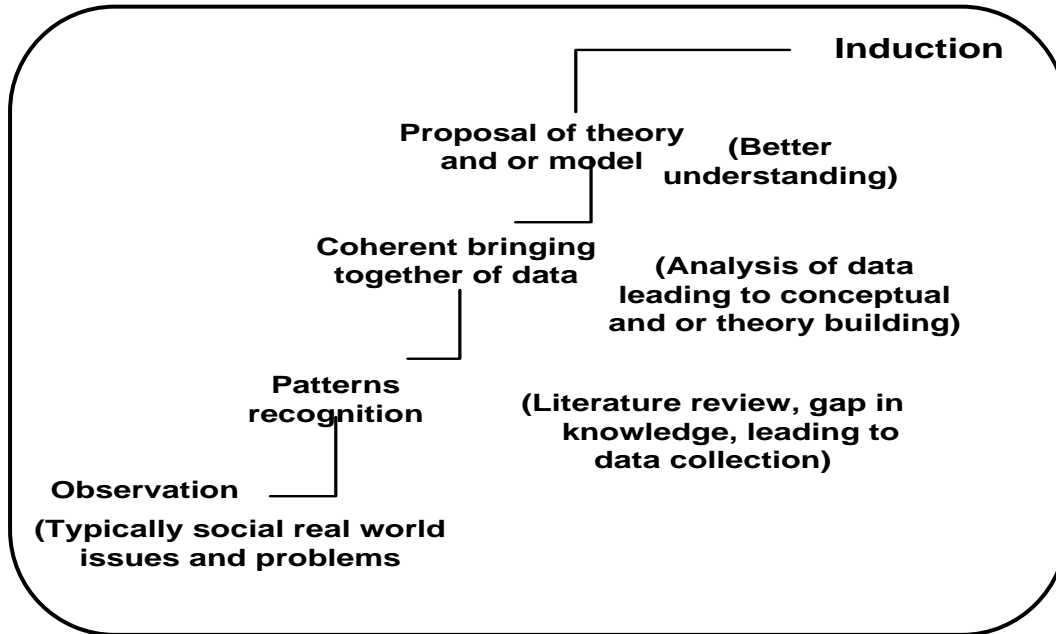


Figure 3.3: Operation of observation to theory for this research (adapted Mantere and Ketokivi, 2013).

The focus of observations, for this research, is in the field of organisational and management social understanding, practice and thinking. This forms a suitable field of patterns and study, rich in ideas and areas of interest, with a focus on service innovation and front-line employees. The academic thinking centres on service-dominant logic principles and a service ecosystems perspective. The research findings are built and discovered from empirical data collection. This led to the utilisation of service-dominant logic principles for theory building and conceptual model construction (see Chapter 5).

Initial patterns were built from the literature reviewed to highlight gaps in knowledge. This also assisted in the construction of the research questions.

An inductive interpretive qualitative research methodology was selected as this best incorporated the requirement of undertaking socially situated research, where people are the subject of investigation. The phenomena of interest are front-line employees in organisations within the service innovation process.

For data collected, the data instrument selected was semi-structured interviews, as this method could provide rich cross-sectional data on the thinking, experiences and narratives of organisational members (in finance, health and university sectors), required when undertaking qualitative research.

To support data management, tracking and traceability NVIVO CADQAS (Computer Assisted Qualitative Software Data Analysis) software was used. This allowed for the organising and managing the large and complex sets of data, and the analysis of data, using code books so that categories and themes could be resolved around the proposed research questions (James, 2012).

Empirical data analysis led to the recognition and building of patterns of themes, to be made from the research findings. This resulted in a better understanding of How can taking a service ecosystems perspective to organisational front-line employees promote their broader contribution to the service innovation process.

3.7.2 Introduction to data analysis in qualitative research

Interpretation of data analysis in qualitative research involves looking at the data gathered from the field studies and making induction assertions on theory.

As Clifford Greetz (1993, p.25) comments on the interpretation of the cultural world is a *messy business*. It involves trying to resolve a faithful account of the world through its distinctions and subtleties into the construction of something that can be *generalised as a social phenomenon* (James, 2012). Additionally, as Greetz (1993, p.29) also observes interpretation research is more about the *refinement* of the debate, less about *obtaining perfection*.

James (2012) believes interpretation of qualitative research ultimately involves good analytical craftsmanship and '*imaginative*' scientific and analytical expertise. The act of imagination and creativity involves '*being (able) to live the lives of strangers*' that emerges through undertaking the research, coding themes and the subsequent writing-up of the findings.

For this research, working with categories and themes formed an *essential* step regarding the analysis of data and the production of findings.

Various recommendations on the discovery of themes (Ryan and Bernard, 2003), building themes (Saldaña, 2016, p.16), and issues around trustworthiness and refinement (Nowell, Norris and White et al., 2017, Roberts, Dowell and Nie 2019) and management of themes (James, 2012) were consulted and considered with respect on how to undertake (operationalise) the data analysis.

3.7.3 Building themes for this research

3.7.3.1 Theme analysis for this research

Analysing data from qualitative research often involves many stages of theme exploration including discovering themes and building themes to give some coherent order, and finally linking themes to construct a conceptual or theoretical model (Ryan and Bernard, 2003). This approach is utilised for this research, as the data collected was based on organisational *thinking* on the broader contribution of front-line employees to service innovation. This is essentially an interpretative and inductive approach.

Nowell, Norris and White et al., (2017) outline several advantages and disadvantages to thematic data analysis used in qualitative research. Advantages include focusing on similarities and differences in the perspective of participants and generalising and categorising insights which participants bring to an event or situation (Braun and Clarke, 2006). Thematic data analysis can also be used to bring structure and summarise data in a clear and organised manner (King, 2004).

For these reasons, the use of thematic data analysis was used for this research, *not least* as it provides a systematic way to think about complex social situations such as the role of front-line employees in organisations.

3.7.3.2 Discovery of themes for this research

To assist in thinking about theme building for this research, literature was consulted discussing how they could be recognised and discovered. As Ryan and Bernard (2003) observe themes are the building blocks of qualitative analysis. This is outlined in Table 3.6.

Discovery of themes during analysis – Guidance to researchers
1- Themes are only discoverable through the expression of data (Opier, 1945).
2- Themes are cultural and agreed on, others are objective and symbolic (Opier, 1945).
3- Cultural systems comprise sets of interrelated themes, and the importance of these themes is related to how thoughtful they are, how often they appear, the context of the theme and how people react to the theme (Opier, 1945).

Table 3.6: *Discovery of themes used in code building (adapted Ryan and Bernard, 2003).*

The identification of themes can be answered by the question of *'what is this an expression of'* (Ryan and Bernard, 2003). The discovery of themes and the linking of themes and their expressions allows the addition of conceptual labels for events, instances and occurrences in the social world.

Higher-order classifications follow as themes are grouped under the term category (Ryan and Bernard, 2003). Themes are represented under many different pseudonyms such as *'codes'* (Saldaña (2016), Grounded theory refers to them as *'categories'* (Gioia, Corley, and Hamilton (2012) and Miles, Huberman and Saldaña (2014) term them as *'chunks'*.

Ryan and Bernard (2003) view themes as ‘*abstract (and often fuzzy) constructs that link not only expressions found in text but also found in images, sounds, and objects*’.

For this research, the discovery of themes was essential to the building of assertions and theories which were built to explore and understand

Lastly, Ryan and Bernard (2003) outline eight techniques for recognising themes, which form the basis of this research when discovering themes connected with management thinking on the role of front-line employees’ contribution to service innovation. These are outlined in Table 3.7.

Classification	What this looks like in this research analysis
Repetition	The more a concept occurs in a text, the more likely it can be classed as a theme. For example, <i>The involvement of customers in service innovation</i> .
Indigenous categories	These are local terms used as slang or used in unfamiliar ways. For example: ‘ <i>Boss</i> ’, when referring to a manager.
Metaphors and analogies	The expression of thoughts and experiences with metaphors and analogies. For example: ‘ <i>The implementation of the new service was rubbish</i> ’.
Transition	Shifts in speech, phrase or text denoting a change in topic or subject area. For example: ‘ <i>However, I believe that was not the case</i> ’.
Similarities and differences	Looking for paired expression and comparison in data. For example: <i>Customer and engagement</i>
Linguistic connectors	These define causal relationships in the data. For example: <i>Poor project management, when referring to failure</i>
Missing data	What is missing from the data? What has been avoided or not mentioned? Typical this might concern assumptions and culture For example: <i>The assumption that front-line employees should not be involved in new service delivery design</i> .
Theory-related material	How data highlights important areas of qualitative research. For example: <i>The role of front-line employees in service innovation</i> .

Table 3.7: Identifying themes in qualitative research (adapted Ryan and Bernard, 2003).

3.7.2.3 Building of themes for this research

Having obtained a processed transcript of an interview, broader data analysis can be undertaken. Saldaña (2016, p.3) suggests one way to proceed with data analysis is via code construction. In this situation, a code is often a short phrase or word that ‘symbolically assigns a summative, salient, essence-capturing, and/or evocation attribute for a portion of language’ (Saldaña, 2016, p.4).

Coding as Saldaña (2016, pp.7-8) notes requires the researcher to *perceive and interpret patterns* and *make subjective calls on what they believe is important*. These subjective calls may be best guesses and best explanations of the data which can then be refined into broader better guesses and better explanations (James, 2012). Figure 3.4 illustrates the basic code of the theory model outlined by Saldaña (2016, p.14).

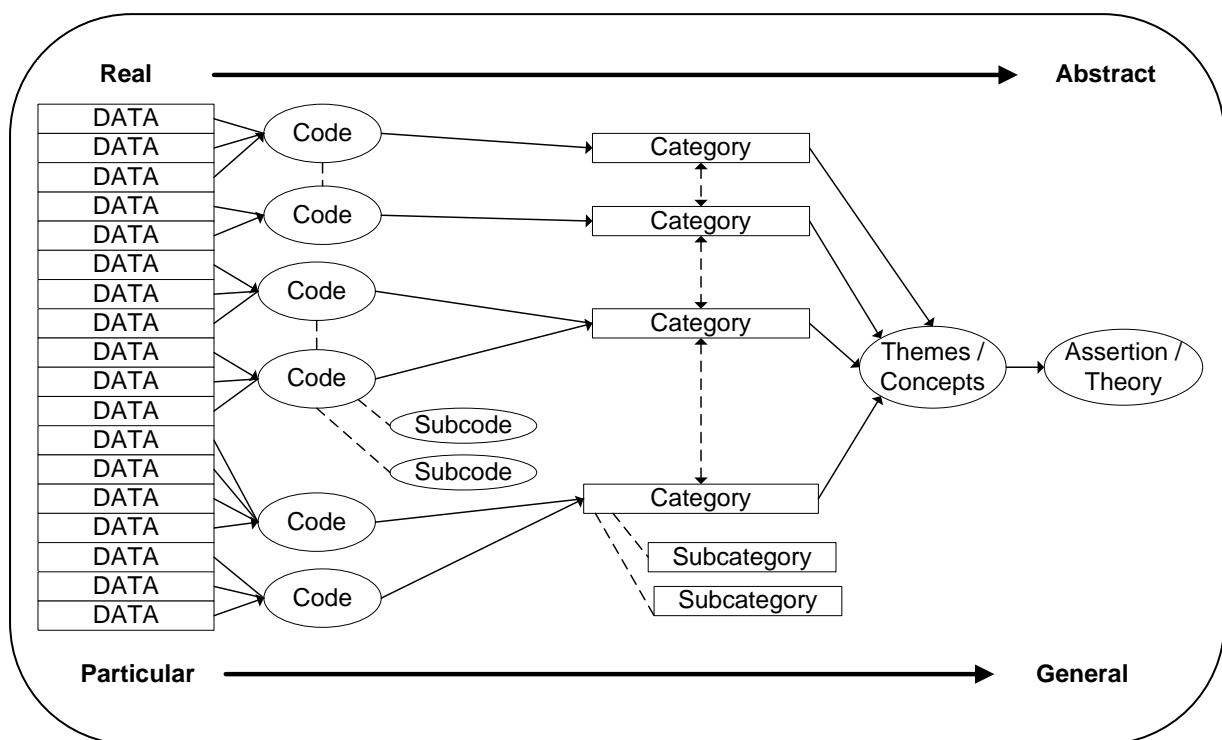


Figure 3.4: The code to theory model (adapted Saldaña, 2016, p.14, Figure-1.1).

Saldaña (2016, p.69) outlines two of the most popular coding techniques '*In-vivo coding*' (which *tries* to remain faithful to what the people say) and '*Process coding*' (which *tries* to remain faithful to the dynamics of events). However, for this research '*descriptive coding*' was utilised as it is particularly good at summarizing text in a short phrase or word (Saldaña, 2016, p.102).

Having arrived at descriptive codes, the researcher can organize and group similar data into categories that are characteristic of the data (Saldaña, 2016, p.10). To undertake this, Saldaña (2016, p.16) advises these categories should be thought of '*as a word or phrase describing some segment of your data*'. After arriving at categories, key themes can be conceptualized. These themes may be thought of as describing a '*more subtle and tactic*' way of thinking about the data (Saldaña, 2016, p.16). Having decided upon the themes, Saldaña (2016, p.16), recommends a certain amount of iteration and review be undertaken on the data, categories and themes. For this research, the advice offered by Saldaña (2016) was undertaken.

Nowell, Norris and White et al., (2017) discussing the reviewing of themes, suggest a certain amount of refinement, once preliminary themes have been established, is required (Braun and Clark, 2006). They endorse King (2004), who highlights, the need for continuing exploration of themes in the examination of (new) data. As Braun and Clark (2006) highlight the ongoing process of data analysis is to be expected with thematic research. Nowell, Norris and White et al., (2017) note that ongoing analysis of themes should lead eventually to clear, identifiable and meaningful themes from the research (Braun and Clark, 2006).

The next section outlines the code book development undertaken for this research.

3.8- Data Analysis using Code Book Development

For this research, the use of NVIVO CADQAS (Computer Assisted Qualitative Software Data Analysis) software forms a central tool for data analysis and assisting in theme analysis and general project management.

As Jackson and Bazeley (2018, p.4) note NVIVO is feature-rich to aid and assist the qualitative research exploring the varied data of their qualitative research. Jackson and Bazeley (2018) highlight such features as making coding and thematic analysis easier, the querying and management of data and general project management support of categorising documents, video and voice files (Jackson and Bazeley, 2018, p.19). For these reasons, NVIVO was utilised for this research. However, according to Roberts, Dowell and Nie (2019), the development of code books, can be very inefficient. Nevertheless, code books do allow for the promotion of good inductive principles for the development of unexpected categories and themes and so were utilised for this research.

It should be noted that NVIVO *does not build concepts or theories*, it is the task of the researcher to construct or otherwise *notice* these (interpret the data). Thus, although the use of NVIVO software in this research aided the management of data analysis, the human (the researcher) element is still needed to highlight essentially human social complexities and endeavours associated with service innovation, front-line employees and organisations. This process is essential interpretative and is the methodology in which the researcher undertook the data analysis.

3.8.1 Code book development and research context

This research utilises code book construction as part of its qualitative methodological approach. A code book here is defined as a research tool to ‘assist in the analysis of large qualitative data sets’ (Roberts, Dowell and Nie, 2019). Code books hold codes, annotations and themes allowing for the capture and summary of the interpretation of findings and conclusion of qualitative research (Roberts, Dowell and Nie, 2019). Figure 3.5 illustrates the context of the code book for this research.

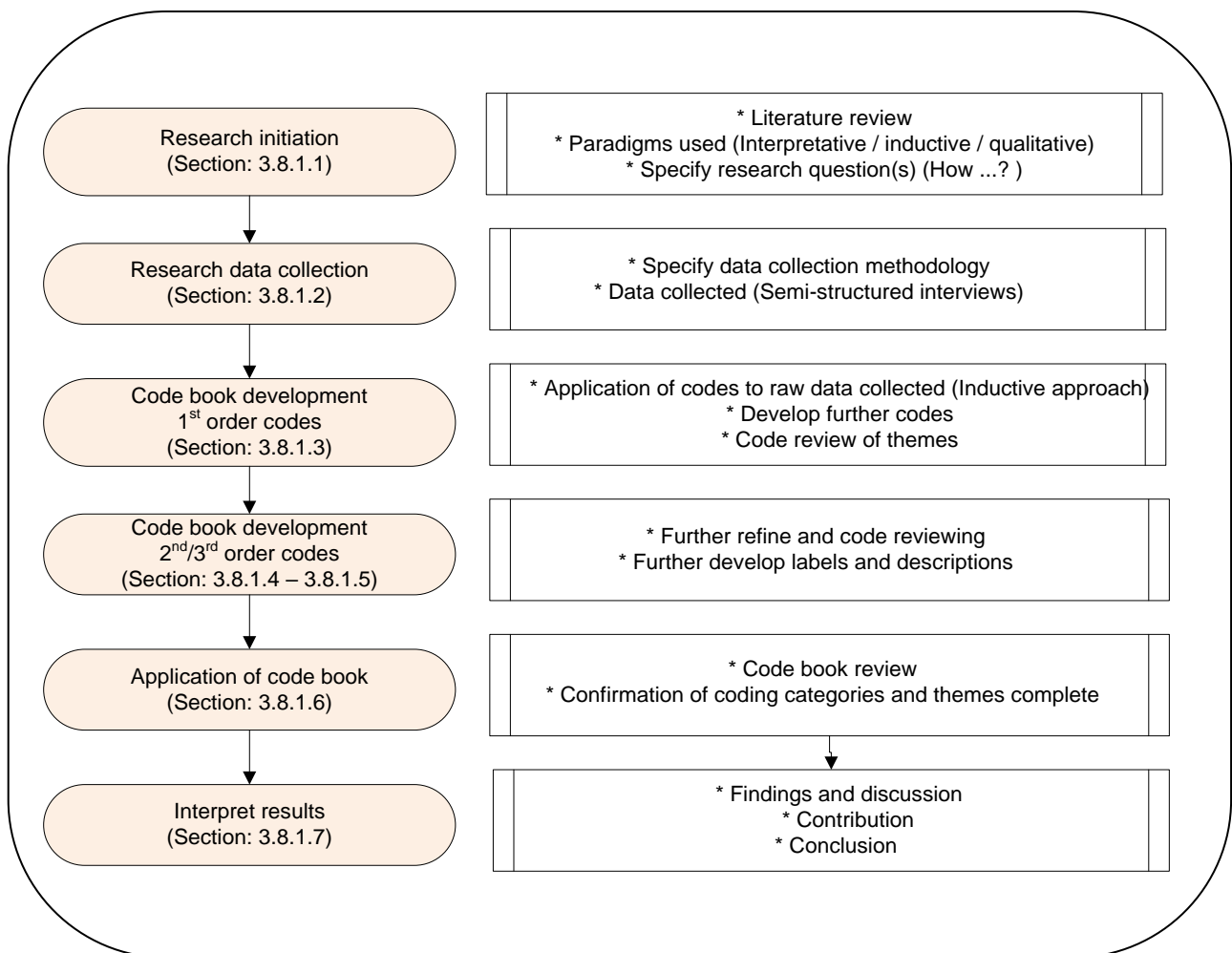


Figure 3.5: The context of code book development in the research process (adapted from Roberts, Dowell and Nie, 2019).

3.8.1.1 Code book development and research initiation

A literature review was undertaken in the context of the research questions building on the inductive theory to explore a service ecosystems perspective on the broader contribution of front-line employees in the service innovation process. The literature review is given in Chapter 2. The conceptual and theoretical framing of the research from the literature reviewed allowed for *categorising* and *initial* themes. For instance, organisational arrangements, staff allocation, skills, and knowledge. This framework could then be utilised to form a basis for data analysis and code book development.

3.8.1.2 Code book and research data collection

The data collection methodology utilised for this research was semi-structured interviews. This would allow participants to answer questions based on their *real-world* experiences of their social situation. This was important as themes such as culture, staff allocation and staff skills and knowledge are inherently social constructs based on qualitative social understanding (see section: 3.4 what counts as knowledge in a research paradigm).

Additionally, this qualitative research highlights an inductive approach thus allowing codes and categories to *emerge* from the data collected to be formed around the research questions, rather than prove any existing theory.

3.8.1.3 Code book development and first-order codes

The development of initial codes (categories) was based on the structure framed during the literature review. This was undoubtedly a compromise position to take. However, part of the research exploration was to build a theory on front-line employees' contribution to the service innovation process from a service ecosystems perspective. This has been covered in the literature review.

Although this was a concession to pure research inductive principles, this initial framework was thought suitable as initial codes and categories could be allocated within the research context. This would still allow flexibility for change as the empirical data analysis proceeded, with further patterns emerging in additional orders of coding. This advantageously would also reduce and keep to manageable levels the initial proliferation of codes at the start of analysis.

Furthermore, this framing allowed for the categorisation of the research questions within the research being undertaken. This would ensure interpretive analysis fell within the guidelines of: *How does this (participant) data answer the research questions (if at all)?* This would also promote the traceability of interview questions to research questions to code book analysis through context and rationale building (Also see section 3.6.2 and Table 3.8). Lastly, at the start of coding it remained unclear what emphasis or focus participants would place (if any) within this framing. This rested on the actual data.

Problems encountered at this level include at the start of analysis, where it was unclear where data should be assigned to which code. This only became clearer as the analysis proceeded with the emergence of second (and additional) orders of coding.

Secondly, there was a problem with logical ordering regarding the code book structure, to make the analysis more manageable. This was solved by adding a numerical prefix at the beginning of each concept. Then breaking this down with sub-numerical prefixes.

Figure 3.6 illustrates the initial construction of high-level codes utilising NVIVO.

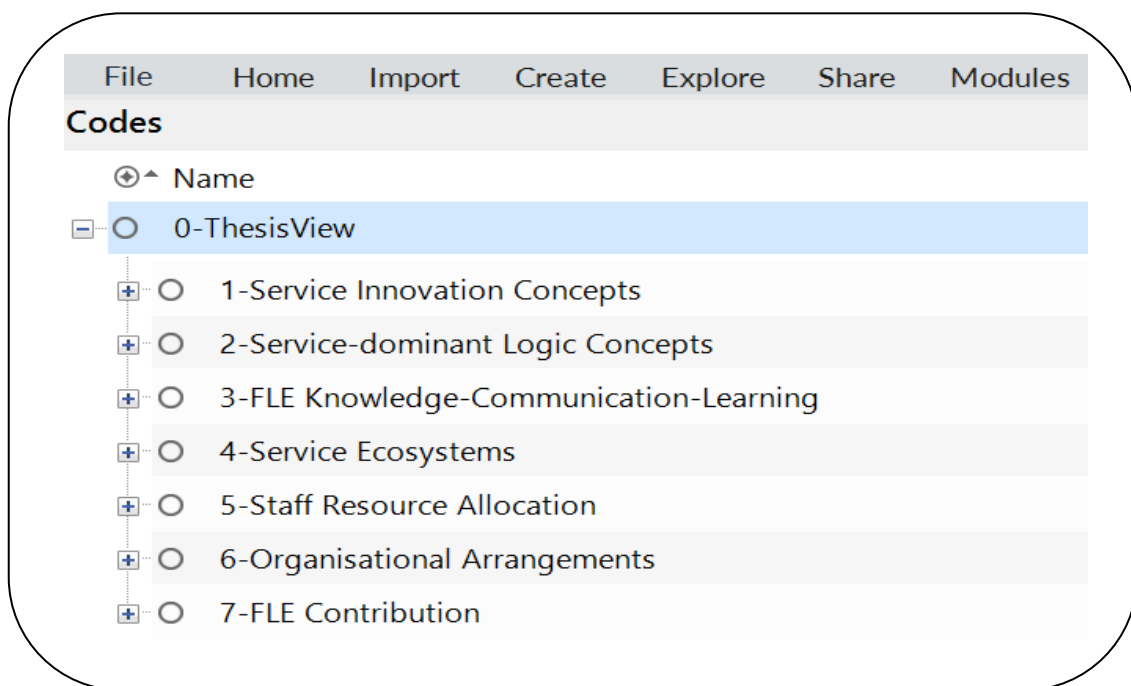


Figure 3.6: Initial code book framing based on literature review.

Table 3.8 gives a breakdown of how the code book for this research was initially framed with the rationale of assignment to a particular code from interview questions.

Answers <i>initially suggest coding to ...</i>	Interview question (Also see section 3.6.2 and Appendix F)	Rationale suggestion for allocating in the code book
1 - <i>Service Innovation Concepts</i>	<p>IQ-1: Please can you tell me something about your role in the area of service delivery and perhaps a little about service delivery in your institution? - Please can you tell me a little bit about your key responsibilities in service delivery? (RQ)</p> <p>IQ-3: Do you believe staff or technology are the key elements in new service delivery? - And why do you think this? (RQ2/RQ3)</p> <p>IQ-15: Is there anything you would like to add with respect to management thinking on front-line employees' in service innovation process or projects? (RQ1, RQ2, RQ3)</p> <p>IQ-15a Including: Do you work for or with customers? (RQ1, RQ2, RQ3)</p>	<p>Coding here is for participants 'real-world' experiences of service innovation. This might include strategy, levels of management, and project change.</p> <p>Initial coding here might include concepts focused on service innovation. Was it technology-driven?</p> <p>This is a catch-all. However, initial coding here was deemed within the context of service innovation (which was the emphasis of the question).</p> <p>Coding concerning attitudes on customers -Perhaps service-dominant logic co-create?</p>
2 – <i>Service-dominant logic Concepts</i>	IQ-5: Please can you tell me who you think contributes the most to the new service delivery process? Why do you think this? (RQ2)	Reponses concern customer perception of the service. Hence their ability to co-create, co-produce and customer value, and what the organisation believe suitable

(All, specifically: P4, P8, P9, P11)		staff should be allocated to the service innovation process.
3 - FLE Knowledge- Communication- Learning (P4)	IQ-4: Thinking about your involvement in new projects for new service delivery, what do you think are key project elements? - For example, how are staff involved and engaged with the project? (RQ1/RQ2) QI-11: How can you improve the engagement of front-line employees in a new service delivery project? (RQ)	Initial allocation to this code concerned <i>staff involvement and engagement</i> . Coding here concerns front-line employees' <i>broader contribution</i> to the service innovation process, with emphasis on skills and knowledge practices.
4 – Service Ecosystems (P8)	IQ-6: Please can you tell me more briefly any story where a manager or member of staff has made a difference to a new service delivery project and how? (RQ1/RQ2) IQ-10: Again, thinking about front-line employees, please can you tell me who do you consider as a front-line employee in the new service delivery process and why so? (RQ1/RQ3)	Initial data coded includes aspects of thinking about a systems approach to service delivery – The response involves the participant <i>selecting</i> from many perspectives of service innovation. Allocation to this code initially, concerns taking a systems perspective on front-line employees'.
5 – Staff Allocation (P8)	IQ-14: What new service delivery processes would you like to change in your institution? - What	Data coding to this concern <i>understanding of service innovation</i> processes such as staff allocation.

	management best practices would you like to highlight for new service delivery? (RQ1, RQ2, RQ3)	
6 – Organisational Arrangements (P11)	<p>IQ-2: From your own experience can you say more about the introduction of a new service you have been involved with? - Can you tell me what made this successful or unsuccessful? (RQ1/RQ2)</p> <p>IQ2a- Was it a continuous improvement or a major service improvement (RQ1/RQ2)</p> <p>IQ-7: What do you understand the role of managers should to be in a new service delivery project? (RQ1, RQ2, RQ3)</p> <p>IQ-13: How would a better understanding of the new service delivery process help you and your institution deliver better services to customers? - How could this be implemented? (RQ1, RQ2)</p> <p>IQ-13a How would a better understanding of organisational culture have played a part in the new service process and delivery to customers? (RQ1, RQ2)</p>	<p>Participant responses concerning how organisations understand service innovation. Whether the emphasis is on staff or technology. This is a cultural aspect.</p> <p>Data coding relates to how organisations culturally undertake service innovation.</p> <p>Initial coding concerns the manager's understanding of the service innovation process (possibly the role of front-line employees).</p> <p>The understanding of the service innovation process.</p> <p>Initial coding here is explicitly concerned with organisational culture.</p>

<p>7 - FLE Contribution (P4/P8/P9/P11)</p>	<p>IQ-8: Thinking about staff who deliver a service (front-line employees') - What do you think the manager's views on front-line employees might be? (RQ2, RQ3)</p> <p>IQ-9: Where do you think front-line employees play the most important part in the new service delivery/innovation process? And also, please can you tell have you acted on a suggestion or idea from a customer which has resulted in a new service delivery project? (RQ2)</p> <p>IQ-12: What skills and knowledge do you think contribute to the new service delivery process? - Both from your own level and people whom you work with? (RQ2, RQ3)</p> <p>IQ-12a: What learning would you like see for new service delivery? (RQ2, RQ3)</p>	<p>Initial data assignment to this code concerns, the thinking of where front-line employees contribute to the service innovation process – For example ideas generation.</p> <p>The response here seeks to elicit data on front-line employees’ involvement and engagement in the service innovation process.</p> <p>Responses to this question should be coded to the Front-line employees’ contribution – based on their skills and knowledge.</p> <p>Initial coding regarding front-line employees’ skills and knowledge.</p>

Table 3.8: First order initial coding and development in the code book for this research.

There are several points to note concerning the code book structure. Firstly, the research questions (and interview questions) do not fall logically sequenced. For instance, interview questions in IQ1, IQ2, and IQ3 do not fall within 1 - Service Innovation Concepts. This was because of the requirement to ask participants questions which seemed to logically follow *each other*, not to conform to a structure.

Secondly, the initial code book structure (based on literature) would form a framing for second and third-order and subsequent codes and themes. However, what these codes might be, would be driven *by the actual* empirical data analysis.

Lastly, the initial coding structure *does not equally* include the same number of interview questions. However, IQ1 (real-world experience) and Q115 (catch-all) allow initial data allocation to any of the code book themes. This then enhanced the data-drive quality of the research - *let the data speak*.

3.8.1.4 Code book development and second order codes

Second-order codes were established under first-order codes and tended to describe or expand on the concepts of first-order codes. However, this theme building was not entirely fixed with continuing data coding, highlighting the actual category/theme. This is illustrated with the theme: *'1-1 Management Thinking on Service Innovation'*. Here aggregation of many third-order codes, from the data analysis, suggested the second-order theme categorisation.

Figure 3.7 gives the final second-order code book structure for this research.

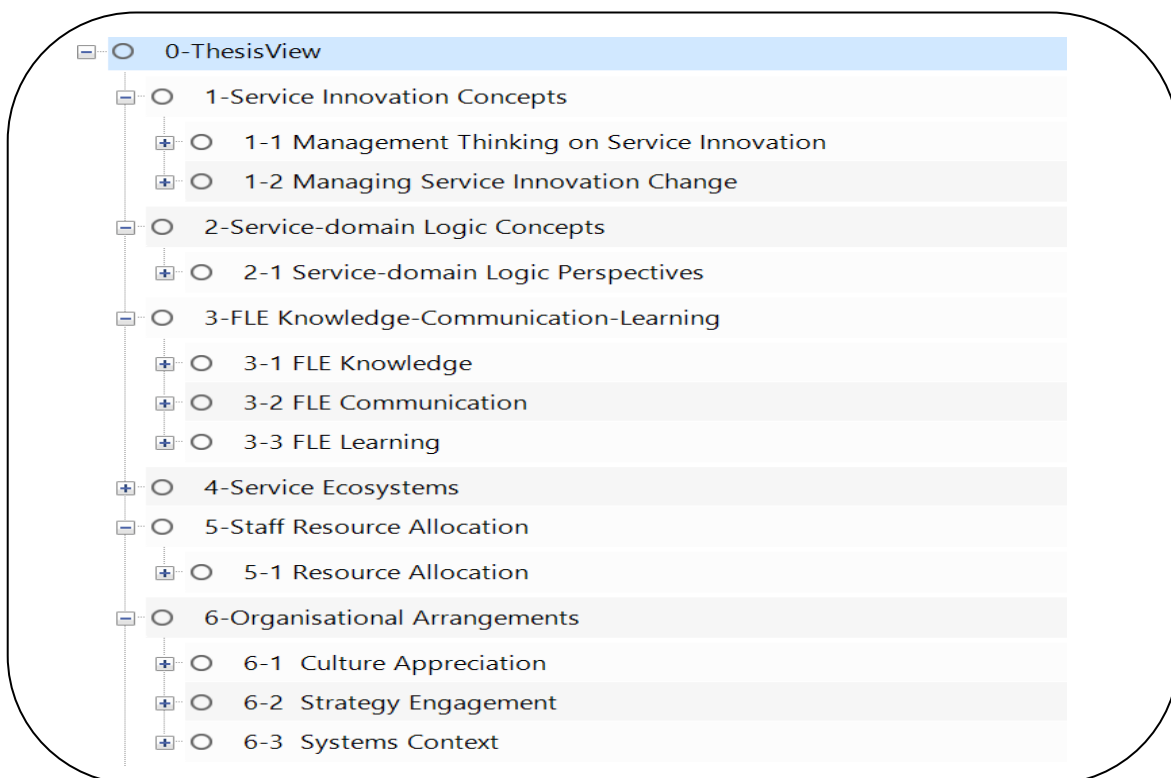


Figure 3.7: Code book extract of second-order codes for this research.

At the second order of coding, there was further thought concerning how the coding analysis *could be* made more manageable. The actual number of themes at this level reached eleven (11). This number was considered *manageable*, as analysis and assignment of data were thought to cover the main categories and themes of the research. Additionally, from a research practical perspective, all the themes could be illustrated within a single NVIVO screen!

Further considerations at this level (and including first and third (additional level)) codes, were issues of bias in interpretation. In large, well-funded and well-resourced qualitative research studies, the interpretation of the empirical data is often undertaken by two or more researchers and a consensus is reached. However, for this research (at an individual and PhD level) steps to reduce or mitigate bias in code book analysis included:

- Review of labels and codes at regular intervals to ensure the codes were relevant.
- Checking the codes make sense in the context of the research.
- Could codes be merged?
- Did the code represent the data (also see section 3.9 and Roberts, Dowell, Nie, 2019).

3.8.1.5 Codebook development and third (and subsequent) order codes

Third order codes involved many iterations of data assignment and reassignment as data from participant interview scripts was assessed and analysed. These codes were frequently merged, relabelled or reallocated to other first or second order codes.

Figure 3.8 gives a research extract of third order codes for this research.

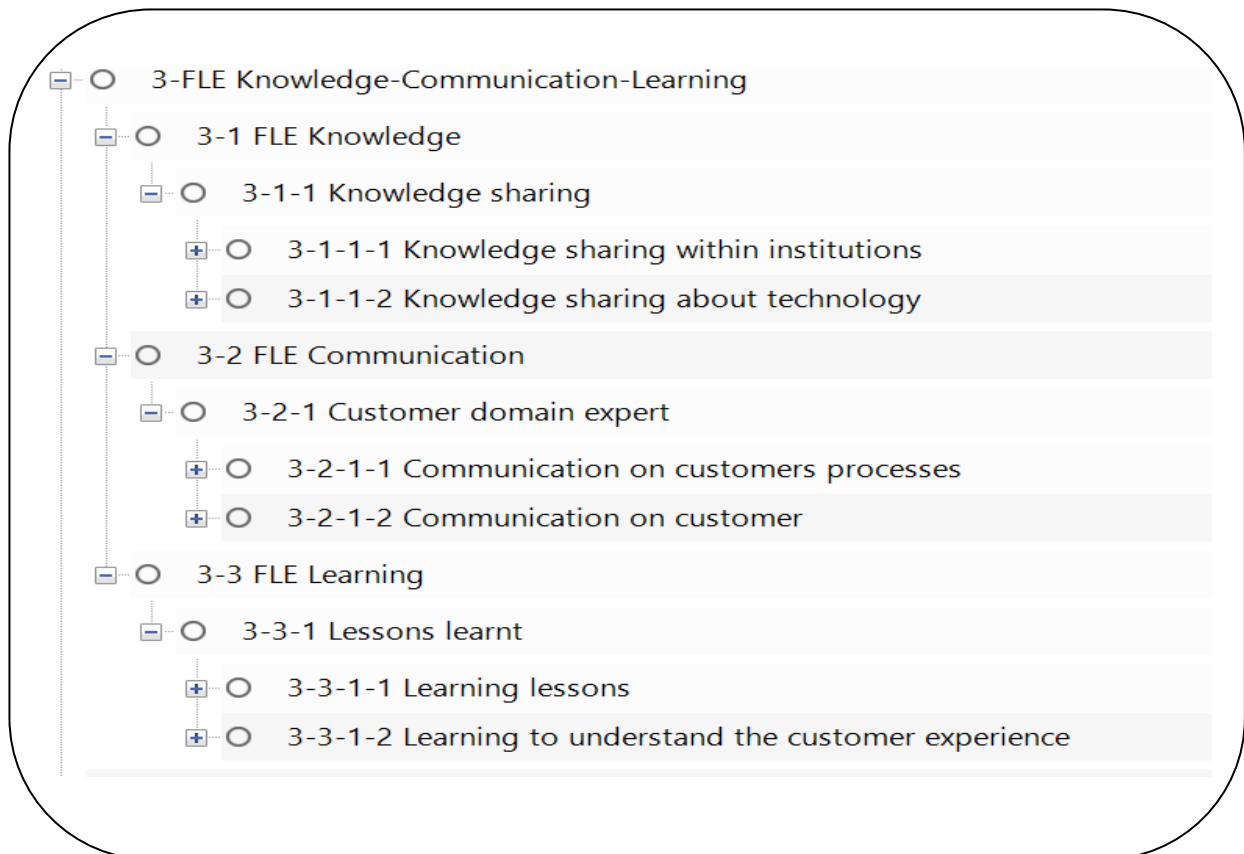


Figure 3.8: Code book extract of third order codes for this research.

Problems encountered for third order codes included *when to merge relabelled or reallocate*. This process typically occurs when further script analysis suggests a better categorisation or better description of a code. This interpretive process was therefore data driven. Additionally, following the end of each transcript analysis, a review of all the codes was undertaken to audit and assess existing codes.

At third (and additional) order codes, trying to remember the allocation of recurring themes became an issue. For instance, in Figure 3.9, where a participant discusses learning – Which theme should this be allocated to? The issue was to remember where themes on learning are coded and the interpretation of which theme (or new theme) to code against. This was often resolved by using the search function in NVIVO.

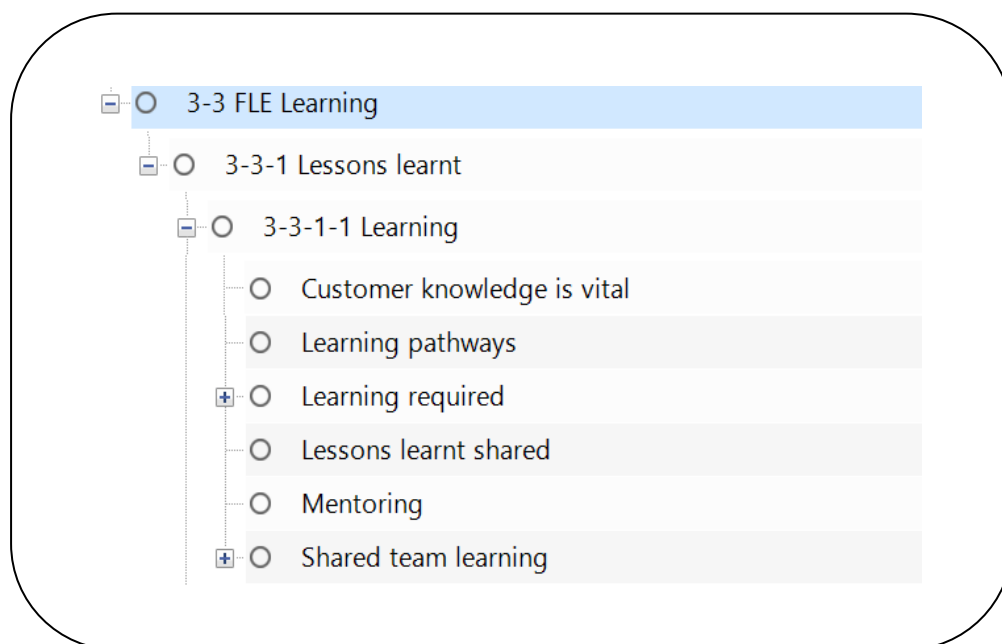


Figure 3.9: Issues of which and where to code transcription data.

A worked example of theme building begins with the building of codes and the subsequent allocation of phrases, text or passages from an interview script. Here the phrase ‘*So you know who to ask for that knowledge?... the knowledge sharing so great and saying gave any employee will be willing to answer any questions. But if you don’t know who to ask*’. Figure 3.10 illustrates the original reference as transcribed and loaded into NVIVO.

<Files\\Staff2-Script(Ot)> - § 3 references coded [0.48% Coverage]

Reference 2 - 0.20% Coverage

So, you know who to ask for that knowledge? 'cause yeah, the knowledge sharing so great and saying gave any employee will be willing to answer any questions. But if you don't know who to ask.

Figure 3.10: Data collection – Text loaded into NVIVO.

As noted, Figure 3.11 illustrates 'Difficult (sometimes)', has been coded under: '*...Knowledge sharing with colleagues – Share with other teams – Team sharing*'. This recognises the phrase contains keywords such as *knowledge* and *knowledge sharing*. This suggests allocation to a *knowledge code*. The context of the phrase is within *front-line employees*, suggesting a coding of *Organisational culture about knowledge*. Finally, the phrase suggests a problem or issue. Interpreting this together gives the final code allocation (Figure 3.11).

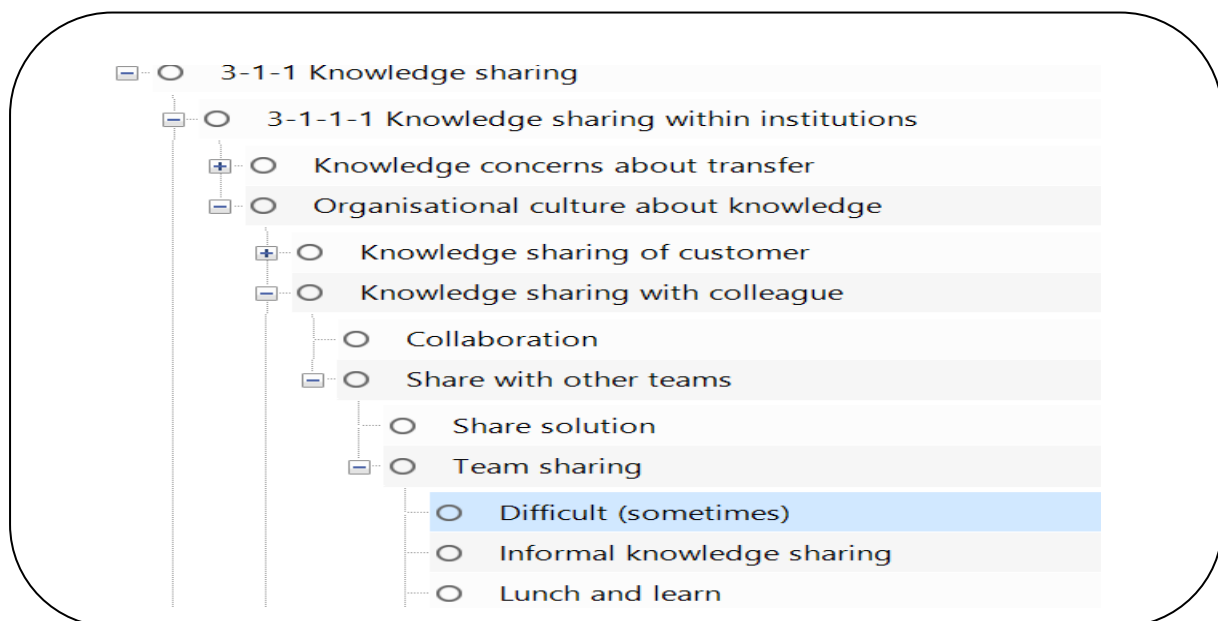


Figure 3.11: Code allocation (an example).

3.8.1.6 Application of code book

Following initial code allocation there was a certain amount of *interpret refinement* of codes. This has already been discussed and involved the combination and relabelling of codes as themes emerged with better descriptive narratives (section 2.6.1 and section 3.4 and section 3.9). Figure 3.12 illustrates the near completion of the refinement of codes and labels in the research code book. Also, reference Appendix G which has the code book extract for Figure 3.12 coding.

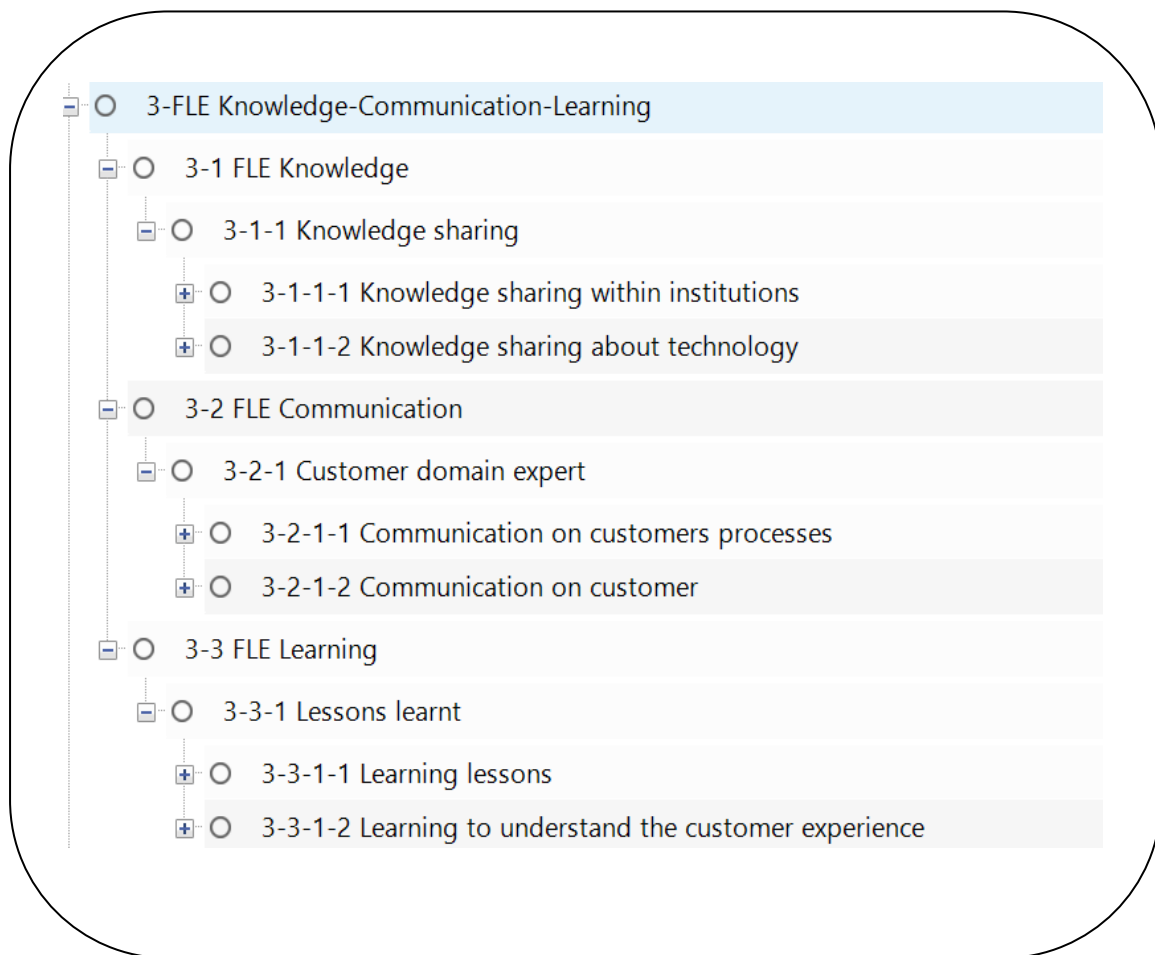


Figure 3.12: Application of code book, as constructed for this research.

3.8.1.7 Interpretive results

Figure 3.13 illustrates the *interpretive results* process undertaken from the building of the code book.

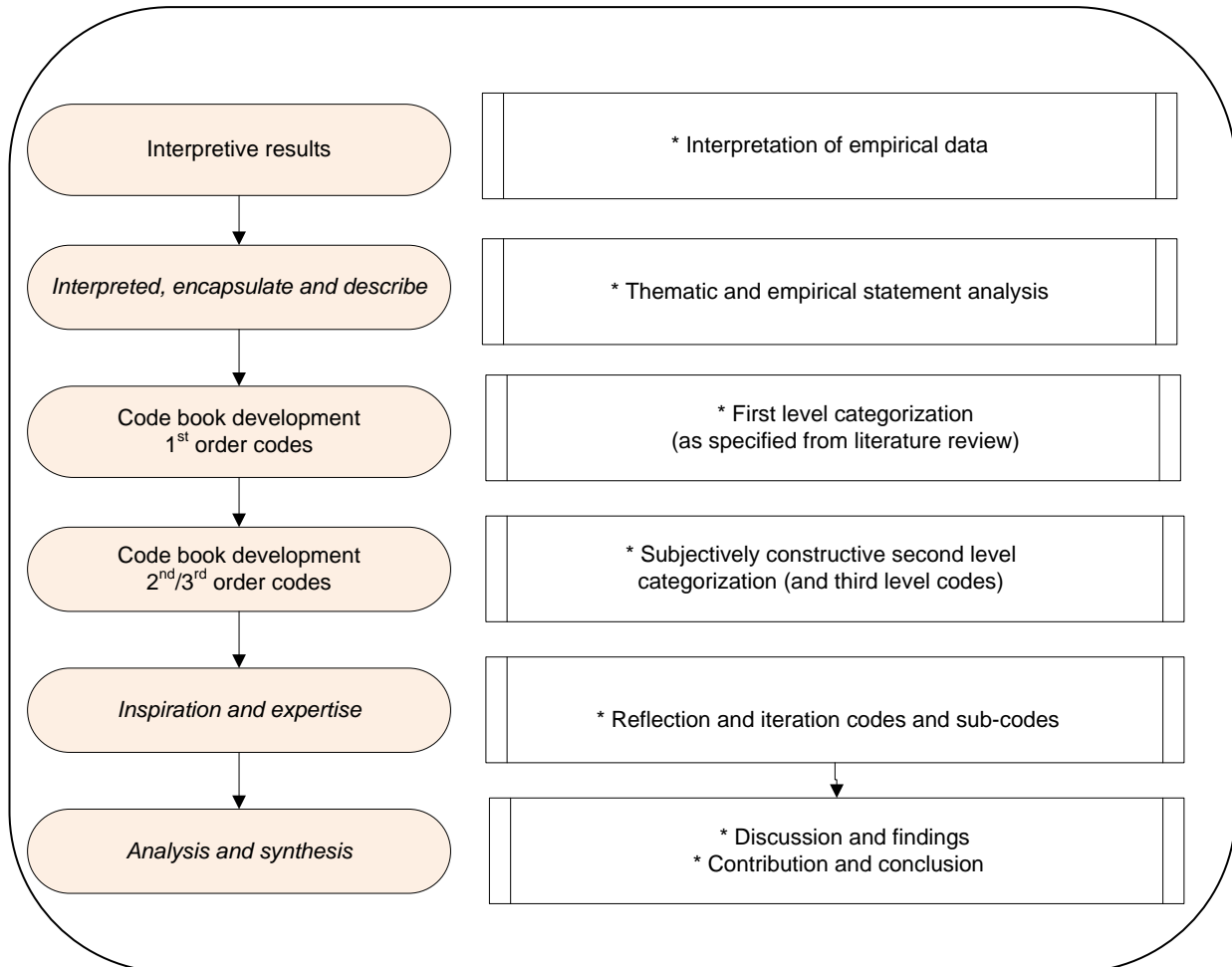


Figure 3.13: The interpretive process for this research.

At the start of the interpretive analysis, the first level categorisation of *organisational arrangements, staff allocation and staff skills and knowledge*, were specified in the context of the service ecosystems concepts outlined in the literature reviewed (also see Chapter 2 and section 1.4: Research Justification for this Thesis). These concepts allowed an initial conceptual structure for further data interpretation and refinement.

At the next level of analysis, within each of the first order categorises, second level categories thought best to *interpret, encapsulate, and describe* the underlying empirical (code book) data were subjectively built as a framework (James, 2012, Saldaña, 2016, pp.7-8). For instance, under the *organisational arrangement*, second level categories such as *culture appreciation, strategy engagement, and systems context* emerged from the interpretation of second, third and fourth order coding. For instance, in Figure 3.12, 3-2 *FLE learning*, suggested (inferred), a second level category (concept) of *lesson learnt*, to which interpretive underlying themes could be allocated under.

The *subjectively constructed* (built) second level categories then went on to form the conceptual model theme building of this thesis. Table 3.9 illustrated the subjective and indicative first and second categories constructed from the code book.

Research question	SDL concept (first level categorisation)	Subjective constructed second level categories (concepts) undertaken from thematic analysis of code book data		
Research question 1	Organisational arrangements	<i>culture appreciation</i>	<i>strategy engagement</i>	<i>systems context</i>
Research question 2	Staff allocation	<i>management vision</i>	<i>promote learning</i>	<i>assessing staff allocation</i>
Research question 3	Skills and Knowledge	<i>knowledge sharing</i>	<i>customer domain expert</i>	<i>lessons Learnt</i>

Table 3.9: First and Second level categories (concepts) from empirical analysis.

The interpretation of empirical data analysis consisted of thematic analysis employing NVIVO. Research data was processed and organised (Saldaña, 2016, p.16) to give analysis in to related tables, within a general framework of service-dominant logic principles. Additionally, participant statements were also analysed from transcripts loaded into NVIVO, to assist thematic analysis. These are presented in empirical statement tables and utilised to give a perspective from the research participant's *own words* (also see Figure 4.1, Chapter 4).

Analysis of both sets of empirical data was undertaken within the framework of each (related) first and second level category. Once the empirical data was analysed, *specific literature* to place the analysis in context, and a synthesis of literature and analysis was given. Also, see Figure 4.1, Chapter 4.

The actual interpretation of the code book to produce the discussion and findings required a certain amount of both *inspiration* and *background expertise* regarding the research topic being explored. Inspiration and background expertise also assisted the development of qualitative research questions on what counts as knowledge (resolved in section 3.4) and questions on how to judge the quality of the research through *trustworthiness* and *adequacy of evidence for qualitative research*. These are considered in section 3.9.

In summary, section 3.8 has discussed the data analysis using code book development. This was outlined in Figure 3.5 which was adapted from Roberts, Dowell and Nie (2019). It is noted that code book development is an essentially *interpretative* and *thematic* process. Appendix G and Appendix H has a sample code book extracts.

Table 3.8 maps service-dominant logic principles to interview questions to code book allocation, to give an academic rationale. Illustrations of research code book samples are given throughout. Table 3.9 depicts where interpreted second level categories (concepts) map onto first level categories (service-dominant logic principles). The second level concepts, for instance, *culture appreciation*, *strategy engagement*, and *systems context* are used to frame empirical analysis (see reference Chapter 4) and in the construction of process model contribution (see reference Chapter 5).

The next section of this chapter outlines the assessment for the validity of qualitative research. This is based on the criteria of *trustworthiness* and *adequacy of evidence* utilised by the research. These are explained and their applicability to this research is outlined and justified.

3.9- Assessment of the Quality of Research

3.9.1 Assessment criteria for this research

Having a research idea, a philosophy and research questions which seek to close the gap of knowledge must then lead to speculation on how to judge the quality of the research. Bryman and Bell (2015) and Batt-Rawden, Björk and Waaler (2017) argue *validity* and *reliability* criteria in quantitative research can be replaced by criteria based on:

- *Trustworthiness.*
- *Adequacy of evidence for qualitative research.*

Additionally, leading business research authors, Bryman and Bell (2015, p.400) further outline the four main criteria making up the trustworthiness assessment of qualitative research:

- *Credibility.*
- *Dependability.*
- *Transferability.*
- *Confirmability.*

Trustworthy concepts are discussed in section 3.9.2. The adequacy of evidence for qualitative research criteria is outlined in section 3.9.3. These are given as follows:

- *Amount of evidence.*
- *Adequacy of variety of evidence.*
- *Adequacy of discomfort.*
- *Adequacy of interpretation.*

3.9.2 Discussion on credibility and dependability for this research

3.9.2.1 The credibility criteria: The case of semi-structured interviews

For the *credibility criteria* (judging whether the research approach undertaken is suitable) for this research, a qualitative semi-structured interviews were utilised. According to Saunders, Lewis and Thornhill (2019, p.451), this approach can be judged in several ways. The criteria and compliance for this are illustrated in Table 3.10.

Credibility criteria	For this research (Semi-structured interviews)
Opening comments (Met by research)	Shapes the conversation to answering questions: <i>Use of opening questions based on the participants social, real-world experience: IQ-1, Appendix F.</i>
Approach to questions (Met by research)	The phrasing of questions clearly to participants: <i>Technical jargon such as service innovation replaced by the more practitioner oriented new service delivery.</i>
Use of different types of question (Met by research)	Use of open questions to allow narrative answers: <i>Open questions are used to develop participants own experiences and thinking.</i>
Listening to participants (Met by research)	Active listening to what the participants say: <i>Judicious use of noise words such as ‘Yes’ and ‘Okay’ interjected into the interview.</i>
Understand and summarise (Met by research)	Clarification with participants main points of their answer: <i>Summarising points raised with participants and reviewing answers at the end of the interview.</i>
Data recording (Met by research)	Permission is sought (Appendix D and Appendix E). <i>Participant form emailed signed and returned. A reminder that the interview was being recorded was given to participants at the start of the interview.</i>

Table 3.10: Criteria for credibility (and dependability) for qualitative research based on semi-structured interviews (adapted from Saunders, Lewis and Thornhill, 2019, p.451-463).

3.9.2.2 Discussion on credibility for this research: The case of audio-recording and remote interviewing

To further the *credibility* of the research, Saunders, Lewis and Thornhill (2019, p.461-463) make several recommendations on the use of audio recording to increase factors such as *audibility*, *accountability* and *trust*. These are illustrated in Table 3.11.

The issue raised in audio-recording	Issues for this research
Allows the interviewer to engage with questions and listening	<i>Using audio-recording in this research allowed the researcher to build repour with the participants, making them feel easy to answer questions, which added to the quality of the answers.</i>
Relisten to interview during data analysis	<i>Relistening, allowed for reflection and (re)evaluation of participant responses during data analysis.</i>
Accurate and unbiased records provided	<i>Using audio recording (functionality within MS Teams and an Android telephone app) in this research allowed for the transcription of the interview without bias relating to what was actually said by the participant.</i>
Allows direct quotes to be used	<i>Useful evidence to illustrate and highlight results which are used in the analysis (Appendix H)</i>
Significant time to transcribe	<i>Software was purchased which significantly reduced the need for transcription NVIVO CADQAS.</i>
<i>Possibility of technical errors</i>	<i>Taking notes during the interview means that if the recording device fails, the notes could be used to capture the essence of the interview</i>
May inhibit responses from participants	<i>If any stage the participant wished to stop the interview they may have done so (Appendix D).</i>
Changes in questions asked at the interview can be captured for asking at later interviews	<i>A certain amount of flexibility was applied to the semi-structured interviews in the order the questions were asked.</i>

Table 3.11: Issues for credibility and dependability for audio-recording/remote interviewing (adapted from Saunders, Lewis and Thornhill, 2019, p.463, Table 10.3).

3.9.2.3 The dependability criteria for this research

Commenting on *qualitative of dependability* (was the research approach undertaken in a consistent matter), Bryman (2012) notes qualitative of dependability criteria concerns the detailed step-by-step explanation of the research design or approach so that the research or similar research can be judged and assessed. O'Leary, 2017, p.68) stresses systematic well-documented methods assist in evaluating dependability.

The justification regarding the rationale of the research, research design, research questions and data collection methods have been outlined and discussed in this thesis (this chapter). This then provides the reader with a rich understanding, commentary, and situation on how the research was built, and executed and how the discussion and findings, contribution and conclusions were reached. Also see Chapters 4, Chapter 5 and Chapter 6.

3.9.2.4 Discussion on transferability criteria for this research

Work by Bryman (2012), notes the transferability of qualitative research relates to how far the research can be *generalised* beyond the current research context (Thomas, 2017, p.146).

Table 3.12 outlines the criteria used by Saunders, Lewis, and Thornhill (2019, p.217) for the transferability criteria.

Criteria	Discussed for the research undertaken
Validity of design	<i>Discussion on research design justification.</i>
Research questions	<i>Discussion on the background to research questions.</i>
Context of study	<i>Discussion on knowledge gap.</i>
Analysis of findings	<i>Discussion on findings from semi-structured interviews.</i>
Interpretation of results	<i>Discussion on contribution and conclusion from the research.</i>

Table 3.12: The transferability criteria of qualitative research (adapted from Saunders, Lewis and Thornhill, 2019, p.217).

Leading business research academics, Saunders, Lewis and Thornhill (2019, p.217), believe that the transferability criteria for research design rests on the opportunity for readers (reading the research) to relate the research to their or other contexts.

Additionally, as Saunders, Lewis and Thornhill (2019, p.451) note transferability for *qualitative* research, does not mean *quantitative* statistical transferability, but as used in this research, to explore how taking a service ecosystems perspective to organisational front-line employees promote their broader contribution in the service innovation process. The emphasis is on surfacing the socially situated understanding of participants of their real-world experiences and making these understandings and experiences accessible for qualitative (interpretative) analysis (see Chapter 4).

This analysis can then be utilised to complete gaps in knowledge, propose new theories and concepts and subjectively compare across similar social settings.

For this research, this might be generalised across similar financial, health and university organisations.

3.9.2.5 Discussion on confirmability criteria for this research

Commenting on *confirmability* (the application of good practice), Bryman and Bell (2015, p.403) note confirmability illustrates that the researcher has acted in '*good faith*' throughout the research by following established practices.

Bryman and Bell (2015, p.403) also note confirmability is essential in data collection and analysis, thus allowing other researchers to have confidence when checking the data and findings from the research. Demonstrated throughout Chapter 3, with an outline of research design and methods (this chapter).

To assist in the conformability of the data collection, feedback from participants was sought with a summary given by the researcher of the main points at the end of the interview. This allowed the participant to comment and provide feedback. Thus, providing the opportunity to challenge any points raised during the interview (also see Table 3.10).

Additionally, for this research, good practices on data management and qualitative research ethics were also adhered to (further reference section 3.10). These included password protecting data files, regularly backing up of data files and secure data office access.

Furthermore, this also included anonymity of participant data, signed returned participant consent forms and that those participants could ask for their data to be deleted (if they wished, within 14 days). Participant consent form and Information sheet are given in Appendix D and Appendix E).

3.9.2.6 Building on the trustworthiness of data analysis

Serval stages were utilised to ensure the trustworthiness of data analysis in this research.

Firstly, a rigorous audit trail was imposed, with all audio recordings and interview transcripts being cross referenced and stored in suitably named folders on a computer (Miles, Huberman and Saldaña 2014, p.40). These were also backed up to secondary storage (as mandated under the data management plan for this research).

Secondly, all interview transcripts were loaded into NVIVO and cross-referenced against participant mnemonic (data anonymisation as mandated by the ethical plan). The NVIVO, software allowed the data to be classed in appropriate first, second and third order codes to assist in the assessment, refinement and reiterations of codes, categorises, patterns and themes (Jackson and Bazeley, 2018, p.102).

Assignment to codes was based on context in a particular participant script. For example, *stakeholder management* might be coded under managing the customer if it is related to customer interaction or integration requirements, or perhaps if it is related to internal management of staff communication.

Additionally, in NVIVO, annotations were made on each interview script, to highlight important observations made by interview participants, particularly concerning novel or interesting experiences (Jackson and Bazeley, 2018, p.27). These could be used later to check understanding and context.

3.9.3 Discussion on the adequacy of evidence for this research

In the paper, '*Quality and Trustworthiness in Qualitative Research in Counselling Psychology*' Susan Morrow (2005) outlines several strands to the *adequacy of evidence* for qualitative research.

Firstly, the *amount of evidence*. Here Morrow (2005) highlights because of the discomfort quantitative researchers find when dealing with the '*ambiguities*' of qualitative research, large datasets are often required. This often reaches far beyond the saturation point required by data collection. However, as Braun and Clarke (2021) contest the meaning of qualitative research is not data size or data saturation but the way '*meaning is generated through interpretation of, not excavated from, data*'.

For this research, the many years of practitioner experience in the field of service innovation, combined with wide academic reading has built a sound foundation for interpretative analysis. Additionally, this experience has built a strong thematic understanding, allowing the identification of key codes to be discovered and constructed. Further, this expertise has promoted *subjective interpretation* with the application of pattern recognition in the data (Saldaña, 2016, pp.7-8).

According to Morrow (2005), when undertaking qualitative research often between 20-30 interviews is sufficient. For this research, 42 interviews were undertaken to provide a rich set of data to match against the research question. Also see section 3.6.3 which discusses approaches to sample size and data saturation.

Secondly, the *adequacy of a variety of evidence*. Morrow (2005) argues for a variety of data sources to improve the richness and depth of the data collected. For this research, multiple participants from multiple organisations were interviewed for their understanding regarding the importance of front-line employees in service innovation (also see 3.6.4 and 3.6.5 for selection of organisational and participants).

Thirdly, for *adequacy of discomfort*, Morrow (2005), believes to combat any research bias the researcher should go beyond confirmatory data and seek out data outliers which may point to new insight. To tackle this criterion, consideration of potential outliers was reflected on and explored (reference section 4.6), which indeed highlights possible new insights in the data collected.

Lastly, to meet the criteria of *adequacy of interpretation* Morrow (2005) believes the researcher should become immersed in the data collection to the extent that they develop a deep understanding of the data.

This is further discussed by leading researchers in qualitative analysis, Gioia, Corley and Hamilton (2012), who believe when initially undertaking research design there is a need to think about which inter-relationships and hidden concepts might surface during the research. Additionally, in data collection, there is a need to cross-reference participant data in data analysis. Finally, there is a requirement to maintain the integrity of the data when undertaking the thematic analysis.

In this research, to explore inter-relationships, multiple reiterations of data analysis were undertaken to establish suitable and reasonable connections and linkages from the data collected (reference section 3.7 and section 3.8). Cross-reference was established during the building of codes, categories and themes which were carefully considered and reflected. A deep understanding of the data was reached after many hours (researcher's best guess 1000 hrs+) of working with the data over many iterations of thematic and data analysis

Additionally, the research approach to data collection is discussed in section 3.6 and the research approach to data analysis in section 3.7. Chapter 4 presents the discussion and findings for this thesis.

In summary for this section, this section discussed the criteria based on *trustworthiness* and *adequacy of evidence* for qualitative research. These concepts are important for this research as they highlight confidence in how the research was undertaken and how the research may be judged and assessed.

A summary of concepts of *trustworthiness* and *adequacy of evidence* for the judgement of qualitative research is outlined in Table 3.13.

- Trustworthiness criteria include:
Credibility, Dependability, Transferability and Confirmability.

- *Credibility* for this research includes Illustration for this research on interviewing and data recording credibility.

- *Dependability* for this research includes The commentary throughout the thesis regarding the rationale for the research, research design methodology, justification of research questions and data collection methods used.

- *Transferability* for this research includes: The discussion throughout the thesis regarding the rationale for the research, research design methodology, justification of research questions and data collection methods used, so it can be assessed in other research contexts.

- *Confirmability* for this research includes: Following good practices on data collection, data analysis and ethics.

- Adequacy of evidence criteria include:
Amount of evidence, Adequacy of variety of evidence, Adequacy of discomfort and Adequacy of interpretation.

- *The amount of evidence for this research includes:* Going beyond the typical 20-30 interviews often seen as required by leading qualitative researchers – 42 interviews were undertaken.

- *Adequacy of a variety of evidence* for this research includes multiple participants from multiple organisations were interviewed.

- *Adequacy of discomfort* for this research includes Consideration of data analysis with multiple iterations of data codes undertaken.

- *Adequacy of interpretation* for this research includes Many hours of consideration undertaken with data analysis when building codes, categories and themes (assertions) were undertaken.

Table 3.13: A summary of concepts for judgement of research.

The next topic for this chapter is the importance of research ethics. This is essential to show *no harm* results from the undertaking of the research and a *duty of care* was followed in undertaking the research.

3.10- Consideration of Research Ethics

3.10.1 Discussion on research ethics

The principle of protecting from harm must be the overriding principle when undertaking social research, as Petra et al., (2010, p.107), state a '*duty of care*' must be maintained at all times to ensure the integrity of the research. Undertaking the research, the researcher should ask themselves: '*Whom do I owe a duty of care, and what is it*' (Petra et al., 2010, p.107). This thought remained paramount for this research. Additionally, Thomas (2017, p.52) does raise the interesting point, that the researcher should consider no harm to themselves and avoid dangerous situations such as meeting strangers who have not been introduced. All interviews for this research were undertaken remotely via telephone or online.

Wiles (2013, p.5-6) defines qualitative research ethics as '*moral behaviour in research contexts*' and provides guidelines, codes of practice and frameworks for researchers to think about challenges and dilemmas that they face undertaking research. Although there are many practical tools for ethical assessment, such as Seedhouse's ethical grid (Stutchbury and Fox, 2009), there is no definitive guidance on research ethics; however, there are many codes of conduct and guidance depending on the research context. Thomas (2017, p.43) gives a favour of these listing ethics approaches from the British Educational Research Association, General Medical Council and the British Psychological Society amongst others. These essential highlights the principles of '*duty of care*'. Standard ethical forms were completed and returned by the researcher to the appointed university ethical compliance officer, outlining the conduct of interviews including risks and mitigation.

Saunders, Lewis and Thornhill (2019, p.264) outline specific ethical considerations at various stages of research. These are illustrated in Table 3.14.

Research	Ethical consideration	Implemented for this research
<i>Design</i>	Getting participants' informed consent	<i>Participants were supplied with a consent form so they understood why the research was being conducted (Appendix D).</i>
<i>Design</i>	Honesty should be paramount. Participants have the right to an honest relationship	<i>Participants were given information sheets outlining the research aims and what their participation involves (Appendix E).</i>
<i>Design</i>	Respect vulnerability. Beware of sensitive situations and people	<i>Participants were informed they did not have to answer a question if it caused them distress and that they could withdraw their consent to their interview being used after 14 days. This period is used for participants to reflect on any answers they provide (Appendix E).</i>
<i>Data</i>	Importance of confidentiality. Non-disclosure of information which might be privileged	<i>Research data was kept under strict data management procedures and password protected (Appendix E).</i>
<i>Data</i>	Causing no harm. Do not put your participants in situations of potential distress	<i>Participants were not put in situations of potential distress. They could withdraw from the interview anytime (Appendix E).</i>
<i>Data</i>	Use of collected data and unauthorised use of data is not permissible	<i>Data is only used for research being undertaken (Appendix E).</i>
<i>Data</i>	Compliance with legislation	<i>All data collected was ultimately protected by the Data Protection Act 2018.</i>
<i>Findings</i>	Confidentiality and anonymity. Right to privacy	<i>All the data was atomised and pseudonymised to protect participant's identities.</i>
<i>Findings</i>	Reporting of harmful or misleading conclusions	<i>Respect participants within the do no harm principle.</i>

Table 3.14: Ethical considerations for this research (adapted Saunders and Lewis, 2018, p.76-83).

The principles illustrated in Table 3.14 essentially highlight the *trust* principle for participants. This includes avoiding embarrassment to participants, applying pressure to participate, and issues around trust and confidence (Cameron, 2011, p.462). These concerns are respected by this research and researcher. These may be illustrated in Appendix D and Appendix E, allowing the participant to have trust in the interview process.

Issues such as the confidentiality of participants and institutions and the control and use of data are discussed by Thomas (2017, p.46) who remarks that confidentiality should not be breached or compromised and anonymity always remained. This can be undertaken by use of codes, pseudonyms and, or changing of names.

This strategy was paramount for this research. This was undertaken utilising NVIVO CADQAS for project management. Thomas (2017, p.46) outlines general data protection issues such as keeping data secure, only using data appropriately and not passing data to anyone else, as good data practices. Again, this guidance was followed by this research with the completion of a data management plan submitted to an ethical compliance and data management office for approval.

Issues such as conflict of interest (and deception) are also tackled by Thomas (2017, p.45), who notes these must be explicitly declared before the research is undertaken and clearance is obtained. For this research, an information sheet to participants and a consent form were emailed were used which explicitly outlines what taking part in the research involves for participants (also see Appendix D and Appendix E).

In the execution of this research, appropriate ethical protocols and guidance were sought from appropriate university ethical bodies. This included good practice seminars and statements on general data protection in line with the UK General Data Protection Act 2018. The principle of '*do not harm*' is paramount within a duty of care.

3.10.2 Discussion on the ethics of this research

The Data Management plan submitted for this research highlighted compliance with current UK data protection legislation and data management best practices concerning the anonymity of data (Saunders, Kitzinger and Kitzinger, 2015) and password protection.

Specific interview ethical considerations for this research include adhering to a non-disclosure policy on the name of the participants in the interviews and their organisations with pseudonyms being utilized for both staff and organisations (Saunders, Kitzinger and Kitzinger, 2015; Thomas, 2017, p.46; Saunders and Lewis 2018, p.76). Cassell (2009, p.510) highlights other ethical issues of interviewing such as inappropriate disclosure of either personal or organisational information. However, Cassell (2009, p.510) believes as long as these are kept confidential, by atomization and use of pseudonyms, there should be no conflict of interest.

Petra et al., (2010, p.107) outlining the principle of ethical informed consent state: “*potential participants should always to informed in advance and understandable terms of any potential benefits, risk, inconvenience or obligations associated with research*”. According to Gesualdo, Daverio, Palazzani and Demetriou (2021) informed consent by participants leads to a better understanding of the aims of the research and highlights any ethical concerns of participants. Thomas (2017, p.47) believes informed consent allows for an *active decision* by the participants to take part in the research, knowing that ethical processes are in place to protect their well-being. This can then lead to a better level of trust concerning the research and researcher.

Throughout the research, good ethical practice on atomization and the use of pseudonyms for data was upheld, as highlighted by Cassell (2009, p.510). Data Management for this research followed guidance on UK data protection legislation. Informed consent forms outlining the research were given to the participants, stating the research aims and additionally, their right to withdraw from the research and have their data deleted. Appendix D (Participant consent form) and Appendix E (Information sheet for participants) illustrate the various consent forms emailed to interview participants before being interviewed by the researcher. If no participant consent form was returned, then no interview was undertaken. For all 42 interviews undertaken a participant consent form has been stored by the researcher.

The approach to ethics is very important in the execution of qualitative research, as it increases the trustworthiness and adequacy of evidence of the research (Section 3.9). This also protects the researcher from allegations of misconduct from participants. This is seldom mentioned and discussed in journal articles on service innovation, as it is a *taken-for-granted* concept. However, with research undertaken at the doctorate level, this must be discussed, acknowledged and seriously considered, as the researcher is deemed inexperienced in real-world issues and potential problems of qualitative research. Therefore, the extended discussion for this research.

Important concepts such as: '*Whom do I owe a duty of care, and what is it?*' (Petra et al., 2010, p.107) and the requirement in this research for confidentiality and anonymity of participants and organisations undertaking qualitative research have been discussed.

3.11- Summary of Chapter Three (Research Design and Methods)

Section 3.1 of this thesis discusses the research design and methods utilised for this research based on the work of Morrow (2000) and Maxwell (2008) and Roberts, Dowell and Nie (2019). Section 3.2 section outlines the Maxwell (2008) model used to generally frame the research designs and methods chapter.

In section 3.3 the existing knowledge and perceived research are outlined. Presented in this section are some of the key academic papers consulted for the research undertaken. In section 3.4, the paradigm for the research is outlined. A brief discussion of types of research approaches is given: Deductive, Abductive, and Inductive.

The inductive approach is highlighted for this research as this allows for the interpretation of the data collected to build patterns, assertions, and theory construction from qualitative semi-structured interviews, based on the real-world socially situated experiences of organisational staff (front-line employees'), managers and service innovation consultants in the service innovation process.

An outline of the research approach to the research questions is outlined in section 3.5. A restatement of the research questions is also given.

In section 3.6 data collection is discussed. This is based on semi-structured interview questions. It should be noted, interviews have had to follow UK government restrictions on COVID-19. The approach to interviewing is discussed as well as the approach to sample size and data saturation. This was contested to lay between 12, 20 and 40.

The typical sample size and data saturation for similar research in the field of front-line employees (Karlsson and Magnusson, 2015) was 20 participants. For this research, 42 interviews were undertaken. A table of interview question rationale and participants is given.

In section 3.7 the undertaking of data analysis is discussed. This includes steps of inductive research undertaken (Figure 3.3). The main discussion of the section centres on building and discovering of theme, which allows coding, categorisation, and assertions to be made leading to theory building based on the interpretation of empirical data analysis.

In section 3.8 the discussion on data analysis using code book development is outlined. Here the framework offered by Roberts, Dowell and Nie (2019) is utilised to discuss how the data collected was processed. Principally, the transcription of participant interviews was loaded into NVIVO CAQDAS (Computer-Assisted Qualitative Data Analysis) software to be project-managed and collated. NVIVO also assisted in the analysis of data to build researcher constructed categories and themes. The *interpretation of data* is the work undertaken by the researcher.

In section 3.9 the criteria for this research are based on measures assessment commented upon by Gioia, Corley and Hamilton (2012), Bryman and Bell (2015), Batt-Rawden, Björk and Waaler (2017). These measures include trustworthiness with criteria of credibility, dependability transferability and confirmability. The second assessment of good quality qualitative research includes adequacy evident based on work by Gioia, Corley and Hamilton (2012) and Norwell, Norris and White et al., (2017).

In section 3.10, the importance of ethical research was discussed, with the overriding principle of '*do no harm*' highlighted for research participants to establish trust in the collection of data.

The next chapter of this thesis outlines and includes the research discussion and findings. Analysis was undertaken using an inductive (interpretive) approach. This allowed the building of a theme and the exploration and discovery of the data collected.

Chapter 4: DISCUSSION AND FINDINGS

“Qualitative researchers should strive neither to overestimate nor to underestimate their efforts but to take seriously their responsibility to describe and study what those effects are” (Patton, 1999)”

This chapter on discussions and findings is broken down as follows:

- Section 4.1: Introduction to Discussion and Findings
- Section 4.2: Thesis Research Question
- Section 4.3: Research Question 1 (Organisational arrangements)
- Section 4.4: Research Question 2 (Staff allocation)
- Section 4.5: Research Question 3 (Skills and knowledge)
- Section 4.6: Service Ecosystems Perspective – Consolidation
- Section 4.7: Empirical Data Analysis: Consideration of Potential Outliers
- Section 4.8: Summary of Chapter Four (Discussion and Findings)

4.1- Introduction to Discussion and Findings

The chapter discusses and outlines the empirical data analysis utilised for the research. This analysis is undertaken within the context of service ecosystems meso-level (organisations arrangements and staff allocation) and micro-level (skills and knowledge).

It should also be noted within the following sections in this chapter, that the empirical data analysis is framed and discussed within the context of each research question.

This was undertaken to scope and frame the data analysis.

Additionally, each section is broken down into thematic table analysis, empirical participant interview statements and organisational observations. These *are the results of* the interpretive (code book) analysis undertaken in NVIVO. These are utilised to discuss and highlight important views, experiences and understanding from research participants. Suitable quotes from participants are used to illustrate specific points. The thematic table analysis and empirical participant interview statements do not necessarily need to be read. The organisational observations highlight the role and organisational sector to give a context and assist the interpretative analysis at a service ecosystem level.

The data analysis is then discussed in the context of specific literature relevant to the analysis. A synthesis of the data analysis and literature is then further discussed.

Figure 4.1 illustrates and outlines the research approach to the discussion and findings section.

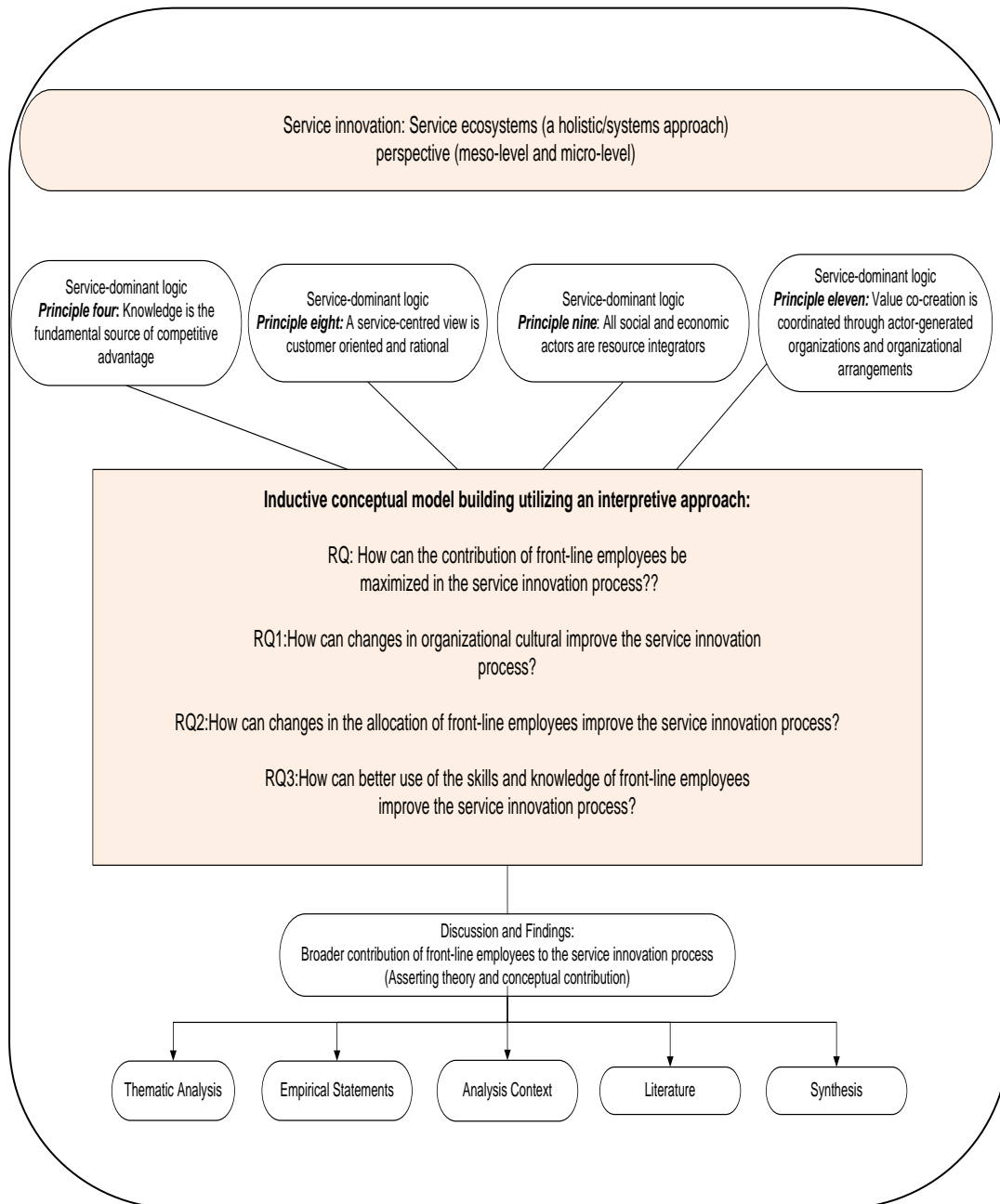


Figure 4.1: Construction of discussion and findings for this research.

Additionally, section 4.6 consolidates some of the service ecosystem analysis. Section 4.7 illustrates potential outliers from the analysis.

4.2- Thesis Research Question

Thesis research question: How can the broader contribution of front-line employees be maximised in the service innovation process?

4.2.1 Discussion of empirical data findings: Research question

The theory building of this thesis combines service-dominant logic principles, including a service ecosystems perspective, to explore the maximisation and broader contribution of front-line employees in the service innovation process and how organisations can operationalise this.

The inductive theory building initially starts with service-dominant logic principle eight a service-centred view that is customer-orientated and rationale (Vargo and Lusch, 2004). This emphasises a service and a rationale lens for the focus of customer engagement. This is the primary role of front-line employees.

Co-opting service-dominant logic principles principle eleven, value co-creation is developed through actor-generated organisations and organisational arrangements, stresses the need to add organisational cultural understanding to the service ecosystems perspective (Vargo and Lusch, 2016).

Service-dominant logic principle nine, all social and economic actors are resource integrators (Vargo and Lusch, 2016) further adds to the service ecosystems perspective by highlighting the need to think about resources to be utilised in the service innovation process. Vargo and Lusch (2004) distinguish between operand resources, for example, technology and operant resources for example staff.

In service-dominant, logic Vargo and Lusch (2004) strongly link principle nine with principle four (knowledge is the fundamental source of competitive advantage). Taking this approach to service ecosystems leading academics such as Vargo, Wieland and Akaka (2015) stress the organisational arrangements and resource integration aspects of service ecosystems.

Building on service-dominant principles, research question 1 explores and discovers the theme of organisational social and cultural understanding. This is the organisational environment where front-line employees may broadly contribute to the wider service innovation process.

Research question 2 stresses staff allocation regarding greater involvement, engagement and facilitation. This research explores staff allocation of front-line employees in their broader contribution to service innovation. These are the processes, procedures and routines of staff allocation in the service innovation process. This was discussed in section 2.7 under sensing, seizing and reconfiguring.

Research question 3 highlights the exploration and discovery of front-line employees' skills and knowledge practices in this context. This thesis adds the theme of staff skills and knowledge to the service ecosystems perspective in the context of front-line employees' broader contribution to the service innovation process.

In summary, the service ecosystems perspective is taken from concepts and principles of service-dominant logic (Vargo and Lusch, 2004, 2016). Further to this Vink, Koskela-Huotari, Tronvoll, Edvardsson and Wetter-Edman (2021) urge utilising service-dominant logic principles to conduct further systems, service ecosystems and empirical data investigation into service innovation. Additionally, Karlsson and Skälén (2015) and Engen and Magnusson (2018) having investigated the contribution and role of front-line employees' also urge further empirical research. This was broadly discussed in section 2.10.

Combining thinking based on empirical data at the service ecosystems levels of meso-level and micro-level (with associated organisational arrangements, staff allocation and skills and knowledge) can then promote a systems approach. This perspective can then lead to better service innovation outcomes.

4.3- Research Question 1 (Organisational arrangements – Meso-level)

Thesis research question 1: How can changes in organisational culture with respect to front-line employees improve the service innovation process?

4.3.1 Discussion of empirical data findings: Research question 1

The research question for this section explores the culture of organisations regarding front-line employees in their broader contribution to the service innovation process.

Within this context, the research question centres on how organisations think about service innovation. How organisations engage with service innovation. How organisations approach systems thinking and service innovation. The theory background of the empirical data collection rests within service-dominant logic principle eleven: 'value co-creation is coordinated through actor-generated organisations and organisational arrangement' (see section 2.6 and Vargo and Lusch, 2016). It is additionally framed in the context of service-dominant logic principle eight (a service-centred view is customer-orientated and rationale, Vargo and Lusch, 2004) and service ecosystems at a meso-level.

Further discussions consider the constructed underlying categories (concepts) of *culture appreciation*, *strategy engagement* and *systems context* categorised discovered during the undertaken of empirical data analysis. A focused literature review is undertaken on papers centring on the underlying concepts to frame the understanding of the empirical data analysis. A brief synthesis of section findings is made.

The thematic data analysis for this section is undertaken the from research code book. The empirical data analysis is taken from participant statements transcribed and loaded into NVIVO. The analysis is principally taken from 6- Organisational Arrangements (Figure 4.2).

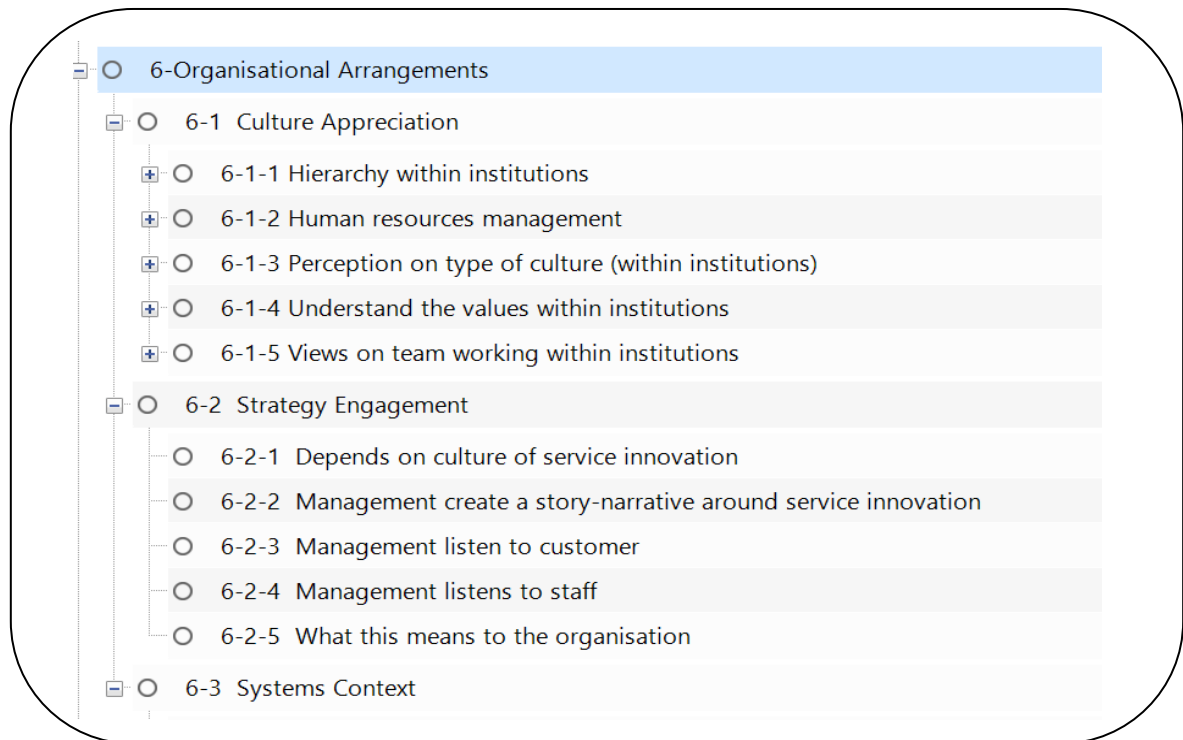


Figure 4.2: Organisational Arrangements - Code book extract.

Investigation of second, third and fourth-order empirical codes gave the following *Interpreted* and *subjectively* constructed second-level concepts. Reference James, (2012), Saldaña, (2016, p.7-8). Also, reference 3.8.1.7 interpretive results:

(6.1) *Culture appreciation*

(6.2) *Strategy engagement*

(6.3) *Systems context*

These second-level categories are then utilised to further frame analysis for theme building, exploring and discovering from the empirical data.

4.3.2 Research question 1 (Culture Appreciation – Meso-level)

Code book thematic analyses for Culture Appreciation is given in Table 4.1.

	(Organisational arrangements – Culture Appreciation) RQ-1: How can changes in organisational culture with respect to front-line employees improve the service innovation process?
Service ecosystems Finding (ARQ1)	<i>Principle Eight: A service-centred view is customer oriented and rationale.</i> Front-line employees understand the customer journey, best of all within an organisation.
Organisational arrangements Findings (BRQ1)	<i>Principle Eleven: Value co-creation is coordinated through actor-generated institutions and institutional arrangement.</i> The environment of culture involves shared beliefs, norms and values that dictate how much front-line employees are 'allowed' to contribute (participate). The culture (set by management) determines the service innovation environment. This then sets the contribution front-line employees may make. An inclusive environment allows front-line employees to have a greater say over the service innovation process - And so more in what they can contribute. Need to understand the fear of change and the scheduling of change. Understand the business processes which are changing (what processes affect the service delivery to the customer and hence have the largest impact on front-line employees).

<p>Front-line employees' contribution Findings (CRQ1)</p>	<p>Managers have no understanding of the service innovation process consequentially the contribution made to the service innovation process by front-line employees.</p> <p>Management should have a clear understanding of the service innovation process and the role of front-line employees' within it. Acknowledgement of front-line employees, as they made a difference in service innovation, and they do a good job.</p> <p>Give front-line employees the knowledge to deliver (participate) in service innovation and have a clear understanding of the service innovation process.</p> <p>Organisations must make their front-line employees feel valued. This includes motivation to encourage and inspire front-line employees. This includes regular communication with staff/front-line employees, and they are well-managed.</p>
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Table 4.1: Thematic analysis: RQ1 (Culture Appreciation).

Empirical participant interview statements are given in Table 4.2.

Consultant-4	RQ1: Organisational Arrangements (1:1) So, culture is everything, really, which is why I came back to values. It is absolutely responsibility overboard and executive team to understand the current culture, understand what culture they want, understand the risks to the common culture, and therefore use that to shape what values they want. And then they should recruit for it and assimilate for people who don't align with it. Okay, but this is not negotiable.
Staff-11	(1:2) How to get things done in a place you know you need to understand the culture because they're whilst there may be sort of written out procedures how things happened depends a lot on some cultural aspect. Depends a lot I think on personalities and people.
Staff-4	(1:3) Now we're in in this in the current world we live in and we move in a very multicultural world where there's different cultures, different people from different backgrounds, different ethnicities, genders, which is great. It's. It's, it's great because you'll be very like just aware of like just understanding different cultures as opposed to being in all people think like there. So, all people think like that. 'cause that's not, that's not. That's not that's not the case, so it's understanding and being aware of it.
Staff-12	(1:4) And you need to create an environment where this new service is seen as beneficial to people who have to deliver the servers and the people who deserve this is being delivered and they receive a sub delivered servers.
Consultant-5	(1:5) Organisational culture, and I think individual competencies as a part of it. When you have individual contributors and I think the people that are part of it, they need to be respected amongst their peers. And that's a bit of a bizarre von. But if they're the ones that are going to be advocates for the change, then people need to want to listen to them.

Table 4.2: Empirical data: Research RQ1 (Culture Appreciation).

Code book thematic analysis:

The thematic analysis of ARQ1 highlights that from a service ecosystems perspective, many front-line employees understand the customer journey well. Granted this may be a specific customer or customer type. This is often not understood by senior organisational managers. This is emphasised by BRQ1 where the culture of an organisation sets the understanding and importance of front-line employees' contribution to service innovation. Where these principles are appreciated there is recognition for the broader contribution of front-line employees to the service innovation process.

As CRQ1 notes senior organisational management needs to understand change and the effect of change on customers and front-line employees to service innovation. An organisational culture which recognises and makes front-line employees feel valued is essential. Front-line employees need to be suitably managed.

Empirical data analysis:

The remark (1:1) (found in Table 4.2) stresses the '*absolute*' need for senior organisational management to understand the culture. Remark (1:2) stresses that only with the understanding of culture, that: '*to get things done in the place you know you need to understand the culture*'. This would include service innovation changes. However, as remark (1:3) notes appreciation of culture is difficult. Nevertheless, as remark (1:4) highlights organisations should strive to improve the cultural environment of (service) innovation, which allows front-line employees to contribute. Also, see remark 1:5.

Analysis on the context of organisations and participants:

There were no comments from organisational managers regarding culture. This might be because they thought it was self-evident. There was also no comment from middle-sized organisations. Service innovations consultants were aware of the importance of culture. As consultant-4, with a background finance notes: "So, culture is everything". Both Staff-11 and Staff-12, in the university sector, also highlighted culture as important. As Staff-12 noted: 'You need to create an environment where this new service is seen as beneficial to people'.

What the literature has to say on Culture Appreciation

According to Storey and Hughes (2013), there is a strong link between organisational culture, staff involvement, and successful innovation. This was also found by Baradarani and Kilic (2018), who emphasise the importance of organisational culture in the service innovation process, particularly the central role front-line employees undertake. The research by Raajpoot and Sharma (2021) suggests that a strong organisational innovative culture leads to more successful outcomes. However, they found understanding customer needs did not necessarily result in better chances of success. Nevertheless, as Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd (2021) note service innovation is about delivery excellent and delivery above customer expectations for a greater competitive advantage.

Research by Hidalgo and Herrera (2020) notes, that in the service sector, there is an increasingly perceived gap between how management of innovation is understood and managed by organisations. This is particularly highlighted concerning information communication technology (ICT) in knowledge-based organisations.

Additionally, research by Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd (2021) highlights the importance of culture, senior management, and the front-line employees' involvement in the service innovation process.

Synthesis: Culture Appreciation

The empirical data findings suggest, within organisations, that service innovation is not understood at a cultural level and consequentially the broader contribution that front-line employees could make to the service innovation process is not understood. A review of the literature found there is a strong link between culture, the involvement of staff and successful innovation (Storey and Hughes, 2013). Where the cultural environment (norms, values and beliefs) within an organisation *recognises* or *appreciates* the contribution of front-line employees to the service innovation process, there are better service innovation comes. This is also covered in the literature review regarding the organisational arrangement of culture found in section 2.6 and section 2.9.1.

Service-dominant logic principle eleven (Vargo and Lusch, 2016) stresses the requirement for organisations to consider culture as important. This sets the context within which service innovation and the consideration of front-line employees' broader contribution is undertaken. However, as highlighted, organisational culture concerning service innovation front-line employees is not *well understood* or seen *as important*. The organisational default is to *think* in terms of technology.

4.3.3 Research question 1 (Strategy Engagement - Meso-level)

Findings from thematic analyses for research question 1 (Strategy Engagement) are given in Table 4.3.

	<p>(Organisational arrangements - Strategy Engagement)</p> <p>RQ-1: How can changes in organisational culture with respect to front-line employees improve the service innovation process?</p>
<p>Service Innovation Findings (DRQ1)</p>	<p>Front-line employees involved with changes due to COVID-19. These are large social organisational changes as to how service are delivered to customers involving new concepts on how organisations operate.</p> <p>There is a requirement for change management and senior management should not be involved with the day-to-day management of a project.</p> <p>Front-line employees need to feedback their knowledge back into organisational strategy.</p> <p>Feedback from front-line employees' needs to '<i>fit</i>' organisational strategy. However, this presupposes that senior management has a strategy for service innovation. If there is no overall strategy for service innovation (understanding) senior management may not see the need/requirement for service innovation (and front-line employees' involvement with strategy).</p> <p>Feedback from front-line employees should be incorporated into the strategy. Here improvements for service innovation (where it can be improved) increase knowledge about customers.</p>

<p>Service-dominant logic Findings (ERQ1)</p>	<p>Co-create (Customer engagement):</p> <p>Organisational managers underestimate the role of front-line employees (and overestimate their use of strategy). Here is a lack of consultation to discover customer sentiments – and requirements.</p> <p>Getting feedback from customers, which can then be utilised to improve service delivery through service innovation should be utilised by middle managers, senior managers, and service innovation consultants, in design as they provide valuable insights.</p>
<p>Service ecosystems Finding (FRQ1)</p>	<p><i>Principle Eight: A service-centred view is customer oriented and rationale.</i></p> <p>Front-line employees understand the customer journey, best of all within an organisation.</p>
<p>Organisational arrangements Findings (GRQ1)</p>	<p><i>Principle Eleven: Value co-creation is coordinated through actor-generated institutions and institutional arrangement.</i></p> <p>Senior management needs to listen to staff (front-line employees). There is a disengagement with managers on change.</p> <p>The requirement by management to trust staff and trust staff to undertake their job. Humane empathy to understand the customer can be used to help design a better service, where frequently technology is put first without thought of how the customer benefits.</p>

Front-line employees' contribution Findings (HRQ1)	Senior managers lack understanding of service innovation, as they have no communication with front-line employees and believe they do not need to know how service innovation operates, as they are only involved with strategy and have no involvement with operations management.
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Table 4.3: Thematic analysis: RQ1 (Strategy Engagement).

Transcribed participant interview statements are given in Table 4.4.

Manager-7	<p>RQ1: Strategy engagement</p> <p>(1:6) I think I probably turn that on its head in as much as I say that so often people who represent service are not necessarily there when the strategy is being put together.</p>
Manager-16	<p>(1:7) It's those people that because they've got that almost vested interest in it rather than the strategic sort of like you know, well, this just needs to happen. It's the people that are kind of going to see the most in or could see the most improvement out of the service.</p>
Manager-16	<p>(1:8) Align any sort of improvement innovation that you're trying to put forwards with. You know, as many of those sorts of strands of strategies as you can. Then it's certainly going to stand, you know, for you if you can show. Demonstrate suggests how it might improve or meet any of those things. Then you certainly sound a better chance.</p>
Manager-7	<p>(1:9) And you know you have to have sound it out with people whether they do, they might not think they might not want to do. It may not be in there, but they can get it from the point of view of delivering additional service value or whatever they need to be on site. So I think you need to make sure that your you know your idea is understood and sponsored at the right levels. Be that the frontline folks or broader up the organisation.</p>
Manager-1	<p>(1:10) I think the senior managers need to listen to the junior staff more and engage them in. In deciding the direction in which the company should go, especially those who have been there for some time and they've been through the different processes, you know, they could see what's worked and what doesn't work.</p> <p>(1:11) Yeah, but sometimes some of the stock is told that is that those at the top? Then there he goes in front of them. Yeah. And even though they can see that things are going to work. It was sort of pushed on. It caused them to stop looking, look failure, if you know.</p>
Consultant-12	<p>(1:12) Your problems that are very, very high level. You know it's from a strategy point of view to see if there's a CEO aware of CFO aware of what we're doing as an organisation. Does that align with the strategy of the organisation?</p>
Staff-6	<p>(1:13) Quite often our boss turns around and said, I don't know what you're talking about. Yeah. Everybody in the room knows what we're talking about, except the one person who could make the choice and decision that's going to make the decision.</p>

Table 4.4: Empirical data: RQ1 (Strategy Engagement).

Code book thematic analysis:

The thematic analysis of DRQ1 (found in table 4.3) notes large changes in service innovation strategy will be required following the COVID-19 pandemic. However, front-line employees' feedback needs *to fit into and feedback* into overall organisational strategy. This does presuppose that senior organisational management organisations have a strategy for service innovation and are willing to engage with front-line employees. As ERQ1 notes organisational managers *overestimate* their use of strategy and *underestimate* the role of front-line employees. Front-line employees are ideally placed as customer relationship staff to tell if strategy needs rethinking (FRQ1).

Both ERQ1 and FRQ1 emphasise principles that highlight a service ecosystems understanding of the customer is important.

The finding of GRQ1 notes the need to trust front-line employees' feedback as they understand the customer perspective within the service innovation process. However, as HRQ1 notes senior organisational managers (who set strategy) have no regular contact with front-line employees and so do not understand where front-line employees can further contribute to the service innovation process.

Empirical data analysis:

The remark (1:6) suggests that decisions on strategy often lack input from people who have the most knowledge on service – such as front-line employees. This often results in poor service innovations (Remark 1:7 – 1:9). Remark (1:10) stresses the requirement for senior organisational managers to 'listen' and engage with staff.

However, as remark (1:11) further suggests organisations frequently fail to do this. This as remark (1:12) notes, leads to the thinking that strategy does not need correcting. Nevertheless, staff (front-line employees') know there are many service issues which need resolving (Remark 1:13).

Analysis of the context of organisations and participants:

Several managers (Manager-7 and Manager-16) from the financial and university sectors commented on the requirement to engage staff, such as front-line employees' in a dialogue regarding strategy. Consultant-12, also from the university sector believed strategic engagement to be important. The observation from Staff-6 (health) is significant, as it illustrates a breakdown in strategic engagement: "except the one person who could make the choice and decision that's going to make the decision". There were no significant comments from participants from small or middle-sized organisations.

What the literature has to say on Strategy Engagement

According to the researchers Bettencourt, Brown and Sirianni (2013), true service innovation strategy involves *shifting back* service innovation processes towards a customer-centric focus to achieve better service outcomes and a competitive advantage. This is service-dominant logic as outlined by Vargo and Lusch (2004, 2016). Ottenbacher and Harrington (2010) in their study on achieving successful innovation in service, believe broader research should be undertaken into the inclusion of staff in service innovation strategy. They conclude, there is a need for greater staff engagement. However, this would be dependent on overall organisational strategy.

Nevertheless, Engen and Magnusson (2015) argue that front-line employees should be aware of organisational strategy to understand organisational long-term aims and objectives.

Karpen, Bove and Lukas (2012) believe increased communication, increased social understanding of the service innovation process and better strategic choice result from a greater understanding of service-dominant logic principles. Strategic choice was also considered by Lightfoot and Gebauer (2011). Undertaking empirical research, they found that there were better service innovation outcomes where the service innovation process was understood strategically.

Furthermore, as Rubalcaba et al., (2012) contend when strategically rethinking service innovation, organisations *actively* need to consider the role of front-line employees in the service innovation process. This needs to be both from the perspective of customer engagement for co-creation, co-production and the increased generation of service innovation ideas (Lages and Piercy, 2012). Also, see section 4.5 on customer domain expert.

Lastly, Taghizadeh, Rahman, Hossain and Haque (2020) found that where management strategy did not involve staff there was little incremental service innovation. There needed to be more autonomy for teams and staff, such as front-line employees. Secondly, where there was more cooperation and sharing, particularly knowledge organisations were more innovative. See section 4.5 regarding knowledge sharing.

Synthesis: Strategy Engagement

The underestimation of the important role front-line employees play in service innovation is highlighted in the empirical data analysis. It was discovered that organisations failed strategically to understand the service innovation process and so consequently failed to engage customers in principles of co-creation, co-production and value-added (service-dominant logic principles six and seven, Vargo and Lusch, 2004). These failures highlight the deficiencies regarding organisations (senior organisational managers) in *thinking* about front-line employees, service innovation and service-dominant logic.

The literature highlights that organisational strategy on service innovation should shift to a greater customer focus perspective (service-dominant logic, Table 2.3, Vargo and Lusch, 2004). Additionally, literature suggests there is a need for a greater strategic understanding of the service innovation process and the contribution of front-line employees.

4.3.4 Research question 1 (Systems Context – Meso-level)

Thematic findings for research question 1 (Systems Context) are given below in Table 4.5.

	(Organisational arrangements – Systems Context) RQ-1: How can changes in organisational culture with respect to front-line employees improve the service innovation process?
Service Innovation Findings (IRQ1)	Through customer contact knowledge (domain knowledge) front-line employees can provide input into service improvement. They understand if the service is being delivered well to the customer. Front-line employees must be involved with service innovation, otherwise, innovation outcomes are poor. The engagement of front-line employees in service innovation is not always considered. This is because of a lack of consultation/listen/trust.
Service ecosystems Finding (JRQ1)	<i>Principle Eight: A service-centred view is customer oriented and rationale.</i> Need for a holistic approach to front-line employees' involvement in the service innovation process. Joined-up processes and joined-up approach to requirements.
Organisational arrangements Findings (KRQ1)	<i>Principle Eleven: Value co-creation is coordinated through actor-generated institutions and institutional arrangements.</i>

	<p>A better way to do things (service innovation) requires managers to understand the importance of front-line employees' within the institution and the service innovation process. Knowledge sharing is a cultural aspect (which should be) led by senior management.</p> <p>The increased knowledge of business processes/procedures helps front-line employees understand how the organisation operates (a systems approach), so can understand how to improve the service/service innovation process and assist customers more effectively.</p> <p>Front-line employees could engage more in the service innovation process.</p>
<p>Front-line employees' contribution Findings (LRQ1)</p>	<p>There is no understanding of the organisational-wide impact of service innovations management is undertaken in a silo manner.</p> <p>There are lots of technology websites, Mobile Apps etc, front-line employees often assist customers with the use of technology. There is still a need for the human element in service deliver and service innovation. Technology is often seen by customer as problematic and want a solution from a human.</p>

Table 4.5: Thematic analysis: RQ1 (Systems Context).

Empirical participant interview statements for Systems Context, are given in Table 4.6.

Manager-7	<p>RQ1: Systems Context</p> <p>(1:14) I think that that is partly in play, but I think there's a more fundamental to the impediment here, and that is people are just thinking very typically that they're thinking internally thinking you're right. I think in first and foremost their own service area. If you like, and maybe their brain is prepared enough to fan out to a few other internal areas, but what they're not good at doing is to transfer themselves into the minds of the custom.</p> <p>(1:15) So, I think organisations typically find it difficult to come up with ways that they can engage people at all levels in the service, innovation, service, development, kind of process.</p>
Consultant-9	<p>(1:16) I think sometimes maybe there needs to be a better understanding in the wider organisation of what the roles of those people are. Sometimes they don't necessarily need to think about the implications, but this should care that there are implications and that somebody has to deal with them. What concerns me a little bit sometimes is that people say, well, that's detail in that should just be sorted. Well, actually, yeah, it probably should, but that doesn't mean there's no effort being required to do it. These things, and not just assume stuff is magically going to happen with no effort being required.</p>
Consultant-12	<p>(1:17) Sometimes it beggars belief how some of these top-level people actually think.</p>
Consultant-3	<p>(1:18) But I agree would be in order to have a better service. It will be key for them to understand the whole picture and who is doing what and how relevant is this bid in in relation to the other one to the next one.</p> <p>(1:19) Surely this is. You should know this stuff. You know you should be thinking about this stuff and how come you're not able to articulate it to us, but it is. It is. Yeah, some organisations are very good at it.</p>
Consultant-2	<p>(1:20) I don't understand what that service is trying to deliver then are more likely to deliver the wrong thing. And so, understanding the business, understanding what the business is trying to do in the marketplace or the organisation because it's not really a business.</p>
Consultant-12	<p>(1:21) Digital transformation path is and you're getting them to engage and think about what OK as an organisation very top level you know what are you trying to do? What problems are you trying to solve at the middle level where heads of departments trying to do something.</p>
Staff-11	<p>(1:22) We've got to think about how we design services and institutions and organisations so that we make it easier for people to cooperate giving support each other. Uh, so we need to bring into the design of systems, bring into the design of organisations.</p>

Table 4.6: Empirical data: RQ1 (System Context).

Code book thematic analysis:

The finding of IRQ1 (thematic analysis of table 4.5) highlights that front-line employees can provide valuable input into the service innovation process. However, they are frequently not involved so the service innovation outcomes are poor.

The finding of JRQ1, Service ecosystems, notes the need for a systems approach to the involvement of front-line employees in the service innovation process. However, as KRQ1 observes front-line employees are not seen as important in the context of service innovation.

The analysis of KRQ1 further notes front-line employees could engage and contribute more to the service innovation process. This is highlighted in LRQ1, where there is no management understanding of service innovation and where organisational managers believe technology is the solution. However, customers see technology as problematic and *value* front-line employees' (human) interaction.

Empirical statement data analysis:

As remark (1:14) suggests organisations fail to consider the wider systems context on service innovation. Organisations take a firm-centric view and fail to consider the customer (customer co-create and customer value), when thinking about service innovation. Additionally, organisations find it difficult to think beyond technology and forget people when thinking about service innovation (Remark 1:15). In this circumstance the role of front-line employees in contributing to service innovation is minimal.

The remark (1:16) observes there needs to be a better understanding of the wider and broader roles of people, such as front-line employees in the service innovation process. As remark (1:16) notes senior organisational managers believe stuff happens by *magic* and as remark (1:17) alludes to, this is a widely held belief.

As remark (1:18) notes, if there is no understanding of the service innovation process, the wrong service innovation gets delivered. Remark (1:19) explicitly highlights the need to understand the system context of service innovation. However, as remark (1:20) notes *few organisations are good at thinking* about service innovation (Remark 1:21).

Lastly, remark (1:22) notes the requirement for people to work together for better service design. This is where front-line employees could contribute more to improve the service innovation process. However, there must be an understanding of the systems context of service innovation.

Analysis of the context of organisations and participants:

Many comments elicited concerning systems context came from service innovation consultants. They perhaps recognised the requirement for service innovation processes to be delivered into wider organisation processes. Additional observations are highlighted by Staff-11 and Manager-7 (university and finance), who notes the need for people to “cooperate” and “engage”. This perhaps highlights a failure of organisations to take a service ecosystems perspective.

What the literature has to say on Systems Context

Work by Rubalcaba, Gallego and Hertog (2010), argue the case for a more systematic approach to service innovation, with dedicated policies to promote service innovation, beyond typical R&D development of products (Good-dominant logic), and thus prevent service failure through lack of understanding of service innovation.

Additionally, work by Woisetschläger, Hanning and Backhaus (2016) highlights the essential involvement of front-line employees in the service innovation process, and their lack of involvement results in *poor service* innovation outcomes. According to Jaaron and Backhouse (2018), the operationalisation of service innovation comprises four steps: Service conceptualisation; Customer contact; Service delivery design and Technology options.

However, organisations tend to dedicate little *time and resources* to customer contact (customer value) and by inference the involvement of front-line employees. Instead, they focus on service delivery conceptualisation and technology (Jaaron and Backhouse, 2018).

Research undertaken by Meynhardt, Chandler and Strahoff (2016) highlights it is only by taking a wider systems organisational perspective at both a meso-level and micro-level on service innovation that customer value can be realised. This includes front-line employees as customer relationship and contact staff.

The requirement for a systems and joined-up approach to service innovation is discussed by Vink, Koskela-Huotari, Tronvoll, Edvardsson and Wetter-Edman (2021).

They stress the need for a service-dominant logic, service ecosystems perspective to service delivery and service innovation, based on organisational arrangements. These form some of the key areas of exploration for this research.

Synthesis: Systems Context

The findings from the empirical data analysis regarding systems context would suggest organisations require a service ecosystems approach for the service innovation process and the broader contribution of front-line employees to the service innovation process. Work undertaken by Woisetschläger, Hanning and Backhaus (2016) highlights the importance of front-line employees in the service innovation process, not least their role in customer contact and customer relationship duties (Engen, 2020, p.131).

However, organisations fail to consider customer value and customer co-creation (service-dominant logic principles six and seven (see section 2.2.4) Vargo and Lusch, 2004). Typically, organisations take a firm and technology-centric view on service innovation (Vargo, Wieland and Akaka, 2015). The empirical data would suggest that organisations are not good at taking a systems approach to service innovation (also see Engen, Fuglsang, Tuominen et al., 2021). Taking a service ecosystems approach would improve service innovation, by further involving front-line employees, so further placing the customer at the heart of service innovation.

4.4- Research Question 2 (Staff allocation – Meso-level)

Thesis research question 2: How can changes in organisational staff allocation of front-line employees' improve the service innovation process?

4.4.1 Discussion of empirical data findings: Research question 2

The research question for this section explores the thinking of staff allocation regarding front-line employees in their broader contribution to the service innovation process.

Within this framework the research question focuses on the organisational processes, procedures and routines (also see section 2.7 on sensing, seizing and reconfiguring) leading to increased staff allocation and so improved thinking and utilisation of front-line employees in their broader contribution to the service innovation process.

The theory context of the empirical data collection rests within service-dominant logic principle nine (all social and economic actors are resource integrators, Vargo and Lusch, 2016) and from the perspective of service ecosystems service-dominant logic principle eight (a service-centred view is customer-orientated and rationale, Vargo and Lusch, 2004).

The discussion explores the second-order categories of *management vision*, *promote learning* and *assessing staff allocation*. These categories are explored in the framework of empirical data analysis. Key papers placing the analysis in context are discussed with a brief synthesis of analysis and literature is undertaken.

The thematic data analysis for section 4.4 is utilised from the research code book.

The empirical data analysis is taken from participant statements transcribed and then loaded into NVIVO. The principal analysis is taken from the code book: 5- Staff Resource Allocation (Figure 4.3).

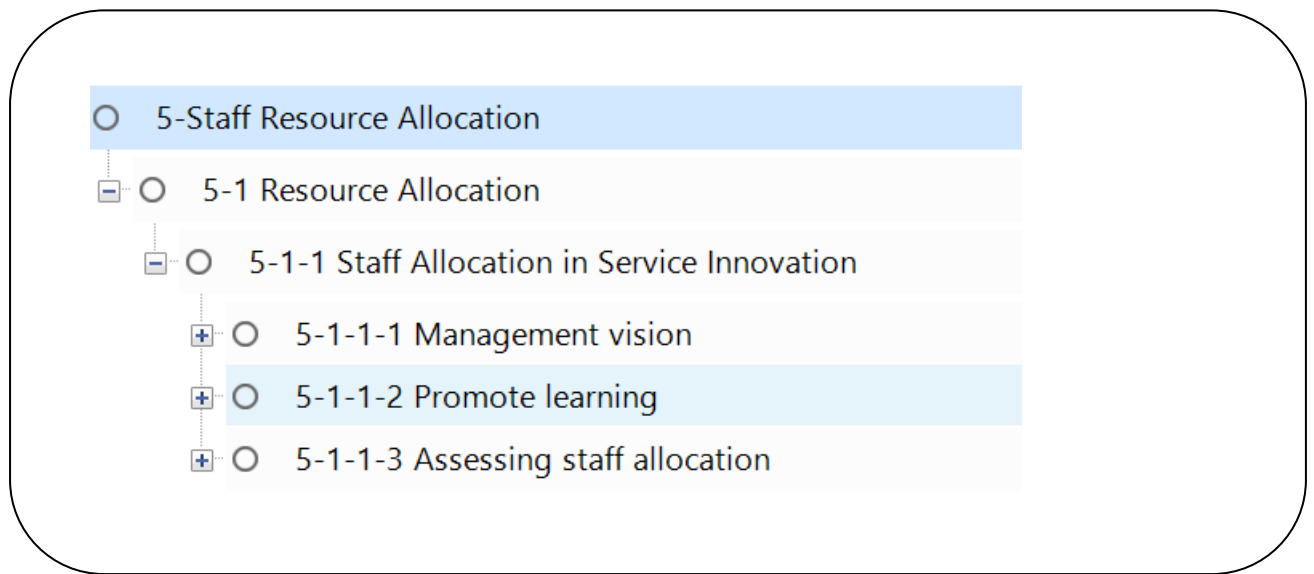


Figure 4.3: Staff Allocation - Code book extract.

Examination of second, third and fourth-order codes, gave the following *interpretation and subjective constructed* second-order concepts for the research (James, 2012, Saldaña, 2016, p.7-8). Also, reference section 3.8.1.7):

(5-1-1-1) *Management vision*

(5-1-1-2) *Promote learning*

(5-1-1-3) *Assessing staff allocation*

These second-level concepts could then be utilised to frame further research empirical analysis regarding the exploration and discovery of underlying codes and themes.

4.4.2 Research question 2 (Management Vision – Meso-level)

Thematic findings for research question 2, Management Vision are given below in Table 4.7.

	(Staff allocation – Management Vision) RQ-2: How can changes in organisational staff allocation of front-line employees improve the service innovation process?
Service Innovation Findings (ARQ2)	Need to involve front-line employees early in the service innovation process. However, there is a lack of consultation and senior managers do not listen.
Staff resource allocation Findings (BRQ2)	<i>Principle Eleven: Value co-creation is coordinated through actor-generated institutions and institutional arrangement.</i> Senior management needs to engage with front-line employees. There should be regular communication by managers on changes in business processes within the organisation and how they affect service delivery (and service innovation). Senior management needs to communicate a vision of the new service to all staff (including front-line employees). This is key to overcoming resistance to change.

	<p>Managers must supply a vision of the <i>'new world'</i> so that front-line employees can <i>'buy into'</i> the new service innovation. There is a need for a management vision and a need to communicate with front-line employees the vision of the new service. Essentially to <i>'paint a picture'</i>. Management vision can be with narrative and stories.</p> <p>Aspects of effective involvement include the management style used to manage front-line employees. The overwhelming style was to delegate including shared decision-making engaging with staff or conduct by command and control.</p>
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Table 4.7: Thematic analysis: RQ2 (Management Vision).

Empirical statements for interview statements, for Management Vision are given in Table 4.8.

Manager-1 Consultant-9	<p>RQ2: Management Vision</p> <p>(2:1) Directors and the departments and so on that we meet everyone and each one will go through what they've done or what they're going to do over the next six months or a year. So that way, everyone in their sort of directorate of a better understanding of what each other team, each of a department is doing. Yeah. And in that respect, that's good</p> <p>(2:2) its getting them to believe in it, getting them to feel that it's good for their role and good for the alright.</p> <p>(2:3) I absolutely think communication is one of the key.</p>
Manager-15	<p>(2:4) And then you also kind of portray why we're changing something. Sometimes people just go and impose things on other people without giving them that bigger picture. Why? Why do we need to change what other reasons behind it? And I think that's something that's very key for frontline customer services.</p>
Consultant-5 Consultant-2	<p>(2:5) No vision from CEO - and some people are built to be a block and I think generally when you find sort of political manoeuvres and such going forward through these teams, and you have a CEO that doesn't like vision but lacks discipline, that's what it is.</p> <p>(2:6) You're looking at central power, maybe policy wrong with central authority or central management, the C-suite, the CEOs on the scene.</p>
Staff-2 Consultant-7	<p>(2:7) It is something more with more of an empowering people manager. Strong back and forth communication and say they always know what you're roughly doing and where you're at and what the timelines for completion are, but also, so the you are on top of their process, so you can confirm that what we've produced works and is how you want the process to work. In addition, you know the customer needs to console update you on any updates to their process as you're building it. 'cause in the real world nothing static and processes change all the time</p> <p>(2:8) But if you're going to ask somebody to change, you need to be clear what you're asking them to change too. The CEO is easier for me to identify with the head of my department, run with a clear vision for that department, it's easier for me to be bought into that vision.</p>
Consultant-2	<p>(2:9) In fact, it's one of the things I work on the most, and it's probably one of the things that I see can break down communication with senior management sometimes breaks down and how to communicate with their subordinates or the people that they live in and not just communicate in terms of telling or poking at us, but actually, making us part of the vision, shared a vision. It's almost like they have the vision, but they make it our vision as well, not just by telling us it's our vision, but by drawing us into that vision.</p>

Table 4.8: Empirical data: RQ2 (Management Vision).

Code book thematic analysis:

The analysis of ARQ2 (found in the thematic analysis of Table 4.7), notes the lack of organisational management consultation with front-line employees in the service innovation process. BRQ2 highlights the requirement for senior managers to engage with front-line employees, with regular contact, this includes the need to communicate the management vision of the new service innovation. Senior managers must *paint a picture* of the new world. This can be a narrative or story. Lastly, BRQ2 further notes, that the style of the Management Vision was dependent on the current management style.

Empirical statement data analysis:

The remark (2:1) (found in Table 4.8) comments on a better understanding of changes through Management Vision. Also, see remark 2:2 and remark 2.3.

The findings from remark (2:4) highlight the requirement of management vision in the context of front-line employees, who then can envision the bigger picture, and add to this picture through their broader contribution to the service innovation process. Reasons for the lack of management vision are given in remark (2:5), with no vision from the CEO and in remark (2.6) where power is centralised. Also see BRQ2.

Highlighting the requirement for a strong management vision, remark (2.7) notes that the world does not remain static and there is a requirement to respond to customer changing requirements. This is the rationale behind service innovation, with front-line employees, as customer contact staff, being able to best articulate into the broader organisation the wider customer expectations on service and service innovation.

The remark (2.8) makes a note for management vision explicit: '*But if you're going to ask somebody to change, you need to be clear what you're asking them to change too*'.

Lastly, remark 2.9, observes, that senior organisational managers need to make their vision become the vision of staff. This includes leadership of front-line employees, so they feel empowered so they can contribute more broadly to the service innovation process.

Analysis on the context of organisations and participants:

Only front-line employee Staff-2, from the financial sector, considered Management Vision important in their interview. Managers from opposite sizes of organisations (Small: Manager-1 and Large: Manager-15) considered the issue of Management Vision important. The majority of comments stressing Management Vision stem from Service Innovation Consultants. This is perhaps because Service Innovation Consultants typically deal with organisation change and the requirement to express the benefits of service innovation change. Remark (2:8) expresses this well.

What the literature has to say on Management Vision

Management vision as discussed in work undertaken by Malhotra and Ackfeldt (2016), highlights the importance of internal communication within organisations and the inclusion of front-line employees in the service innovation process. Qualitative research undertaken by Welch (2012) concludes appropriate communication by senior management is essential to foster a clear shared organisational vision among staff and other managers.

This includes the importance of front-line employees in the service innovation process (Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd, 2021).

The work by Artusi and Bellini (2021) makes several observations regarding management vision and front-line employees. Firstly, the involvement of front-line employees' allows them to champion the new values to customers and ensures their engagement in the new service innovation change (service-dominant logic principle seven – customer value, Vargo and Lusch, 2016).

Secondly, the promotion of the management vision, with the *buy-in* of front-line employees, allows for managed change within the organisation. This includes setting priorities on processes, routines and service delivery. This is important as this sets out what organisations think regarding the allocation of staff resources particularly concerning innovation processes (Suh, Harrington and Goodman, 2018).

Thirdly, the intangible nature of service innovation (González-Blanco, Coca-Pérez and Guisado-González, 2019) is articulated allowing both the *painting* of the new service innovation and the illustration of the *bigger picture* with the pivotal role front-line employees play within organisational service innovation.

Essentially, the work by Artusi and Bellini (2021) highlights the role of management vision in the consideration and allocation of front-line employees through the articulation of the service innovation change.

Lastly, Artusi and Bellini (2021), recognise the importance of front-line employees' play as customer domain experts, allowing the communication and feedback of customer experience into management vision (service-dominant logic principle six – co-creation, Vargo and Lusch, 2016). Also, see the section on *strategy engagement* and *customer domain expert*.

Synthesis: Management Vision

The analysis notes the lack of organisational management consultation with front-line employees in the service innovation process. This highlights that senior managers *must* engage with front-line employees'; this includes the need to communicate the management vision of the new service innovation.

There is a need for effective organisation communication regarding service innovation change and change in routines and processes. This then also supports the case for the promotion of customer value and co-creation (service-dominant logic six and seven) regarding service innovation and the pivotal role front-line employees play in this process.

The work by Artusi and Bellini (2021) views the management vision as having an important impact on how front-line employees can contribute to the service innovation process, by how the customer is perceived and so how front-line employees' customer knowledge is utilised.

Senior managers must *paint a picture* of the new world. This can be a narrative or story. However, the style of the management vision is dependent on the current management style. Also, reference the culture appreciation section.

4.4.3 Research question 2 (Promote Learning - Meso-level)

Code book thematic analyses are given in Table 4.9.

	(Staff allocation - Promote Learning) RQ-2: How can changes in organisational staff allocation of front-line employees improve the service innovation process?
Service ecosystems Finding (CRQ2)	<i>Principle Eight: A service-centred view is customer oriented and rationale.</i> Need to standardise the delivery - In service innovation, there is a need for front-line employees to know the business processes, otherwise actual service innovation becomes difficult.
Staff resource allocation Findings (DRQ2)	<i>Principle Nine: All social and economic actors are resource integrators.</i> The promotion of a learning culture would allow front-line employees to develop both professionally and personally. The use of front-line employees as subject matter experts to share their knowledge (organisational-wide). Understand the scope of change, so front-line employees can be managed as appropriately. This includes the need to schedule staff/front-line employees with the correct skill set and a number of front-line employees who participate in workshops, focus groups or design meetings. Also, understand the timeline for service innovation.

<p>Front-line employees contribution Findings (ERQ2)</p>	<p>There was some sentiment that <i>everyone</i> in the organisation should be involved with service innovation - That managers should contribute to the service innovation process and regularly speak with customers.</p> <p>A better understanding by front-line employees of technology within organisations will help and assist front-line employees become more engaged with service innovation. This is important as technology is often thrust on front-line employees without the necessary training. Here, managers do not understand technology and/but expect staff to understand it (as part of their job).</p> <p>A greater understanding of technology will allow front-line employees to participate broadly in the service innovation process.</p>
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Table 4.9: Thematic analysis data: RQ2 (Promote Learning).

Empirical participant interview statements are given in Table 4.10.

<p>Manage-13</p>	<p>RQ2: Promote Learning (2:10) Learning and development is very much decentralized. Down to those capability groups and at the moment we. I mean, there is an undo expectation on the on the capability managers that they will manage the training requirements within their capability groups. So, they were like just work with their employees. (2:11) They would develop their needs; they will deliver those means for the employees and that through I mean that training is generally follow the model of 60% on the job training.</p>
<p>Manager-15 Consultant-10</p>	<p>(2:12) I think things are changing the world that we live in constantly. Things are changing. There're new ways being developed. I think continuous learning is important for everybody that been involved, whether that's. And day-to-day learning, or whether that's more structured learning where you go on courses. (2:13) As part of the objectives with the line manager set up for us there is that we need to do. That's quite hard to change. Recently we need to do lunch and learns. So, you need to prepare some topics that you're passionate about. Or maybe they asked you. Can you please research and something that we may be so weak point for us and you just share that with the rest of the team, and that's kind of what we expected.</p>
<p>Manager-7</p>	<p>(2:14) When I've been hiring, I quite often come back to this is what can you train people in. You can train people in technology or ability to. I don't know. Understand a technical solution, software function, a piece of hardware, what can't you train people in is more of a true customer focus and motivation.</p>

Table 4.10: Empirical data: RQ2 (Promote Learning).

Code book thematic analysis:

The finding CRQ2 (thematic analysis of table 4.9) on service-centring of customers notes that front-line employees' should know and understand business processes, so they can contribute more broadly to the service innovation process. This requires learning (DRQ2).

As DRQ2 notes the promotion of a learning culture would allow front-line employees to develop both professionally and personally, allowing them to share their knowledge and customer expertise organisational-wide (also see RQ3). The promotion of learning would also allow improved utilisation of front-line employees in design and implementation so improving the service innovation outcomes (DRQ2).

The analysis of ERQ2 raises two interesting observations. Firstly, organisational managers should regularly speak with customers, so they understand the role of front-line employees. This would increase their knowledge of customers, which could be feedback into improving the service innovation process. Secondly, front-line employees should be given training to understand the technology they are being asked to use. They can then suggest better service improvements.

Empirical statement data analysis:

The remark (2:10) highlights learning and development, with the management of staff training as important in the service innovation process (also Remark 2:11). This is observed in remark (2:12) with the requirement to promote learning with continuous learning with structured training or promotion of day-to-day training. Remark (2:13) suggests that the promotion of learning comes from the organisation's culture where managers believe service learning is important.

Further, as remark (2:14) alludes, organisations can often train staff in technology aspects of service delivery. However, human soft skills in customer relationship management cannot be readily taught.

Analysis on the context of organisations and participants:

The significance of the promotion of learning was recognised across the organisation sector type: Manager-7 (finance), Manager-13 (health) and Manager-15 (university). This perhaps suggests promotion of learning is recognised as an important aspect of the service innovation process and to which front-line employees with additional (technical) learning could more broadly contribute.

What the literature has to say on Promote Learning

Tajeddini, Martin and Altinay (2020) propose leading innovation organisations are effectively 'learning systems' which actively promote staff resource management centred on learning.

A conceptual framework by Selig (2016) highlights the pivotal role people's development and learning play in project governance success. Work by Pace and Miles (2020) highlights this 'assimilation of knowledge for innovation' as important, highlighting learning and processes of exploitative. Research by Gomes, Seman, Berndt and Bogoni (2022) suggests that learning and the promotion of learning leads to better service innovation outcomes. An example of this is outlined by Vargo and Lusch (2004) who observe skills and knowledge may be transferred by training and education (learning).

Furthermore, work by De Jong, Schepers, Lages and Kadic-Maglajlić (2021) highlights front-line employees as key resources in the service innovation process and that with continuing learning they increase both their personal and professional development.

Moreover, work by Xie, Wang and Garcia (2021) stresses not only the need for front-line employees to actively participate in the service innovation process, but they also need to have skills and knowledge regarding customer relationships and learning practices. These practices can then assist front-line employees' focus on customer engagement and how this learning can be used organisationally wide (Gomes, Seman, Berndt and Bogoni, 2022).

Research undertaken by Hewagama, Boxall Cheung and Hutchinson (2019) gives an example where training to increase, front-line employees' learning, led to service quality improvements, as did management support of front-line employees. Hewagama, Boxall Cheung and Hutchinson (2019) speculate one factor for this increase in service quality was the increase in employee abilities through training. Therefore, with the promotion of service learning front-line employees' organisational managers recognised the broader contribution of front-line employees to the service innovation process and this thinking then allowed them to be allocated accordingly (Dagger, Danaher, et al., 2013).

Lastly, the work by De Jong, Schepers, Lages and Kadić-Maglajlić (2021) stresses the requirement for managers of front-line employees to promote learning to increase their skills and knowledge, both soft skills and technology. Additionally, where organisational managers understood service innovation and the engagement of customers there were more successful outcomes for the service innovation process (Gustafsson, Kristensson and Witell, 2012).

Synthesis: Promote Learning

The promotion of learning practices of front-line employees, particularly with respect to technology, could broadly increase the contribution of front-line employees in the service innovation process. The research by De Jong, Schepers, Lages and Kadić-Maglajlić (2021) emphasises the necessity to promote the learning of front-line employees.

The promotion of learning impacting front-line employees' allows for the enhancement of their customer (human soft skills) for improvements in the service innovation processes. This includes not only the traditional aspects of design and implementation but also in customer knowledge sharing organisationally wide and greater engagement with technology aspects of service innovation. Front-line employees' greater contribution can lead to the better utilisation of technology and so improves service innovation.

4.4.4 Research question 2 (Assessing Staff Allocation – Meso-level)

Code book thematic analyses for section 4.4.4 is given below as Table 4.11.

	(Staff allocation – Assessing Staff Allocation) RQ-2: How can changes in organisational staff allocation of front-line employees improve the service innovation process?
Service-dominant logic Findings (FRQ2)	Front-line employees listen to customers and then provide feedback on how to improve the service - What customers value and what we are doing well. Front-line employees' converse regularly with customers is highlighted and are ideally placed to collaborate with customers in service innovation.
Service ecosystems Finding (GRQ2)	<i>Principle Eight: A service-centred view is customer oriented and rationale.</i> Front-line employees interact with customers to promote a positive image of the organisation and to explain new services. Front-line employees need management support to undertake their duties effectively. As front-line employees are the main source of contact between the organisation and the customers, they are the people who understand the customer journey and best places within the organisation to understand direct customer contact.
Staff resource allocation Findings (HRQ2)	<i>Principle Nine: All social and economic actors are resource integrators.</i> Managers need to understand the service innovation process, so they understand the tasks needed to be undertaken, clear about the change and clear about the focus on the customer.

	<p>The role of front-line employees' is seen in isolation, where they should be seen as an important resource to highlight customer requirements to the rest of the institution.</p> <p>Front-line employees' require soft skills, right technology skills. We do not have enough front-line employees' with the right skills at the right level at the right time to take part in service innovation.</p> <p>Do we have the right practices for service innovation (transformation, design, soft skills). Management finds it difficult to obtain resources for service innovation projects.</p>
<p>Front-line employees contribution Findings (IRQ2)</p>	<p>Organisational managers need to listen to staff more - Staff need to be more included in the service innovation process - They need to be included and not just have service innovation imposed on them by managers.</p> <p>The role of front-line employees' is seen in isolation, where they should be seen as an important resource to highlight customer requirements to the rest of the institution.</p>

Table 4.11: Thematic analysis: RQ2 (Assessing Staff Allocation).

Empirical participant interview statements for section 4.4.4 are given in Table 4.12.

Consultant-9	<p>RQ2: Assessing Staff Allocation</p> <p>(2:15) It just pushing your resource in that direction. You know it might be a problem, but it's a bit like you know, if your house is on fire and one of your light bulbs is broken, you don't change the light bulb and then worry about the fire. You get the fire extinguisher out first.</p>
Consultant-9 Staff-9	<p>(2:16) You need right people and the right breadth of people involved at the right times.</p> <p>(2:17) Things like that but in terms like the project delivery product service, make sure all the right resource on the right projects.</p>
Manager-9	<p>(2:18) There are several aspects different varies an element of cost control. It is expensive to do a job twice because he didn't meet the client expectation first time.</p>
Consultant-5	<p>(2:19) Resource allocation failure wanted 12 got 4 - Lack of management understanding of service innovation.</p>
Consultant-1	<p>(2:20) You know Willy nilly like shaking up a large pot of Lego bricks, as it were, and plucking people out for it, trying to get continuity across things must be very difficult.</p>

Table 4.12: Empirical data: RQ2 (Assessing Staff Allocation).

Code book thematic analysis:

The finding of FRQ2 highlights that front-line employees are ideally the best-placed organisational staff to speak with customers (co-create, co-produce) regarding the service innovation process. This is also stressed in GRQ2, which highlights front-line employees' understanding of customers.

Additionally, GRQ2 stresses that organisations should understand the importance of customers and the tasks of customer engagement, which front-line employees undertake. The reason for this is given in HRQ2, as the perceived lack of front-line employees' human soft and technology skills, so organisations find it difficult to resource for service innovation.

A counterargument to HRQ2 is given in IRQ2, which notes organisational managers need to listen to and include front-line employees in the service innovation process and not just impose service innovation on them.

Empirical statement data analysis:

The remark (2:15), gives a useful example of a house on fire when considering staff allocation: *'If your house is on fire and one of your light bulbs is broken, you do not change the light bulb and then worry about the fire. You get the fire extinguisher out first'*

As the remark (2:16) notes service innovation is about: *"You need right people and the right breadth of people involved at the right times'*. However, as remark (2:17) notes, the actual securing of staff for service innovation projects is seen as very difficult.

This as remark (2:18) comments, often depends on cost. The remark (2:19) notes: ‘Resource allocation failure wanted 12 and got 4’. This highlights that service innovation was not thought important. Additionally, the contribution of front-line employees is often seen in isolation and broader contributions they could make are not considered or seen as important. Finally, as remark (2:20) notes the allocation of staff, such as front-line employees’ to service innovation is chosen *more or less* at random.

Analysis on the context of organisations and participants:

There would seem to be little recognition by organisational managers beyond Manager-9 and Staff-9 (both universities) that front-line employees’ allocation to the service innovation process needs to be considered. However, as Consultant-9 notes: “You need right people and the right breadth of people involved at the right times”.

What the literature has to say on Assessing Staff Allocation

Prahalad and Ramaswamy (2004) consider ongoing dialogue between customers and employees, such as front-line employees’ as essential. Organisations must therefore assess how they engage existing staff resources to promote customer involvement and contribution.

In the context of staff resources, Kleinaltenkamp, Brodie, Frow, Hughes and Peters et al., (2012), stress the need for understanding of resource utilisation. In the context of this thesis, this is how staff, such as front-line employees’ could further contribute to the service innovation process. This is where organisations understand processes, procedures and routines around staff allocation and the importance of front-line employees.

Additionally, Kleinaltenkamp, Brodie and Frow et al., (2012), highlight the imperative to think about staff and the staff allocation process, especially concerning staff skills and knowledge practices-

Additionally, Edvardsson, Kleinaltenkamp, Tronvoll, et al., (2014) contend in the context of service systems (and institutional logic and resources), there is a need to recognise the dynamic nature of resources required to engage with customers in the service innovation process (Kindström, Kowalkowski and Sandberg, 2013; Kim, Song and Triche, 2015). This is the role of front-line employees.

Work by Hollebeek and Andreassen (2018) implicitly joins up the engagement of customers to the resource process via service-dominant logic showing that in service ecosystems, organisational actors, such as front-line employees, should not be seen to act in isolation. Also, see the section on systems context.

Stressing the significance of organisational arrangements and service ecosystems in the thinking of resources, Koskela-Huotari and Vargo (2016), highlight the importance of thinking about *resourcesness*. This is the ability of organisations to understand and assess how their resources, such as front-line employees, can be utilised and managed to assist customer co-creation and customer value. This as Koskela-Huotari and Vargo (2016) contend, would allow the organisation to think about what resources they require in a *systems manner*, rather than on a case-by-case or random basis (Martin and Horne, 1993).

The article by Schneider, Bullinger and Brandl (2021), notes that thinking of resources in the context of service innovation and change can lead to a better understanding of front-line employee engagement in the organisation.

Synthesis: Assessing Staff Allocation

Organisations *must* understand the importance of front-line employees and customer engagement. However, the understanding of the contribution of front-line employees is poor when thinking about staff allocation and consequently where they could more broadly contribute to the service innovation is also consequently poor. Service-dominant logic principle nine *highlights* the requirement for organisations to think about resources (Vargo and Lusch, 2004).

The work by Koskela-Huotari and Vargo (2016) notes from an organisational arrangements and service ecosystems perspective that organisations should consider staff allocation, such as front-line employees', in a more systems manner. This is additionally stressed by service-dominant logic principle nine, highlighting the requirement for organisations to *think about* resources (Vargo and Lusch, 2004).

However, where the contribution of front-line employees' is considered, organisations find it difficult to secure staff allocation. So, staff are allocated at random. The failure now becomes a failure of culture (appreciation) and service-dominant logic principle eleven (Vargo and Lusch, 2016) as co-creation with the customer may *not* be viewed as important.

4.5- Research Question 3 (Skills and knowledge - Micro-level)

Thesis research question 3: How can better utilisation of the skills and knowledge of front-line employees improve the service innovation process?

4.5.1 Discussion of empirical data findings: Research question 3

The research question for this section explores the skills and knowledge of front-line employees in their broader contribution to the service innovation process. Within this context, the research question considers what organisational skills and knowledge practices front-line employees might utilise. This can increase service innovation appreciation of customers and better service innovation outcomes (Lusch, Vargo, and O'Brien, 2007).

The academic framework of the empirical data collection rests within the service-dominant logic principle four knowledge is the fundamental source of competitive advantage, Vargo and Lusch, 2004) and from the perspective of service ecosystems service-dominant logic principle eight (a service-centred view is customer orientated and rationale, Vargo and Lusch, 2004). The discussion explores the constructed second level categories of *knowledge sharing*, *customer domain experts* and *lessons learnt* during the empirical data analysis. Literature papers framing the understanding of the empirical data analysis are considered A brief synthesis is undertaken at the end of the section.

The thematic data analysis extracts for section 4.5 are taken from the research code book. The empirical data statements analysis is taken from participant statements transcribed and loaded into NVIVO. The analysis is principally taken from: 3-FLE Knowledge-Communication-Learning (Figure 4.4).

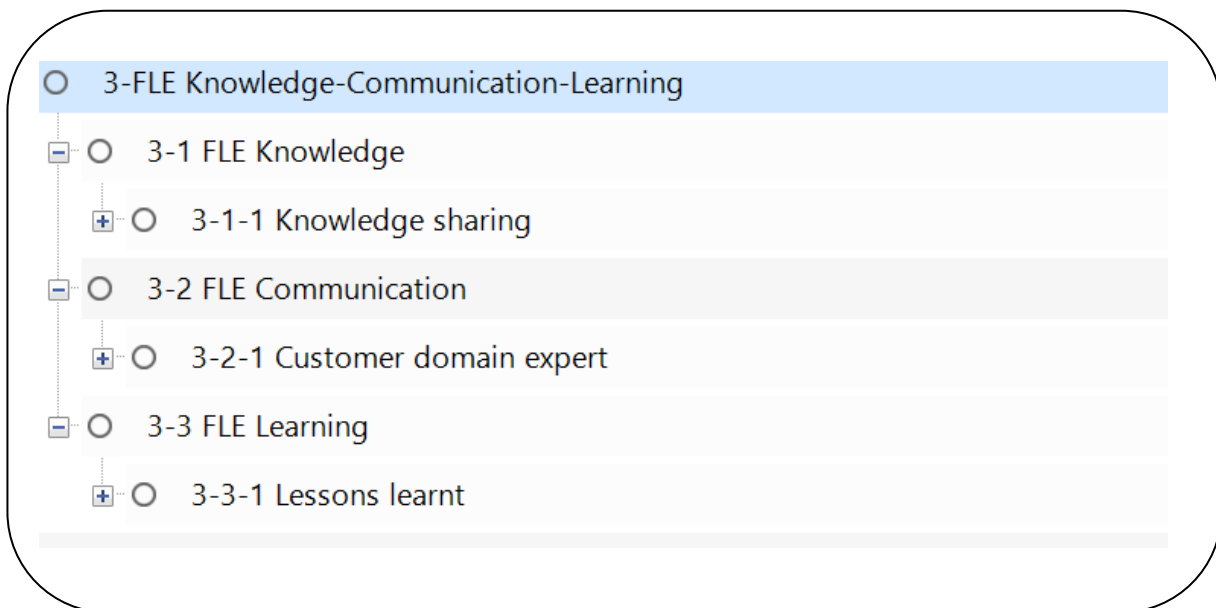


Figure 4.4: Knowledge-Communication-Learning - Code book extract.

Analysis of second, third and fourth-order codes from the research code book resulted in the *interpreted* and *subjectively constructive* application of the following second-level categories (James, 2012, Saldaña, 2016, p.7-8). Also, see section 3.8.1.7:

(3-1 FLE Knowledge) *Knowledge sharing*

(3-2 FLE Communication) *Customer domain expert*

(3-3 FLE Learning) *Lessons learnt*

These second-level categories are then utilised to further frame empirical analysis in the exploration and discovery of underlying themes and data structures.

4.5.2 Research question 3 (Knowledge Sharing – Micro-level)

Findings for research question 3 Knowledge Sharing are given below in Table 4.13.

	<p>(Skills and knowledge – Knowledge: Knowledge Sharing) RQ-3: How can better utilisation of the skills and knowledge of front-line employees improve the service innovation process?</p>
<p>Service-dominant logic Findings (ARQ3)</p>	<p>Front-line employees are good at effective customer problem resolution, particularly solving customer immediate problems (difficult customers and problematic behaviour). This knowledge can be feedback into the service innovation process.</p>
<p>Front-line employees' knowledge, communication and learning Findings (BRQ3)</p>	<p><i>Principle Four: Knowledge is the fundamental source of competitive advantage.</i></p> <p>Knowledge practices:</p> <p>Front-line employees provide (contribute) knowledge about customers to the wider organisation (this is frequently overlooked) and needs to be promoted more.</p> <p>Knowledge impacts the effective contribution of front-line employees in the service innovation process.</p> <p>Better links with internal teams would benefit front-line employees and the organisation regarding the service innovation process - flow of ideas, business problems and solutions and customer feedback. (7)</p>

	<p>The requirement for front-line employees to work together both in service delivery and in the service innovation process is paramount. The holding of regular team meetings is important to coordinate the effort and from the aspect of team management, so front-line employees are kept informed.</p>
<p>Service ecosystems Findings (CRQ3)</p>	<p><i>Principle Eight: A service-centred view is customer oriented and rationale.</i></p> <p>Front-line employees must have soft skills. These skills are transferable to service innovation in the articulation of requirements for new service innovation.</p>
<p>Front-line employees' contribution Findings (DRQ3)</p>	<p>The requirement by management to trust staff and trust staff to undertake their job. Humane empathy to understand the customer can be used to help design a better service, where frequently technology is put first without thought of how the customer benefits.</p> <p>People care about the job they are doing however sometimes management should engage with active motivation. Front-line employee is a difficult role and managers underestimate the skills and experience needed to undertake the role, especially within the circumstances of service innovation.</p>

Table 4.13: Thematic analysis: RQ3 (Knowledge Sharing).

Empirical data for section 4.5.2 are given in Table 4.14.

Staff-2	<p>RQ3: Knowledge Sharing</p> <p>(3:1) Unfortunately, between team knowledge isn't as frequent as we had like with trying to improve upon that. As we're building some systems that basically build up a database, person doesn't actually use database, but database a little under share knowledge base of who knows what and so we can start showing up at the moment. That's still very much work in progress, so usually it's just within teams that knowledge is shared, but we are trying to improve that so we know who the experts are in the future</p>
Staff-1	<p>(3:2) Transfer between those teams. They all kind of know how they work and sticks their silos, but sometimes people will transfer from one team to another and that's when they sometimes bring things with them and it's for me to try and work out what they do every once in a while, and say, did you know there's a better way of doing that?</p>
Staff-2	<p>(3:3) Not just knowledge sharing but also knowledge of who can do what and how. So, you know who to ask for that knowledge? 'cause yeah, the knowledge sharing so great and saying gave any employee will be willing to answer any questions. But if you don't know who to ask. You're gonna have to ask a lot of people before you get the right person. You can actually answer your question.</p>
Staff-3	<p>(3:4) I think so, said probably the biggest things are things we've already mentioned. So yeah, yeah amalgamation into a single platform for all where we're tracking all service delivery across their business. But also, we'll see where we're tracking our knowledge and where we're able to go from go from dealing with an incident to creating a new knowledge article based on how we how we deal with that. So, the next person then that that deals with a similar issue can just pull that that article straight back up and not have to kind of reinvent the wheel.</p>
Manager-1	<p>(3:5) So, documents go across department boundaries smoothly and everybody knows the processes work and comes in and what goes on, but say they know that we are actually now starting to do this.</p> <p>(3:6) All that knowledge in loose he loses all the knowledge that people have so much knowledge and sometimes people don't want to share it</p>
Staff-7	<p>(3:7) So, it's encouraging people to share it. Which people are kind of get protective of their knowledge and their and you've got to have the right culture in a team that says you know if you share this size then you don't have to do that every day. You could do XY and Z, which is a little bit more exciting and newer. Then broaden your skill set. So, I think it's just trying to build that knowledge sharing culture to recognize it gives them opportunity by sharing.</p>

Table 4.14: Empirical data: RQ3 (Knowledge Sharing).

Code book thematic analysis:

The findings of ARQ3 (thematic analysis found in Table 4.13), highlight that front-line employees are good at solving customer issues and problems, which increases their knowledge of customer and customer issues and problems. This knowledge could be feedback into the organisation to improve the service innovation process sharing.

The contribution of front-line employees' knowledge to the wider organisation is highlighted in BRQ3. The findings from BRQ3 also highlight the linking of internal teams, which would allow the flow of ideas and solutions to business problems concerning customers (co-creation and customer value). BRQ3 also notes the requirement for regular team meetings to coordinate service innovation. This highlights a holistic approach to service innovation.

The finding of CRQ3, on ecosystems, highlights that front-line employees must have soft human skills to interact with customers, and these skills can be utilised to articulate and share customer knowledge regarding improvements to service innovation.

Common themes of staff trust and the utilisation of technology in service innovation without reference to front-line employees are highlighted in DRQ3. Here as DRQ3 notes organisations do not engage with front-line employees, so underestimate their skills and knowledge and where they could more broadly contribute to the service innovation process.

Empirical statement data analysis:

Knowledge sharing is highlighted in remark (3:1) (found in Table 4.14), noting that knowledge sharing is usually only within the team: *'so usually it's just within teams that knowledge is shared'*. Furthermore, remark (3:1) highlights that knowledge sharing between teams is infrequent. Additionally, as remark (3:2) notes, knowledge is not shared within organisations as knowledge is viewed in a non-systems approach (silo-managed) manner.

The difficulty of sharing knowledge is commented on with remark (3:3), as organisations do not have access to *who knows what*. In the context of front-line employees' broader contribution to service innovation, typically organisational managers do not seek knowledge from front-line employees' and so fail to seek knowledge which could improve service innovation from a customer perspective.

The remark (3:4) highlights the problem of knowledge sharing, is the tracking and storing of knowledge connected with service delivery (service innovation) environment. As remark (3:4) notes: *'So, the next person then that that deals with a similar issue can just pull that that article straight back up and not have to kind of reinvent the wheel.'*

The difficulties of knowledge sharing are commented on with remarks (3:5) and (3:6) concerning actual document sharing and people *wanting* to share knowledge. This is noted in remark (3:7) with the requirement to share knowledge, with a knowledge sharing culture. In the context of front-line employees', their contribution to the wider organisation is often not recognised (also see culture appreciation).

Analysis on the context of organisations and participants:

Front-line employees' statements in the finance sector particularly highlight the requirement for knowledge sharing in the service innovation process. Manager-1 (finance) also recognised the importance of knowledge sharing. There would seem to be little recognition of the need to share knowledge regarding service innovation from other institutions in this research.

What the literature has to say on Knowledge Sharing

According to Kim, Koo and Han (2021), knowledge sharing is the combination of new and organisational existing knowledge, which leads to new or novel service processes. Research into front-line employees, in knowledge-intensive organisations by Siahtiri (2018), suggests knowledge of customers and their customer orientation have a significant impact on the service innovation process. Also, see Storey and Larbig (2018) who highlight customer knowledge as important for service innovation success.

However, as Siahtiri (2018) further notes many organisations fail to utilise the knowledge of front-line employees in the service innovation process (Dagger, Danaher, Sweeney and McColl-Kennedy 2013; Santos-Vijande, Lopez-Sanchez and Rudd, 2016, Engen, 2020, p.132).

Hu, Horng and Sun (2009) highlight the requirement for a culture of team sharing within organisations. Further Hu, Horng and Sun (2009), stress knowledge sharing is important to the operationalisation and success of the service innovation process.

However, as Santos-Vijande, Lopez-Sanchez, Pascual-Fernandez and Rudd (2021) observe there is a relative lack of research of front-line employees' involvement in team (knowledge) sharing in the service innovation process. Melton and Hartline (2013) found knowledge transfer as a key success factor. Further, Jaaron and Backhouse (2017) highlight front-line employees' knowledge sharing is a key factor in the promotion of service innovation. In their research, Santos-Vijande, Lopez-Sanchez, Pascual-Fernandez and Rudd (2021) found where front-line employees' knowledge sharing was utilised, there was greater service innovation success.

However, Santos-Vijande, Lopez-Sanchez, Pascual-Fernandez and Rudd (2021) found organisational knowledge sharing was dependent on senior organisational management support of service innovation on a case-by-case basis.

The findings by Santos-Vijande, Lopez-Sanchez, Pascual-Fernandez and Rudd (2021) would suggest firstly, a lack of importance attached to front-line employees' contribution to the service innovation process and secondly, the lack of regular knowledge-sharing forums, for instance, *lunch and learn* in promote learning. These forums are not seen as organisational important for knowledge sharing and where front-line employees' soft skills (tacit knowledge) could be articulated to a wider organisational environment.

Synthesis: Knowledge Sharing

The findings from the empirical analysis highlight organisations must engage and involve staff in customer knowledge sharing processes. Service innovation customer knowledge is often facilitated by front-line employees, who act as points of contact for a wide range of customers. For instance, understanding a query from an NHS consultant is likely to require different knowledge, than a query from a district nurse.

The type of knowledge captured on each can be feedback into the service innovation process. This information can then lead to a greater organisational understanding of the customer and the contribution of front-line employees in the service innovation process. Literature suggests that *where* knowledge sharing is undertaken by front-line employees, there are greater service innovation improvements and success (Santos-Vijande, Lopez-Sanchez, Pascual-Fernandez and Rudd, 2021). Vargo and Lusch (2004) contend knowledge is a fundamental source of competitive advantage in service organisations.

4.5.3 Research question 3 (Customer Domain Expert – Micro-level)

Thematic findings for research question 3, Customer Domain Expert are given below in Table 4.15.

	(Skills and knowledge – Communication: Customer Domain Expert) RQ-3: How can better utilisation of the skills and knowledge of front-line employees improve the service innovation process?
Service Innovation Findings (ERQ3)	Front-line employees provide input into service improvement. Front-line employees' providing ideas for service improvement. Where front-line employees are involved as Customer Domain Experts there is a greater understanding of the customer journey. Typically, this is done through workshops and focus groups and requirements captured via user stories.
Service-dominant logic Findings (FRQ3)	Add value (Customer experience): Front-line employees' 'Add value' to customer experience and make a difference to the customer by providing an enhanced service to the customer. There is a need to understand customer behaviour and meet their expectations. Co-create (Customer engagement): Assist, inform and guide them - This requires customer domain knowledge and human relationship skills (empathy, understanding of the customer perspective).
Front-line employee's knowledge, communication	Principle Four: Knowledge is the fundamental source of competitive advantage. Communication practices:

<p>and learning Findings (GRQ3)</p>	<p>Knowledge impacts the effective contribution of front-line employees in the service innovation process.</p> <p>Customer knowledge is vital for the whole service innovation process.</p> <p>The role of front-line employees' is seen in isolation, where they should be seen as an important resource to highlight customer requirements to the rest of the institution.</p> <p>When undertaking service innovation projects, front-line employees are considered subject matter experts, about customer knowledge and process procedures. However, they are not consulted particularly about which technology to use. They need to be involved early to have significant input into the project process and need to have the correct skills for a particular project.</p>
<p>Service ecosystems Findings (HRQ3)</p>	<p><i>Principle Eight: A service-centred view is customer oriented and rationale.</i></p> <p>Front-line employees have strong customer domain skills and knowledge to assist customers. This can be utilised for service innovation.</p> <p>There is a need for organisations to understand the customer journey, front-line employees are the best-placed staff to do this.</p> <p>Front-line employees are customer domain experts on the customer. Front-line employees provide tacit insight-knowledge about customers and customer processes.</p>

<p>Front-line employees contribution Findings (IRQ3)</p>	<p>Front-line employees as customer domain experts are often overlooked, where the emphasis is on the introduction of technology, not on how the technology can be used.</p> <p>Organisations must understand technology will not solve all the issues within the service innovation process and there needs to be a greater focus on staff, such as front-line employees, to improve service innovation and ultimately service delivery. Front-line employees could contribute more to service innovation with correct business and technical skills.</p> <p>Front-line employees need to keep current with technology to use it effectively and so can engage more in the service innovation process. Shifts in technology are frequent as new technology (AI, cloud technology) is used to improve service delivery. Front-line employees must have the correct personality to use and engage with new technology. However, human skills are more important than technology skills. Human skills can not readily be 'learnt'.</p> <p>Front-line employees can provide valuable insights into the use of technology regarding the service innovation process. Front-line employees make a major contribution to the service innovation implementation process within organisations. They are also involved with design in service innovation. Front-line employees make a major contribution to ideas generation.</p> <p>Front-line employees should have more involvement with design.</p>

	Front-line employees are required to be involved with the implementation of service innovation although they may have little input into the actual process design. This leads to resistance to change. Service implementation of new processes works better with the involvement of front-line employees.
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Table 4.15: Thematic analysis: RQ3 (Customer Domain Expert).

Empirical participant interview statements, for Customer Domain Expert, are given in Table 4.16.

<p>Manager-7</p> <p>Staff-7</p> <p>Staff-3</p>	<p>RQ3: Customer Domain Expert</p> <p>Customer services -Ideas generation:</p> <p>(3:8) I think it certainly ideas generation and certainly the more successful service innovations I've been involved in. Probably 80% of them start from some kind of seed of thought that comes from frontline people. As you get broader along, that kind of if you like development spectrum almost, I think they're also they're invaluable when it comes to how would you put it practicality test.</p> <p>(3:9) Encouraging that innovation and rewarding innovation so people that contributes getting it.</p> <p>(3:10) Yeah, some kind of acknowledgement or some kind of award if their idea is taken up and might lead to additional revenue. They're not an urgent priority. We can see merit in them, so we don't. You know, don't kill the idea off, but we end up with a lot of things that look like good ideas but may or may not get done over time.</p>
<p>Manager-15</p>	<p>Customer services -Design:</p> <p>(3:11) People we found out that people are more engaging when you involve them in the autonomy of designing something. If you tell them, how do you want it? And let's work together. So, what we did in the working group arrangement is essentially picking up people that are involved on the day-to-day basis in the business.</p> <p>(3:12) You're representing your colleagues. What do you think would be better for your colleagues and those people are kind of working for us and with us at the same time with us in the sense that they bring the views of their colleagues on the front-line.</p>
<p>Consultant-14</p> <p>Staff-11</p>	<p>Customer services -Implementation:</p> <p>(3:13) These projects are often, as we've been saying, technology, lead and can often be a bit wearying on people because they're a lot. Project work tends to be done on top of the day job, people and universities. They don't have a lot of slack to kind of, give some more time to run the project so often they run with not sufficient resources, so you do need to be able to motivate people.</p> <p>(3:14) I think there should be involved in all, absolutely because they're the ones delivering the service so and specially for several reasons. One, they've got insight into how it works too if you want. If you want to make implement, change unique there, they're buying and they're marked far more likely.</p>

Table 4.16: Empirical data: RQ3 (Customer Domain Expert).

Code book thematic analysis:

The contribution of front-line employees to the service innovation process is acknowledged. However, this contribution seems to be limited to idea generation (ERQ3). Additionally, the findings of ERQ3 highlight where organisational front-line employees' are recognised as customer domain experts, there is a greater understanding of the customer when they require help, assistance and guidance. This aspect may be little understood by senior organisational managers

The findings from FRQ3 highlight the service-dominant logic perspective on front-line employees', skills and knowledge from a customer experience (customer value) and a customer engagement (co-create) perspective. Customer experience highlights that front-line employees are the staff best able to *add value* to the customer and understand customer behaviour. Customer engagement highlights that front-line employees can assist, inform and guide customers in their interactions with the organisation, so are ideally placed to understand customer issues.

Finding GRQ3 notes the availability of (customer) knowledge affects the contribution of front-line employees in the service innovation process. The contributions of front-line employees are often viewed in isolation concerning service innovation. Whilst customer knowledge is viewed as important and front-line employees are considered subject matter experts on customers this is often forgotten in service innovation.

Additionally, as GRQ3 further notes, front-line employees need to be consulted early in the service innovation process and about technology, for significant service innovation improvements.

The findings from HRQ3 also note that front-line employees have a significant impact on the service innovation process. This is in their central role as customer domain experts. Organisations need to understand the ‘customer journey’ with front-line employees being the ideal staff to *initially* articulate this process in a wider organisational context. This might be simple tacit knowledge of a single customer type or wider customer issues. However, this type of understanding is not typically articulated or captured unless specifically required, such as in-service blueprinting and project requirements gathering.

Further, the findings from IRQ3 highlight that organisations must understand that technology will not solve *all service issues* and that front-line employees’ customer domain expertise is often overlooked. This particularly concerns technology ideas, design and implementation and where the technology can be utilised. Additionally, the findings from IRQ3 observe that front-line employees require the correct skills and knowledge about technology.

Furthermore, IRQ3 notes the important contribution of front-line employees to service innovation ideas, design and implementation of the service innovation process. Moreover, IRQ3 additionally notes, service innovation implementation works better with front-line employees’ involvement.

Empirical statement data analysis:

Ideas generation, front-line employees’ and successful service innovation are noted in remark (3.8). The broader contribution to service innovation testing (implementation) was also recognised.

Thinking about rewarding front-line employees for ideas generations was commented on in remark (3.9). Remark (3.10) notes to acknowledge ideas and manage the idea generation process.

Service innovation design and front-line employees are commented on in remarks (3.11 and 3.12). Remark (3.11) suggests the importance of front-line employees in the engaging of service innovation design. Remark (3.12) also highlights the requirement for front-line employees to engage with service innovation.

Service implementation suggests front-line employees must feel *motivated* in the implementation of service innovation, as they are typically involved outside of their day duties (Remark 3.13). As remark (3.14) highlights front-line employees are delivering the new service innovation, so involving them with the implementation vastly increases its success.

Analysis on the context of organisations and participants:

The traditional roles of front-line employees as customer domain experts in the fields of ideas generation, design and implementation were highlighted by staff, managers and service innovation consultants. Interestingly staff in finance, health and university also commented on their role as customer domain experts.

What the literature has to say on Customer Domain Expert

Melton and Hartline (2010) note the importance of customer and front-line employees' engagement for successful service innovation, finding that front-line employees should be involved to assist customer's understanding of new service innovation, rather than ideas generation. As Melton and Hartline (2010) find organisations should involve customers in design and development (co-creation, co-production and customer-value); however, organisations fail to understand customers and so the effective contribution of front-line employees' knowledge feedback into the organisation is limited, leading to less successful service innovation (Also see Heinonen and Strandvik, 2015).

Moeller, Ciuchita, Mahr, Odekerken-Schröder and Fassnacht (2013) contend that the customer has generally more knowledge about the problem and the service provider more knowledge, typically through front-line employees' relationship with the customer, about the solution and the innovation concepts to provide the service.

Work by Cambra-Fierro, Melero-Polo and Vázquez-Carrasco (2014), highlights the requirements of front-line employees to engage with customers, particularly concerning navigating internal organisational process and procedures focusing on the customer in their boundary-spanning role (Trkman, Mertens, Viaene and Gemmel, 2015, Engen 2020). Front-line employees are the best-placed organisational staff to assist customers.

Engen and Magnusson (2015) stress the important role that front-line employees have regarding idea generators, which come through their insights and customer interactions during service delivery, which then can be feedback into the service innovation process (Engen, 2020, p.137). Engen and Magnusson (2015) also stress the important role of front-line employees in knowledge management (also see section on knowledge sharing) and technology through their interactions with customers (Karlsson and Skålen, 2015).

Additionally, Karlsson and Skålen, (2015) find the important role of front-line employees is vital regarding service innovation success in the design and implementation of a new service, as they supply the customer domain expertise and the customer-oriented perspective for the new service innovation.

As front-line employees are typically the first point of contact for customers and represent the *organisational face* to the customer, Blut, Heirati, and Schoefer (2020) argue although customer participation in service innovation is critical, organisational managers must manage both *staff* and *customer* expectations *actively* for the service innovation process to succeed.

Engen (2020, p.131) highlights this, with the important boundary-spanning role front-line employees play between the customers and organisations regarding knowledge, insight and (customer domain) expertise.

Synthesis: Customer Domain Expert

The analysis highlights both where front-line employees are involved actively in the service innovation process *and* the importance of customers to the service innovation process is understood, there are better service innovation outcomes.

The literature reviewed suggests front-line employees, through their customer engagement and insights, can provide a broader contribution to the service innovation process.

However, there is a general lack of organisational understanding of customers (customer value and co-creation section 2.2.4, Vargo and Lusch, 2004; Frown and Payne, 2019 pp.86-87) and front-line employees' customer domain expertise. Consequently, organisations *fail to understand* both front-line employees and customers leading to poor service innovation outcomes.

Traditional front-line employees' contributions to ideas generation, service design and service implementation were acknowledged. However, the broader contribution of front-line employees to the service innovation process was not acknowledged because they lack technology skills!

4.5.4 Research question 3 (Lessons Learnt – Micro-level)

Thematic findings for research question 3, Lessons Learnt are given below as Table 4.17.

	(Skills and knowledge – Learning: Lessons Learnt) RQ-3: How can better utilisation of the skills and knowledge of front-line employees improve the service innovation process?
Service-dominant logic Findings (JRQ3)	Customer insights need to be feedback into project service innovation at multiple levels.
Front-line employee's knowledge, communication And learning Findings (KRQ3)	<p><i>Principle Four: Knowledge is the fundamental source of competitive advantage.</i></p> <p>Learning practices:</p> <p>Involvement with lessons learnt on service innovation from experience. At the end of a project, front-line employees should be involved with a lesson learnt review.</p> <p>The use of mentoring would increase the effective utilisation of front-line employees by allowing them both to pass on their expertise and gain expertise.</p> <p>The need to share lessons learnt regarding experiences of service innovation. This also comes under the realm of shared team learning.</p>

	<p>Management needs to trust and engage with front-line employees in the service innovation process. They need to communicate and listen rather than command and control. Managers must understand the importance of internal communication, the need to share lessons learnt regarding experiences of service innovation. This also comes under the realm of shared team learning.</p>
<p>Front-line employees contribution Findings (LRQ3)</p>	<p>Front-line employees can distribute/share customer knowledge institutionally-wide. This improves the competitive advantage by increasing customer awareness and service innovation outcomes.</p> <p>A limiting factor in service innovation is the availability of front-line employees to take part in the service innovation process, so typically they are no consulted at all.</p>

Table 4.17: Thematic analysis: RQ3 (Lessons Learnt).

Empirical participant interview statements, for Lessons Learnt are given in Table 4.18.

Manager-13	<p>RQ3: Lessons Learnt</p> <p>(3:15) Lessons learned is an ongoing bugbear for the organisation because we'd regularly draw lessons learned from projects. But how do you ensure they're effectively embedded going forward and we find it's really about? We find that is an ongoing challenge to make sure that the lessons remain learnt. Part of that is about workforce. They run development and learning and why important to retain key skills and keep people in roles in order to maintain.</p>
Staff-7	<p>(3:16) We understand we've documented it. Everybody's got that knowledge that we don't end up repeating the same mistake. So, I think customers are fairly. You know, there might be annoyed when things go wrong, but if they feel as though you've probably dealt with the situation and he can make sure, give them a confidence and it won't reoccur and take ownership. Then most customers are fairly forgiving if it's things were repeated and you have the same mistakes repeatedly made. That's when customers get frustrated.</p>
Consultant-12	<p>(3:17) So, I think as individuals and as people we kind of learned. But as an organisation, we don't. We don't take stock of that and disseminate that out. The rest of the organisation kind of keeps things to ourselves, which is a bit of a shame.</p>
Consultant-12	<p>(3:18) I think one of the things we don't do and regards Do the lessons learned and what have you and ever since I've been here, I've probably been involved in one lessons learned. And we haven't rarely done it because we moved were too busy to move on to the next project.</p>
Consultant-12	<p>(3:19) But I think ideally our preference would be that somebody independent goes in has a discussion with customer. Find out whether they're happy. Find out what they were. They weren't happy about, and all that kind of stuff. think lessons learned is always key, but it's all very well having the lessons learns how you disseminate that and how you how do you. Because when you're working on a project on a service delivery and you and your team have been involved with that.</p>
Manager-8	<p>(3:20) It's about the lessons learned piece I touched on it earlier at the start and then we. I think we need to do a lot better and somehow. Look at a repository for lessons, learn and categorizing certain customers and implementations into certain categories</p>

Table 4.18: Empirical data: RQ3 (Lessons Learnt).

Code book thematic analysis:

The findings from JRQ3, regarding service-dominant logic, observe the requirement to feedback service innovation insights from customers into broader service innovation projects. Also, see the section on customer domain experts in this thesis.

Further the findings from KRQ3, also highlight the requirement for lessons learnt in the service innovation process to be feedback. KRQ3, also notes that lessons learnt form wider organisational and project sharing of knowledge. The use of mentors would help in this process and the organisational managers' trust of front-line employees' (Also see section culture appreciation).

Additionally, finding KRQ3 also brings together several other themes in which lessons learnt may be helpful with contributions from front-line employees. These include knowledge sharing, management vision and culture appreciation of management style.

In the context of lessons learnt, LRQ3 notes that customer knowledge can be shared organisational-wide. However, a limiting factor is the availability of front-line employees.

Empirical statement data analysis:

Lessons learnt remain a problem for organisations to ensure that knowledge is embedded within the organisations (Remark 3:15). The issue is *not* to make the same mistake again.

Customers are very forgiving with issues if they feel they are being dealt with, but as remark (3:16) notes customers get frustrated if the same mistake is made again.

The remark (3:17) notes that organisations do not understand lessons learnt need to be shared organisational-wide. Here front-line employees can play a central role in disseminating lessons learnt. However, as remark (3:18) notes organisations rarely undertake this process.

As remark (3:19) concedes lessons learnt are *key* regarding the service innovation process, with front-line employees playing an important role. However, as remark (3:20) notes the issue is capturing the lessons learnt and then sharing them. If front-line employees do not contribute to lessons learnt, lessons learnt are not captured and so the same service innovation mistakes are made again (and again). There is no service innovation improvement.

Analysis of the context of organisations and participants:

Consultant-12 (university) had much to say about lessons learnt. However, Manager-13 (health), comment perhaps reflects the norm across finance, health, and university: “Lessons learned is an ongoing bugbear for the organisation because we'd regularly draw lessons learned from projects. But how do you ensure they're effectively embedded going forward”.

What the literature has to say on Lessons Learnt

Vargo, Lusch and O'Brien (2007) contend that organisations need to both learn lessons from their environment and have the flexibility to change resulting from these lessons. Hence the requirement for service innovation becomes vital for competitive advantage (Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd, 2021).

The requirement to capture lessons learnt from customers via co-creation engagement, such as undertaken by front-line employees, is emphasised by Kautz and Bjerknes (2020) as an important aspect of successful service innovation. As Kautz and Bjerknes (2020) urge, organisations should include an element of lessons learnt to increase understanding, knowledge and successful innovation beyond the traditional case-by-case typically realised in the organisational service innovation process.

The case for lack of lessons learnt is highlighted by the work of Tokede, Ahiage-Dagbui and Morrison (2022) who observe that lessons learnt remain a largely overlooked part of organisational change and service innovation, as staff, such as front-line employees' moved to the *next big project* before lessons learnt information captured can be captured.

Synthesis: Lessons Learnt

The empirical data analysis stresses that lessons learnt are an important part of the service innovation process, and where front-line employees could broadly contribute more by feeding back their customer experience into the wider organisation.

However, due to a lack of organisational understanding and the lack of securing front-line employees for lessons learnt reviews, front-line employees are not consulted in the service innovation process.

The literature suggests the importance of lessons learnt to service innovation and improve organisational knowledge, skills, and a broader understanding of the service innovation process (Tokede, Ahiage-Dagbui and Morrison, 2022).

4.6- A Service Ecosystems Perspective

4.6.1 Introduction

This section further highlights the *service ecosystems* aspect of the research discussed in sections 4.1 through section 4.5.

Taking a service ecosystems perspective on the service innovation process highlights the importance of customers, front-line employees and a service-dominant logic principle eight service-centred (systems) approach (Vargo and Lusch, 2004). This approach also stresses other service-dominant logic principles, for instance, co-creation and customer value (principle six; principle seven; principle ten – Table 2.3).

The organisational arrangement perspective emphasises the requirement for organisational management to understand and engage front-line employees. The staff allocation perspective highlights the necessity for organisations to understand the service innovation process through management vision, staff allocation and learning. From a staff skills and knowledge perspective, there is a need for communication of shared knowledge and lessons learnt from customer domain expertise.

4.6.2 Service ecosystems perspective – A consolidation

4.6.2.2 Meso-level

At an organisational arrangements level:

ARQ1 notes the pivotal role front-line employees play with customers.

ERQ1 analysis notes a lack of customer engagement at a wider organisational level.

FRQ1 notes that front-line employees understand the customer experience well, as they engage with the customer as part of their duties.

JRQ1 notes the need for a holistic approach to consider front-line employees' broader contribution to the service innovation process.

At a staff allocation level:

CRQ2 analysis notes the requirement for front-line employees to be involved in the service innovation process.

GRQ2 makes a note that front-line employees as organisational representatives can explain a new service to customers.

Summary:

The need to engage the customer (co-creation – Also see section 2.4.2.5) is seen as important with the role of front-line employees key in this aspect. Additionally, there is a requirement to take a holistic (service ecosystems) approach to ensure front-line employees' customer-facing duties are fully utilised.

4.6.2.3 Micro-level

At a skills and knowledge level:

ARQ3 highlights that front-line employees' knowledge can be fed back into the service innovation process.

CRQ3 notes the importance of soft human relationship skills for front-line employees.

FRQ3 notes front-line employees add value through their experiences with customers and co-create in their customer engagement role.

Summary:

The skills and knowledge of front-line employees are not always recognised in the service innovation process.

Consolidation on service ecosystems analysis:

The contribution of front-line employees in the service innovation is recognised. However, the wider contribution of front-line employees to the service innovation process through their soft skills and knowledge of customers is not emphasised well in the findings.

The analysis suggests there is a requirement to take a service ecosystems approach to combine meso-level *and* micro-level levels.

4.7- Empirical Data Analysis: Consideration of Potential Outliers

4.7.1 Introduction

The empirical data analysis was undertaken with service-dominant logic principles of organisational arrangements, staff (front-line employees') allocation and staff skills and knowledge as central. These are *the scope* of the research field. However, there were some potential interesting outliers in the empirical data, not particularly well emphasised in the final discussion and findings.

4.7.2 Values of staff contribution

The theme *7-1-2 Values of staff (FLE) contribution to service innovations*, says something about what staff *believe* and how their contribution is *valued* in the service innovation process. Figure 4.5 reflects this view.

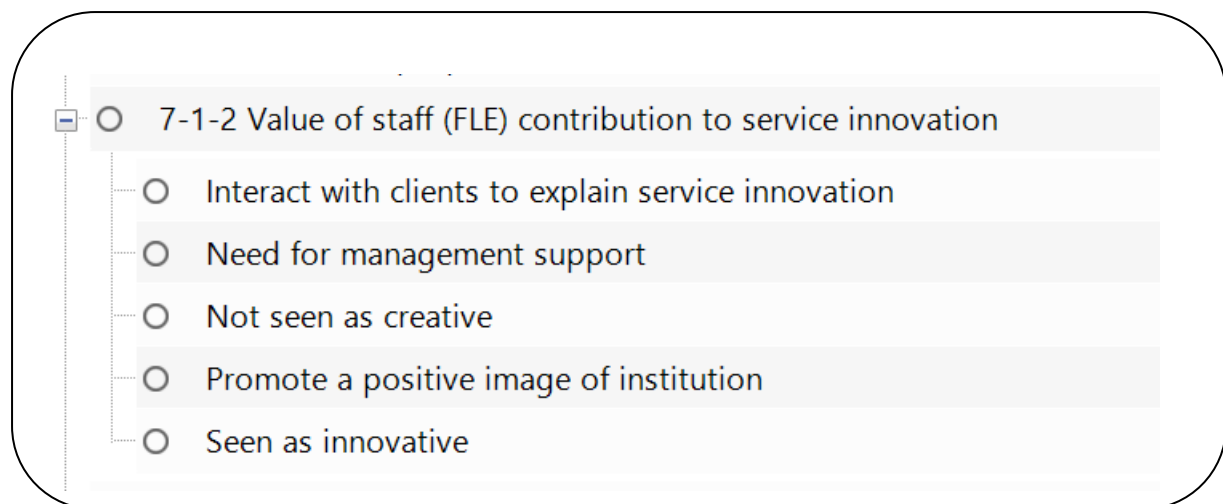


Figure 4.5: *What staff think about their value contribution.*

The code book analysis of this theme highlights several interesting aspects of what front-line employers *thought about their current contribution* to service innovation. There seems to be a contradiction between front-line employees not seen as creative but innovative. Perhaps front-line employees do not think service innovation is a creative process. The traditional role of front-line employees interacting with customers is highlighted. An empirical participant interview statement highlights the requirement for front-line employees to feel valued in the service innovation process. The need for management support is highlighted.

Staff-11	With technical services, particularly health care making people feel that they've been listened to and understood. Incredibly important, you could have all the best technical skills in the world, but if you don't. diagnose exactly what's required. You may give the wrong technical intervention.
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Table 4.19: Empirical participant interview statements.

The *value* of front-line employees might perhaps be better covered by research on *motivation* (Singh and Marinova, 2013) or *behaviour* (Kumar, Dass and Topaloglu, 2014).

Moreover, the findings might also be covered as Greenwood, Oliver, Suddaby and Sahlin (2008, p.6) and Mele, Sebastiani and Corsaro (2019) (see section 2.6.3) suggest under organisational arrangements *and* the social value of front-line employees. This was weakly reflected in the research as *culture appreciation* (section 4.3).

4.7.3 Management change

The theme *1-2-1 Management of change* perhaps points to reasons behind organisations' lack of engagement with front-line employees in the broader service innovation process (Figure 4.6).

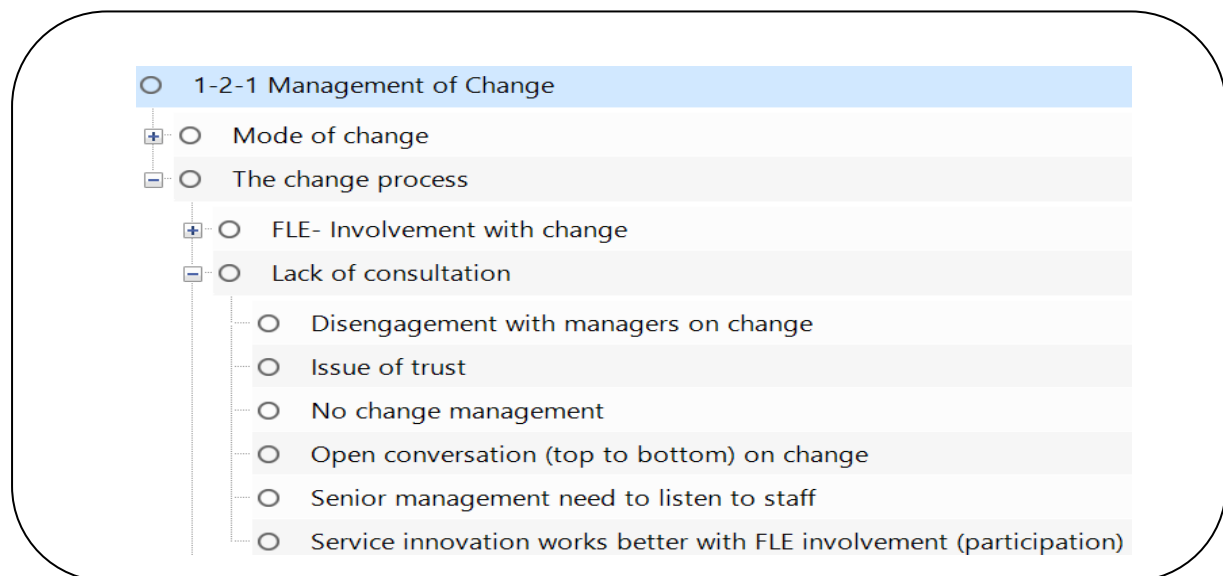


Figure 4.6: *Lack of front-line employee consultation.*

These findings perhaps highlight organisational management's lack of understanding (via lack of consultation) of front-line employees in the service innovation process.

Additionally, highlighted was the need to listen and hold open conversations.

This ultimately leads to front-line employees *not being* allocated to service innovation projects – Although the findings note front-line employee participation leads to better service innovation outcomes.

These themes were weakly picked up in the research as *management vision* and *assessing of staff allocation*. Also, reference section 4.4.

The empirical interview statements for the theme highlight a better understanding of managers of the role of front-line employees concerning organisational change. Indeed, staff-11 would seem to highlight the need for managers to understand service innovation when undertaking change.

Consultant-9	I think sometimes maybe there needs to be a better understanding in the wider organization of what the roles of those people are.
Staff-11	(Managers need) to understand (service innovation) they need to understand the desired outcomes. They need to understand why those desired outcomes are important. Sort of understanding where the service needs to go.

Table 4.20: Empirical participant interview statements.

4.7.4 Customer participation perspective

A third, possible outlier resolves around service ecosystems and service innovation via a customer participation perspective. This would widen the scope of the research to bring in more aspects of customer co-creation (service-dominant logic principle six, Vargo and Lusch, 2004) and customer value (service-dominant logic principle seven, Vargo and Lusch, 2004). Figure 4.7 illustrates the code book for this.

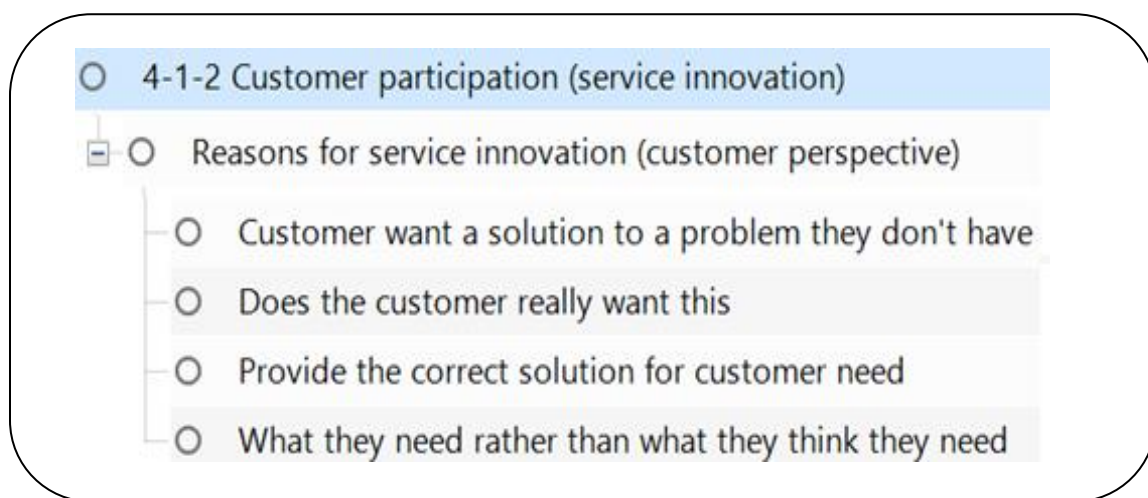


Figure 4.7: A customer perspective on service innovation.

The phenomena of interest for this research revolve around *front-line employees'* broader contribution to the service innovation process. The scope of the research is *not the customer*. Nevertheless, there has been much research on co-creation, for instance, Vargo and Lusch (2016), as important in service-dominant logic. The research weakly picks up these findings as *customer domain experts* (section 4.5).

The code book themes discovered that front-line employees think that customers do not know what they want from service innovation, and it is the role of front-line employees to guide and assist customers. Staff-9 highlights the need for front-line employees to build trust, in service delivery and by inference service innovation.

Staff-5	We've decided after talking to the customer and seeing how they've interacted with the product that we would not start from scratch per se, but redo the entire front end as well as some things back end because it was very clear on testing with the user and this was done when everyone is in the same meeting
Staff-7	I think that's it is building customer trust. I mean, I think a lot of this thing with service delivery is building trust that the customer knows that you do care. You got their best interests at heart. You really care about delivering a good quality service

Table 4.21: Empirical participant interview statements.

4.8- Summary of Chapter Four (Discussion and Findings)

Section 4.1 forms an introduction to the discussion and findings section, with Figure 4.1 broadly illustrating the outline of the findings and discussion section. In the section, it was noted the stress on empirical data collected and analysis undertaken for this research.

Section 4.2 outlines the research question, co-opting a service ecosystems approach to maximise the importance of front-line employees to the service innovation process. This is undertaken by service-dominant logic principles, four, eight, nine and eleven (Table 2.4, Vargo and Lusch 2004; 2016). Also, reference Table 2.3 for associated service-dominant logic principles.

In sections 4.3 through section 4.5, for each section, there is a discussion of the research question, and the code book extract is given. Under each high-level concept, for instance, *culture appreciation* (section 3.8.1.7), code book thematic (interpretative) analysis is allocated. Following this is empirical data (statements) from interviews are given. There is also a brief consideration of context. These are discussed and a targeted literature is given. Finally, a synthesis is made.

Section 4.3 gives the empirical data findings considering research question one and from an organisational arrangements stance. The second level categories interpreted were: culture appreciation; strategy engagement; and system context.

Section 4.4 gives the empirical data findings considering research question two and from a staff allocation viewpoint. The second level categories built were: management vision; promote learning; and assessing staff allocation.

Section 4.5 gives the empirical data findings considering research question three and from a staff skills and knowledge standpoint. Interpreted second level categories were: knowledge sharing; customer domain expert; and lessons learnt.

Section 4.6 discusses the wider service ecosystem perspective on the research analysis. Section 4.7 considers some potential outliers from the empirical data analysis.

The next chapter (Chapter 5) of this research outlines the contribution of the research. The contribution outlines the addition of empirical analysis, new theory, and new conceptual knowledge through constructed process modelling.

Chapter 5: CONTRIBUTION

“Not everything that counts can be counted” - Albert Einstein (Gorry and Westbrook, 2011)

This chapter on contribution to the academic body of knowledge can be broken down as follows:

- Section 5.1: Introduction to Contribution
- Section 5.2: Contribution from Empirical Data Analysis
- Section 5.3: Contribution to Theory from this Thesis
- Section 5.4: Contribution to Practice at a Conceptual Model Level
- Section 5.5: Summary Chapter Five (Contribution)

5.1- Introduction to Contribution

5.1.1 Contribution of the research

The contribution from the research takes three forms:

Firstly, the empirical data collected for this research resolves front-line employees' maximisation and broader contribution to the service innovation process. Empirical data, service-dominant logic theory and conceptual modelling should be viewed as a whole, from a *service ecosystems* perspective to the broader contribution of front-line employees to the service innovation process.

Secondly, a review of the literature highlights the deficiency in academic theory to explain the broader contribution of front-line employees in service innovation. A theory framework is offered based on service-dominant logic principles and a service ecosystems perspective (Vargo and Lusch, 2004).

Thirdly, conceptual process models (Figure 5.3 through Figure 5.6) are illustrated based on service-dominant logic principles and a service ecosystems perspective. These models incorporate the research findings from the empirical data analysis.

5.1.2 Empirical research data contribution

The empirical data collected and analysed concerning front-line employees, service innovation and a service ecosystems perspective form new valuable insights.

The data collected provides new insights into the UK financial, health and university sectors involving front-line employees in the service innovation process.

The insights focus on organisational and management thinking on *how* front-line employees can maximise their contribution to the service innovation process more broadly.

The insights are focused on service-dominant logic principles of organisational arrangements, staff allocation and front-line employees' skills and knowledge.

The thematic and empirical analysis explores what might constitute the underlying rationale behind the service-dominant logic principles for front-line employees' broader contribution to the service innovation process. These resolved to culture appreciation, strategy engagement, systems context; management vision, promote learning, assessing staff allocation; knowledge sharing, customer domain expert, lessons learnt.

Furthermore, the empirical data collected for this research answers the research questions (section 1.5) and resolves the gap in knowledge (section 2.10).

5.1.3 Theory building contribution

The theory-building contribution comes from the subjectively and interpreted combination of service-dominant logic principles and a service ecosystems perspective.

The service-dominant logic principles explored include:

- Organisational arrangements (service-dominant logic: Principle eleven, Vargo and Lusch, 2016).
- Resource integration, specifically staff allocation (service-dominant logic: Principle nine, Vargo and Lusch, 2016).
- Front-line employees' skills and knowledge service-dominant logic: Principle four, Vargo and Lusch, 2004).
- Service ecosystems (service-dominant logic: Principle eight, Vargo and Lusch, 2004).

It should be noted that the building of theory on these service-dominant logic principles *explicitly* leads to new inductive theory building. No theory in the literature reviewed sought to promote front-line employees in their maximisation and broader contribution to service innovation by taking a service ecosystems perspective. The statement of the theory is given later in this Chapter in section 5.3.2.

5.1.4 Conceptual model contribution

The conceptual model aspect of this thesis builds on the theory of service-dominant logic service ecosystems encompassing organisational arrangements, staff allocation and skills and knowledge of front-line employees and empirical data analysis.

The question of *what these models contribute* comes from their utilisation to form a framework to assist practitioners and academics in their service ecosystems of how front-line employees can broadly contribute to the service innovation process.

The question of *why these models?* This comes from the discovery through the empirical data analysis undertaken. The question of whether *I could just use service-dominant logic* is answered from the perspective that the models are built incorporating a service-dominant logic service ecosystems perspective, so extend service-dominant logic principles (Vargo and Lusch, 2004, 2016).

Lastly, the question of *how these models highlight improvements to maximise the front-line employees' contribution*, is resolved around the promotion, thinking and consideration of front-line employees. This highlights beyond traditional ideas, design and implementation, that front-line employees are *important* and should be *understood*, as they offer a valuable perception of customer value, customer exchange and co-creation in service innovation (delivery). This is *service-centred* and *not* product goods-dominant or firm-centred. Also see sections 2.3.4, Table 2.2 and Table 2.3.

5.2- Contribution from Empirical Data Analysis

5.2.1 Contribution: Research question 1

RESOLUTION –

How can changes in organisational culture concerning front-line employees improve the service innovation process?

Changes in organisational culture rest on the organisational environment social situation (norms and beliefs) and values. This then defines the environment in which the service innovation process is undertaken.

Taking a service ecosystems perspective highlights the requirement through organisational arrangements for culture to be placed at the centre of service delivered for and with the customer (Vargo and Lusch, 2016).

Section 2.6 notes service-dominant logic principle eleven. Here, value co-creation is coordinated through actor-generated organisations and organisational arrangements, (Vargo and Lusch, 2016). This forms the theoretical framework, in which organisations should endeavour for change and improvement. This as section 2.6 outlines, includes changes in the organisational environment (sense making, create meaning and beliefs), social situation and cultural values.

The failure of organisational culture to consider front-line employees' broader contribution to the service innovation process, also results in failure of strategy and strategy engagement thinking on front-line employees' broader contribution to the service innovation process. This consequentially leads to failure in service delivery with a lack of engagement and understanding of customers.

Empirical data suggests senior managers do not understand the service innovation process, so they fail to understand the importance of front-line employees and their broader contribution to the service innovation process. These results suggest there is a need for changes in organisational arrangements (culture) which promote the understanding and importance of the contribution of front-line employees.

Additionally, from a systems context perspective, empirical data findings suggest the service innovation process from a service delivery customer-centric stance is not well understood within organisations. This leads to a default of *firm lead, technology lead* service innovation and again a failure to consider front-line employees' broader contributions to the service innovation process (Nathalie and Lahouel, 2018).

The synthesis highlights the improvement to maximise service innovation and service outcomes through changes in organisational thinking, consideration and possible application, which rests with culture appreciation; strategy engagement and systems context concerning front-line employees' contribution.

5.2.2 Contribution: Research question 2

RESOLUTION –

RQ2: How can changes in organisational staff allocation of front-line employees improve the service innovation process?

The research, discovered via empirical data collection that improvements to maximise service innovation and service come through changes in organisational thinking on staff allocation. Further, this thinking highlighted management vision; promotion of learning and the assessment of front-line employees in the service innovation process. Furthermore, the data analysis highlights that organisations need to engage front-line employees in service innovation through stronger communication and a management vision (paint a picture) of how service innovation can be improved.

However, the lack of organisational understanding regarding front-line employees' importance, leads to failures in management vision and the significance of them as valuable staff. Their allocation and further contribution to the service innovation process being dismissed.

The importance of promoting learning for front-line employees is underestimated and how they can contribute to service innovation improvements. A better understanding of technology would allow front-line employees to contribute and comment at the start of the service innovation on suitable technology. Typically, technology is imposed and often *customer unfriendly* in operation.

However, organisational understanding of how front-line employees could further contribute to service innovation is poor. So, thinking on staff allocation to service innovation projects is consequentially also poor. Additionally, when organisations do consider front-line employees' staff allocation, they fail to forward think in a systems manner and so staff are allocated at random (Martin and Horne, 1993).

Nevertheless, where customers are viewed as *important*, the contributions of front-line employees *are seen as important* also and so service innovation thinking of *staff allocation is important and planned*.

Section 2.7 notes service-dominant logic principle nine. This highlights that all social and economic actors are resource integrators (Vargo and Lusch, 2004). This can then form the theoretical framework on which these organisations should embrace change and improvement. As the literature reviewed in section 2.7 highlights thinking of staff allocation of front-line employees must also be seen in the context of the overall organisation culture and essentially dynamic capabilities.

5.2.3 Contribution: Research question 3

RESOLUTION –

RQ3: How can better utilisation of the skills and knowledge of front-line employees improve the service innovation process?

Empirical analysis highlights front-line employees are good at solving customer issues and engaging and assisting customers. However, the actual sharing of customer knowledge, organisationally wide is not something organisations are good at recognising, so do not prioritise. This results in the failure of front-line employees to contribute their skills and knowledge more broadly to the service innovation process, so resulting in poor service innovation outcomes. However, where front-line employees are viewed as important there is greater service innovation improvement.

The failure to understand the important customer knowledge front-line employees hold also impacts the perceived understanding of the contribution they can make. Typical contributions relate to ideas generation, service design and implementation. However, their wider customer domain expertise, for instance resolution of customer issues where technology has failed (for instance chatbots) is seldom considered.

Furthermore, their contribution at the *start of the service innovation*, to advise and guide, is also seldom considered, for instance, CRM technology is *obviously* the correct solution. When analysis on '*why*' this is the case, is seldom questioned.

The failure, by organisations, to undertake lessons learnt exercises results in organisations making the same mistakes, at the same stages again (and again). Here front-line employees can contribute further by sharing their customer knowledge and wider customer domain expertise to the lessons learnt process, resulting in improved and maximisation of service innovation outcomes.

Taking a service ecosystems perspective at a micro-level, with staff skills and knowledge, organisations need to understand the importance of front-line employees' soft human skills in the customer relationship and service innovation process.

Organisations fail to recognise the broader contribution front-line employees can make with their skills and knowledge because *they fail to understand* a service ecosystems (systems) process of service innovation.

Through synthesis, the improvement to maximise service innovation and service outcomes comes through changes in organisational thinking. This rests with increased knowledge sharing, customer domain expertise and lessons learnt from front-line employees. These were discovered by empirical data collection and analysis which was undertaken by this research.

Section 2.8 notes service-dominant logic principle four. This states that knowledge is the fundamental source of competitive advantage (Vargo and Lusch, 2004). This approach should form the theoretical framework for organisation improvements and changes. Also, as the literature reviewed in section 2.8 outlines, thinking about front-line employees' skills and knowledge should be founded on knowledge, communication and learning.

5.2.4 Contribution: Bring it all together – A service ecosystem perspective

RESOLUTION – Thesis research question

RQ: How can the broader contribution of front-line employees be maximised in the service innovation process?

Empirical analysis at the meso-level of service ecosystems highlights the failure of organisations in their cultural (organisational arrangements) understanding. The failure highlights a customer-centric focus on service delivery and service innovation based on the principles of service-dominant logic. Consequentially this leads to a failure to consider *how* front-line employees could more broadly contribute to the service innovation process. Organisations need to understand the wider contribution front-line employees can make to improve service innovation outcomes.

Culture (organisational arrangements) failure leads to failure in strategy engagement with front-line employees and the lack of understanding regarding how they could contribute more to a wider systems context. Therefore, changes in the organisational environment, social situation and cultural values should be prioritised. Also, reference section 2.6.

Organisational changes in staff allocation, at a meso-level, should improve the service innovation and lead to improved service innovation, in that front-line employees' are thought of as *important contributors* to improved and better service innovation outcomes.

The consideration of service ecosystems at a micro-level, adds front-line employees' skills and knowledge (see section 2.8).. It is recognised that front-line employees are skilled and knowledgeable as subject matter experts concerning customer contact relationships (Engen, 2020, pp.131-132).

The failure to consider front-line employees as an important resource impacts thinking on learning. When front-line employees are allowed to learn technical and human skills, they gain knowledge which heightens their awareness of the service innovation process. This, then potentially allows an increase in what front-line employees can contribute.

However, there is a failure to understand the importance of how front-line employees can contribute to knowledge sharing, lessons learnt and the wider service innovation process. Here better use of front-line employees' skills and knowledge could lead to improved service innovation particularly concerning customer exchange, customer value and customer co-creation. Also see Table 2.3 which outlines the service-dominant logic principles concerning these concepts.

Connecting service-dominant logic principles four, eight, nine and eleven with a service ecosystems perspective gives a systems approach to organisational thinking on how front-line employees can broadly contribute more to the service innovation process. (Service-dominant logic: Principle eight, Vargo and Lusch, 2004). Also, see section 2.9 for the literature reviewed.

Finally, the maximisation of the contribution of front-line employees to the service innovation process is *only realised* through the bringing together of a service ecosystems, and systems perspective (Vargo and Lusch, 2017)

This promotes organisational understanding and thinking for both customers and front-line employees (Service-dominant logic: Principle eight, Vargo and Lusch, 2004).

5.3- Contribution to Theory from this Research

5.3.1 Theory building for this thesis

Building on service-dominant logic principles, constructed theory highlights the broader contribution of front-line employees to the service innovation process. The contribution is built taking a service ecosystems perspective.

The contribution is argued in and from the literature review in Chapter 2. The structure from Chapter 2 is utilised to build in the code book and allows interpretive empirical data analysis to be undertaken. This theoretical perspective was utilised to discover, and theme build on what constitutes the broader contribution of front-line employees to the service innovation process.

The building of inductive theory is utilised to build concepts, for instance, customer domain expertise (section 4.5). It is important to note the concepts and themes discussed in Chapter 4, might only be discovered from the data collected and then analysed. The empirical data analysis, therefore, builds upon and reinforces the original inductive framing.

5.3.2 Contribution to theory

The contribution to theory for this research is to utilise service-dominant logic theory incorporating principles four, nine and eleven. Additionally, to provide a service-centred perspective service-dominant logic principle eight is also co-opted.

The theory framework brings together service-dominant logic, with service innovation, and front-line employees' contribution. To give better service innovation outcomes thinking about service ecosystems with defined meso-level and micro-level approaches are also added. In this context, the theory adds to the academic (and practitioner) knowledge through the understanding and importance of how taking a service ecosystem's perspective on the broader contribution of front-line employees to the service innovation process may be conceptualised. Figure 5.1 outlines the theory – Note, that the text is taken from the headings of section 2.9 which outlines a service ecosystems perspective.



Figure 5.1: New inductive theory based on service-dominant logic.

Understanding the service innovation and a service ecosystems perspective is important as Lusch Vargo and O'Brien (2007) note, as it leads to a better understanding of customer value and co-creation. Further, Santos-Vijande, López-Sánchez, Pascual-Fenández, and Rudd (2021) also note a greater understanding of the service innovation process and possibilities within organisations. Moreover, Vink, Koskela-Huotari, Tronvoll, Edvardsson and Wetter-Edman (2021) stress the importance of service ecosystems understanding to improve service innovation change. Moreover, academic understanding is important regarding the reduction in organisational time-cost-resource and improved competitive advantage (Korper, Holmlid and Patrício, 2021; Kumar et al., 2022).

Additionally, as section 1.4.1 highlights any improvements in academic theory regarding understanding of service innovation, to a \$16 trillion (Cutler and Summer, 2020) contribution in service delivery for the US economy *must be seen as important!*

5.3.3 Contribution to theory practice

The learning for practitioners (and perhaps academics as well) comes from the theory outlined in this thesis. This is founded on the literature review regarding the service-dominant logic of Vargo and Lusch (2004, 2016). Here explicitly, subjectively interpreted principles (four, eight, nine and eleven) were reviewed as making up systems, service ecosystems perspective to the broader contribution of front-line employees in the service innovation. This can be brought together here:

‘Organisational front-line employees can more broadly contribute to the service innovation process through the utilisation of service-dominant logic service ecosystems theory and perspectives. These perspectives centre on combining an understanding of the social organisational arrangements, the effective undertaking of staff allocation and the promotion of customer relationship skills and knowledge.

This approach can lead to better organisational service innovation outcomes and the realisation of competitive advantage in service delivery.’

As noted in section 1.4.1 and section 1.4.4 the reality in most organisations, and from the researcher's own professional experience of the problem, is that organisations take a fixed non-systems perspective of front-line employees’ in service innovation *only* viewing them in the context of ideas, design and implementation. The academic and practical *value* (stressed in this thesis and research) is for organisations to take a service ecosystems perspective (systems) approach to front-line employees and service innovation. This leads to better service innovation outcomes and competitive advantage (Santos-Vijande, López-Sánchez, Pascual-Fenández, and Rudd, 2021).

Figure 5.2: Illustrates the inductive theory contribution to this research graphically.

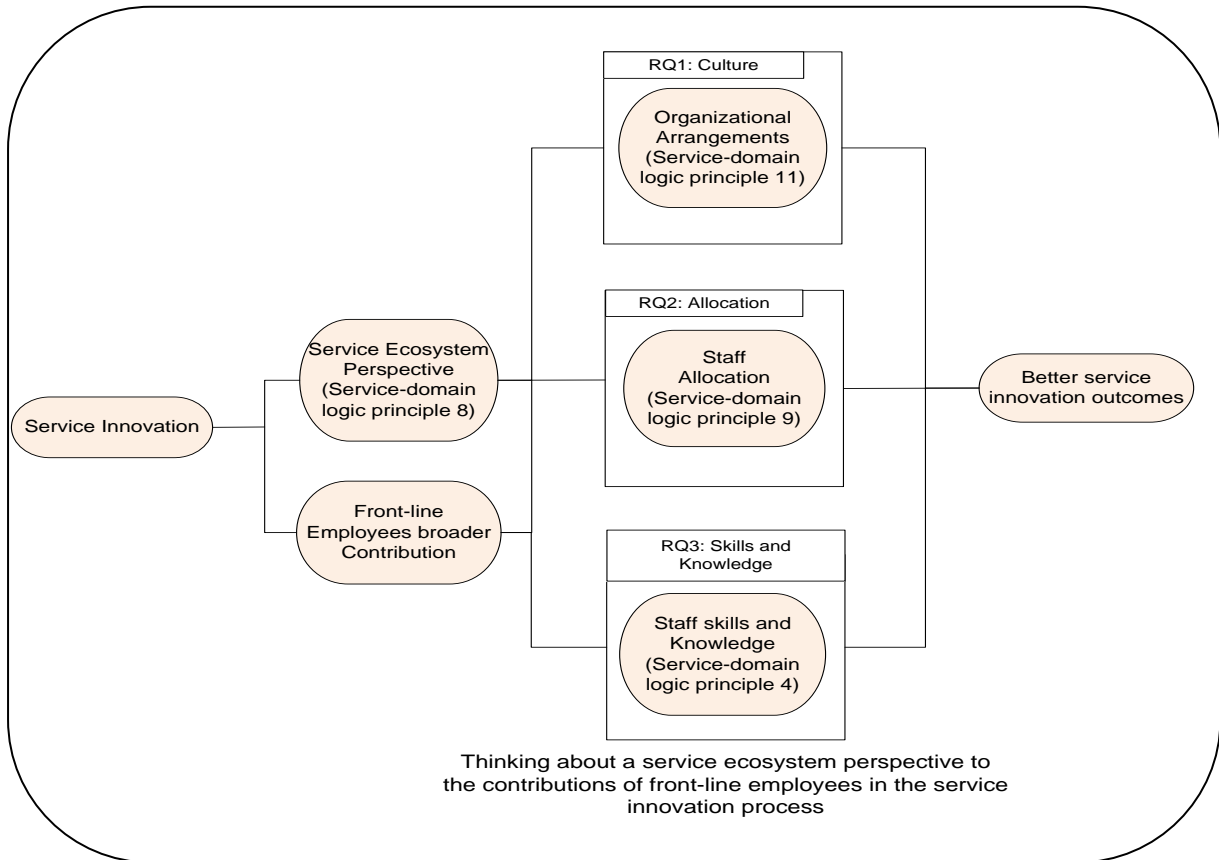


Figure 5.2: Contribution to theory for this research.

5.4- Contribution to Practice at a Conceptual Model Level

5.4.1 Introduction

The contribution of unique and new knowledge, at the concept level, comes from the construction of a series of conceptual process models. These are built on the research service-dominant logic principles on service ecosystems (Vargo and Lusch, 2004, 2016; Vink, Koskela-Huotari al., 2021). Additionally, the models *build on* empirical data analysis discovery. Taking this approach, the series of process models can be utilised to operationalise the discussion and findings of this research. Also, see Chapter 4.

The process models highlight the categories and themes of organisational arrangements, staff allocation and staff skills and knowledge brought together by the empirical data analysis. The conceptual models answer the ‘*How*’ research questions RQ1 – RQ3 regarding improvements and change. These models might seem *obvious* but are elicited in this research in the context of front-line employees and their contribution to maximise service innovation. This then becomes *less obvious* and unique knowledge. These models are illustrated in Figure 5.3 through Figure 5.5.

Additionally, the conceptual models emphasise *what can be done* to maximise the contribution of front-line employees in the service innovation process. Moreover, utilising the three process models can be combined to resolve the main research question. Figure 5.6 illustrates the final conceptual model.

Furthermore, for each process model (Figure 5.3 through Figure 5.5) an example from the UK financial, health and university sectors, drawn from research (interpretive) participant data is utilised to illustrate the conceptual model (contribution) in context.

An extended illustration (case study), drawn from participant data from a health sector organisation, is then utilised to a combined service ecosystems perspective (Figure 5.6).

The process models can be utilised (singularly or in combination) by UK managers, front-line employees and service innovation consultants to understand and think about the broader contribution of front-line employees in the service innovation process from a service ecosystems perspective.

5.4.2 Process Model - Service ecosystems perspective: Organisational arrangements

5.4.2.1 Organisational arrangement (Meso-level)

Research Question 1: How can changes in organisational culture concerning front-line employees improve the service innovation process? This resolved from empirical and thematic data the *organisational arrangements* categories of culture appreciation, strategic engagement and a systems context are important when exploring a service ecosystems perspective and the broader contribution of front-line employees in the service innovation process. This conceptual model can be utilised as a framework by practitioners and academics to assist in their thinking on organisational arrangements. This is brought together in Figure 5.3.

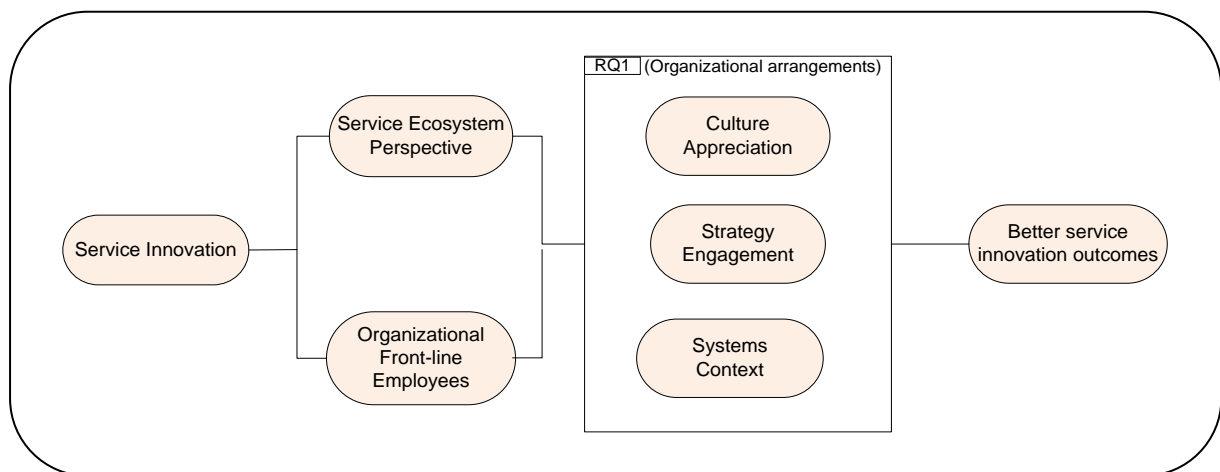


Figure 5.3: Organisational Arrangements (based on empirical data findings).

5.4.2.2 Practical contribution: UK organisations (Organisational arrangements)

5.4.2.2.1 Finance organisation

A large financial organisation, with assets of many billions of pounds. It specialises in large loans to large organisations.

The culture within the organisation promotes a mindset of innovation and continuing service innovation improvement. Front-line employees and front-line employee managers are encouraged to think about how a service is delivered and how the service could be delivered in the future. The organisation prides itself on its innovation culture.

Front-line employees' work is defined in terms of *micro-strategy* which is specified from department strategy by senior manager. Front-line employees *have no* input to organisational strategy. In a system's context, technology is often implemented and then service innovations follows – How can service be innovated to align with technology. In terms of the service ecosystems perspective, the organisation is perceived to be working with customers.

Using the process model of *organisational arrangements* would highlight that front-line employees could feedback from micro-strategy and into department strategy. The broader contribution of front-line employees could highlight problems with technology and greater improvements to the service innovation process.

5.4.2.2.2 Health organisation

A social media team member has been working with one of the leading UK and European drug organisations to promote service delivery and service innovation.

A challenge, with most service delivery aspects of any organisation, is to understand the culture, the impact of service delivery (and service innovation) failure and understand senior management strategy.

It is often unclear what the business problems are and so consequential what service innovation improvements need to be undertaken. It is also, often unclear whether or if the service innovation matches organisational strategy at an operational level.

Consequentially staff, such as front-line employees, suggest ideas concerning technology and business intelligence reporting, whereas further investigation might highlight issues regarding improvements important to customers. This would highlight a service ecosystems approach to working *with customers*.

The process model of *organisational arrangements* would improve service innovation. This could be achieved by emphasising the need for a shift in organisational culture from business centric improvements to customer centred. This would further increase front-line employees' broader contribution to the service innovation process, as they could work to improve cultural understanding within the organisation from a customer perspective.

5.4.2.2.3 University organisation

This university is based in southern England and is consistently within *The Time 25* best world university to study. The student population is diverse and there is a requirement from the senior management team to engage and understand the student population.

The culture of the university is good, with many people understanding the benefits of service innovation, however, there is a requirement to promote service innovation to improve the student experience.

The engagement of strategy to understand the student population is important. However, strategy is only based on what the senior management team *believe is important*. Not what is important. Front-line employees could help with feedback on strategy.

The systems context is important as student applications and processes *must* be seen to be holistic to promote students' (customer) confidence in the university. However, feedback from front-line employees is often ignored as different sections, for example, Registry, have different perspectives on students.

Taking a service ecosystems perspective, the organisation could use the *organisational arrangements* model to bring together systems thinking on the individual aspects of the model to improve service innovation and front-line employees' broader contribution.

5.4.2.2.4 A perspective on concept model contribution (RQ1)

The conceptual model (Figure 5.3) should visualise to IT consultants, front-line employees' and organisational managers the requirement to consider organisational culture when thinking about service innovation *and* the need to understand it. Especially with strategic engagement with staff. There is still a need to think about technology, but this should *assist* interactions with customers.

From a service ecosystems perspective, Vargo and Lusch (2016) place principle eleven *organisational arrangements* at the heart of service delivery, and by inference service innovation. The involvement, facilitation and engagement of front-line employees' contribution to the service innovation rests with an organisational cultural understanding of front-line employees (and customers). This leads to improvements in service innovation outcomes (such as time-resource-money).

5.4.3 Process Model - Service ecosystems perspective: Staff allocation

5.4.3.1 Staff Allocation (Meso-level)

Interpreting the empirical and thematic analysis of 42 semi-structured interviews undertaken for Research Question 2: How can changes in organisational staff allocation of front-line employees improve the service innovation process? discovered categories (from empirical data analysis) for staff allocation included management vision; promote learning and assessing staff allocation are important when exploring a service ecosystems perspective and the broader contribution of front-line employees in the service innovation process. This conceptual model can be utilised as a framework by practitioners (and academics) to help in their thinking on staff allocation. This is brought together in Figure 5.4.

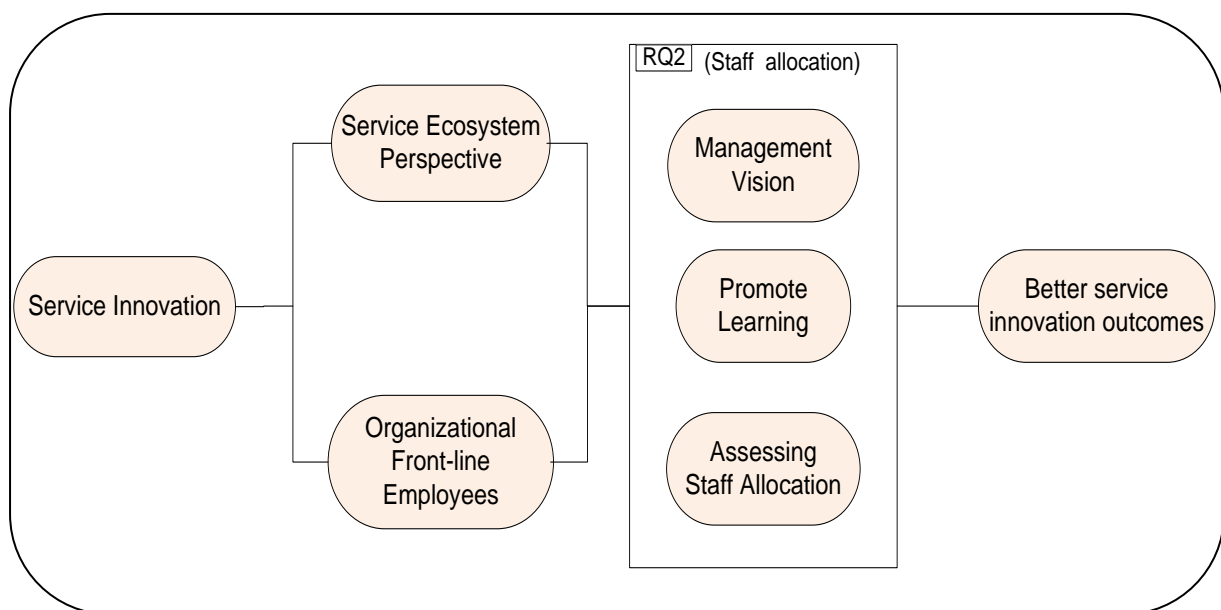


Figure 5.4: Staff allocation (based on empirical data findings).

5.4.3.1 Practical contribution: UK organisations (staff allocation)

5.4.3.1.1 Finance organisation

This financial organisation has been undertaking a data migration (cleansing) programme to ensure CRM information they hold on customers is correct.

All levels of management did not understand service innovation and so there was no management vision as to what they wanted to achieve beyond better data reporting.

The concept of better service delivery was not a consideration.

Senior managers particularly did not understand what staff resources they required and have no concept of training staff. Front-line employees' involvement was minimal, although their duties included capturing and customer relationship management.

The practical model of *staff allocation* would encourage a customer centred focus on the organisation. This would allow management to articulate a service-centred management vision and thinking about staff resourcing to match this vision.

This would require staff development in new skills, with front-line employees being involved with the promotion of customer relationship skills organisationally wide. This would lead to improvements in service innovation.

Taking a service ecosystems perspective, the organisation is then *working for the customer*.

5.4.3.1.2 Health organisation

The organisation represents its health professionals to government, media and the wider community. It offers advice and guidance to its members, including medical indemnity insurance.

Management vision is unclear, as the medical world is undergoing rapid change (COVID-19) and there is rapid innovation in communication methods such as online meetings between managers and staff.

The organisation promotes learning to its membership but is not very good at promoting learning internally.

The assessing of staff allocation is difficult, as managers are unaware of the skills and knowledge of front-line employees and so do not ask at all. Front-line employees are typically seen as ideas generators. Ideas are logged and managed.

The *staff allocation* model could be utilised to think about the contribution of front-line employees in a systems manner. This would promote thinking on front-line employees', how they could be engaged further, how their skills and knowledge could be better utilised and understanding the importance of front-line employees to improve and drive the service innovation process.

5.4.3.1.3 University organisation

This university is based outside of central London. It is considered a UK and world centre of excellence in many of its departments.

The issue of front-line employees' staff allocation is a primary concern, as the university finds it *challenging* to find staff with the correct technical and human skills management. Changes in the organisation have led to an increased workload for front-line employees in contact with both internal staff and external consultants. Although training has been given to improve the situation, it is not clear what the management vision is for the future.

These issues have had a direct impact on service innovation, as issues concerning service delivery are not raised and consequential only minor improvements are made. Senior managers *do not understand* the importance of service innovation, which is made difficult because of the hierarchical nature of the organisation.

Support of front-line employees is seen as vital but there is no clear thinking to manage front-line employees' contribution, beyond providing further training.

The *staff allocation* model can be utilised to bring together thinking on front-line employees and empower their broader contribution to the service innovation process.

5.4.3.1.4 A perspective on concept model contribution (RQ2)

The conceptual model (Figure 5.4) can be used to assist IT service innovation consultants, front-line employees, and organisational managers in their thinking on front-line employees' staff allocation. The management vision should highlight the requirement to think about front-line employees and plan accordingly for their utilisation. This includes thinking about promoting of learning, so front-line employees can be more readily involved and engaged, not only with service delivery but service innovation projects.

Taking a service ecosystems perspective, Vargo and Lusch (2004) elicit principle nine, on resource integration (staff allocation), as key to the principle of service delivery. Highlighting the requirement for staff allocation places front-line employees firmly around customer thinking in organisations and their better utilisation. Thus, thinking about front-line employees leads to improvements in service innovation outcomes concerning the recognition of their contributions.

5.4.4 Process Model - Service ecosystems perspective: Staff skills and knowledge

5.4.4.1 Staff skills and knowledge (Micro-level)

Research Question 3: How can better utilisation of the skills and knowledge of front-line employees improve the service innovation process? discovered categories (from empirical data) of knowledge sharing; customer domain expertise and lessons learnt were seen as important when exploring a service ecosystems perspective and the broader contribution of front-line employees in the service innovation process. This conceptual model can be utilised as a framework by practitioners to aid in their thinking on improving staff regarding skills and knowledge. This is brought together in Figure 5.5.

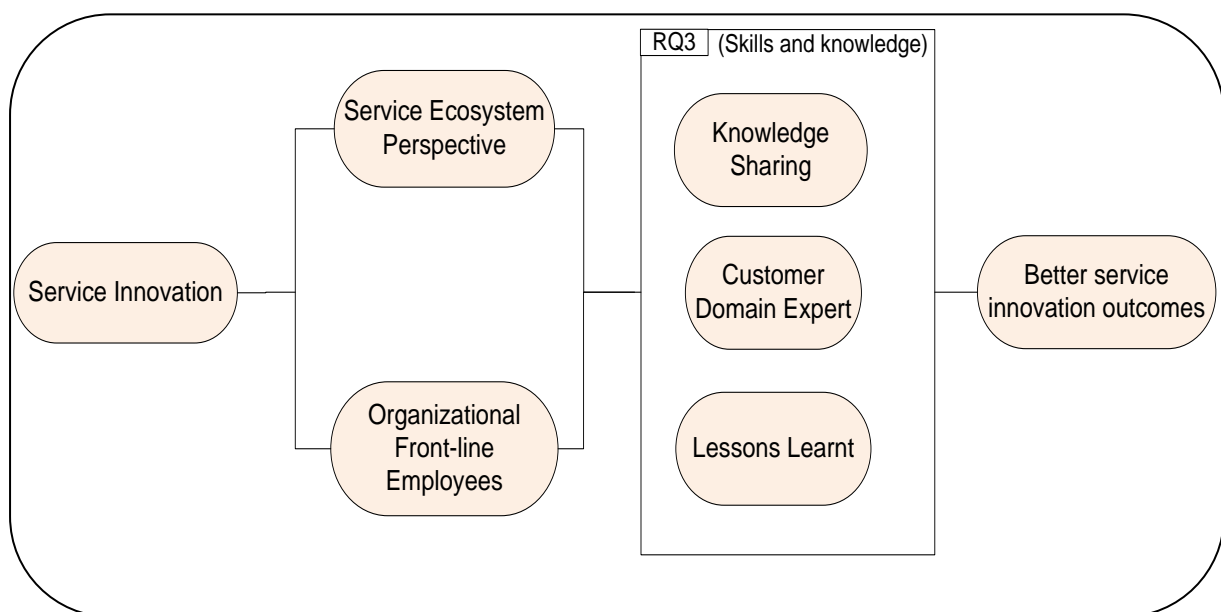


Figure 5.5: Skills and knowledge (based on empirical data findings).

5.4.4.2 Practical contribution: UK organisations (Skills and knowledge)

5.4.4.2.1 Financial organisation

A medium-sized financial SME based in Southeast England. The organisation manages clients' affairs for many hundreds of its clients, providing advice and guidance on current UK legislation.

One of the organisational senior managers, notes that since the COVID-19 pandemic, the skills and knowledge of the front-line employees have moved to be more engaged with clients using remote online conferencing. It has been noted this works well, as there is direct feedback from the client and the front-line employee. Where agreement from the client is obtained, the meeting can be recorded for compliance and training purposes. This also serves to capture best practices for lessons learnt.

Although, recordings are shared in a central folder not all clients and staff agree to online conferencing. The recordings are seldom reviewed.

The practical model of *skills and knowledge* would emphasise the capture of front-line employees 'human skills expertise for lessons learnt and knowledge sharing. However, the downside to this would be the time needed to review each meeting and front-line employees' lack of trust in manager motives.

5.4.4.2.2 Health organisation

A service delivery manager of a leading UK health provider speaks of the need for staff to engage with hospital consultants. This is problematic, with consultants such as knee specialists, demanding ‘instant’ resolution of their issues by front-line employees’, where cancellation of an operation might cost £5,000+

The idea of lessons learnt is at the forefront of service innovation, as post-change meetings with front-line employees are undertaken to review changes made. How changes could be improved, and failure mitigated. This typically involves failure with technology and failure to share knowledge about processes.

Updating of knowledge stores is *not typically* seen as important. However, documentation is widely consulted for the resolution of consultant issues and typically forms the initial reading for service innovation projects. Updating knowledge stores and sharing knowledge is seen as something front-line employees *could be* utilised directly.

Although front-line employees are recognised as important for their customer domain skills and their ‘diplomacy’ working with consultants, this is not always appreciated by senior organisational managers.

The practical model of *skills and knowledge* would allow bringing together these concepts and thinking on service innovations. These improvements would form a service ecosystems perspective with *working for the customer*.

5.4.4.2.3 University organisation

This university is based in the eastern part of England and is consistently within *The Times* top 50 best UK universities to study.

Knowledge sharing is seen as important, as multiple stakeholders are involved in meetings with student representatives, for instance, Student Union staff, to discuss service improvements (service innovation). However, most service innovation involves changes from Key Performance Indicators (KPIs).

Information from the KPI is feedback on lessons learnt to see what processes can be improved and what changes worked and did not work. However, this tends to ignore feedback from front-line employees. This results in service innovation which only meets a specific requirement, not a broader perspective to which front-line employees could contribute.

Utilising the *skills and knowledge* model would promote front-line employees in the service innovation process by accessing their customer domain knowledge. This would allow experiences from students to be shared and lessons learnt consolidated to improve the service innovation process.

5.4.4.2.4 A perspective on concept model contribution (RQ3)

The conceptual model (Figure 5.5) highlights to organisational staff, the requirement to think about front-line employees' skills and knowledge. Skills and knowledge include knowledge sharing of information about and customer organisationally wide. This knowledge should be recognised as an important contribution by front-line employees. Additionally, where lessons learnt are required, to improve the service innovation process, the learning, knowledge, and skills of front-line employees as customer domain experts should be readily utilised.

Taking a service ecosystems perspective, the addition of front-line employees' skills and knowledge, highlights a major contribution front-line employees can play in the wider service innovation process. Vargo and Lusch (2004) stress principle four, that knowledge is the fundamental source of competitive advantage. The thinking on front-line employees' skills and knowledge can lead to better service innovation outcomes and improvements regarding better service delivery based on their organisational customer knowledge.

5.4.5 Process Model – Service ecosystems perspective: Systems approach

5.4.5.1 A perspective on concept model contribution (incorporating the RQ): A Service ecosystems perspective

The conceptual model (Figure 5.6) promotes a *shift of perspective* to service ecosystems thinking on front-line employees in the service innovation process and how their broader contribution to the service innovation process can be maximised.

Conceptual process models Figure 5.3 through Figure 5.5 can be used in isolation and in combination. However, when they are combined, they give a service ecosystem perspective and a systems approach.

Taking this perspective additionally resolves the research question, which was the aim of this research: How can the broader contribution of front-line employees be maximised in the service innovation process? This is brought together in Figure 5.6.

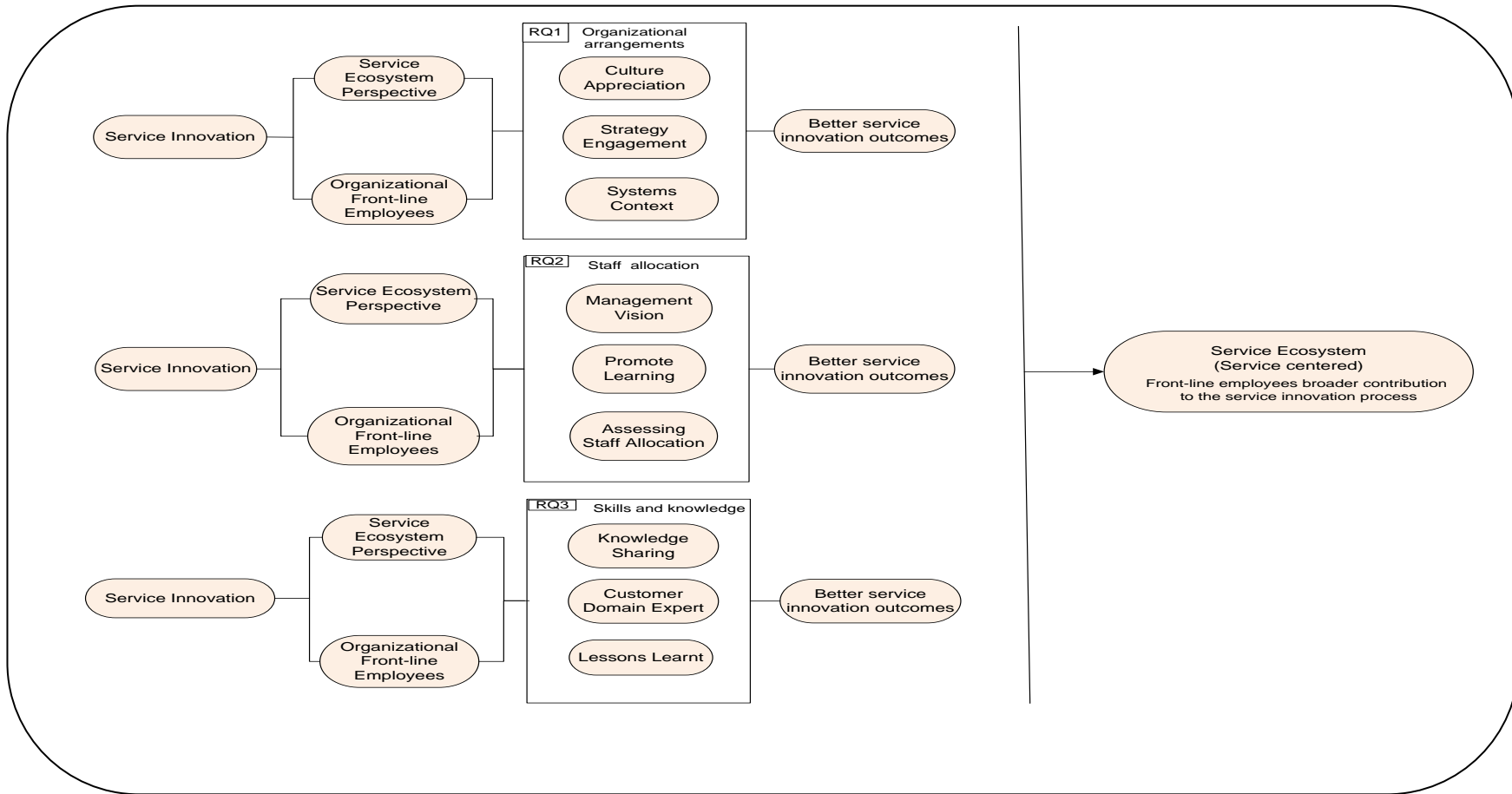


Figure 5.6: Combining previous conceptual models resolved in the findings.

5.4.5.2 An extended case study on the conceptual model contribution: Health organisation

Empirical data is interpreted from scripts loaded into NVIVO. The interviewee is a district nurse, with eleven years' experience working for a prime health care NHS trust in Eastern England.

Organisational arrangements

Culture appreciation

The chief nurse is very supportive of their staff and is open to discussion on new service initiatives. Change is open-up to *all staff* and *patients*. Changes have been many during the COVID-19 pandemic. There is an 'open-door' policy regarding suggestions for change. Staff trust they are being listened to.

Strategy engagement

There is a *need* for senior management to understand how a service is delivered, and the consequences of any changes made on front-line employees (staff) and customers (patients). Senior management is disengaged with service delivery.

Systems context

Technology is seen as an enabler. The primary service task is to *look after* the patient's health care requirements. However, completing patient records is seen as sometimes difficult as old technology is used.

Staff allocation

Management vision

Staff in meetings understand the problems encountered by service delivery, except for the one person in the room who can make the changes. Senior managers often do *not understand* the service delivered nor service innovation.

Promote learning

There is a need to understand your patients (customers) in the different districts you work in. The promotion of learning is viewed as important, to mitigate hazards. There is a requirement for shared learning (knowledge sharing).

Assessing staff allocation

The requirement for 24-hour medical cover. Consultants tend to work 9-5 Monday to Friday. Therefore, there must be staff to cover outside these times, especially at weekends. This is sometimes difficult.

Skills and knowledge

Knowledge sharing

Knowledge sharing of *best practices* between teams and staff is seen as vital in support of patient care. Communication between different staff members is seen as key. Communication with the patient is also seen as vital to assessing their physical and mental well-being.

Customer domain expert

There is a requirement for soft human skills. The ability to talk to a 104-year-old gentleman about the social and economic changes they have seen in their lifetime. The need for empathy. Patient's feedback on the level of care they receive and this is documented (in many forms). This goes back to administrative staff *and can* improve service delivery (service innovation).

Lessons learnt

Learning from support staff, who have lots of experience in the field of district care nursing, regarding *what works* and *what does not work* concerning nursing should be emphasised more.

5.5- Summary of Chapter Five (Contribution)

Section 5.1 introduces the research contribution. Section 5.2 outlines the empirical data analysis contribution to this research. This resolves the research questions and contribution to the research.

Section 5.3 outlines the theory contribution. The theory for this research taking a service ecosystems perspective is built from the deficiencies highlighted in the literature reviewed on service innovation, front-line employees' and service-dominant logic. Figure 5.2 illustrates this graphically.

Section 5.4 outlines the conceptual model contribution. This is considered from a service ecosystems perspective: Organisational arrangements; staff allocation; staff skills and knowledge and a service ecosystems perspective. For each perspective, an example is utilised from research participant data regarding UK organisations (financial, health and university sectors). This illustrates the practical contribution to thinking from the conceptual models. Lastly, an extended case study on a healthcare provider is outlined. This represents the combination of perspectives to the organisational understanding and the broader contribution of front-line employees in the service innovation process.

All three contributions provide *new valuable and unique insights* and *add* to the academic body of knowledge on front-line employees, service innovation and service ecosystems.

The next chapter brings together some conclusions resulting from the research.

Chapter 6: CONCLUSION

"It's not necessary to know everything in order to understand something" (Greetz, 1993, p.20)

This chapter on the conclusion may be broken down as follows:

- Section 6.1: Introduction to Conclusion
- Section 6.2: Conclusion to the Research
- Section 6.3: Limitations and Future Research
- Section 6.4: Summary of Chapter Six (Conclusion)

6.1- Introduction to Conclusion

This chapter comments on the results of undertaking the research and the contribution to the field of service innovation; front-line employees' and service ecosystems. A brief review regarding the context of research questions is outlined and how the research has met these objectives.

There is also a discussion on further research insights. There is also a review of the research limitations and possibly extending the research.

6.2- Conclusions to the Research

6.2.1 A brief commentary research aim

The motivation for this research (introduction, section 1.1) was prompted by the observation regarding the lack of *understanding and difficult nature* of service innovation commented on by Lusch, Vargo and O'Brien, (2007); Dörner, Gassmann and Gebauer (2011) and Tajeddini, Martin and Altinay (2020).

Work undertaken by Kitsios and Kamariotou (2019), noted those organisations which failed to engage with wider service ecosystems (systems approach) thinking on service innovation defaulted to implement technology (Cucciniello, et al., 2015; Wallin and Fuglsang, 2017; Korper, Holmlid and Patrício, 2021). This fixed approach then typically *fails* to consider wider organisational aspects, such as front-line employees' contributions to the service innovation process (Woisetschläger, Hanning and Backhaus, 2016; Russo Spina, Mele and Nuutinen, 2017).

The work by both Bäckström and Bengtsson (2019) and Lütjen, Schulz, Tietze, and Urmetzer (2019) note there has only been *limited* research on how organisations understand and think about staff involvement and what staff can contribute to the service innovation process (Karlsson and Skålén, 2015; Engen and Magnusson, 2018; Santos-Vijande, López-Sánchez, Pascual-Fernández and Rudd, 2021; Vink, Koskela-Huotari, Tronvoll, Edvardsson and Wetter-Edman, 2021).

This can be summed up by Tajeddini, Martin and Altinay (2020), who in their paper, note despite much research into service innovation, there is *no consensus* around *what service innovation means for organisations* (Vargo and Lusch, 2016). Tajeddini, Martin and Altinay (2020) suggest service innovation should include new or improved service offerings, marketing strategies and improved process innovation (Jaaron and Backhouse, 2018).

However, as Tajeddini, Martin and Altinay (2020) observe the intangible nature of service and the lack of a formal systems approach in management thinking, ultimately leads to *confused* management understanding regarding the service process and therefore the broader contributions of front-line employees' (Rubalcaba, Gallego and Hertog 2010; Lusch and Nambisan, 2015; Cucciniello, Lapsley, Nasi and Pagliari, 2015)

The research has *aimed* to take a service-dominant logic lens, utilising a service ecosystems perspective (at a meso-level and micro-level) to discover and explore front-line employees' broader contribution to the service innovation process. Here the broader contribution is the influence, involvement and engagement of front-line employees in the wider organisational understanding, staff allocation and skills and knowledge required concerning the service innovation process. Service innovation is defined as the co-creation or development or change of value proposition in service delivered to organisational customers (also definitions in Appendix A).

6.2.2 A brief commentary on the research perspective

The overarching research perspective taken for this research has been the focus on the service innovation process, service ecosystems and the broader contribution of front-line employees to this process, from a service ecosystems perspective. The service ecosystems perspective is important as it is *only* by taking this perspective that the broader contribution of front-line employees to service innovation might be holistically and systematically considered.

6.2.3 A brief commentary on the research approach

The *novel* approach from the research comes from arguing for the greater, broader and further contribution of front-line employees to service innovation from a service-dominant logic and service ecosystems perspective.

Empirical and theory building has come from utilising service-dominant logic principles to give a service ecosystems perspective at a meso-level (organisational arrangements and staff resource allocation) and micro-level (staff skills and practices) of front-line employees' contribution to the service innovation process (Figure 5.1). Conceptual model building comes from a process model structure, from empirical data collection, which extends the theory construction (Figure 5.3 through Figure 5.6).

6.2.4 A brief commentary on the empirical approach to the research

The use of empirical analysis resolves the conceptual gaps in knowledge highlighted as significant by Karlsson and Skålén, (2015); Engen and Magnusson (2018); Koskela-Huotari, Vink and Edvardsson (2020) and Egan, Fuglsang, Tuominen, Sundbo, et al., (2021).

Additionally, the research through empirical data collection, resolved the empirical gaps (Siahtiri 2018; Bäckström and Bengtsson, 2019; Engen, Fuglsang, Tuominen et al., 2021; Engen and Magnusson, 2018; Tajeddini, Martin and Altinay, 2020).

The empirical data collection additionally resolves the *composition (the what)* of categories and themes marking up service-dominant logic organisational arrangements (meso-level: culture appreciation, strategy engagement, systems context), staff allocation (meso-level: management vision, promote learning, assessing staff allocation) and staff (front-line employees') skills and knowledge (micro-level: knowledge sharing, customer domain expert, lessons learnt).

6.2.5 A summary of empirical data discovered: Research questions

Thesis research question RQ1: How can changes in organisational culture concerning front-line employees improve the service innovation process?

This research argued for a service ecosystems (based on meso-level and micro-level) approach to promote front-line employees in the service innovation process. The research question explored the importance of organisational culture.

For this research the focus is *not on* organisational dimensions such as *behaviour* (Baradarani and Kilic, 2018) or *motivation* (Singh and Marinova, 2013) or *job satisfaction* (Kumar, Dass and Topaloglu, 2014) or *human relations practice* (Alfes, Tuss, and Soane, et al., 2013) but on front-line employees' a service ecosystems perspective on the broader contribution of front-line employees to the service innovation process.

The research was undertaken in the specific context of UK organisational culture. The context of UK organisations is important as Eurofound (2017, p.29) and Mary Jo Hatch (2018, pp.200-201) highlight different countries have different perspectives on organisational culture and the importance of each organisational dimension.

The literature reviewed included the organisational culture in which front-line employees are involved, engaged and participate in the service innovation process. The dimension of organisational culture defines beliefs, norms and values regarding the narratives and stories around the service innovation process. This includes the broader contribution of front-line employees to the service innovation process.

Research analysis discovered that the broader contribution of front-line employees to the service innovation process is *not* culturally understood within organisations. This is because service innovation from a service delivery perspective (service-dominant logic, Vargo and Lusch, 2004) is *not* understood. This includes both the importance of front-line employees and the customer.

Equally, a service ecosystems (based on meso-level and micro-level) approach to promote front-line employees in the service innovation process is not understood.

Thesis research question RQ2: How can changes in organisational staff allocation of front-line employees improve the service innovation process?

This research argued for a change to staff allocation thinking utilising a service ecosystems approach to promote front-line employees in the service innovation process.

The literature reviewed on staff allocation looked at the use of a dynamic capabilities approach to thinking about staff allocation. Both Kindström, Kowalkowski and Sandberg (2013) and Song and Triche (2015) highlighted a framework for thinking about how staff allocation could be operationalised.

Research data analysis discovered that staff allocation in the service innovation process is typically based on a lack of understanding of the important contributions front-line employees can make to the service innovation process. So, they are ignored or chosen at random for service innovation projects.

For the future, thinking about staff allocation on service innovation projects might allow front-line employees' wider skills and knowledge to be utilised organisationally wide.

Thesis research question RQ3: How can better utilisation of the skills and knowledge of front-line employees improve the service innovation process?

This research argued for the better utilisation of front-line employees' skills and knowledge, taking a service ecosystems approach.

The literature reviewed centred on knowledge, communication and learning practises. A case study by Chua and Banerjee (2013) undertaken at *Starbucks*, focused on the importance of knowledge management. They found taking a systems approach to knowledge management increased competitive advantage. Artusi and Bellini (2021) in their research found good communication between management and front-line employees' was a *significant factor* in successful service innovation by Santos-Vijande, López-Sánchez and Rudd (2021). Research by Gomes, Semen, Berndt and Bogoni (2022) suggested that organisational managers *need* to promote learning practices to achieve service innovation goals and wider organisational success.

The research analysis focused on skills and knowledge, with the discovered categories (and associated themes) of knowledge sharing; customer domain expert and lessons learnt are acknowledged as important aspects of front-line employees' contribution to organisations. However, the broader contribution that front-line employees could make by utilising these skills is not recognised as important, ignored or forgotten.

There was a requirement to promote front-line employees' expertise to gain improvements in the service innovation process. This might include greater customer engagement and involvement (co-creation).

Thesis research question: How can the broader contribution of front-line employees be maximised in the service innovation process?

This thesis has argued, that only by taking a service ecosystems perspective at a meso-level and micro-level can the broader contribution of front-line employees to the service innovation be fully operationalised and their importance understood and recognised.

The literature reviewed from a service ecosystems perspective includes at a meso-level service-dominant logic principles of organisational arrangements and staff allocation (principles eight and eleven, Vargo and Lusch, 2004). At a micro-level skills and knowledge (principle four, Vargo and Lusch, 2004). This can be combined to give a service-centred worldview (principle eight, Vargo and Lusch, 2004).

Both Chih, Zwikael and Restubog (2019) and Koskela-Huotari, Patrício, Zhang, Karpen et al., (2021) argue utilising a systems approach to service innovation can assist in better service innovation outcomes.

Research analysis discovered that thinking from a service ecosystems (service-dominant logic) highlights a systems perspective is required *to fully comprehend and understand* how front-line employees may contribute further, widely and broadly to improvements in the service innovation process.

Figure 6.1 illustrates the research conclusions as illustrated by a subjectively (inductively) constructive conceptual model.

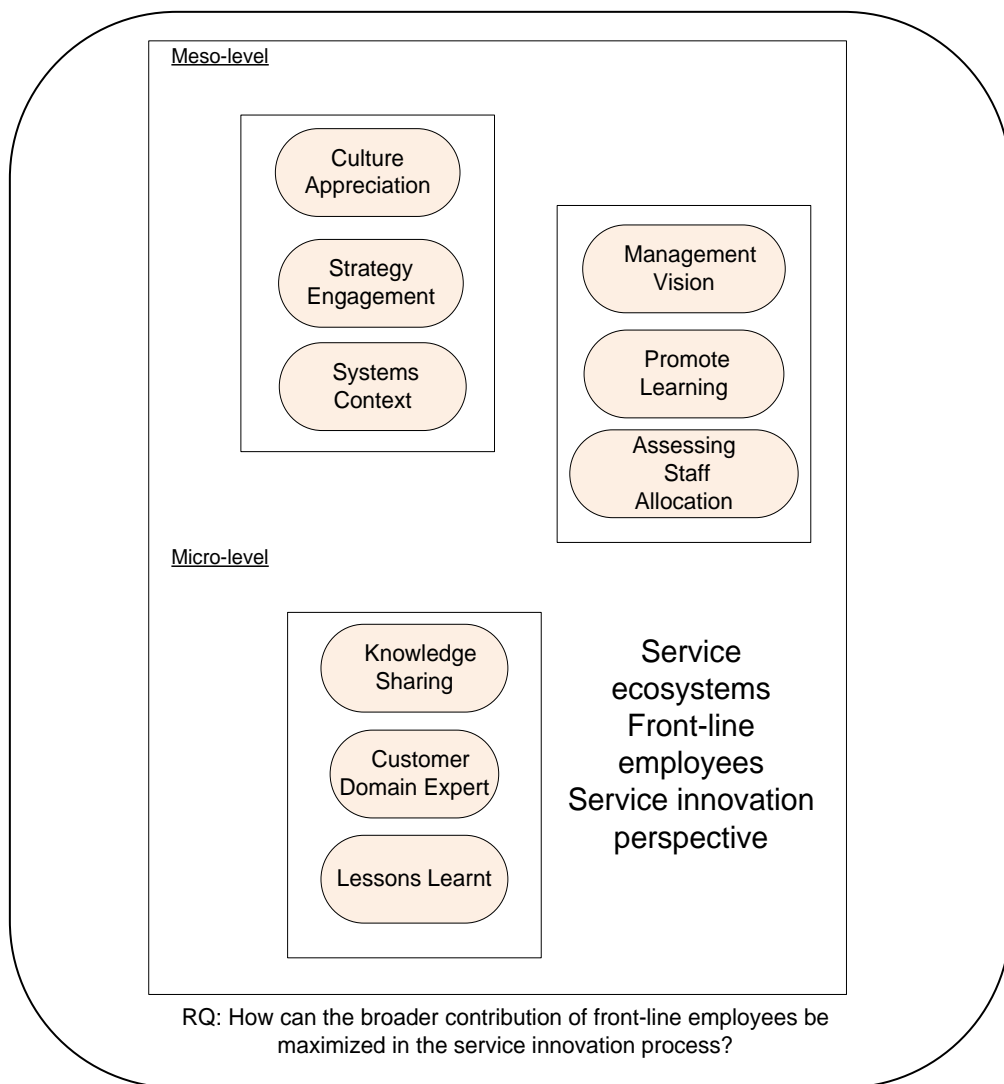


Figure 6.1: Taking a service ecosystems perspective.

This research highlighted and urged there is both an *organisational* and *operational* requirement to utilise the empirical data finding, theory and conceptual models from this research. These can then be employed to assist organisations (and academics) in their thinking on *how* front-line employees can more broadly contribute to the improvement of the service innovation process.

So, from this research, what are the broader contributions of front-line employees? At a high level, these contributions include cultural advocacy of customers across the organisation to promote customer understanding and thus co-creation, customer value and customer exchange. Understanding front-line employees' and service innovation includes a contribution to strategy so service delivery (and the customer) is paramount and again this is set in an organisational (systems) wide context.

The understanding of front-line employees' and service innovation processes leads to senior organisational management having to articulate, promote and think about service innovation throughout their organisation. This effectively means management vision, promote learning and assessing staff allocation. This can be undertaken with engagement, facilitation and involvement of front-line employees.

Front-line employees provide their skills and knowledge regarding customers, service encounters and service delivery via knowledge sharing, customer domain expertise and input into lessons learnt feedback. This leads to better service innovation outcomes and a competitive advantage (not reliant on technology).

Lastly, front-line employees' contributions can best be recognised from a service ecosystems perspective. However, as this research has highlighted, undertaking a service ecosystems perspective and the importance of front-line employees in the service innovation process is *not widely appreciated* by organisations.

6.2.6 A service-dominant logic building theory perspective on the research

In the academic theory building for this research, combining the service-dominant logic principles of *service-centred* and organisational arrangements, staff allocation and staff skills and knowledge practices can assist organisations in thinking systematically about front-line employees' broader contribution. Rather than typical, silo-management thinking. The theory is restated from section 5.3.2:

'Organisational front-line employees can more broadly contribute to the service innovation process through the utilisation of service-dominant logic service ecosystems theory and perspectives. These perspectives centre on combining an understanding of the social organisational arrangements, the effective undertaking of staff allocation and the promotion of customer relationship skills and knowledge.

This approach can lead to better organisational service innovation outcomes and the realisation of competitive advantage in service delivery.'

6.2.7 A note on the conceptual model perspective

Conceptual model building, for this research, is based on empirical data discovery based on organisational arrangements, staff allocation and staff skills and knowledge and further extends the organisation's service ecosystems thinking. These discoveries highlight operationally, and operationalise, what organisations should consider when thinking about the broader and wider contribution to the service innovation process of front-line employees.

6.2.8 Body of knowledge

This research has contributed to the academic *body of knowledge* on front-line employees' (phenomena of interest), service innovation and service ecosystems (service-dominant logic) perspective.

It has explored and discovered that taking a service ecosystems perspective at a meso-level and micro-level can assist in the wider organisational understanding of the broader contributions of front-line employees in the service innovation process.

6.3 Further thoughts on the research

6.3.1 Introduction

This section discusses further considerations of the research.

The research analysis has been presented in the discussion and findings section of this thesis. This is what was found, not what would like to have been found.

Nevertheless, this section highlights what insights *might* be speculated from the research undertaken.

6.3.2 Further methodologies

Given the restrictions of the UK government on the COVID-19 lockdown when the data collection was undertaken in 2021, the use of remote online interviewing was deemed as the most feasible way to collect data. COVID-19 restrictions prevented on-site interviewing and observations. The use of on-site observations may have extended particular experiences of service innovation. This might also have led to further questions with organisational staff regarding why this or that process was being undertaken.

A case study comparison between finance, health and university organisations could be feasible. A case study at one organisation might also be possible. This may perhaps also allow the checking of perceptions between front-line employees and their managers concerning their participation in the service innovation process.

Further observations of front-line employees may have surfaced their particular experiences and attitudes toward the service innovation process and how the service innovation could be improved. Improvements from a system ecosystem perspective could then perhaps be further elicited and elaborated and feedback to organisational managers for consideration (Action Research).

Taking a qualitative approach to the research with hypothesis setting and statistical testing to prove existing theory was not the aim of the research.

The research aimed to *discover* and *explore* people's understanding and meaning of social phenomena. This includes capturing the messy world of organisational culture and the interpretation of people's thinking on processes and skills and knowledge. This is best approached by a qualitative methodology. Centred on people's socially constructed and real-world lived experiences.

Additional, methodological approaches might include the use of questionnaires, Delphi consultation and document analysis to further explore the understanding and appreciation of front-line employees in organisations. Focus groups with front-line employees, managers and service innovation consultants might also be considered. These would require careful research planning and execution. However, the expected results may further confirm and expand upon the current research findings.

6.3.3 Further insights on data collection

The data collection questions for this research were limited in scope in several ways. Firstly, the amount of time participants could give. This was generally limited to 90 minutes (good qualitative research practice). This perhaps necessitated the need to focus answers with seeming leading questions. However, as the questions were semi-structured and open-ended in nature, so the participants could answer the questions as they wished.

Secondly, the interview questions set out to capture both opinions, values, beliefs and narratives concerning service innovation, front-line employees' and service ecosystems. Again, how these were to be answered was dependent on the participants. However, having undertaken the research, further research questions might focus on in-depth assumptions, experience and attitudes.

Thirdly, the interview questions were constructed to be generalised across the roles of front-line employees, service innovation consultants and front-line employees. Further research might ask questions particularly focused on each of these separate groups. A compare and contrast exercise *could then be validly* undertaken.

Lastly, data collected on organisational sector types (finance, health and university) was selected because of the similar ethos to service innovation and the similar issues regarding perceptions of front-line employees.

As noted, the research was undertaken during COVID-19 restrictions making remote interviewing the most feasible approach to elicit participant data.

6.3.4 Further insights on the data analysis

Further insights into the data analysis might have been gained from an additional review of the data by a second researcher (or team of researchers). This might have highlighted similarities in data coding. This would then generally confirm a theme. Additionally, any differences in coding might be discussed or highlight assumptions made on theme building debated.

However, the research was undertaken to demonstrate independent research at doctorate level.

Within the inductive paradigm of research, the analysis of the data is open to interpretation on behalf of the script reviewer and what they notice as significant. This opens the research analysis to subjectivity, which quantitative researchers might find disconcerting in dealing with sigma values and standard deviation as proof. This might be a research analysis exercise for future investigation.

Further data analysis of potential outliers might have offered insights into exceptions and edge cases which were outside the scope of the research questions. However, a further analytical review might form the basis for follow-up research.

6.3.5 Management further insights

The management implications requiring managers to consider the culture and the broader contribution of front-line employees were highlighted well. However, how organisational culture could be changed was not particularly well surfaced. Increases in strategic engagement and management vision were highlighted. This might additionally include senior organisational leadership to promote the role of front-line employees or the requirement for front-line employees' input at the beginning of any service innovation initiative.

The implication of the need for managers to consider more learning for front-line employees was highlighted. This was generally considered to be the requirement for front-line employees to have more technology training. This could be CRM or social media. These were considered as important to service innovation. However, the requirement for managers to undertake training was not particularly highlighted. The training might include undertaking lessons learnt exercises and feeding this back into organisational processes. This would then connect both meso-level and micro-level service ecosystem thinking.

The implication of the need for managers to consider front-line employees' skills and knowledge suggests that managers should think further about the engagement, involvement and participation of front-line employees in the service innovation process. What type of training this should be was not particularly surfaced in the analysis. This might include training such as online or classroom-based or other approaches such as mentoring or coaching.

6.3.6 Front-line employees' further insights

The phenomena of interest for this research were front-line employees and their broader contribution to the service innovation process.

The research was prompted on the premise that service innovation is difficult to accomplish (Dörner, Gassmann and Gebauer, 2011). Further, front-line employees' importance is overlooked in the service innovation process (Vargo, Wieland and Akaka, 2015). Moreover, front-line employees' contributions are overlooked in the rush to implement technology (Engen and Magnusson, 2018).

The discussion and findings (chapter 4) broadly confirmed the prompting for the research. Additionally, the research explored how taking a service ecosystem approach at a meso-level (organisational arrangements and staff allocation) and micro-level (staff skills and knowledge) might allow front-line employees to additionally contribute, engage and be involved in the service innovation process.

Further insights on both why organisations fail to appreciate and understand the role of front-line employees' and how front-line employees might be fully utilised in the service innovation process could be areas for following research. Problems may lie with management's lack of understanding, which could highlight further management training or failure by front-line employees' understanding of the service innovation process, which could be resolved by further technology training. This was highlighted in section 4.3.3.

6.3.7 Service Innovation consultants further insights

Further insights regarding front-line employees in service innovation projects include the notion that front-line employees only contribute ideas, contribute to service design and contribute to implementation. The missing insight might include the participation of front-line employees at project initiation or the initial business requirements gathering stage. This would then focus on front-line employees' role in service innovation.

Further insights might be drawn on how the service innovation process is operationalised to include front-line employees' knowledge and expertise.

6.4- Limitations and Future Research

6.4.1 Limitations of the research

The limitations of this research are of course inherent in all interpretative, qualitative, research, that of selection of the field of interest and sampling strategy.

The field of interest, for this research has been limited to a number of organisations focusing on the study of finance, health and universities. The context was UK organisations (Schepers and Van der Borgh, 2020). Further research might include other organisational typographies such as utilities, local government or more traditional organisations concerned with service innovation and service delivery such as hospitality and tourism.

Although the sample size is consistent with good practices of sampling strategies (Guest, Namey, and Chen, 2020), it is acknowledged the sample is only a representative sample. This would seem to be the case in most interpretative, qualitative research. Here, the limitations of the sampling strategy revolve around the amount of time and staff for data collection and processing. Also, reference section 3.6- The Research Approach to Data Collection. Additionally, a consideration of the judgement on the criteria of *Trustworthiness* and *Adequacy of evidence* (Table 3.13) was given to meet the *quality* assessment for the research.

A larger sample, however, might reduce *qualitative researcher's* concerns about levels of significance. However, quantitative research typically involves observation, interpretation and subjective construction (reference 3.4- The Research Paradigm for this Research) are non-statistically based. Nevertheless, just because it cannot be justified by significance level, does not prove it is not significant.

6.4.2 Additional further research

Further directions for research could include detailed case studies in the financial, health and university sectors on the importance of front-line employees within organisations. These case studies could then be analysed together to highlight broader themes connecting the service ecosystem's social and culture understanding, staff allocation and skills and knowledge practice of front-line employees' maximisation and broader contributions to the service innovation process. Further research might also include a wider study highlighting which front-line employees' contributions can be integrated long-term into the organisational service innovation process and how this could be operationalised.

Potential outliers (section 4.7 Empirical data analysis: Consideration of potential outliers) may be further explored to support front-line employees' broader contribution.

The theory and conceptual model(s) from this research could be utilised in the *real world* of business practice to test in an abductive manner the findings from a practical application stance. The success or otherwise could then be reported.

6.4.3 Extending the research to possible future research

6.4.3.1 Emergent properties of service ecosystems

New systems thinking on the study of emergent properties of service ecosystems has been undertaken by Vargo, Peters, Kjellberg, Koskela-Huotari, Nenoene, Polese, Sarno and Vaughan (2023). In their research, they elicit four types of service ecosystems concerned with increased *conceptualisation* of service, institutions and resource allocation. According to Vargo, Peters, Kjellberg and Koskela-Huotari, et al., (2023), there are *orders of service ecosystems emergence*.

This research undertaken for this thesis could be extended to include this new research as it extends the concept of systems world views at a meso-level and micro-level.

The paper had *not* been published when the data collection was undertaken in 2021, so data could not be analysed in the context of this research.

At the first order of emergence, service ecosystems organisations made use of ad-hoc resources, making use of what staff may be available (Martin and Horne, 1993, Vargo, Peters, Kjellberg, and Koskela-Huotari, et al., 2023). This highlights a *Bricolage* aspect of service innovation where resource management is not planned (Baker and Nelson, 2005; Witell, Gebauer, Jaakkola, Hammedi, Patricio and Perks, 2017).

Fuglsang and Sørensen (2011) further highlight that Bricolage service innovation is typical in many organisations, as unplanned continuous improvement or change, and is justified accordingly. However, this unplanned nature of service innovation promotes little thinking on how the actual service innovation can be made more efficient or improved and how front-line employees could more broadly contribute.

At the second order of emergence, organisations recognise the requirement for resource allocation, such as front-line employees, to be involved in the service innovation process. However, this recognition is not institutionalised throughout organisational arrangements (also see section 2.6) (Vargo, Peters, Kjellberg, and Koskela-Huotari, et al., 2022).

At the third order level emergence of service ecosystems, there is a clear understanding of the importance of staff allocation and there is a clear understanding of the service innovation process via organisational arrangements (Vargo and Lusch, 2016). At this order of service ecosystems service innovation becomes prioritised within service delivery organisations (Vargo, Peters, Kjellberg and Koskela-Huotari, et al., 2023).

An emergence four order perspective would allow organisations to think and understand service innovation organisational arrangements, such as culture, strategy engagement and a systems context regarding front-line employees (Service-dominant logic: Principle eleven, Vargo and Lusch, 2016).

Four order thinking stresses the importance of staff allocation of front-line employees' which is recognised with their broader contribution to the service innovation process. Here front-line employees' learning is promoted, and a vision is painted to engage and involve front-line employees so that they can contribute. Organisations understand their importance, so actively plan their utilisation (Service-dominant logic: Principle nine, Vargo and Lusch, 2016).

Taking a four order perspective on front-line employees' skills and knowledge comes with the recognition of the important customer skills front-line employees possess (Dagger, Danaher, et al., 2013). This includes prioritising knowledge sharing, lessons learnt and the wider feedback into the organisation of front-line employees' customer domain expertise (Service-dominant logic: Principle four, Vargo and Lusch, 2004).

As discussed, the conceptual paper by Vargo, Peters, Kjellberg and Koskela-Huotari, et al., 2023) argues for extended systems thinking regarding the use of service-dominant logic and service ecosystems. By extending the research discussed in this thesis empirical data could be collected further elaborating on the meso-level and micro-level of front-line employees' broader contribution to the service innovation process. A valid question to ask of participants might be: How would you extend systems thinking in your organisation regarding the involvement of front-line employees in your service innovation processes?

6.5- Summary of Chapter Six (Conclusion)

This chapter has brought together the conclusion of the research and has additionally outlined the limitations and further research directions which might be undertaken. Section 6.1 gives a brief introduction. Initially, in section 6.2 a discussion is undertaken regarding research questions. Further in section 6.2, the research approach is explored and how the challenges of the research were met.

Section 6.3 reviews further thoughts on the research undertaken.

Section 6.4 outlines the limitation of the research, noting the heterogeneity of both participants and organisations, which could be reduced by a larger sample size.

Section 6.4 highlights further research. This might include a study into how the broader contribution of front-line employees in the service innovation process, could be integrated long-term into organisations. Additionally, how emergent properties of service ecosystems might extend thinking on service ecosystems perspective. Section 6.5 provides a summary of the conclusion chapter.

The next chapter outlines some personal reflections on having undertaken the research.

Chapter 7: REFLECTIONS

“Despite significant technological advances in recent decades, humans are still relevant in innovation processes” (Santos-Vijande et al., 2021).

The break down for this chapter on reflections is broken down as follows:

- Section 7.1: Introduction to reflections
- Section 7.2: Reflections on this research
- Section 7.3: What could have been done differently
- Section 7.4: Finish of a personal journey
- Section 7.5: Final research acknowledgements
- Section 7.6: Summary of Chapter Seven (Reflections)

7.1- Introduction to reflections

This section of the thesis provides some reflection on undertaking the research. This includes a personal commentary on the research and how the research could have been executed differently.

Lastly, an acknowledgement to the participants who spared their time to share their knowledge and perceptions is made. These provided many interesting insights.

7.2- Reflections on this Research: A Commentary

Innovation involves 499 ways to build a light bulb and 1 way that works (Thurgood, 2023). This research has explored one conceivable way to interpret how managers think about service innovation and front-line employees' and opens the debate to how service innovation is understood within organisations. This is of significant bearing, not least because of the economic value and impact services have for people around the world, but also on the need for broader academic research (section 1.4.1).

The thesis starts by reviewing the service innovation process, in the practitioner world outside academic research continuous improvement practices such as those highlighted by Shore and Warden (2008) with Agile, and Ojasalo and Ojasalo (2018) with Lean, are infrequently practised beyond the Information Technology departments of most organisations, although many organisations *claim* they undertake such practices.

Goods-dominant logic remains the predominant perspective in most organisations, even when referring to services and processes. A *Product Owner* is often assigned as having ownership. Not a *Service Owner*. Also, section 2.3.2 and section 2.3.3

Taking a personal perspective much of what is deemed service innovation, is technology implementation, involving little customer or staff involvement or a systems approach to processes (Edvardsson and Tronvoll, 2013). This often leads to issues in operational service delivery and the requirement to restart the change process (with great expense in time, resource, and money). As *experienced* by the researcher.

The discussion on service-dominant logic principles highlighting service delivery was initially difficult to comprehend with the focus on the customer, co-creation and customer value. However, as the study of front-line employees and service innovation is framed in better service delivery, the use of service-dominant logic as an academic theoretical framework to discuss a service ecosystems perspective centre seems ideal.

The service-dominant logic principles of organisational arrangements, staff allocation and staff knowledge and skills are argued, as they relate directly to front-line employees' involvement, engagement and facilitation with customer contact.

The thesis argues for a service ecosystems perspective to the broader contribution of front-line employees in the wider organisational understanding of the service innovation process. Important research from Karlsson and Skälén (2015); Koskela-Huotari, Vink and Edvardsson (2020); Engen, Fuglsang, Tuominen, Sundbo, et al., (2021); Vargo, Peters, Kjellberg, Koskela-Huotari, et al., (2022) all helped assist in my understanding. However, there remained a *gap in a wider academic* understanding of systems, service-dominant logic and front-line employees.

These reflections are important as the academic world has a very different viewpoint than the practices of service innovation in its operational use. The academic study is often deemed sufficient, whilst for service innovation practitioners the value in use is the most important factor.

The one personal reflection is the truly hardest part of the research was finding a research gap for exploration; in the already crowded field of management research.

As Tosh (2022, p.103) observes in undertaking a PhD, the hardest part of the research is answering new questions of new and well-established material. However, once a gap had been identified, *it was a surprise there was a gap there*, a targeted focus on important literature could be reviewed relevant to the field of study.

The recruiting of interview participants was challenging, as unlike many academic institutions, there were no set lists(s) of pre-agreed organisations nor participants which could be contracted to undertake the research. The absence of such list(s) to undertake the research should not detract from the research and results.

Empirical data analysis requires a strong understanding of the literature and data collected *beyond* (qualitative) statistical correlation where you can choose which data might be significant. Inductive research therefore requires greater expertise and insight (in my opinion).

A final reflection, the inclusion (in the literature review) of CRM and social media as important technologies for customer relationship and customer contact was covered with the interview of two participants. However, both participants stressed human skills, such as those utilised by front-line employees', were *more* important than technology. The research results tend to suggest competitive advantage comes from human front-line employees and their input in the wider service innovation process, *not* technology.

7.3- What Could Have Been Done Differently: Lessons learnt?

Having completed the research, a number of lessons learnt for any future research can be reflected. Firstly, it is important to get the research questions defined early in the research. These may change as the research progresses, but the initial questions dictate the research methodology (deductive, abductive inductive) and so how the research should be executed. Secondly, do not assume your reader understands your subject (do you?), so define the terms and scope of the research field (definitions are given in Appendix A).

Do not underestimate the amount of time needed for data collection. Participants need to be reminded of the date and time of the interview and frequently cannot make the date and or time initially suggested. The participants chosen for this research were *mostly* known by the researcher (they knew something about service innovation). However, some of the best interviews were recommendations made by participants who knew other people who could assist (snowballing). Nevertheless, the difficulty of recruitment for research *should not* be underestimated.

Empirical data analysis is a *very time-consuming* activity to tease out codes, categories and themes. It should not be underestimated. Appendix G has a sample extract code book from this research. Sometimes code book analysis can lead to interesting data outside the scope of the research questions. See Empirical data analysis: Consideration of potential outliers. For instance, *leadership style* was merged into the overall research analysis. The choice of what to *interpret* and *recognise* (Saldaña, 2016, p.10) is therefore a *significant* research decision and needs to be considered as important.

7.4- Finish of a Personal Journey

From a personal perspective, I found the research process a journey of learning. I set out in this research to ask several questions about how service innovation is understood by organisational managers, consultants and staff. My original research proposal focused on service innovation and front-line employees. However further reading suggested, and from professional experience, that organisations *did not* think about service innovation in a systems manner and saw front-line employees, as Tajeddini, Martin and Altinay (2020) observe, *merely seen as a cost*.

The pandemic/COVID-19 crisis beginning in March 2020, made face-to-face interviewing impossible, but the use of online Microsoft Teams and telephone interviewing, did not mean this was a critical issue. However, the recruitment of 42 participants, may have been more challenging had participants not been 'working from home' and so the pandemic may have been a positive factor, as participants could speak in their own *home environment* and not in their *office (official) environment*. This I believe, minimised interruptions and to a certain extent time constraints and so led to a better quality of interview.

Personal future academic research might include the use of conceptual models and theory application discovered in this research within future service innovation projects. These projects would help refine and validate the theory models explored and discovered during the current research.

It is thought some of the questions posed during my interviewing may have assisted and helped people think about their own role. Also, having read this thesis the reader can appreciate my *new insights*, *new knowledge*, and *unique perspective* on service innovation and front-line employees within organisations.

7.5- Final Research Acknowledgements

I would like to thank all the 42 interviewees who participated in this research. Each contributed in their own way to the research outcome. I was always surprised that people would spare some of their valuable time to take part in my research. And was thankful they did. Although people who I thought would not take part did, and those I thought would take part did not. I had many participants wish me *Good Luck*.

Finally, I would like to acknowledge family and friends and acknowledge those who sadly now are unable to see the progress made on my journey. Also, I would like to thank Michelle for keeping me sane. Also see Appendix I, for my biography, on my personal and professional background for undertaking this research. No organisational or research funding for this research was received, and I report no conflict of interest.

Signed:

Mark Thurgood

Dated:

01 July 2024

7.6- Summary of Chapter Seven (Reflections)

This brief part of the thesis has reviewed broader research (section 7.2 and section 7.3) and personal reflections (sections 7.3 and section 7.4). The thesis has argued for a service-dominant logic service ecosystems (systems) approach to consider the broader contribution of front-line employees in the service innovation process.

This has included thoughts on the research process, essentially the need for a good set of research questions. The pandemic crisis *made* the data collection challenging, but in many respects feasible, as geographic travel to participant offices was removed (section 7.4). Section 7.5 gives final academic acknowledgements.

Having completed this research, I have enjoyed exploring the issues connected with service innovation.

Lastly, I trust you (the reader) found reading about this research, in this thesis, informative and interesting.

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APPENDICES

Appendix A: Definitions used throughout this thesis

This appendix provides *guidance* on how certain phrases or words are used, defined and considered throughout the thesis. The guidance is typically based on the common practitioner understanding, with examples given where further academic elaboration might prove helpful.

Better service innovation outcomes in this thesis may be defined in terms of a more effective and improved service delivery to an organisation's customers in terms of a competitive advantage.

In seeking competitive advantage, this might be less time-resource-cost in the service innovation process. This could also include greater customer value delivery or customer engagement and co-creation.

Broader contribution (Front-line employees') is defined in this thesis as the role, involvement, influence, and engagement of front-line employees in the wider organisational environment associated with customer practices and relationships.

These are set in the environment of the service innovation process. Aspects highlighted in this thesis include organisational arrangement, staff allocation and skills and knowledge.

Capabilities and competencies. Capabilities take the dictionary form of the ability to undertake or do something. Competencies also take the dictionary form of doing something successfully. Further, the dictionary form of a business competency is the capability to apply skills and knowledge to a task or work. Also see Prahalad and Hamel (1990).

Co-creation is defined from Vargo and Lusch (2016) update on service-dominant logic, which is where the value (of services) is always co-created by multiple actors including the beneficiary.

Co-production is defined by Vargo and Lusch (2004), as from a services centre (in this thesis at a meso-level and micro-level) perspective the customer is always involved in the creation of value. Where value (value-in-use) is uniquely and phenomenologically determined by the beneficiary (Lusch, Vargo and O'Brien, 2007; Vargo and Lusch, 2016).

Create Meaning definition is offered by Korper, Holmlid and Patrício (2021) as centred on human-centric understanding bound by phenomenological and organisational understanding.

Customers in this research include other associated terms such as students, patients, clients, partners and involved with both external and internal relationships. It is noted in the healthcare sector *patients* rather than customers are used. Likewise, in universities, *students* rather than customers is used. However, for both classifications, people are directly or indirectly purchasing services.

Dynamic capabilities, in this thesis, concern the '*distinct skills, processes, procedures, organisational structures, decision rules, and disciplines* (which an organisation should own for a competitive advantage)' (Teece, 2007).

Zawislak et al., (2023, p.362) outline dynamic capabilities in service innovation as: Sensing, Seizing and Reconfiguration.

In the context of this thesis, dynamic capabilities allow for a conceptual framework regarding the assessment, thinking and allocation of front-line employees into the service innovation process.

Front-line employees largely covers the definition offered by Schneider and Bowen (2019) of organisational staff involved with customer service encounters or contact with customers in their role (also see Engen, 2020, p.131).

The definition also extends to organisational staff engaged in customer facing roles or duties. Further, Engen, Fuglsang, and Tuominen (2023, pp.363 - 364) note the organisational importance of front-line employees in the service innovation process. They highlight their role in the participation, involvement and engagement in the service innovation process.

Front-line employees' contribution to the service innovation process has *typically* included: ideas generation, service design and implementation (Engen and Magnusson, 2015; Santos-Vijande, López-Sánchez and Rudd, 2016; Cadwallader, Jarvis, Binter and Ostrom, 2010).

Knowledge and skills are defined by Löbler (2019, p.362) as: '*Knowledge is the ability to know and understand information about things or processes in question; whereas skills are the ability to act or do, to perform or carry out specific procedures that are known*'.

Organisation and **Institution** are used interchangeable to denote firms, businesses, companies, corporations, governments and not-for-profit entities. Although Lusch and Vargo (2019, p.9) use the words *institution* and *institutional arrangements*, which academically have strict definitions, for this thesis a more generic term of organisation and organisational arrangements are utilised.

Organisational arrangements are defined as framing a complex adaptive human social system coordinating, constraining and enabling collective actor-generated activities, within a wider service ecosystems environment (Siltaloppi and Wieland, 2019, p.299).

Organisational arrangements shape the context, interests and identities of actors in the value co-create process (Siltaloppi and Wieland, 2019, p.299).

In this thesis, organisational arrangements resolve to environmental, social and culture aspects of actors and processes in organisations.

Making Sense is defined in this thesis as creating meaning from the *world real* experiences and situations of organisational staff and managers (Weick, 1995, p.39; Checkland and Holwell, 2004, p.82).

Resource(s) are defined as: ‘resources included organisations processes and knowledge that helped the firm conceive of and implement strategies that help improve efficiency and effectiveness’ (Barney, 1991). Specifically, in this thesis, resources are organisational staffing resources such as front-line employees.

Sense Making is used in the context of social meaning as outlined by Weick (1995, p.53) as giving meaning to shared organisational activities.

Service is defined by Grönroos (2007) as a: ‘*collection of processes or series of activities, provided by a service provider in interaction with a customer to provide solutions to problems defined by the customer*’.

Koskela-Huotari (2023, p.137) defines service in terms of the process of using resources for the benefit of another actor.

Services are defined by a shift in perspective from goods-dominant logic to a focus on a value customer co-creation perspective (service-dominant logic principle six). The co-creation value comes from the service for service exchange (service-dominant logic principles two (and ten)). However, as Lusch and Vargo (2019, p.13) note *value* is always co-created for the service beneficiary. This emphasises a service delivery aspect to services.

Benoit (2023, p.7) defines *services* as: ‘intangible performance promises, which requires heterogeneous customer resources that are inseparable from the transformation process’.

Service delivery in this thesis is defined generally in the term of intangible services value proposition (service-dominant logic principle seven) *and/or* value co-creation service-dominant logic principles two).

Additionally, *service delivery* might also be defined by such properties as: Intangibility, heterogeneity, inseparability and perishability. These are also general terms to describe properties of service innovation (Lievens and Moenaert, 2000). Therefore, in this thesis value proposition properties are stressed above value co-creation. Although value co-creation in strict technical service-dominant logic terms defines service innovation.

Service-dominant logic is defined in this thesis from Vargo and Lusch (2004) original definition of service-dominant logic, in taking the perspective that *services* rather than *goods* are the fundamental unit of exchange.

In this thesis, service-dominant logic principles are utilised in the building of theory which includes front-line employees' broader contribution to the service innovation process from a service ecosystems perspective.

Service ecosystems is defined as a: '*complex, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual actors*' (Lusch and Vargo, 2014, p.24).

Conceptually this definition does not explicitly define services. So further definitions are required for this thesis:

For this thesis, Institutional arrangements – organisational arrangements include organisational culture: Norms, beliefs and values. Mutual actors and actors include front-line employees, service innovation consultants, and front-line employees managers. These concepts are situated in a service innovation context.

Additionally, in this thesis this is *explicitly* limited to, the scope of *meso-level* organisations and staff allocation and a *micro-level* staff skills and knowledge such as front-line employees. The context is in the *service innovation process* (Frow and Payne, 2019. p.80). These service ecosystems views then form the *complex, self-adjusting* system, in which actors operate.

Ng (2019, p.195) further defines service ecosystems as a framework for the study of wider systems among multiple service systems.

Service innovation is built on the definition offered by Engen and Magnusson (2018) as: *'the creation of new or development of an existing service or value propositions'*. The concept of *service innovation* in service-dominant logic terms rests on the enhancement of a service for service exchange (service-dominant logic principle two).

Although in service-dominant logic terms, service innovation is a *service* concerning value co-creation, in this thesis *service innovation* is defined as a change in service delivered (value proposition - which includes value co-creation) to a customer.

In this thesis the Assimilation-Demarcation-Synthesis approaches to service innovation are discussed as they have a long history of utilisation in services research and are well known to service innovation partitioners (Djellal, 2023, p.323).

The service innovation process is considered as the reconceptualization of service delivery and the requirement to manage and consider customer issues connecting co-creation, value and customer relationships (Jaaron and Backhouse, 2018).

For this thesis, the service innovation process includes the organisational culture, organisational routines and procedures, and staff skills and knowledge which focus on front-line employees as a critical element of a service ecosystems perspective.

Service innovation consultant is used in this thesis, relates to organisational staff, business consultants and Information Technology staff, who are directly or indirectly connected with service innovation processes or service innovation improvement projects.

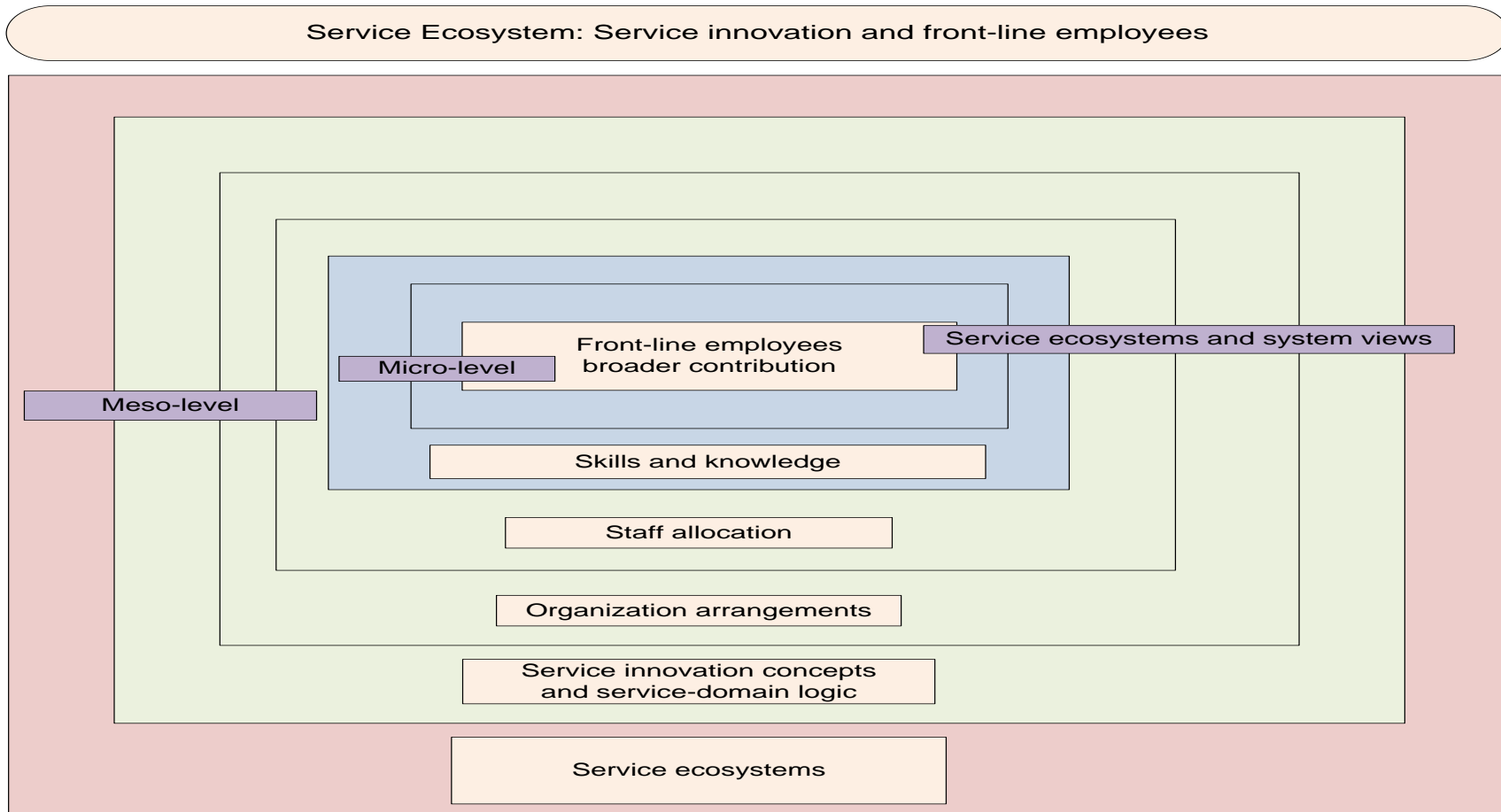
Staff allocation is defined in this thesis, in connection to operant resources (Vargo and Lusch, 2004). Here staff allocation centres on processes and thinking on front-line employees' engagement, involvement, and participation in the service innovation process.

Systems thinking may be investigated by Checkland and Holwell (2004). Also see Fortune and Peters (2005, p.49). However, a brief explanation offered here concerning *organisational systems* might be an individual series of components, processes and routines which when brought or thought of together (*holistically*) form a higher level of functionality than when viewed separately.

Understanding/understand (*in a social situation*) is broadly used in the context of this thesis and relates to thinking and conceptual understanding of a socially situated lived experience within an institution (Weick, 1995, p.36).

For this thesis, this has broadly been defined as comprising Sense making, create meaning and making sense.

Appendix B: Systems map of thesis context



Appendix C: Extended case study of organisational arrangements

The role of organisational and management sense making, people and process has been widely considered by Sue Holwell and Peter Checkland (1998) with respect to information systems, in their paper '*An information system won the war*', where they discuss how a new services delivery innovation during the 1940 Battle of Britain, allowed senior commanders in RAF fighter command to effectively manage RAF stations, aircraft and pilots to engage enemy aircraft.

By combining RADAR, observation centres, and centralised and decentralised operations into a single process, this service innovation effectively allowed the RAF to '*deliver*' a combat service in the defence of Britain.

The RAF fighter command *service* has many of the characteristics which can be recognised in service innovation. Using the resource integration and staff allocation concept from service-dominant logic, the innovative integration of RAF pilots into the process of *service delivery*, the defence of British air space, was at the time novel. Taking an organisational perspective, combining RADAR, observation centres, and centralised and decentralised operations allowed senior RAF commanders, and senior managers, to effectively sense make and deliver a service in the defence of the British people.

The co-creation aspect may also be recognised, with many different people, for instance, RADAR operators and observer corps, combining to create an integrated delivery service where they were individual components.

The importance of front-line employees in the Battle of Britain can be argued from many aspects. Certainly, RAF fighter pilots, who delivered and ‘engage and contact (and destroy)’ service to meet their *customers* (The German Luftwaffe). This might loosely be framed in the circumstances of *contribution*.

The management of these front-line employees in an organisational context with senior managers (both on airfields and at group operations) managing and allocating these resources under uncertainty (how many pilots would be available; how many aircraft would be available and how many airfields would be available). This might loosely be framed as a wider perspective of management social understanding and allocation on how front-line employees’ should be viewed in the new *service innovation* process (the defence of Britain).

Lastly, to focus on people, not just technology, the organisational arrangements, operations and change involved with service innovation (the integration of staff utilising RADAR) which would ultimately successfully defend Britain, could be viewed from the perspective of supporting the contribution and how front-line employees’ could contribute more effectively via skill and knowledge (of RADAR and combat readiness).

Organisational arrangements form the organisation environment which leads to collective (systems) organisational thinking as to how to approach staff resource allocation. This includes systems perspectives on organisational processes (such as the service innovation process) and what social understanding regarding the broader contribution of front-line employees’ could assist in making the service innovation process more effective.

Appendix D: Participant: Consent form

Please read the following before participating in this research:

- I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask broader questions at any time.
- I understand I have the right to decline to answer any particular questions. I need not give a reason for doing so.
- I understand I have the right to withdraw from the study until the data has been amalgamated into a larger dataset and it is no longer feasible to unpick it from the other data. This is 14 days from the date of the interview
- I agree to provide information to the researcher(s) on the understanding that my name will not be used without my permission. The information will be used only for this research (and publications arising from this research project).
- I agree to the interview being recorded.
- I understand that I have the right to ask for the audio to be turned off at any time during the interview.
- I agree to participate in this study under the conditions set out in the Information Sheet

Signed by:

The researcher:

Date:

The interviewee:

Date:

Note: A typed signature and date can be used as acceptance on agreeing to participation, I will contact you to arrange interview details I cannot proceed unless I have your consent agreement (this form signed and dated). Also remember to return completed form to:

Appendix E: Information sheet for participants

Research Study: A Service Ecosystem Perspective on the Broader Contributions of Front-line Employees to the Service Innovation Process.

I would like to invite you to participate in this research project, which is part of my PhD in Management at Birkbeck, University of London. This project has received ethical approval. To make an informed decision on whether you want to take part in this study, please take a few minutes to read this information sheet.

Who is conducting this research?

This research is conducted by Mark Thurgood, Research Student under the supervision of Dr Marion Frenz, Reader in Management both from the Department of Management at Birkbeck (see contacts details below).

What is the purpose of the study?

This research project looks at the contribution, participation and the views of management and staff in the introduction of new services.

Why have I been invited to take part?

I am inviting managers and staff from across selected service industries in the UK to take part in my research project. This might include, for example, professional organisations such as universities, financial organizations and government agencies. If you believe consent is required from a senior manager, please seek their advice. Participation is voluntary, but it would *greatly* assist in furthering academic research.

What are the procedures of taking part?

If you agree to take part, this will involve one of the following: remote video conference or telephone interview. This will involve a series of 15 semi-structured questions, asking for your views, opinions and insights. This might for example include your experiences of taking part in service delivery projects and/or managing service delivery projects and/or working in a service delivery environment. This should take approximately 60-90 minutes to complete. Upon completion of your participation, you will be offered the opportunity to access a summary of the findings, once analysed, by contacting the researcher (details below). Please note colleagues from your own institution may be asked to participate in the research, so you should not include any responses to interview questions that may identify you or your institution.

What are my participation rights?

Participation in this research guarantees the right to withdraw, to ask questions about how your data will be handled and about the study itself, the right to confidentiality and anonymity (unless otherwise agreed), the right to refuse to answer questions, to have audio recorders turned-off (in the case of recorded interviews) and to be given access to a summary of the findings.

What if I want to withdraw my information?

If you wish to withdraw responses or any personal data gathered during the study you may do this without any consequences. You can ask for your data to be removed up 14 days after the interview where you have been deemed to have accepted interview participation. If you would like to withdraw your data, please contact the researcher (details below).

What will happen to my responses to the study?

Data collected in this study will be analysed and used for the research student's dissertation. Data may also be used for academic publications. Any quotes or text from the study will be screened to ensure the participant or institution cannot be identified. This could include, for instance references to specific projects, team size, IT application names, managers and college names.

Will my responses and information be kept confidential?

The first step in processing the data I collect will be to remove any information which could identify you [or your employer]. The anonymised version of the data will be used in all subsequent stages of analysis, and the original data will be stored securely by me. I may show the original data only to my co-authors, supervisor or PhD examiners, and then only for the limited purpose of verifying its genuineness. Data will be held and secured by means of password protected files and following the guidance of the UK Data Protection Act 2018.

What are the possible risks to taking part?

The focus of this research is on management practice in organisations and in most cases, this should not present any risk to you above the normal risk expected in everyday life. However, I am aware that recalling issues related to COVID-19 may be potentially distressing. Furthermore, I acknowledge that the current COVID-19 pandemic may be a source of stress for you. In the case of experience distress, we can stop or pause the interview at any point including the voice recording. You can ask for a break at any time and you have the right to not answer a particular question. We can reschedule our interview and you can withdraw from the study up to 14 days from the date of our interview.

If talking about your experiences leaves you feeling upset, there are a number of national organisations that can offer you support. For example:

MIND (www.mind.org.uk) provides advice and support to empower anyone experiencing mental health problems. Telephone: 0300 123 3393. Monday to Friday 9am-6pm.

Samaritans (www.samaritans.org) offer a 24-hour helpline staffed by trained volunteers who will listen sympathetically. Telephone 0845 909090.

Any broader questions?

If you have any questions or require more information about this study before or during your participation, please contact either of:

Mark Thurgood (xxxx@mail.bbk.ac.uk)
Research Student

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If you have concerns about this study, please contact the School's Ethics Officer at: bei-ethics@bbk.ac.uk.

School Research Officer
School of Business, Economics and Informatics
Birkbeck, University of London
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For information about Birkbeck's data protection policy please visit: <http://www.bbk.ac.uk/about-us/policies/privacy#7>

You also have the right to submit a complaint to the Information Commissioner's Office
<https://ico.org.uk/>

Appendix F: Interview questions for this research study

This appendix gives the questions asked to participants during data collection stage of the research. The rationale for each question can be found in ‘*Table 3.4: Interview questions used for data collection*’. The questions are semi-structured allowing the participant to answer as they think. Terms such as “new service” are used as they are more commonly understood terminology than “service innovation” by practitioners.

Clarification prompts will be asked if the participant is unsure of question wording.

Sub-questions (*a*) seek to expand upon a question and would be asked to elicit more understanding of the circumstance of the participant response.

Questions:

IQ-1: Please can you tell me something about your role in the area of service delivery and perhaps a little about service delivery in your institution? - Please can you tell me a little bit about your key responsibilities in service delivery?

Clarification: *Thinking about your own “real-world” experience*

IQ-2: From your own experience can you say more about the introduction of a new services you have been involved with? - *Can you tell me what made this successful or unsuccessful?*

IQ2a- Was it a continuous improvement or a major service improvement?

Clarification: *Highlight - Good practice, bad practice, teamwork/members, customer involvement – Type of change*

IQ-3: Do you believe staff or technology are the key elements in new service delivery? - *And why do you think this?*

Clarification: *Thinking about service (innovation) delivery*

IQ-4: Thinking about your involvement in new projects for new service delivery, what do you think are key project elements? - *For example, how are staff involved and*

engaged with the project?

Clarification: *Good knowledge of customer, A good knowledge of processes, Project plan, Strategy (way forward)*

IQ-5: Please can you tell me who you think contributes the most to the new service delivery process? Why do you think this?

Clarification: *Highlight - Staff, Customer, Management, Project Staff*

IQ-6: Please can you tell me more briefly any story where a manager or member of staff has made a difference to a new service delivery project and how?

Clarification: *New practice or saved a project or new ways of thinking*

IQ-7: What do you understand the role of managers should to be in a new service delivery project?

Clarification: *Lead or direct or consult and delegate or enforce and command, manage staff engagement, motivate, and listen to staff*

IQ-8: Thinking about staff who deliver a service (front-line employees) - What do you think managers' views on front-line employees might be?

Clarification: *Involvement in ideas generation, Service Design, Service Implementation, Something else*

IQ-9: Where do you think front-line employees play the most important part in the new service delivery (innovation) process? And also, please can you tell have you acted on a suggestion or idea from a customer which has resulted in a new service delivery project?

Clarification: *Ideas generation, Service design, Engagement with customers, Customer relations, Service implementation*

IQ-10: Again, thinking about front-line employees, please can you tell me who do you consider as a front-line employee in the new service delivery process *and why so?*

Clarification: *Thinking (holistically) about the service innovation process*

QI-11 How can you improve the engagement of front-line employees in a new service delivery project?

Clarification: *More staff training, better management training, customer involvement, wider role*

IQ-12: What skills and knowledge do you think contribute to the new service delivery process? - Both from your own level and people whom you work with?

IQ-12a: What learning would you like see for new service delivery?

Clarification: *Understanding of customer, better technical training*

IQ-13: How would a better understanding of the new service delivery process help you and your institution deliver better services to customers? - How could this be implemented?

Clarification: *Better service to customers, better processes, reduced cost*

IQ-13a How would a better understanding of organisational culture have played a part in the new service process and delivery to customers?

Clarification: *Engagement with customers, style of management*

IQ-14: What new service delivery processes would you like to change in your institution? - What management best practices would you like to highlight for new service delivery?

Clarification: *Better understanding of processes, better documentation, more communication, better management engagement, better staff engagement, more customer engagement*

IQ-15: Is there anything you would like to add with respect to management thinking on front-line employees in service innovation processes or projects?

IQ-15a: Including (if time): Do you work for or with customers?

Appendix G: Sample extract code book for this research

3-FLE Knowledge-Communication-Learning	The explicit, tactic and operational knowhow of how institutional routines regarding the service innovation process	0	0
3-1 FLE Knowledge		0	0
3-1-1 Knowledge sharing	This is set within the context of how front-line employees could contribute their knowledge organisational wide	0	0
3-1-1-1 Knowledge sharing within institutions	That is what organisations processes, routines and how knowledge is used and perceived	0	0
Knowledge concerns about transfer	Highlighting issues with FLE knowledge transfer within organisational	0	0
Assist with other processes	FLE can assist with knowledge of other internal processes connected with service innovation	3	3
Barriers to knowledge transfer	These are internal cultural, and reductionist thinking which hinders the flow of knowledge within an organisation	4	6
Free flow of information between teams	Silo-management is a typical barrier to the free flow of knowledge internally within organisations regarding service innovation	5	5
Knowledge expert	FLE are knowledge experts (customer domain experts) concerning customers	4	4
FLE provide tacit insight knowledge about customers-processes	FLE provide tacit insight knowledge about customers-processes	2	4
Shared knowledge	The transfer and sharing of knowledge about	4	8

	customers and the service innovation process		
A better way to do things	Retain internal organisational customer knowledge to improve service innovation outcomes	9	13
Knowledge sharing is a cultural aspect led by senior management	Knowledge sharing is a cultural aspect led by senior management	1	1
Retain knowledge in the organization		5	6
Organisational culture about knowledge	The sharing of organizational-wide with other internal teams concerning knowledge (and insights) about and concerning service innovation processes, routines and procedures relating to customer engagement, involvement, and assistance	0	0
Knowledge sharing of customer	This is knowledge sharing with the customer - This highlights service-dominant logic P6 - The customer is always a co-producer (co-creator) and service-dominant logic P4 - Knowledge is the fundamental source of competitive advantage	0	0
Better information to customers	This relates to the sharing of internal organisational knowledge with customers - This might include who to contact next within the organisation regarding a new process or procedure	4	4
Email communication	How "better information to customer" (knowledge sharing) is undertaken	2	3
Present to customer	This might typically be a PowerPoint presentation - Sharing knowledge about - a customer	3	4

Customer service knowledge	The processes, procedures and routine knowledge associated with customer delivery	3	3
Customer skills can't always be learnt	Human relationship with customers - Empathy, emotional intelligence etc cannot be taught	1	1
Research customer	The requirement to learn or have insights about the customer's background, so the FLE understands the customer's perspective - service-dominant logic P1: The application of specialist skills and knowledge is the fundamental unit of exchange - Knowledge about the customer, gives a competitive advantage in understanding what the customer regarding the organisational offer in service delivery	5	8
Subject matter expert on customers	FLE have regular contact with organisational customers so, builds up a good understanding of customers' issues and problems - This might be ideas generation for later service innovation changes	7	13
Knowledge sharing with a colleague	This highlights wider sharing of knowledge about the service innovation process - This could be knowledge on processes, workarounds, best practice	9	10
Share with other teams	Share knowledge with other teams in the wider organisation	7	16
Share solution	Share a solution to an issue or problem with the wider organisation regarding service delivery and or service innovation process, routine, or procedure	5	7

Team sharing	Particular observations concerning team sharing and knowledge sharing with colleagues	2	3
Difficult (sometimes)	The difficulty of sharing knowledge within a wider organisational environment	3	4
Lunch and learn	Lunch and learn relative to a presentation or discussion over best practices, issues or the discovery of solutions or update of new product information in an informal lunchtime environment	3	4
Knowledge sharing with partners	Knowledge exchanged with partners customers, suppliers or external agents such as consultants	6	9
3-1-1-2 Knowledge sharing about technology	FLE knowledge about organisational technology - What it is, how it works and what it is meant to deliver,	0	0
Knowledge article-base	Knowledge can be made available to a wider organisational environment by knowledge-based articles (typically in a database, typically on an intranet)	1	2
Knowledge bank	Store of knowledge centrally in an organisation, concerning service innovation process, routines, and procedures. Also, issues, workarounds, known issues and problems. Knowledge about customers	1	2
Intranet	Hold knowledge internally, which organisational staff can access	3	4
Knowledge in one place (cloud)	Hold FLE knowledge in one central place (Store once, use many)	2	2
Knowledge hub	A central organisational place to store knowledge about customers - Discovered from FLE	1	1

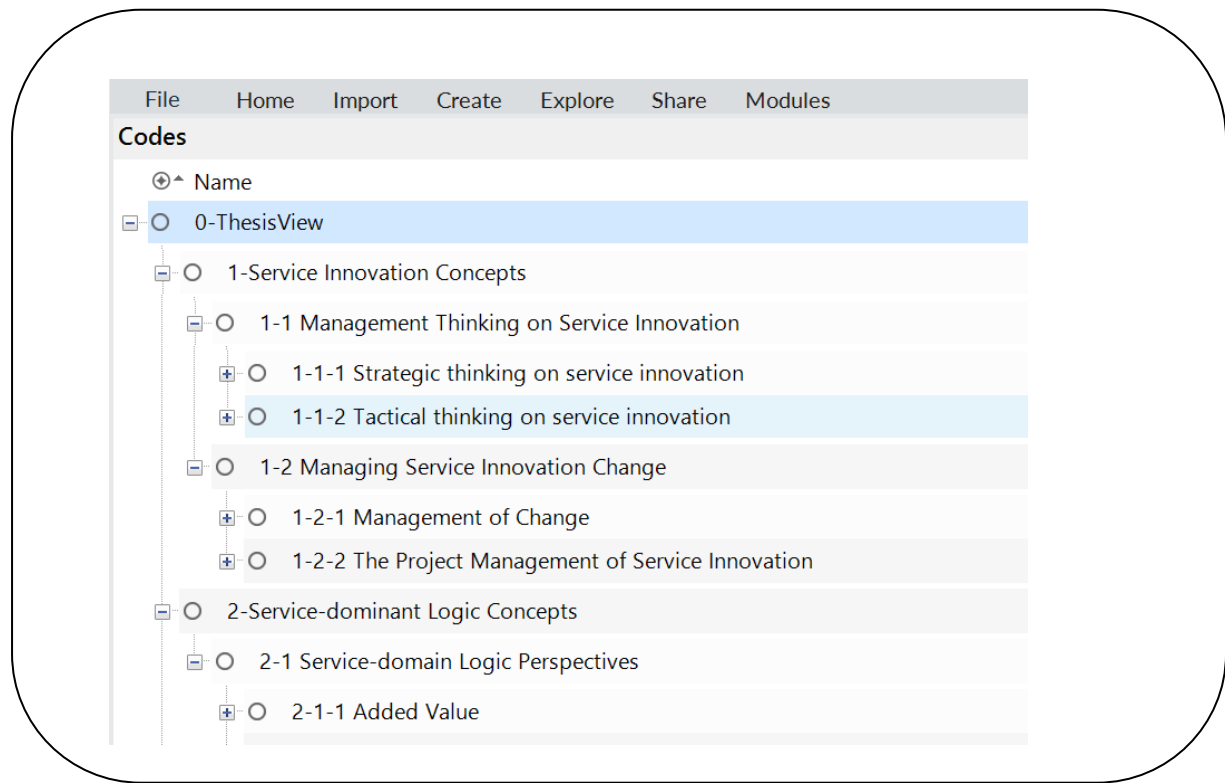
SharePoint (Share)	SharePoint site(s) to hold FLE knowledge	3	3
Manuals of standard procedures	Manuals of standard procedures. Regarding service innovation	3	4
Shared database	Shared database(s) of knowledge	5	5
Wiki Page	Construction and use of Wiki Pages	3	4
Technical knowledge	Technical knowledge about service innovation and service delivery	9	12
Technology integration	Technical knowledge about service innovation and service delivery	4	4
3-2 FLE Communication		0	0
3-2-1 Customer domain expert	This is in the context of front-line employee's customer contact skills and knowledge	0	0
3-2-1-1 Communication on customers processes	Institutional communication - Service Innovation	0	0
Communication from Senior Management	Communication to staff	0	0
How senior managers communicate with the rest of the organisation is important	Seen as important	1	2
Senior Management needs to engage in communication	Communication undertaken	1	1
Talk with senior management	Regular meetings	3	6
Vision not communicated	No, communicate	3	3
Facilitation of communication and professionalism	Communication in a professional manner	1	3
Importance of internal communication	Is internal communication important	6	9
Communication with the rest of the institution	Requirement for wide communication	8	12
Internal communication method	Organisational communication	1	1
Communicate to staff via blog	Intranet or email	2	2

Email	Regular emails from management	1	4
Online (Video Conferencing)	Remote	3	5
Communication via Skype	Online	1	1
Communication via Zoom	Online	2	2
Management communication is key - Resistance to change - Vision	Management of communication	3	3
Management of business processes	Management of communication	7	11
Staff training in communication skills	Technical or human skills	2	3
Transparency in communication	Clear message	5	6
Trust and engagement in work	Do staff trust the message	3	3
Understanding the communication	Communication undertaken	3	3
3-2-1-2 Communication with customer	How communication is undertaken with the customer	0	0
Customer communication	Communication with customers	2	2
CRM systems to manage relationships (communication)	Typically email or CRM	1	1
Meetings via Zoom	Meetings to update customers	1	1
Microsoft centre of excellence	Promotion through Microsoft	1	4
Weekly catch-up meetings to discuss progress	Meetings with customers	2	2
3-3 FLE Learning		0	0
3-3-1 Lessons learnt	This is in the context of service innovation	0	0
3-3-1-1 Learning lessons	Learning at the staff level, but also could include organizational learning	1	2
Customer knowledge is vital	Understand the customer	1	1

Learning pathways	Requirement for learning	1	3
Learning required	Learning in the organisation	2	2
Need for learning (personal-professional development)	Is learning important in the organisation	7	10
Feedback loops of learning	Is a review of learning undertaken?	1	1
Many hours	Many hours of learning	1	1
Opportunity to learn (need to)	Is learning prioritised	2	2
Need for training material	Is training material provided for front-line employees	2	2
Training medium	How is training delivered	0	0
CBT	Computer Based Training	1	1
E-learning and Webinar (online)	Online	2	4
Google	Online	1	1
Training courses (classroom-based)	Based away from the desk	1	1
YouTube	Online	1	1
Lessons learnt shared	Lessons learnt	4	5
Mentoring	Coaching	4	5
Shared team learning	Learning with colleagues	1	2
No team share	No learning	1	1
3-3-1-2 Learning to understand the customer experience	Customer is important	3	4
Improve learning	Need for learning	2	3
Personal development	Undertaken by front-line employees	1	3

Appendix-G: NVIVO code book sample for 3-FLE Knowledge-Communication-Learning (comments added to some of the themes during analysis)

Appendix H: Code book additional structure for this research



Appendix-H: Part-one code book for this research.

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- 2-1-2 Co-Creation
 - 3-FLE Knowledge-Learning-Communication
 - 4-Service Ecosystems
 - 4-1 Understanding Service Innovation for Customers
 - 4-1-1 Organisational Context (organisational arrangements)
 - 4-1-2 FLE Facilitation (understand staff allocation)
 - 4-1-3 Customer Context (skills and knowledge to support customer)
 - 5-Staff Resource Allocation
 - 6-Organisational Arrangements
 - 7-FLE Contribution
 - 7-1 Management and consultant view
 - 7-1-1 Management Leadership of Service Innovation
 - 7-1-2 Management Perceptions on Service Innovation
 - 7-1-3 Service Innovation Management (Management)
 - 7-2 Staff view
 - 7-2-1 Staff (FLE) insights on service innovation
 - 7-2-2 Staff (FLE) perceptions on service innovation
 - 7-2-3 Staff (FLE) understanding of contribution to service innovation
 - 7-3 Technology view

Appendix-H2: Part-two code book for this research.

Appendix I: Biography

Mark Thurgood MBA (Technology Management), MSc, MSc, BA (Hons), BSc (Hons), BA has for many years worked as a consultant in finance, health, and the university sectors. His academic work has included, knowledge sharing in a telecoms SME, lessons learnt from project failure, and culture and human rights in the international order. He has been an assistant professor for Technology Innovation Management at City, University of London and is currently (2024) a full-time student at Birkbeck, University of London. Mark's interests include history of the First and Second World Wars, and Earth sciences with a special interest in Antarctica and Ocean Anoxic Events. Dedicated to my late father Derek Thurgood (who died of COVID-19) and my son Oliver Thurgood. Mark Thurgood asserts the moral right to the authorship for this research.