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Exploring Characteristics of IT Capability in Enabling a Customer-Focused Strategy

Ahmed M. AlHarbi
112220483



NATIONAL UNIVERSITY OF IRELAND, CORK
FACULTY OF BUSINESS AND LAW

DEPARTMENT OF BUSINESS INFORMATION SYSTEMS

Thesis submitted for the degree of

Doctor of Philosophy in Business Information Systems

Supervisors:

Dr Fergal Carton and Dr Ciara Heavin

Head of Department/School: Prof. Ciaran Murphy

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The Author hereby declares that, except where duly acknowledged, this thesis is entirely his own work and has not been submitted for any degree in the National University of Ireland, or any other University.

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ABSTRACT

The customer-focused approach is a prominent trend pursued by organisations. Every part of an organisation that follows this approach has a role in the success of that organisation's customer-focused strategy. The role of information technology (IT) in enabling and facilitating customer focus is not fully recognised or appreciated by some managers. The motivation for this study is to develop a new way of thinking about customer-focused strategy and to illustrate that IT has a significant role in the success of the relationship between an organisation and its customers. This research study aims to explore strategies for focusing on the customer, the characteristics of IT capabilities (ITC) and the relationship between business and IT in delivering customer-focused strategies (CFS).

A qualitative exploratory approach was conducted with three large organisations: Saudi Telecom Company (STC) and Arab National Bank (ANB) in Saudi Arabia, and Electricity Supply Board Networks (ESB Networks) in Ireland. Qualitative data were collected by conducting semi-structured interviews with 35 business and IT managers. The data collected were analysed using coding and comparative techniques.

These case studies reveal that the focus of these organisations is on knowing the customer and empowering the customer experience through multiple interaction channels, improving the fulfilment time for customers and transforming customer services to digital. This focus on the customer increases the importance of ITC in the fulfilment, continuity, automation, integration and availability of customer services. Both ITC and CFS are supported by a working relationship characterised by shared responsibility, mutual trust, partnership and agility between IT and business in handling customer services.

A multi-site exploratory study reveals the emergence of self-service initiatives and customer usability. This highlights an organisation’s ability to predict customer needs proactively and enable customers to control their own services. Roles also emerged for ITC in implementing, enabling and initiating business strategies to focus on the customer. These initiatives and ITC roles support the formation of customer focus digitalisation in terms of provision, interactivity and information capabilities.

This study illustrates a theoretical model of customer focus digitalisation. This model refocuses services and interactions between organisations and customers and places greater emphasis on the digital form. This could be one of the building blocks in supporting the processes managed between technology and business. This study also provides organisations with practical classifications for understanding and characterising the role of ITC in supporting organisational strategies towards customers. ITC roles are classified into those of implementer, enabler, autonomous, initiator, and generator of revenue.

CHAPTER ONE INTRODUCTION

1.0 Introduction

This chapter provides an introduction and a road map for the study. The background to and rationale for the research study are discussed in section 1.1 and the following section (1.2) presents the objective of the research. Based on the research objective, four research questions are presented in section 1.3. This thesis is structured in eight chapters, section 1.4 provides a summary of the research plan and thesis structure. During the research study, a number of peer-reviewed papers were published at relevant information systems (IS) conferences and these are listed in section 1.5.

1.1 Rationale for the Research Study

The focus of creating a superior business position from tangible assets – such as human resources, operations and products – has shifted to intangible assets, such as the emotional and value aspects of service, response time and accompanying facilities (Mascarenhas et al., 2006). Intangible assets are often more valuable to many organisations than their tangible assets, particularly in the sustainable relationship between organisation and customer (Parvatiyar and Sheth, 2001; Kaplan and Norton, 2004; Mascarenhas et al., 2006).

Distinguishing solely along traditional strategic plans, such as price and product, no longer provides sustainability for an organisation and, therefore, customer expectation and satisfaction are the next competitive battleground and a source of sustainable distinction (Pine and Gilmore, 1999; Prahalad and Ramaswamy, 2003; Shaw and Ivens 2005). In addition, “the higher the uncertainty associated with the customer’s input, the greater the need for flexibility in the customer-firm interaction” (Schultze et al., 2007). This is due to the significant power of the customer as the most effective factor for growing a business today (Verhoef et al., 2009) and focusing on customer-organisation interactions is a key to customer satisfaction and loyalty (Li et al., 2003).

In addition, organisations seek to gather and analyse customers’ needs and experiences in order to implement reactive and proactive customisation as much as possible, and strive to develop superior information technology (IT) capability to

focus upon and interact more efficiently with customers (Chen and Popovich, 2003; Fink and Neumann, 2007). Thus, IT capabilities are associated with positive strategic plans and expansions for organisations and are a primary indicator of an organisation's capabilities (Bharadwaj, 2000; Kim et al., 2011).

Therefore, the rationale for carrying out this research project lies in the well-documented findings that there is a deficit in the threads that bind the capabilities of IT with customer-focused strategy (CFS). Granados and Gupta (2013) suggest that it is interesting to examine how technologies enable organisations to implement strategies through a greater focus upon and interactive approach with customers. Lu and Ramamurthy (2011) emphasise that there is a need for future research to explore the role of IT capability in the interface between technologies and people. This study is motivated by the desire to resolve issues concerning the lack of focus on the customer and the interaction in organisational strategies versus the unknown influence of information technology capability (ITC).

In the same manner, this study seeks to clarify the ambiguity in the relationship between ITC and CFS. In addition, the motivation for this study is not only directed to making an academic contribution, it is also intended to be used as a practical contribution to the organisations involved or those that are interested in a similar environment, particularly those experiencing continual issues with customers. Therefore, this study hopes to provide organisations with a classification for understanding the role of ITC in supporting organisational strategies oriented towards the customer and to encourage proactive processes to avoid negative impacts and improve performance.

The objective behind this study is to address the perceived gap in the literature by exploring the relationship between ITC and CFS. It is essential to explore how technologies enable organisations to implement strategies through a more focused approach to their customers. Thus, the research objective in the next section seeks to improve understanding of the relationship between ITC and the organisational goal of achieving a CFS. Identifying the characteristics of ITC enables an organisation to focus on developing these characteristics, which may help it to achieve an appropriate level of CFS.

1.2 Research Objective

The proposed research aims to address a perceived gap in the literature concerning the relationship between information technology capability and customer-focused strategies.

The objective of this research is to explore the relationship between IT capability (ITC) and customer-focused strategies (CFS) in an organisation.

This objective seeks to improve our understanding of the potential of information technology to drive the strategic goal of hardwiring customer focus into organisational philosophy. The findings will, therefore, help to establish an understanding of the context and role of ITC in instigating customer focus throughout an organisation, thus making a contribution to the work of academics and practitioners in both fields.

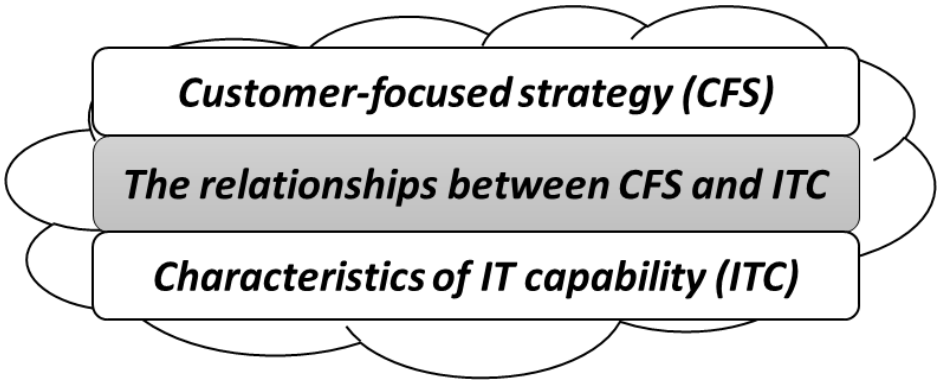


Figure 1.1: The main constructs of the research study

To meet the research objective and goals, the first step is to determine the customer-focused strategies of each organisation sampled. Secondly, the articulation of IT resources and capabilities in the sampled organisations must be understood. This involves an investigation of IT capability and its characteristics using literature-based and emergent constructs. The next section presents the research questions formulated to achieve the research objective.

1.3 Research Questions

Research questions are the first pillar on which to build data collection and articulate research findings (Yin, 2009). The combination of asking the right questions and

employing the most powerful method for answering those questions is key to producing highly regarded research (Bouchard, 1976).

In order to operationalise the research objective, the research questions are formulated as follows.

Research Question One: What are the customer-focused strategies of the organisation?

In chapter two, customer-focused strategy is classified according to three factors: 1) the organisational implications of a heightened customer focus, 2) the level of commitment to engaging with customers, and 3) the customer interaction approach. A CFS is an organisational strategy that is aimed at building a long-term and consistent relationship with the customer in order to enhance customer satisfaction and loyalty (Colgate and Danaher, 2000; Chen and Popovich, 2003). This relationship is characterised by mutual understanding and values shared between the different functions within the organisation and the customer.

In order to improve the understanding of CFS, this research question seeks to explore and categorise the customer-focused strategies in the context of each organisation. This question seeks to understand how organisations transform their strategic orientations to improve customer satisfaction into clearly understood and actionable strategies. The enhanced customer focus means ensuring that these strategies are understood right across the different functional domains of the organisation and, therefore, have an influence on the customer's experience and relationship with the organisation.

Learning about customer-focused strategies leads to a better perception of the relationship between IT capabilities and such strategies. The third and fourth research questions address the exploration of working relationships between IT and business and how the characteristics of IT capabilities support the customer-focused strategies explored in this research question. Therefore, understanding the strategies for focusing on the customer is essential to examining them in the third and fourth research questions.

Research Question Two: What are the characteristics of the IT capability in the organisation?

In chapter two, IT capabilities are defined according to three core concepts: 1) personnel, 2) management, and 3) infrastructure. Bearing in mind the debate identified in the literature review regarding the capabilities of IT (Ray et al., 2005; Kim et al., 2011), describing IT capabilities has traditionally been a challenge because of the subtle mix of people, processes and technology capabilities involved (Fink and Neumann, 2007; Kim et al., 2011). However, satisfying customers involves a blend of all three capabilities and, in a service context that is increasingly digital, it is possible that other elements come to bear that can make the customer's experience merely satisfactory or better.

Therefore, this question seeks to explore and categorise the characteristics of IT capability in the context of each organisation. This research question seeks to understand the mix of IT capabilities that combine to deliver an excellent customer experience and fulfil the customer's needs. Combining IT capabilities ensures that their characteristics are defined and known across the organisation and, therefore, IT has an influence on business in achieving the customer's needs and meeting his or her demands.

Defining and understanding the characteristics of ITC serves the research objective of exploring the roles of ITC in enabling a customer-focused strategy. IT capabilities and their characteristics support IT in imposing its role within the organisation. In addition, understanding the characteristics of ITC is essential to examining them in the third and fourth research questions. The third research question addresses an exploration of the working relationships between IT and business. The fourth research question addresses how the characteristics of IT capabilities support customer-focused strategies.

Research Question Three: How do IT and business work together in delivering a customer-focused strategy?

Organisations deploy and develop IT operations and customer-facing processes in order to improve and deliver excellent customer services. The literature shows an ongoing evolution in the coordination and consistency between IT and business to align the work of both back-office IT service delivery and customer-facing platforms and services (Bharadwaj, 2000; Ngai et al., 2011; Lu and Ramamurthy, 2011). However, as shown in the literature, there is a dearth of research on the organisational interdependencies between these two increasingly interdependent entities (Lu and Ramamurthy, 2011; Granados and Gupta, 2013). This research question explores the characteristics that influence the success of the collaboration between IT and business counterparts in the context of customer-focused strategies.

Research questions one and two seek to understand and study customer-focused strategies and IT capabilities independently. It is useful to consider them independently and then consider the interplay between the two constructs. Understanding the working relationship between IT and business completes the understanding of aspects of these two constructs, and thus helps in achieving the objective of the research, which aims to understand the relationship between the capabilities of IT and strategies focused on the customer.

Exploring both the customer-focused strategies and the IT capabilities of organisations provides insights for understanding the relationship between business and IT in achieving a customer-focused strategy. The understanding of customer-focused strategies and IT capabilities gained from research questions one and two facilitates the study of their relationship in this research question. This question is intended to enable a relationship map to be drawn associating IT personnel capability, IT management capability, and IT infrastructure capability. This map informs the organisational implications of customer focus, the level of commitment to engaging with customers, and the customer interaction approach. This question seeks, therefore, to explore the characteristics of these relationships.

Research Question Four: How can the characteristics of IT capability drive customer-focused strategies in organisations?

The technological and digital revolution has equipped IT to drive innovation and creativity in customer service delivery. This revolution is reshaping the requirements and aspirations of customers with regard to services and their interactions with organisations towards greater digitalisation. The literature shows that IT is a vital and integral part of business success in relation to these changes (Tallon, 2008; Bhatt et al., 2010). However, there is a need to undertake research into the classification and definition of IT roles in enabling a customer-focused strategy (Lu and Ramamurthy, 2011).

This research question supports the research objective by attempting to improve understanding of the categories and relationships that have been generated within the cases. This research question facilitates further abstraction of the multi-site data. The association of customer focus strategies and IT capabilities offers roles and initiatives for customer service. Both CFS and ITC add initiatives that drive changes for the benefit of customers. Understanding the roles provided by IT capability in enabling initiatives for customers is derived from an understanding of ITC and CFS.

This research question is concerned with the driving of customer-focused strategy into organisational philosophy and describing how IT capability instigates customer-focused strategies in the context of an organisation. The research question provides, therefore, an understanding of the context and role of ITC in prompting a customer focus throughout an organisation. It illustrates those roles and initiatives that are common between the characteristics of IT capabilities and organisational strategies towards the customer.

By defining the objective of the research and the research questions, the researcher was able to follow a research plan to complete his doctoral thesis. This plan is presented in the next section.

1.4 Research Plan

Referring to the two main constructs of ITC and CFS, and to the research objective and questions, an action plan was generated that described all the milestones for the research project. This plan was subject to change as the work progressed. The study was given five main milestones:

1. Proposing the research topic, objective and questions.
2. Developing knowledge of ITC and CFS and their concepts and definitions.
3. Defining the research methodology and field case study design.
4. Presenting and analysing the findings.
5. Developing the research contribution and opportunities for future research.

The research plan is visualised in Figure 1.2:

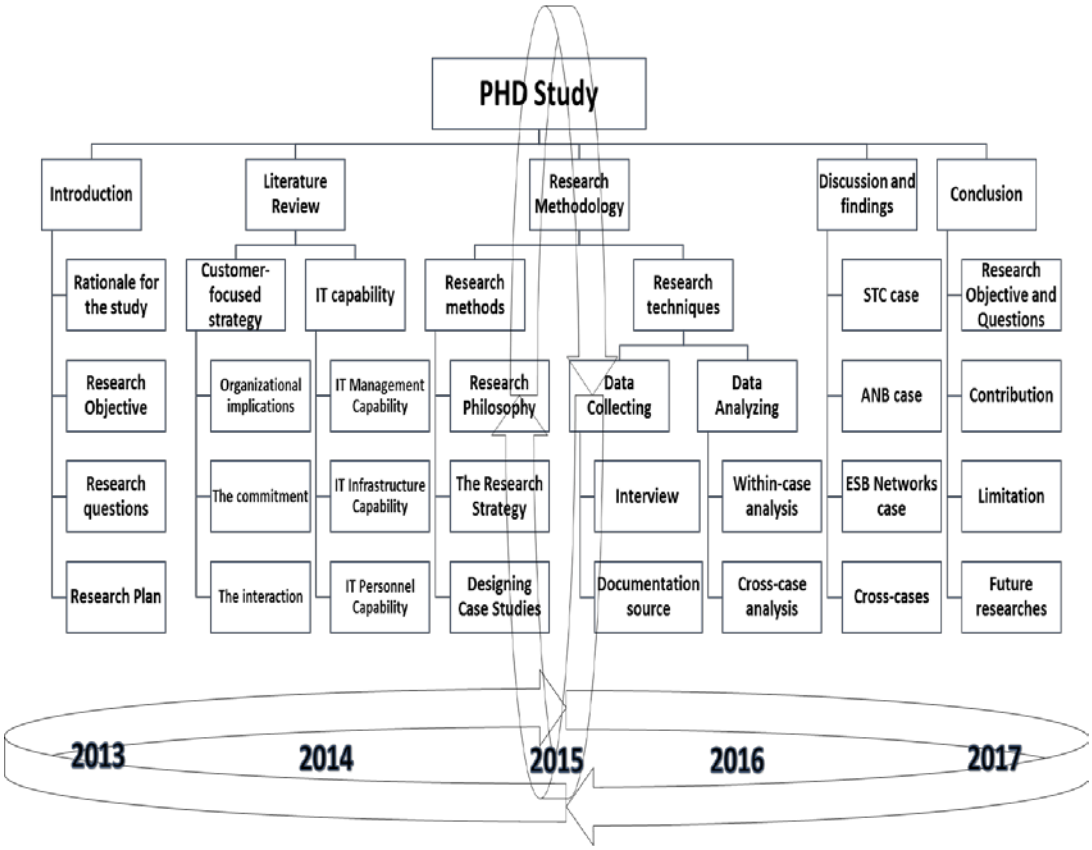


Figure 1.2: Research plan

The chapters in this thesis are ordered as follows:

Chapter one presents the rationale for the study, the objective of the research, the research questions and the research plan.

Chapter two reviews the literature focusing on customer-focused strategy and information technology capability and explores the concepts and definitions that relate to CFS and ITC. The first part of the literature review discusses customer definition and the manifestation of customer focus raised in academic research. The second part of this chapter introduces the definition of information technology capability. This part presents a synthesis of recent research on ITC by considering the relevant themes and constructs arising from top-ranking information system journals.

Chapter three outlines the theoretical approach taken in terms of academic enquiry, the case study design and demonstrates the steps that were taken for each selected case during this qualitative study. The chapter discusses the research approaches and methods used and how they were applied to serve the research objective.

Chapters four, five and **six** present the within-case analysis of STC, ANB and ESB Networks. The analysis chapters present and analyse the answers to the three research questions through the case studies. The first research question reveals five customer-focused strategies: 1) empowering the customer experience and customer care, 2) expanding the customer interaction channels, 3) knowing the customer, 4) improving the fulfilment time for customers, and 5) transforming customer services to digital. The second research question reveals five characteristics of IT capability in the organisations: 1) the fulfilment of business requirements on time, 2) the automation of business processes, 3) supporting business continuity, 4) the integration of multiple business systems and applications, and 5) the availability of timely and accurate information. The third research question reveals five characteristics of the relationships between business and IT: 1) the nature of the working relationships, 2) functional orientation, 3) knowledge orientation, 4) conducting an agile methodology, and 5) leadership and partnership. At the end of each research question, the key arguments are summarised.

Chapter seven addresses RQ4 by describing the support provided by IT capability in enabling a customer-focused strategy. The chapter provides an analysis of the data across the cases. Comparisons made in this chapter depend on identifying similarities and differences across the three case studies based on the output from the three research questions during the presentation and analysis chapters. This chapter

compares the initiatives aimed at helping customers, with the evolution in the roles of ITC and the emergence of digital solutions capability.

Finally, **chapter eight** presents the overall conclusions of the research study. This chapter revisits the research objective and the research questions of the study. It discusses the theoretical contribution of this research and the implications of the findings. The chapter concludes with an account of the limitations of the study and recommendations for further research.

1.5 Peer-reviewed Publications

Ahmed AlHarbi, Ciara Heavin, and Fergal Carton, Understanding the Characteristics of IT Capability in Delivering a Customer-Focused Strategy: The case of Saudi Bank, Information Systems Development: Complexity in Information Systems Development (ISD2016 Proceedings). Katowice, Poland: University of Economics in Katowice. ISBN: 978-83-7875-307-0 [Details].

Ahmed AlHarbi, Ciara Heavin, and Fergal Carton, Improving customer oriented decision making through the customer interaction approach, Journal of Decision Systems Vol. 25, ISS. SUP1, 2016 [Details].

Ahmed AlHarbi, Ciara Heavin and Fergal Carton, Improving customer oriented decision making through the customer interaction approach, conference of IFIP WG 8.3: Big Data, Better Decisions, Brighter Future, University College Cork, Ireland (DSS2016) [Details].

Ahmed AlHarbi, Ciara Heavin, and Fergal Carton, Flexibility of Information Technology Infrastructure Capability, 9th European Conference on IS Management and Evaluation Bristol UK ISBN: 978-1-910810-55-2 ISSN: 2048, (ECIME 2015), pp.243-252 [Details].

CHAPTER TWO LITERATURE REVIEW

2.0 Introduction

This study seeks to improve understanding of the potential for information technology to drive the strategic goal of hardwiring customer focus into organisational philosophy. This chapter concerns a review of the literature on customer focus and ITC capabilities. This study has taken the decision to exclude some of the theories used in regard to the relationship between IT and business, such as Dynamic Capabilities and Strategic Management (Teece et al., 1997) and the Strategic Alignment Model of Henderson and Venkatraman (1993), as the focus on the customer was not a key part of those theories and they may not, therefore, support the objective of this research effectively. More details regarding the research methods used for this research are presented in chapter three.

The first part of the literature review chapter discusses the activities of organisational customer-focused strategy (CFS). Section 2.1 provides definitions of a customer-focused strategy. The activities of an organisational customer-focused strategy are then presented as follows: the organisational implications of a heightened customer focus in section 2.2; the level of commitment to engaging with customers in section 2.3; and the customer interaction approach in section 2.4. Each activity has its own factors for achieving its goals: the organisational implications of a heightened customer focus includes the internal readiness of the organisation and relies on human skills and knowledge, organisational culture and managerial leadership, and process orientation and technology. Customisation according to customer needs focuses on sustaining the customisation advantage of an organisation against competitors and depends on the cost of leadership and product differentiation, as well as exploiting potential opportunities and threats in order to generate revenue for the organisation. The level of commitment to engaging with customers focuses on the customer perspective by adopting a customer-centric approach, refining the loyalty and advocacy of the organisation, maintaining customer relationships and retention, and co-creating dynamic and shared value. The evolution of the customer interaction approach is discussed in terms of four existing methods of customer-

related quality improvement: total quality management (TQM), service quality frameworks (SERVQUAL), customer relationship management (CRM), and customer experience management (CEM).

The second part of this chapter introduces the emergence and definition of information technology capability (ITC). ITC is associated with the positive plans and expansions of organisations and is a primary indicator of an organisation's capabilities (Bharadwaj, 2000; Kim et al., 2011). This part presents a synthesis of recent research on ITC by considering the relevant themes arising from top-ranking information system (IS) journals. Section 2.5 defines the concept of ITC. These definitions point to the main components of ITC by providing definitions, traits and interrelationships of the following: IT personnel capability (ITPC) in section 2.6, the section then focusing on three constructs of IT personnel capability: technical, behavioural and business capabilities; IT management capability (ITMC) in section 2.7, the section then focusing on two main capabilities of IT management: IT business experience and IT business relationship; and IT infrastructure capability (ITIC) in section 2.8, focusing on the technical characterisation of ITIC. Previous research indicates that ITIC is integral to organisational IT capability (Fink and Neumann, 2007). As part of the discussion, the various dimensions of ITIC flexibility are considered, as the dimension of ITIC has been noted as being the most important trait of IT infrastructure capability (Byrd and Turner, 2000; Liu et al., 2013). At the end of this chapter, the interrelationships between the processes in the various IT capabilities are discussed.

The next section discusses the evolution of CFS definitions.

2.1 Customer-Focused Strategy

Organisations attempt to include customer strategies in their mission and vision statements due to the high priority they now give to their customers (Hartline et al., 2000; Kaplan and Norton, 2005). Being customer-focused allows an organisation to be consistent in providing features and high-quality products and services for improved customer retention and loyalty over the long term (Chen and Popovich,

2003). Thus, the definition of a customer-focused strategy is often constant and has become a convention among scholars, as shown in Table 2.1.

Table 2.1: Sample definitions illustrating the evolution of CFS

Author	**Definition**
Roscoe (2001)	The organisations that are going to elicit true loyalty from their customers are the companies that deliver a combination of benefits.
Lafferty and Hult (2001)	A strategic planning process considers that the needs of customers are key and develops specific strategies to satisfy them.
Hansotia (2002)	These strategies highlight differences in customers' values, potentials, needs and preferences. It is about leveraging customer knowledge to get closer to customers, while all the time increasing the breadth, depth and length of their relationship with the firm.
Sue Scullin et al. (2004)	The idea behind developing a customer-focused strategy is not to align the customer to the organisation's goals, but to listen to the customer and try to create opportunities beneficial to both.
Pandey (2005)	"Determine the value propositions that companies should offer to create delight for their target customers" (p.64).
Wilson et al. (2012)	"All strategies are developed with an eye on the customer, and all implementations are carried out with an understanding of their impact on the customer. Decisions regarding new services and communication plans will integrate the customer's point of view" (p.15).
Yaacob (2014)	A successful stand-alone strategy requires a particular degree of focus and examination from researchers.

In Table 2.1, once customers are aware of an organisation's interest in their side of the value, they start to switch their attention and interest to that organisation, become more loyal and act as advocates and, at the same time, know their value inside the organisation. A customer-focused strategy requires keeping customers aware and updating them with regard to what happens inside the organisation. This results in a heightened, transparent and successful relationship, which leads to positive outcomes for both the organisation and its customers (Colgate and Danaher, 2000).

Customers increasingly have multiple choices and various products from which to choose in order to satisfy their needs. Each business works to guarantee an outstanding customer experience, maintaining this through delivering products and services according to customer requirements, and drawing attention away from a static definition of value to a more *dynamic* notion of service or value co-creation (Palmer, 2010). In this regard, organisations conduct active strategies in managing

customers. In the 1980s, Peter Drucker remarked that having their own customers is the first objective for organisations. According to Normann and Ramirez (1993, p.65), “Strategy is the art of creating value. It provides frameworks, conceptual models, and governing ideas that allow a company's managers to identify opportunities for bringing value to customers and for delivering that value at a profit”. A customer-focused organisation is more likely to work by delivering exceptional service quality and creating satisfied customers (Hartline et al., 2000). To achieve this, “Organising around the customer involves adopting solutions strategies” (Galbraith, 2011, p.22). Thus, the next sections focus on describing the major activities of customer focus and provide the main specifications of each.

2.2 The Organisational Implications of a Heightened Customer Focus

As shown in section 2.1, a customer-focused strategy is important for certain organisations. However, the most critical aspect of this transformation is what the organisation must do at all levels to achieve a CFS that is operationally efficient and functionally effective (Bakos and Treacy, 1986; Kaplan and Norton, 2005).

Kaplan and Norton (2004) identify three essential perspectives for implementing such a strategy: (1) the human perspective: the skills, talent, and knowledge that an organisation’s employees possess; (2) the organisation perspective: the culture, the leadership, the arrangement between strategic goals and employees’ orientation, and knowledge transfer and sharing; and (3) the information perspective: the accuracy of databases, information systems, networks, and technology infrastructure.

In light of the above clarification from Kaplan and Norton (2004), and according to Barney (1991) and Porter (1985), the organisational implications of a heightened customer focus can be considered in six domains: human skills and knowledge, organisational culture and leadership, process orientation and technology, customisation of products and services according to customer needs, cost leadership and product differentiation, and potential opportunities and threats of customer servicing. The next sections discuss these domains in turn.

2.2.1 Human Skills and Knowledge in Interactions with the Customer

Having highly knowledgeable staff and training employees to interact with customers are essential to building a positive customer impression and experience (Thompson, 2006). Many organisations train their employees to produce high-quality products and services but neglect training them in how to provide an excellent interaction experience when dealing with the customer. The result is disappointing because customers might experience a negative interaction even if the service has been of excellent quality. The case is exacerbated when an organisation focuses on providing a service without properly training its employees: 'vanilla' training leads to 'vanilla' service (Kamaladevi, 2010).

Many authors refer to workforce readiness in terms of customer interaction. For example, Shaw and Ivens (2005) detail that it is critical to select the right people to serve customers and ensure positive experiences for them. Christopher et al. (1991) and MacGillavry and Wilson (2014) point out that the downstream relationship with the customer implies the co-sharing and co-responsibility of all employees in the organisation – from top management down to the service floor – and that it involves work based on an information network in order to customise the products and deliver an excellent service to the customer. Frow and Payne (2007) emphasise that one of the most important aspects is recognising the benefits of an in-depth knowledge of customer needs through teamwork and cross-integration functions. The collaboration of all staff and departments in an organisation is required for flexible interaction in dealing with the customer. The next section describes the culture of an organisation as it becomes more interested in customer value.

2.2.2 An Organisational Culture for Customer Value

In changing the culture of an organisation towards a customer focus, managers must be clear with regard to their organisation's strategies and objectives, employees must be aware of their responsibilities, and a positive set of values must be developed to build customer focus throughout the business (Shaw and Ivens, 2005).

Improving organisational culture and awareness is the source of achieving the rest of a customer-focused strategy, as this is a powerful force in shaping the behaviour of

individuals and groups within organisations (Barney, 1986). An organisation's ability to direct its full attention to responding positively to a change in market conditions is valuable in maintaining a sustainable competitive advantage, regardless of the degree of environmental simplicity or complexity (Bharadwaj, 2000; Wade and Hulland, 2004). On the other hand, any cultural change needs to be aimed at adapting the philosophy of employees towards their activities so that they become more customer-centric, either by direct support to the customer or indirect support to other groups within the organisation (Anaman, 2010). Otherwise, if a customer-oriented philosophy does not exist, employees will lose skills and will not be able to act appropriately towards customers (Meyer and Schwager, 2007). Any cultural change also needs new intentions and forms of behaviour, such as leaders who can show strong communication skills and employees who are trained, motivated and rewarded in their approach to customers (Chakravorti, 2011). Cultural awareness is vital in building a 'customer-oriented' culture within an organisation.

With regard to the importance of educating and inspiring employees, Shaw and Ivens (2005) emphasise appointing the right leaders to light the path in front of employees and provide a healthy environment in which they can interact with customers in a self-sufficient and confident way. The next section describes the role of leadership and how leaders can change the culture of an organisation to one that is more interested in the customer.

2.2.3 Well-Managed Leadership in Supporting Customer-Oriented Change

Successful business leaders understand their customers. They place themselves in the customers' minds and/or spend time meeting them in order to understand their current and future needs (Kaplan and Norton, 2004). Support from leadership is required to champion a customer management programme, with leaders who can manage and organise employees at all levels, set competing activities and responsibilities, own the customer feedback programme and report customer feedback results at executive meetings (Berry et al., 2006). However, execution is a difficult phase in creating a good customer experience. There are a number of examples of good customer experiences tending to be led by founders or CEOs

because they are a primary source of inspiration (Kamaladevi, 2010). There can be no customer-oriented change unless the general manager leads the team and provides a well-managed, secure, well-organised and inspirational environment. Chakravorti (2011) argues that leaders usually have clear values and beliefs regarding important actions that will affect others emotionally, sensually and cognitively, and they can communicate these values in a clear and consistent way to employees. Such positive actions can help employees to contribute to the shared value of customer orientation.

Both skilled employees and well-organised leaders need tools to facilitate their work. The next section details the importance of process orientation and technology support for an organisation's staff in servicing the customer.

2.2.4 Process Orientation and Technology

An organisation's systems and processes are key to providing a consistent interaction with customers, but they can also be the reason for a poor and inconsistent customer experience (Ray et al., 2005). It is important to point out that a customer-oriented approach is not solely process- and system-oriented, although these factors play an interdependent and integrated part in supporting and enabling heightened customer care (Payne and Frow, 2005). A value creation process transforms the outputs of a strategy process into programmes to create and deliver customer value. The process also requires an assessment tool to determine whether a value proposition creates a positive or negative impact on the customer side, and to quantify the various reactions of the customer to a product or service (Payne and Frow, 2005).

The process of measuring the competitiveness of customer service is the principal criterion for customer satisfaction (Ray et al., 2005). The process demands the realignment of the organisational structure and processes (Pan and Pan, 2006), as well as the optimisation of the business environment to fulfil the needs of the customer (Paula and Iliuta, 2008). According to Shaw and Ivens (2005), not all current processes are customer-facing, with the result that they are usually ineffective. To avoid this, it is advisable to involve customer input or feedback in process development, assign process ownership to gain greater efficiency, select design teams of staff who are related to customer perspectives, minimise processes that are

lengthy or repetitive due to inadequate or less-than-expert work, complete processes as planned, regardless of urgency, focus on customer benefits, and hold regular reviews and updates of internal and external influences.

Customer service processes without technological support show slow performance compared with processes supported by technologies (Ray et al., 2005; Saunders and Brynjolfsson, 2016), because technology has an impact on the efficiency and effectiveness of an organisation (Bakos and Treasy, 1986). If IT is used effectively, it provides an organisation with the opportunity to engage its customers in interactive communication. An in-depth understanding of the customer's needs is required in order to provide a more meaningful interaction, so the organisation becomes the leader in a one-to-one marketing paradigm (Albert et al., 2004). This paradigm suggests that organisations will be more successful if they concentrate on obtaining and maintaining a share of each customer, rather than a share of the entire market. The use of technology to engage with the customer in interactive communication leads to the emergence of successful one-to-one relationships (Wells et al., 1999). For instance, technology is required to gather and analyse satisfaction and loyalty data at customer touchpoints. This provides information on recommendations and actions to facilitate the day-to-day work with the customer (Setia et al., 2013). Sharing such integrated customer data encourages the formulation of cross-functional processes across areas such as manufacturing, logistics, finance, and product development (Frow and Payne, 2007).

Pullman and Gross (2004) indicate that organisations need to discover new ways to achieve competitive advantage, in particular, by focusing on the design and management of the customer experience. Meyer and Schwager (2007) confirm that success in designing and managing processes to deliver products and services according to the needs of the customer is one way to enjoy strategic competitive advantage in the form of customer loyalty. The next section describes the advantages that can be earned from customisation to customer needs.

2.2.5 Customisation of Products and Services According to Customer Needs

Customising a product may necessitate linking some aspects of the services surrounding a product and specific tasks, such as the way in which the invoice is rendered or how the product is packaged. Therefore, the product or service-delivery end has to be able to deal with a particular customer differently based on what the organisation has learned about that customer from any department or information source (Peppers et al., 1999).

Pine et al. (1995) argue that customisation is the development of a product or delivery of a service in response to a customer's needs. Furthermore, Gillenson et al. (1999) define customisation as the activities of an organisation undertaken to make customers feel that they receive individual attention. Peppers and Rogers (2001) focus on product and service customisation in order to create the specifications for an individual customer. Peppers et al. (1999) also refer to the willingness and ability of an organisation to change its ways towards a customer based on understanding what the customer tells the organisation and what the organisation understands about the customer. Albert et al. (2004) consider customisation as the activity taken by an organisation to understand how its customers would like to be treated by assimilating information from the contact and exchanges of the organisation with its customers, such as transactions that are singular in nature or of a more involved series of exchanges that include interactive dialogue. Customisation is one of the main responsibilities of any organisation, and requires full utilisation of resources and capabilities to improve products and satisfy customers (Penrose, 1959; Wernerfelt, 1984; Grant, 1991; Barney, 1995).

Customisation can depend on the internal strengths and weaknesses of a particular organisation and on environmental opportunities and threats (Porter, 1985; Barney, 1991). The following two points provide more debate and analysis of cost and differentiation advantages in section 2.2.6 and organisational opportunities and threats in section 2.2.7, in order to clarify how organisations can achieve customisation in product manufacturing or service delivery according to customers' needs.

2.2.6 Cost Leadership and Product Differentiation

The management of any organisation involves difficult internal decisions and actions, such as cutting costs by shrinking operations and reducing extra costs, and increasing market size and sales figures. Through this process, an organisation aspires to maintain sustainability and growth by providing unique products and quality. It is, therefore, critical that the organisation has the internal abilities to cope. Porter (1985, 2008) classifies competitive advantage from organisational sources into two types. Figure 2.1 illustrates a model of competitive advantage showing that the first type depends on cost advantage, whereby an organisation provides the same service specifications as its competitors at a lower cost. The second factor depends on differentiation advantage, in which the organisation can provide a service or product with more benefits that exceeds the service or product of the competitors.

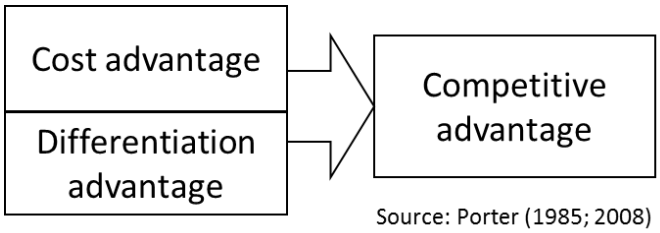


Figure 2.1: Adapted model of competitive advantage

As a result, both organisation and customer benefit, as the organisation will achieve its strategic objectives and its customers will receive superior value (more analysis with regard to customer value is given in section 2.3.6). In addition, these two advantages enable the organisation to protect its leading position in the industry.

Porter (1985) and Grant (1991) argue that sustaining a cost advantage involves cultivating partnerships (alliance strategy) with all suppliers, customers and operational processes. Barney and Clark (2007) declare that the competitive advantage of an organisation not only depends on the competitiveness of imperfect objectives in the markets, but also on the consequences and cost of the implementation of these objectives inside the organisation. An organisation has to consider all expenditure, such as operational expenses, in order to deliver products or services at less than market cost. An organisation needs also to understand the

market and the other items available in order to deliver products with a differentiation advantage.

Customisation leads to reducing costs because it depends on proactive processes and provides exactly what customers need to avoid unnecessary effort or expense (Johnston and Kong, 2011). In most organisations, customer experience has an influence on revenue generation and growth (Pin and Gilmore, 1999; Shaw and Ivens, 2005). A poor customer experience leads to a lower level of loyalty or to customer churn and, as a result, reduced revenue and profit (Anaman, 2010). Unfortunately, in practice, too many organisations focus more attention on the end, not the means. They focus on how to gain more revenue and a greater market share, and neglect the relationship between the customer's value proposition and the organisation's profit (Thompson, 2006). Therefore, organisations have to change these traditional approaches in order to satisfy and sustain their current customers and attract new ones (Joshi, 2014).

2.2.7 Potential Opportunities and Threats of Customer Servicing

Understanding the customer is key to knowing when the perfect opportunity arises to provide a specific service and how it should be delivered and invoiced (Woodruff, 1997; Palmer, 2010; Setia et al., 2013). Concrete analysis of opportunities and threats is the real indicator of competent performance in industry, so Wade and Hulland (2004) argue that an organisation's ability to manage these interactions with outsourcing suppliers is an important organisational factor for high competitive advantage and superior performance.

In the case of services, interactions during the production process provide opportunities for marketing a service by the creation of favourable 'moments of truth', which will encourage the customer to return and give referrals to his or her friends. For example, consulting services usually improve in quality if they are produced in close interaction between advisor and client. A shared experience can also cement long-lasting relationships, such as service co-design. The customer's 'participation style' becomes important, as well as the seller's ability to design and

produce a service so that the contribution from the buyer becomes the best choice (Gummesson, 1987). Therefore,

> Each interaction with a customer should take place in the context of all previous interactions with that customer. A conversation should pick up where the last one left off, whether the previous interaction occurred last night or last month, at the call center or on the company Web-site (Peppers et al., 1999, p.154).

Every customer interaction is to be perceived as both a great opportunity to bond with customers or prospects, and as a risky break point for a worthwhile customer relationship. The effort on both sides – the customer and the service provider – to develop an interactive relationship is essential to ensure good-quality service because it includes the design capability of the organisation and the anticipation of the customer. In addition, managers can plan and develop the stream of customer experience over time – when customers have established constant levels of exchange with the organisation – to work on the enhancement to align with any change and activate the technology to give a more powerful customer experience (Shaw and Ivens, 2005; Palmer, 2010).

The more an organisation makes it convenient for customers to provide information about themselves, the better the opportunity for the organisation to learn more about them, and the more it will do repeat business (Peppers and Rogers, 2001). An organisation "can also offer an incentive to customers to enter into a learning relationship with the organisation – free add-ons, free service, discounts, special memberships, and so forth" (Peppers and Rogers, 2001, p.7). The next section details the commitments in dealing with customers that increase their loyalty to the organisation and share the dynamic value between them.

2.3 The Level of Commitment to Engaging with Customers

The degree of priority given to customer-based strategies has been increasing in many organisations because of a shift to an 'outside-in' approach, which aims to connect the organisation to the external environment, collect market feedback and build external relationships (Day, 1999). Such a shift takes into consideration what the customer wants and changes the organisation to satisfy customer requirements in order to complete an 'inside-out' approach (Shaw and Ivens, 2005; Mascarenhas

et al., 2006). The 'outside-in' approach is the main challenge to organisations because they require a change from being business units to becoming customer-facing units, and because they have structures that are still tied to their old form (Galbraith, 2011). Therefore, the following sections outline the main factors in a business portfolio that need to be changed or followed in order to have a customer-focused organisation. Kaplan and Norton (2005) propose quality, time, service, and cost measurements of the customer perspective to define the extent to which an organisation can monitor and maintain customer acquisition, retention and satisfaction.

The main measure of a business portfolio strategy is how well organisations commit to engaging with customers. Marketing and sales strategies need to consider all the "clues" that customers leave, as the customer is number one and benefits for the customer also increase the benefits to the organisation; the customer is the most effective way to grow a business today (Verhoef et al., 2009). Such commitments in dealing with customers and customer-centric business reflect the strong relationship between the customer and the organisation. The next sections discuss these commitments in greater detail.

2.3.1 Customer-Centric vs. Product-Centric Organisations

To differentiate strategically those organisations that take a product-centric direction from those that are customer-centric, Galbraith (2011) clarifies their differences as follows: a product-centric organisation creates a product and tries to find as many customers as possible; a customer-centric organisation understands its customers and tries to find as many products as possible that are in accordance with customer expectations. Hence, products lead the business in a product-centric organisation, while, in a customer-centric organisation, customers lead the business. Table 2.2 offers a comparison of the two approaches.

Table 2.2: Product-centric vs. customer-centric companies

		Product-centric company	Customer-centric company
Strategy	**Goal**	**Best product for customer**	**Best solution for customer**
	Main offering	New products	Personalised packages of products, service, support, education, consulting
	Value creation route	Cutting-edge products, useful features, new applications	Customising for best total solution
	Most important customer	Most advanced customer	Most profitable, loyal customer
	Pricing	Price to market	Price for value, risk
Structure	**Organisational concept**	Product profit centres, product reviews, product teams	Customer segments, customer teams
Processes	**Most important process**	New product development	Customer relationship management and solutions development
Rewards	**Measures**	• Number of new products • Percentage of revenue from products less than two years old • Market share	• Customer share of most valuable customer • Customer satisfaction • Lifetime value of a customer • Customer retention
People	**Approach to personnel**	• Power to people who develop products • Highest reward is working on next most challenging product • Manage creative people through challenges with a deadline	• Power to people with in-depth knowledge of customer's business • Highest rewards to relationship managers who save the customer's business
	Mental process	Divergent thinking: How many possible uses of this product?	Convergent thinking: What combination of products is best for this customer?
	Sales bias	On the side of the seller in a transaction	On the side of the buyer in a transaction
	Culture	New product culture: open to new ideas, experimentation	Relationship management culture: searching for more customer needs to satisfy

Source: Galbraith (2011)

According to Table 2.2, there are distinguishable gaps between the two approaches, which come from the strategy, the methodology of the work and the components of each approach. These gaps are discussed below.

Customer-centric organisations are strategically oriented towards the full integration of all customer-facing activities and aligning all organisational activities around value-adding activities to respond to market pressures. Product-centric organisations

depend on the best products rather than what customers need, while the strategy of a customer-centric organisation relies on presenting completed solutions for customers. The latter involves: 1) studying the role of every function and the impact of all factors, internal and external, such as the culture of relationships towards customers, 2) the training and awareness of employees, 3) customer thinking and expectation, and 4) after-sales support. The best product might be good for the organisation but does not necessarily fulfil customer needs; the best approach is to have 'convergent thinking', in order to produce a combination of products that are best for the organisation's customers. Therefore, understanding the balance and differences between products and services helps in extending knowledge about what customers are being offered and how it is delivered to them. The next section presents the similarities and differences between services and products as they relate to the objective of this research, which aims to explore the relationship between IT capability (ITC) and customer-focused strategies (CFS) in organisations.

2.3.1.1 Services vs. Products

Services and products represent what the customer can acquire from an organisation and involve many of the human resources of the organisation as well as its customers (Edvardsson et al., 2000). New services and products require new capabilities, metrics and incentives, in addition to an emphasis on changing the business model and transactions and building specific relationships (Oliva and Kallenberg, 2003). Services and products reflect the competencies provided by an organisation to its customers. Organisations depend on the quality of the products or services they provide to the customer for achieving customer satisfaction in a competitive market (Vargo and Lusch, 2004a; Alter, 2010).

Understanding the research that exists in this area presents some convergence in the characterisation of services and products among researchers and practitioners. Some researchers acknowledge that it is difficult to find fundamental distinctions between a service and a product (Oliva and Kallenberg, 2003; Alter, 2010). It is claimed that an organisation's economic offering is a combination of products and services, rather than either pure products or pure services between which there is a binary relation (Vargo and Lusch, 2004a; Hepp, 2008; Alter, 2012). Indeed, it is purported that a

service is more comprehensive than a product, since a product is one of the components of a service, in addition to other accompanying activities, such as maintenance and after-sales repair services (Anderson et al., 1997; Oliva and Kallenberg, 2003). They suggest that the customer not only receives a product, but also undergoes interaction processes and trade-offs between customer satisfaction and productivity (Anderson et al., 1997; Oliva and Kallenberg, 2003).

Other points of view highlight that there are differences between a service and a product; they are not the same (Vargo and Lusch, 2004a; Hepp, 2008). A product may be provided to a customer alone, without a service, and a customer can be served without needing to purchase a product (Edvardsson et al., 2000; Vargo and Lusch, 2004a; Hepp, 2008). A service also differs from a product in terms of presentation, process and control. There are several major differences that distinguish a service from a product, as shown in Table 2.3 (source: collected and adapted from Edvardsson et al., 2000; Vargo and Lusch, 2004a; Hepp, 2008; and Alter, 2012).

Table 2.3: Differences between a service and a product

Service	Product
A service is often an intangible asset.	**A product is often a tangible asset.**
Difficulty of quality control for a service.	**Quality control can be included in a product.**
Quality of service is affected by provider performance.	**Product quality is not affected by provider performance.**
Quality of service is affected when demand increases.	**Product quality is not affected when demand increases.**
Service quality varies when the providers differ.	**Product quality is not affected by different providers.**
A service cannot be stored ('just as needed').	**A product can be stored ('inventory usage').**
A service is produced and consumed at the same time ('just in time').	**A product is produced on request.**
The service is different depending on the customer.	**Products are identical or similar for all customers.**
Services are the result of a coproduction process.	**Products are the result of a sorting process.**
A service occurs at a time and place of the customer's choosing.	**Products are typically produced prior to sale.**
Loyalty is more straightforward in a service context.	**Loyalty depends more on profitability in a product context.**
Services are activities in which customers play an active role in the outcome.	**From the customers' perspective, products are activities that occur 'behind the scenes'.**
Competing more on services provides a platform for earning loyalty and increasing profitability.	**Competing on product price is a natural but dangerous option that ultimately lowers profitability.**

According to Table 2.3, intangible assets are more about experience, emotion and relationship aspects, while tangible assets usually have certain characteristic features, often physical or chemical attributes or related to the context of usage (Hepp, 2008). However, Vargo and Lusch (2004a) and Alter (2012) emphasise that there is a shift from the exchange of tangible assets towards the exchange of intangible assets, specialised skills and knowledge, and operations. Thus, marketing points towards a more comprehensive logic that integrates goods with services. It provides a richer basis for the development of marketing thought and practice. This shift has created new competitive environments that rely on intangible capabilities, such as employees' skills in dealing with customers and values shared between an organisation and its customers. Table 2.3 also indicates the difference between a service and a product in terms of production and delivery. Services are produced, delivered and consumed in time and space, in which the operations overlap and the customer carries out certain essential activities. A service is provided at the time the customer requires and is based on his or her choice, whereas a product is produced prior to a customer's request and is stored and accompanied by offers and financial incentives for marketing purposes (Edvardsson et al., 2000).

Organisations deliver customer value through a mix of tangible products (such as electricity networks, monetary loans and smart phones) and services (electricity supply, online banking and bandwidth). IS researchers focus on how to design, deliver and measure a product or service aimed at customers (Vargo and Lusch, 2004a; Alter, 2012). Alter (2010, p.200) suggests that knife-edge distinctions between products and services are important for economists; IS researchers, however, are more concerned with describing, evaluating, and improving the value and experience of the customer in relation to products and services.

Services are not just provided by people, but by technologies as well, and do not simply include human providers and human consumers, but systems or applications in the middle, both of which may use information technology while performing or receiving a service. Customers use self-service machines or online services that depend on technology (Vargo and Lusch, 2004a). The quality of customer interactions

is very important and is often seen as the essence of service (Alter, 2012). More details about customer interaction approaches are provided in section 2.4.

Customer focus is a reaction to the increasing futility of differentiating between a product and a service. In today's digitally transformed world, such distinctions are less important than delivering customer value through a mix of products and services that integrate seamlessly. Pricing depends on the market in a product-centric organisation, while pricing in a customer-centric organisation relies on the value for the customer because the target is customer profitability. All the above procedures and policies in customer-centric organisations enhance the satisfaction and loyalty of customers because customers are at the centre of operations and strong customer relationship management. As a result, customers become the most valuable asset of an organisation. The next section details the customer-centric approach.

2.3.2 The Customer-Centric Approach

Converting an organisation to a customer-centric structure requires redesigning products and services, building efficient distribution channels and changing business processes. Buttle (2009) and Galbraith (2011) define a customer-centric approach as an organisation learning to adapt to customers' requirements. Gradually, new trends have been associated with the appearance of a customer-centric approach, such as customer-oriented marketing. Sheth et al. (2000) argue that customer-centric marketing focuses on understanding and satisfying the requirements of individual customers rather than those of mass markets or market segments. (They also provide sequenced phases of business change, starting with a product oriented to the customer, in order to serve customers effectively and efficiently.) This new trend creates a new environment of customer focus inside the organisation. The traditional understanding of managers and employees was limited to the vision of what the organisation was able to do. The new vision moves in the direction of what the customer is able to do. Further clarification of this can be seen in the following figure.

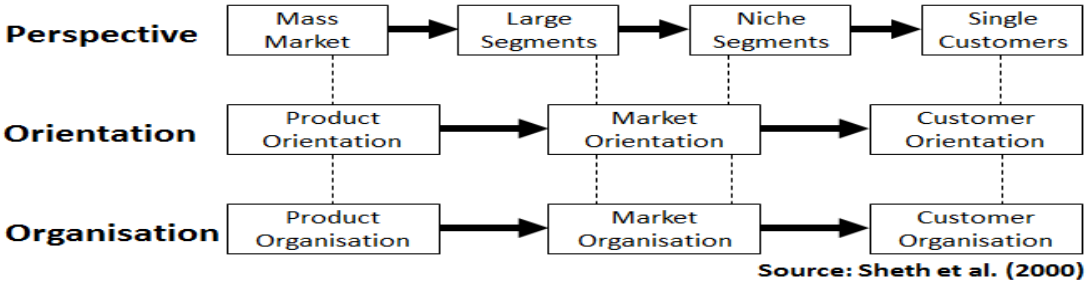


Figure 2.2: Growth of customer-centric marketing

In the past, organisations would initially have worked on non-interactive marketing (mass market) without defining a specific customer relationship or segment (Gummesson, 1987). In the next phase, organisations changed in accordance with market demands and conditions. Today, organisations focus more specifically on customers. Organisation strategy has changed from managing markets to managing customers and keeping them satisfied (Sheth et al., 2000; Shaw and Ivens, 2005).

However, the key transformation and meaning of becoming a customer-centric business is to change the understanding of a 'brand' from a set of messages and images of an organisation and its products to enhancing customer values when delivering the brand as an experience incorporating these values (Haecke et al., 2003). The next two sections explore this further by discussing the nature of brand loyalty in section 2.3.3, and the defining characteristics of loyalty and advocacy and their effects for organisation and customer in section 2.3.4.

2.3.3 Brand Loyalty and Trustworthiness

Business and strategic managers work hard to make sure their brand properties are 'trusted' by customers. 'Trustworthiness' is the most important facet of the bi-directional relationship between an organisation and a customer. Brand loyalty is the tendency of customers to repurchase the same brand over time, even if the price fluctuates. Brand loyalty is the commitment of customers to a specific brand due to certain positive experiences (Lee et al., 2003). The trustworthiness factor assists in building a sense of reliability, such as for Apple and Microsoft, as their brands are measured by global standards due to the strength of the brand name of these companies (Chen and Hitt, 2002). Customers also buy from Microsoft because it

offers greater ease and more flexible products for users at any level of education (Mascarenhas et al., 2006).

There is a misunderstanding about brands that claims that a brand is just a name or a logo that gives an organisation more scope for others to recognise its properties. Others see a brand as an intangible thing, so whether or not an organisation takes care of it will have no great impact on the organisation or its customers. A brand is a name, term, sign, symbol or design, or a combination of these, intended to differentiate the products or services of one organisation from those of competitors. Operationally, a brand conveys its uniqueness and identity (name and fame) and embodies a specific set of unique features, benefits and services to customers (Mascarenhas et al., 2006).

Customers' perception of an organisation's brand is a significant and major factor in the customer experience. Verhoef et al. (2009) confirm that there is a reinforcing effect and a bi-directional interaction between a brand and the customer experience. Two different facets can influence a customer and these have asymmetric effects on brand perceptions within the customer experience. However, Kamaladevi (2010) declares that positive customer brand perceptions may have a stronger influence on customer experience than negative customer brand perceptions.

Customer loyalty is often associated with a brand (Mascarenhas et al., 2006). Customers need to trust in an organisation, as this is the key to a loyal advocacy position from the customer to the organisation. The next section discusses customer loyalty and advocacy.

2.3.4 Moving Customers from Loyalty to Advocacy

The goal of interaction with the customer is to move customers from being satisfied to being loyal, and then from being loyal to acting as advocates (Kamaladevi, 2010). A customer acting as an advocate is a result of planned and directed activities from an organisation towards its customers. Many organisations realise the advantages and returns of being the first mover towards an advocacy strategy that leads to customers being less likely to switch to competitors due to the trusting relationship

they have with an organisation. This relationship forms a solid barrier against competitors and makes it difficult for others to poach customers (Urban, 2004).

While customer loyalty involves intent to repurchase, customer advocacy represents word of mouth. Advocates are people who give positive referrals to an organisation or its products. An IBM report about turning shoppers into advocates declares an intention "to close the gap by systematically integrating knowledge of what their best customers want and expect from their brand into every core operational decision to turn shoppers into advocates and create a sustainable, differentiated advantage" (Kleinberger et al., 2007, p.1).

The most common measurement tool for advocacy is the Net Promoter Score (NPS), developed by Reichheld (2003). It depends on one question: 'How likely is it that you would recommend our organisation to a friend or colleague?' The NPS calculates the share of customer 'promoters': scoring 9-10 out of 10 (high point scale) for respondents highly likely to recommend an organisation to others, and subtracting the share of customers who would detract from it (scoring 0-6 on a 10-point scale). Advocacy calculation is represented by the NPS. If an organisation has a greatly higher NPS than its competitors, it is more likely to grow at a much faster rate (Frow and Payne, 2007).

Urban (2004) declares that an organisation should continue to develop its work towards customer advocacy, since customer loyalty and advocacy objectives aim to move the concept of the customer relationship from just the usual customer relationship to an advocacy relationship. In this regard, the next section describes the customer relationship and retention in more detail.

2.3.5 Long-Term Customer Relationships and Retention

Customer retention is the goal of an organisation wishing to reduce customer churn. Retention has a direct impact on the profit and revenue of an organisation. Buttle (2009, p.258) defines customer retention as "the number of customers doing business with a firm at the end of a financial year expressed as a percentage of those who were active customers at the beginning of the year". Customer retention is particularly important in highly competitive environments (Colgate and Danaher,

2000) in which a number of organisations are offering comparable services and prices, as the customer experience plays a key role in retaining current customers. Chen and Hitt (2002, p.255) state that, "Essential to customer strategy is that customers experience some form of 'lock-in' or switching costs to prevent them from deserting to another provider". Acquiring a new customer can cost several times more than keeping a current one (Shanks et al., 2009).

Successful external relationships require readiness in internal processes. For example, the expression 'moments of truth' is part of services marketing language, and suggests that each customer contact creates a moment that influences the organisation's relationships and reveals its ability to retain that customer (Gummesson, 1987). In addition, using such moments – to maintain long-term relationships between the organisation and its stakeholders – takes advantage of opportunities to upsell, and builds customer advocacy accordingly (Payne and Frow, 2005, 2006).

Relationships with the customer are of central importance. A long-term relationship starts when the first communication occurs during the initial transaction between organisation and customer (Ranaweera et al., 2005), and it has been noted that focusing on the long term creates an emotional context for future interaction (Pullman and Gross, 2004). Relationship belief promotes the idea of a win-win strategy (Verhoef et al., 2009). It involves shifting from transactions to being strongly relationships-based. Buck Rodgers, a former IBM Vice-President of Marketing, states the IBM strategy as follows:

> Successful sales people understand the importance of long term customer connections. The size of their paycheck is determined to a large extent by their ability to develop sound, lasting relationships with enough customers (Gummesson, 1987, p.12).

In order to facilitate more attractive and effective relationships, Rust et al. (2010) suggest assigning a powerful operational position, such as a chief customer officer (CCO), to ensure the design and execution of an organisation's customer relationship strategy and to supervise all customer-facing functions. At the same time, organisations can experience this shift due to the benefits of a long-term relationship with the organisation. Colgate and Danaher (2000) suggest that, from the customer

point of view, long-term relationships have specific economic benefits, such as obtaining discounts and customisation, and non-economic benefits, such as the psychological advantages gained from close relationships (for example, familiarity, personal recognition, and friendship).

A good case for a long-term relationship with the customer is that it requires keeping customers aware and updating them about what happens inside the organisation (Galbraith, 2011), in order to have transparency over the long run and the acknowledgement that a successful relationship leads to positive outcomes for the organisation and to overall customer satisfaction and loyalty (Colgate and Danaher, 2000). Setia et al. (2013) and Pentina et al. (2011) find that the importance of creating positive interactions and strengthening relationships lies in increased value. The next section discusses the value shared between customer and organisation.

2.3.6 Co-Creating Dynamic and Shared Value

The customer recognises real value when engaged with an organisation. This value could be tangible, such as promotions or rewards, or intangible, such as service quality and response speed. Referring to Golfetto and Gibbert (2006), the way in which customer value is delivered is the most important aspect of the relationship. The diplomacy and gratitude shown to the customer and associated actions, such as listening and paying attention to the customer after service delivery, demonstrate respect for the customer. Customer value can be improved by increasing the degree of customisation to meet individual customer demands or tastes. Han and Han (2001) declare that customisation that is focused on individual requirements is the most substantive measure for improving customer value.

A real understanding of how customer value strategies work begins with an actionable understanding of the concept of customer value (Woodruff, 1997). Value has been defined by Huber et al. (2001) as desirability, usefulness or importance. Customer value has also been defined by Kotler and Keller (2009) as the perceived monetary value of the economic, functional, and psychological benefits ‘bundle’ that customers expect from an organisation and its offers. Likewise, Thompson (2006) defines customer value as the level of return on a customer's payment from the

product benefits during the purchasing exchange. On the other hand, Woodruff (1997) defines value as a customer's perceived preference based on his or her assessment of product attributes, attribute performance, and the extent of the facilities given to achieve the customer's demands and purposes. Thus, customer value has two aspects: the first involves financial benefits and the second is sensory feedback.

Payne and Frow (2005) categorise the value creation process into three key elements: 1) determining the value that a customer can gain from an organisation; 2) determining the value that an organisation can receive from its customers; and 3) involving the process of co-creation and maximising the lifetime value of desirable customer segments to manage this value exchange successfully.

Woodruff (1997) declares that implementing customer value inside an organisation can be difficult, and organisations need translation projects that provide a value determination process for reflecting customer value within internal processes and products. Prahalad and Ramaswamy (2003) and Schmitt (2003) highlight that a key practice is to co-create unique value for individual customer interactions with the organisation and its products or services. Customer value is a critical factor during the customer experience life cycle, so a strategy of creating and implementing customer value needs a shared framework (Woodruff, 1997). Creating value through a product or service is easy to understand for any organisation, while creating value through the customer experience is more of a challenge. 'Experiential value' has been defined as a key strategic differentiator (Palmer, 2010).

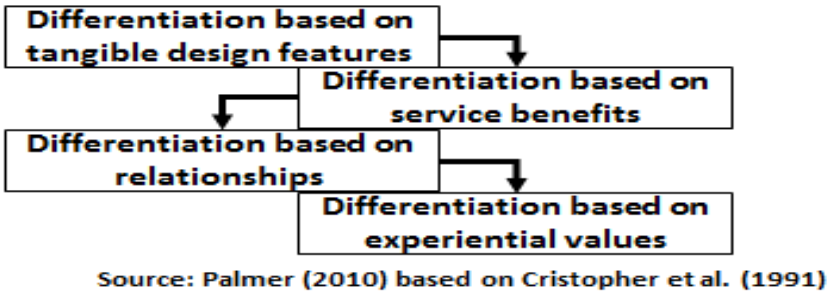


Figure 2.3: Experience value

An organisation takes the first step in such differentiation by embedding customer value in each service to deliver a successful and exceptional customer experience (Meyer and Schwager, 2007). Customer value needs to be involved in products, services, personnel, and image (Huber et al., 2001) and other customer activities (Thompson, 2006), in addition to considering societal and cultural changes (Huber et al., 2001). Customer value has levels and rankings, so needs to be evaluated to know which elements have a high level of value for the customer and to focus carefully on these higher values while building the customer experience (Anaman, 2010; Uusitalo, 2012). Understanding customer value has changed from being a simple financial concept, such as 'how customers can get more discounts or more offers', to customer knowledge that depends on real meaning and interaction, to shared customer value.

The above section introduced customer-focused strategy and explored the value embedded in the interactions between an organisation and its customer. The customer interaction approach to managing customers has become a central and strategic approach inside organisations and understanding the boundaries and terminology relating to customers is the basis of considering this approach in depth (Ranaweera et al., 2005). Section 2.4 introduces the customer interaction approach and presents a breakdown of these interactions.

2.4 The Customer Interaction Approach in Practice

The concept of interactive relationships with customers is not new. For example, Gummesson (1987) suggests a conceptualisation of the interactive relationship between the customer and the organisation's entities, such as employees, machines and the organisation's environment. Based on this work, the author suggests that there is value in an organisation working on building long-term relationships with customers. Shaw and Ivens (2005) argue that differentiation used to be done based on product quality or functionality but this became difficult due to the high cost of quality. Differentiation then moved to service and delivery, but it is also difficult to differentiate on service due to the variety of services and products available today. It then became the relationship with the customer that was the differentiator. In consequence, three parameters (quality, service or product, and customer) led to the

emergence of four significant stages in the evolution of the customer interaction approach, as follows:

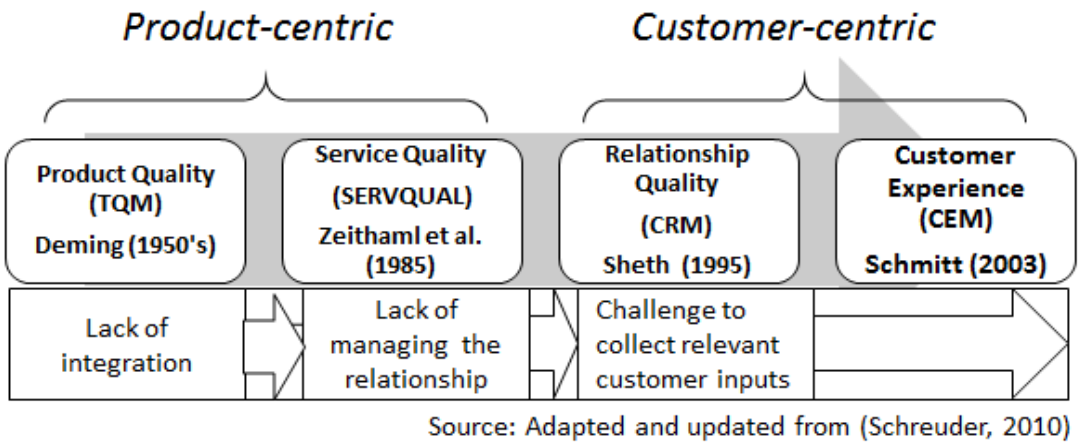


Figure 2.4: Historic overview of the eras of customer interaction approach

In accordance with the historic overview presented in Figure 2.4, the following sections take each stage of customer interaction in turn and consider the features and the justification for moving from one to the next. There is also a focus on the relationship life cycle of customer interaction with the organisation.

2.4.1 Total Quality Management

The quality management and control concept has been heavily discussed by champions of quality, such as Deming (1950s), Crosby (1970s), Juran (1980s) and Ishikawa (1990s). Total Quality Management (TQM) was an exciting newcomer to customer interaction approaches in the late middle of the 20th century (Ravichandran and Rai, 2000).

McNabb and Sepic (1995) argue that TQM concentrates on the importance of improving all work processes to ensure consistent and standard outputs for improving the work environment to inspire and emphasise teamwork. Ravichandran and Rai (2000) define TQM as an integrated management philosophy that leads to a positive influence on organisational performance. Swanson et al. (1991) declare that the vital goal of TQM is to obtain 'zero defect'. It is noteworthy to mention that eliminating all defects is almost impossible; however, striving to get ever closer to a point of zero defects is possible.

A major issue with TQM is the lack of integration between culture, climate, processes, policies and technologies, which means that it is difficult to apply or at least maintain TQM for a long time (McNabb and Sepic, 1995). As a result, both practitioners and researchers started looking for something better that could work to fulfil requirements, either wholly or partially, so that service quality could be raised. The importance of the service quality approach is that customers started to play better roles and became more involved in the development and operation of the organisational process. The customer perspective and interest began with the start of the service quality approach. The next section describes the service quality framework in more detail.

2.4.2 Service Quality Framework

A service quality framework (SERVQUAL, or RATER) was developed by Parasuraman et al. (1985). SERVQUAL focuses on the main standards for measuring service quality. SERVQUAL refers to five gaps between internal functions and the customer, so is sometimes called the 'GAP model'. Within SERVQUAL, customers evaluate the service they receive by comparing their perceptions and their expectations and, as a result, the gap widens when the experience does not meet expectations.

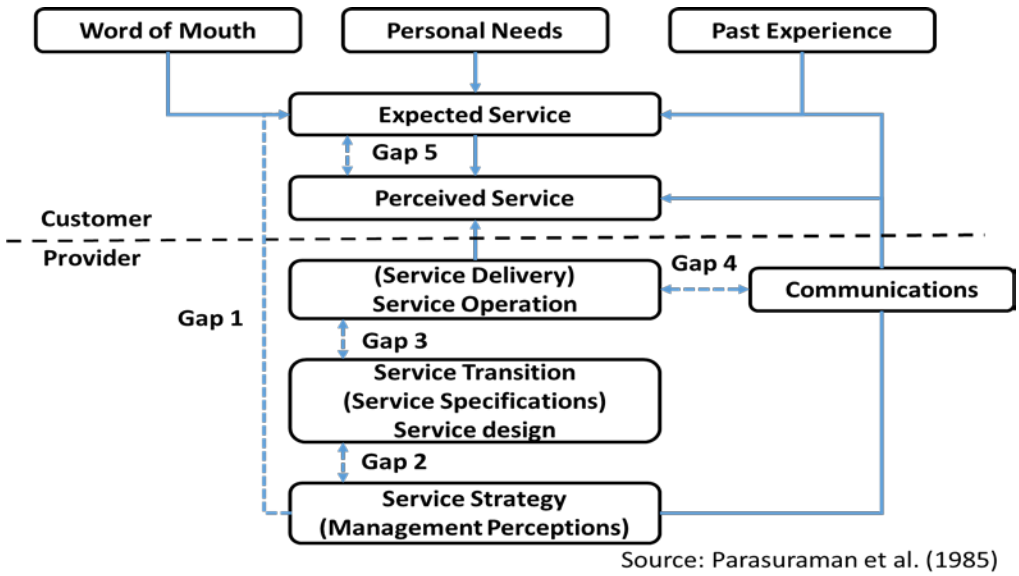


Figure 2.5: Service quality framework (SERVQUAL)

As shown in Figure 2.5, five main gaps have been determined in SERVQUAL. The first gap is the difference between the customer's expectations and management's

perceptions due to a shortage of insight by management regarding what customers want. The second gap is the difference between the management's perceptions and service quality and standards. The third gap is the difference between service quality specifications and service delivery. The fourth gap is the difference between service delivery and external communications due to a lack of communication with the customer about delivery. The fifth gap outlines the difference between the expected service and the service that is actually experienced: where the service does not reach the customer's expectations.

However, Buttle (1996) critiques this framework from a theoretical and operational perspective, respectively: 1) depending on the limitation in established economic, statistical, and psychological theory and item composition; and 2) the lack of management of the relationship between a firm's components, such as suppliers, and the marketing and sales departments. These limitations in interaction led to thinking about an approach that could handle all the relationships inside a firm. Customer relationship management was the best choice to fulfil this requirement at the time.

2.4.3 Customer Relationship Management

In the mid-1990s, the term 'customer relationship management' (CRM) emerged from the IT vendor and practitioner community (Payne and Frow, 2005). CRM is based on the principle of integrating people, processes, and technology throughout a value chain in order to understand and deliver better customer value (Chen and Popovich, 2003; Kim et al., 2004). CRM is a comprehensive approach that undertakes to maximise relationships with all customers. Parvatiyar and Sheth (2001, p.5) define CRM as:

> A comprehensive strategy and process of acquiring, retaining, and partnering with selective customers to create superior value for the company and the customer. It involves the integration of marketing, sales, customer service, and the supply-chain functions of the organisation to achieve greater efficiencies and effectiveness in delivering customer value.

CRM involves a deep synthesis of strategic vision by understanding the nature of customer value in a multi-channel environment, the utilisation of information management (CRM applications), and high-quality operations and services (Payne and Frow, 2005). The number of value-added linkages with areas outside traditional

CRM indicates creative and innovative use of CRM systems. CRM focuses on increasing customer satisfaction and retention by building long-term relationships. At the same time, CRM handles all the organisation's activities and processes related to the customer (Shanks et al., 2009).

CRM involves analysing and examining existing and potential customer bases for the most appropriate and identifiable forms of segmentation in order to create profitability (Payne and Frow, 2005, 2006). Shanks et al. (2009) suggest that CRM assists organisations to maintain/gain a competitive edge in their industry by promoting a favourable image among their customers, thus strengthening their leadership in the market; specifically, increasing profit, wallet share, customer retention, revenue per customer, sales, and the number of customers. Shanks et al. (2009) clarify that there has been growing interest in investigating how the functionality of CRM systems could be leveraged for customer-centric product development. CRM systems contain data about customer behaviour and preferences that can be used by the research and development functional areas of organisations for product innovation. Chen and Popovich (2003) require reengineering of the processes of company-wide, cross-functional, customer-focused business for successful CRM implementation. In addition, Payne and Frow (2005, 2006) insist on the promotion of CRM from the level of a particular application, such as a call centre, to the level of a pan-organisational CRM strategy, involving the incorporation of customer interactions across all communication channels and front and back-office applications and business functions.

Regarding a major shortcoming of CRM, CRM deals in one direction, from customer to firm, but is unable to handle the relationship from organisation to customer (Kamaladevi, 2009). Palmer (2010) declares that many researchers and practitioners have argued that CRM is unable to provide the expected levels of customer value and organisational profit. According to Parvatiyar and Sheth (2001), CRM has a challenge to collect relevant data input at each customer interface and instantaneously provide knowledge or recommendations as a suitable output to win customers and keep them for life. In addition, CRM may need an external interface to access customer details. Payne and Frow (2005), who studied CRM frameworks in depth, suggest

building a new tool that can support an organisation in carrying out a value assessment by quantifying the various attributes of a product according to customer preferences. There is strong evidence from Payne and Frow (2005) that CRM is not an approach for dealing with customers' perceptions or experience. As a result of this shortcoming, a new approach has emerged. This approach focuses on learning the experiences of customers and then studying these experiences in a fundamental way. The next section details customer experience management.

2.4.4 Customer Experience Management

Recently, the customer experience management (CEM) approach has drawn much attention from both experts and academics due to the strength of its impact in determining the fate and success of organisations (Meyer and Schwager, 2007; Palmer, 2010). The competitive battleground is changing. New differentiators include the emotional attachment built with a brand and the customer experience (Shaw and Ivens, 2005). The origin of the word 'experience' is the Latin *experientia*, from *experiri* 'try' (late Middle English), and means practical contact with and observation of facts or events. It also means "an event or occurrence which leaves an impression on someone" (*Oxford English Dictionary*, 2006). In the last two decades, the customer experience phenomenon has drawn much attention from both experts and academics (Frow and Payne, 2007). The early clear emergence of the notion of a customer experience (CE) is identified by Carbone and Haeckel (1994, p.8), who define it as "the 'takeaway' impression formed by people's encounters with products, services, and businesses – a perception produced when humans consolidate sensory information".

Several definitions have since been given by authors, depending on the nature of their research and the conditions. Table 2.4 provides a brief summary of the main aspects of scholars' definitions of CE.

Table 2.4: Main definitions of CE

Author(s)	Definition
Carbone and Haeckel (1994)	"The systematic design and implementation of the context clues that are emitted by the product and/or service and the environment" (p.2).
Schmitt (1999)	The personality aspects are rational, emotional, sensorial, physical, and spiritual.
Pine and Gilmore (1999)	Active and passive components of customer participation.
Gupta and Vajic (2000)	"An experience occurs when a customer has any sensation or knowledge acquisition resulting from some level of interaction with different elements of a context created by the service provider" (p.34).
Schmitt (2003)	"The process of strategically managing a customer's entire experience with a product or an organisation" (p.17).
Shaw and Ivens (2005)	"It is a blend of a company's physical performance and the emotions evoked, intuitively measured against customer expectations across all moments of contact" (p.6).
Thompson (2006)	The customer thinking about the brand will be the volume of interaction.
Mascarenhas et al. (2006)	Focusing on a totally positive, engaging, and long-term customer experience across all main levels that calls for active interaction between customer and organisation.
Verhoef et al. (2009)	Direct or indirect relationship and interaction.
Kamaladevi (2009)	A strategy that aligns the operations and processes of a business towards the needs of individual customers.
TM Forum (2010)	The result of the sum of observations, perceptions, thoughts, and feelings over an interval of time.
Radosavljevik (2010)	The process of strategically managing and optimising these experiences across all customer contact channels.
Lohan et al. (2011)	Interrelated customer attributes, such as customer identity, perceived customer personality, customer location, and the team's experience with the customer.
Powers (2011)	Concentrates on the mechanism of delivery an organisation offers in getting products to the customer.
Teixeira et al. (2012)	Conceptually developed to characterise the different aspects of customer experience in a holistic diagrammatic representation in order to support service design solutions.
Klaus et al. (2012)	The context of integrating organisation around delivery at the point of customer contact, based on the customer perspective.
Chuang and Hsieh (2015)	"Customer service experience is composed of a series of services delivered to customers" (p.1).

The most attractive definition of customer experience is by Meyer and Schwager (2007, p.118):

> Customer Experience is the internal and subjective response customers have to any direct or indirect contact with a company. Direct contact generally occurs in the course of purchase, use, and service and is usually initiated by the customer. Indirect contact most often involves unplanned encounters with representatives of a company's products, service or brands and takes the form of word-of-mouth recommendations or criticisms, advertising, news reports, reviews and so forth.

The above definition is appealing because Meyer and Schwager (2007) collect many of the customer experience management definitions within one definition that includes the aspects of customer experience (formal, unformed), the method and timing of the interaction (direct or indirect) and the time it occurred, and its trigger and direction. Thus, according to this interaction, customer experience is a type of participation and interaction between the organisation and customers' feedback.

Customer experience research has been marked by three themes. Table 2.5 shows the classification of these CE themes.

Table 2.5: The classification of CE aspects

Theme	**Study**
ROLE OF EMOTION: Understanding the level of customers' emotional engagement	Pine and Gilmore (1998); Schmitt (1999); Berry et al. (2002); Schmitt (2003); Shaw and Ivens (2005); Berry et al. (2006); Meyer and Schwager (2007); Gentile et al. (2007); Nagasawa (2008); Lohan et al. (2011)
ROLE OF VALUE: The perceived value that customers recognise	Woodruff (1997); Schmitt (1999); Prahalad and Ramaswamy (2003); Nagasawa (2008); Verhoef et al. (2009); Johnston and Kong (2011); Pentina et al. (2011); Uusitalo (2012); Rose et al. (2012); Keen and Williams (2013)
ROLE OF DUAL INTERACTION: Customers' integration with organisation interfaces (process, technology, and contents)	Schmitt (2003); Berry et al. (2006); Thompson (2006); Meyer and Schwager (2007); Verhoef et al. (2009); Garg et al. (2012); Rose et al. (2012); Powers (2013)

Much has been attributed to emotions, value, and dual interaction roles in articulating CEM aspects. Shaw and Ivens (2005) confirm that to build a strong customer experience, it is crucial to understand the emotional readiness and confidence levels of customers. Berry et al. (2002, p.2) state that "Companies must manage the emotional component of experiences with the same rigour they bring to

the management of product and service functionality". Keen and Williams (2013) argue that it is not only the seller, it is also the customer who determines which scopes of value matter and how offers are evaluated. Woodruff (1997) discusses the way in which the value of the customer is high as long as the value of the organisation is high. Berry et al. (2006) declare that customers consciously and unconsciously filter experience clues and organise them into a set of impressions in interacting with organisations; some of these clues are more rational or calculative and others more emotional. Nevertheless, the most important point is a focus on understanding and providing correct concepts about them.

The literature considers the roles of value, emotion and dual interaction independently. As illustrated in Table 2.5, it is difficult to find empirical research considering these aspects in a single study, although some researchers consider two of the three aspects. For example, Schmitt (1999) and Nagasawa (2008) require understanding of the emotions of customers, and the customer also needs to realise the value gained through his or her experiences with the organisation. Berry et al. (2006) and Meyer and Schwager (2007) focus on the level of the customer's emotions and how the interfaces of the organisation can communicate with the customer and benefit from the customer's feedback. While Verhoef et al. (2009) and Rose et al. (2012) highlight the perceived value to the customer and improving the dual interaction with the customer. In conclusion, each aspect is found in the literature, either singly or in combination with another aspect. Thus, the consistent consolidation of the three aspects shown in Table 2.5 may be a way to achieve optimal customer experience management. This will generate a common language between academics and practitioners for better standardisation of the customer interaction approach.

It is necessary to differentiate between customer relationship management and customer experience management because some understand CEM to be a substitute management approach for CRM (Palmer, 2010). The following section explains the similarities and differences between CRM and CEM in more detail.

2.4.5 CRM vs. CEM: Similarities and Differences

The era of CRM preceded that of CEM, as explained in the historical timeline. There are clear differences between CRM and CEM from the terminology and functionality perspectives. Some researchers link CRM and CEM as integrative sets. For example, Uusitalo (2012, p.19) explains that there is a strong link between customer relationship management and customer experience management, such that CEM is an expansion of CRM: "CEM complements CRM, rather than acts as a replacement for it". Leber (2013) declares that only a combination of CRM and CEM components provides the opportunity for organisations to focus on their customer base holistically. Others differentiate between them according to their components, purpose, or the time they are applied. According to Verhoef et al. (2009, p.38), for example, "Customer experience management differs from customer relationship management by focusing on the current experience of the customer, rather than the recorded history of the customer". Meyer and Schwager (2007, p.4) also state that "Customer experience management and customer relationship management differ in their subject matter, timing, monitoring, audience, and purpose". Functionally, CRM handles particular customer events or transactions, such as invoicing, orders, and activated services or products, while CEM seeks to define particular customers' impressions about an organisation as one entity with the instant response of the customer and feedback regarding the organisation's service. CEM focuses on understanding what the customer thinks about an organisation, while CRM takes a more organisation-centric viewpoint and deals with data the organisation has about its customers (Uusitalo, 2012).

In practice, CRM is equated with technology used for tactical automation projects and is a business strategy to gain, raise, and retain profitable customer relationships (Chen and Popovich, 2003). In this new customer orientation, the term 'customer relationship management' has become tainted and must be avoided, while CEM reflects the sense of being a customer-centric strategy without any stigma attached (Thompson, 2006). On the other hand, CRM has a challenge to collect relevant data input at each customer interface and instantaneously provide knowledge or

recommendations as proper decisions to win customer business and loyalty (Parvatiyar and Sheth, 2001).

CEM needs CRM to gain information from inside an organisation, while CRM needs CEM to have accurate information about the customer from outside the organisation (Meyer and Schwager, 2007). Strategically, CRM focuses on the recorded history of the customer, and CEM concentrates on the current experience of the customer (Verhoef et al., 2009). This also marks an improvement in customer experience management. Assembling what the customer is thinking turned into an interactive dialogue between the customer and the organisation, based on the customer's emotions and feelings instead of just focusing on what the customer thinks about the organisation (Gentile et al., 2007; Johnston and Kong, 2011; Uusitalo, 2012).

There has also been a shift to collecting data from social media and web pages instead of regular touch points that the customer uses (Verhoef et al., 2009; Palmer, 2010; Schmitt, 2010). The practice is to allocate departments specialising in the customer experience, rather than the stand-alone voice of customer feedback (Galbraith, 2011). The use of systems containing functions that work on the monitoring and analysing of customer experiences has shifted to an ongoing basis, rather than the work of a field survey or interim study research (Chakravorti, 2011; Spiess et al., 2014).

In addition, using customer experience information is not limited to business or functional leaders who are interested in knowing the experiences of customers to benefit the organisation or enhance the products, but goes beyond to include psychologists, linguistics, economists and sociologists. CEM is open to contributions from adjoining disciplines (Schmitt, 2010; Joshi, 2014). Concerning the role of the customer in changing the product or service specifications, this has turned into a role of leading and engaging in sharing service design, whereby the customer has also become involved in the decision (Kamaladevi, 2010; Palmer, 2010).

All the above changes in the 'new fashion' of CEM have upgraded customer loyalty to customer advocacy; customers who are not just loyal to purchasing an organisation's services or products, but are long-term loyal advocates (Frow and Payne, 2007; Kamaladevi, 2010). Table 2.6 presents a comparison between CRM, CEM, and the new CEM. The table was adapted from Meyer and Schwager (2007) and

modified by leveraging recent literature. The row highlighted in blue presents the new CEM. It includes ideas from recent literature outside the work of Meyer and Schwager (2007).

Table 2.6: CEM vs. CRM

	What	When	How Monitored	Who Uses the Information	Relevance to Future Performance	Target
Customer Experience Management (CEM) "New Fashion"	• Interactive with a customer and analyse the customer behaviour (Gentile et al., 2007) • Emotional bonds (Johnston and Kong, 2011) • Customer feedbacks (Uusitalo, 2012)	• Social Contexts (Schmitt, 2011) • Public Web pages (Verhoef et al., 2009) • Purchasing transaction and data streaming (Palmer, 2010)	• Data Analytic Organisation Customer Oriented Behavior (Spiess et al., 2014) • Detected units and systems (Galbraith, 2011)	• psychology, linguistics, economics, management, and sociology (Schmitt, 2011) • Strategists and business leaders, in order to build the business strategies based on Customer experience (Joshi, 2013)	• Leading and engagement: sharing in product/ service design and implementation (Palmer, 2010) • Involving in decision making (Kamaladevi, 2010)	Customer Advocacy (Frow and Payne, 2007, Kamaladevi, 2010)
Customer Experience Management (CEM) "Old Fashion"	Captures and distributes what a customer thinks about a company	At points of customer interaction: "touch points"	Surveys, targeted studies, observational studies, "voice of customer" research	Business or functional leaders, in order to create fulfill able expectations and better experiences with products and services	Leading: Locates places to add offerings in the gaps between expectations and experience	Customer Loyalty
Customer Relationship Management (CRM)	Captures and distributes what a company knows about a customer	After there is a record of a customer interaction	Point-of-sales data, market research, Web site click through, automated tracking of sales	Customer-facing groups such as sales, marketing, field service, and customer service, in order to drive more efficient and effective execution	Lagging: Drives cross selling by bundling products in demand with ones that aren't	Customer Satisfaction

Source: adapted Meyer and Schwager's work (2007) by leveraging recent literature.

However, CRM is capable of benefiting CEM in performing its functions. While CEM focuses on the best customer interactions, CRM focuses on managing this interaction. Payne and Frow (2005, p.170) state that "CRM activity will involve collecting and intelligently using customer and other relevant data (the information process) to build a consistently superior customer experience and enduring customer relationships".

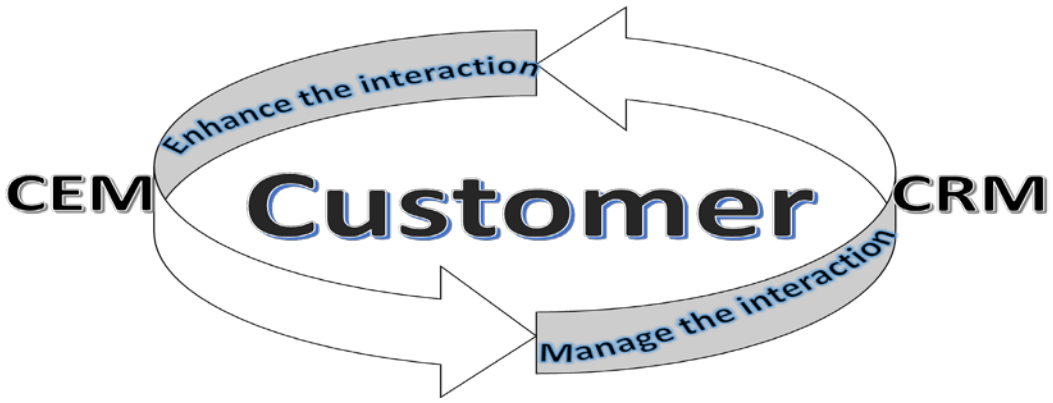


Figure 2.6: Complementary relationship between CRM and CEM

Chen and Popovich (2003) emphasise that CRM is an integrated approach to managing relationships by focusing on customer relationship development. Rawson et al. (2013) find that organisations that are able to manage the entire customer experience skilfully reap the rewards of enhanced customer satisfaction. In other words,

> By combining the abilities to respond directly to customer requests and to provide the customer with a highly interactive, customised experience, companies have a greater ability today to establish, nurture, and sustain long-term customer relationships than ever before (Winer, 2001, p.89).

CRM and CEM are two separate approaches, even though they exist in a complementary relationship.

In conclusion, the literature review first discusses the activities of an organisational customer-focused strategy (CFS). The literature review provides a construct of the organisational implications of a heightened customer focus in order to achieve a customer-focused strategy that is operationally efficient and functionally effective (Kaplan and Norton, 2005; Kamaladevi, 2010). Customer focus activities seek to ensure an outstanding customer experience and maintain the delivery of products

and services to customers (Payne and Frow, 2005; Thompson, 2006; Palmer, 2010). These activities create active ways to engage with customers and add dynamic value for the customer that is also associated with profit for the organisation (Schmitt, 2003; Verhoef et al., 2009; Palmer, 2010). Organisations expend their capabilities to maintain and strengthen the relationship and interaction with their customers (Winer, 2001; Verhoef et al., 2009; Galbraith, 2011).

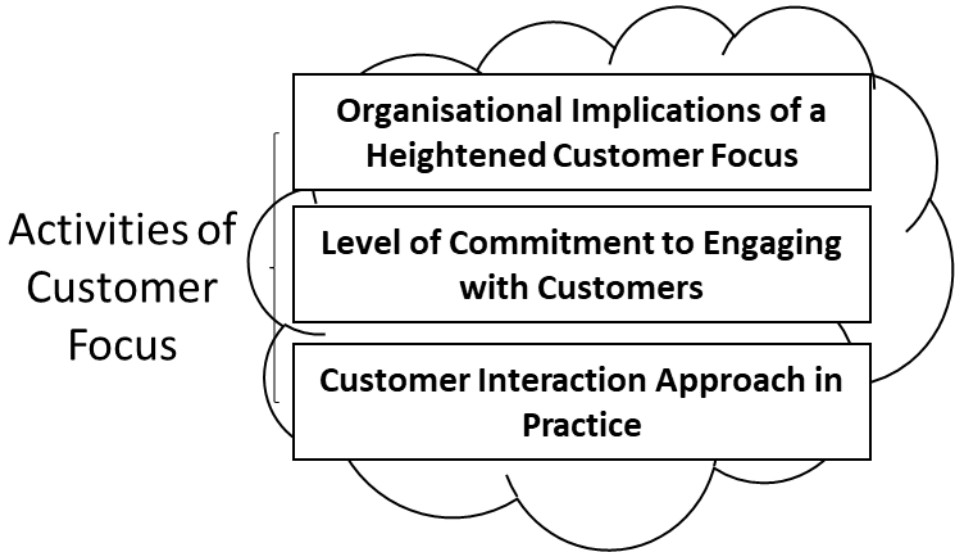


Figure 2.7: Conceptual view of Customer Focus

Therefore, organisations utilise their capabilities in order to maintain and enhance the relationship and interaction with their customers. However, "A key capability for superior customer orientation is the ability to track and predict changing customer preferences, especially in volatile markets. IT enables organisations to track shifts in customer choices" (Bharadwaj, 2000, p.175). Since the objective of this research is to study the relationship between customer-focused strategy and the role of IT capabilities, the researcher has examined, articulated and synthesised relevant academic research papers to acquire knowledge of ITC. Thus, the next sections focus on IT capabilities and their definitions, main components and characteristics.

2.5 Information Technology Capability

Today, information technology plays a crucial role in organisations. IT is the backbone that enables productivity and innovation (Tallon, 2008). IT provides the support for strategic developments, such as business process reengineering, customer intimacy, organisational learning, and even organisational transformation (Ross et al., 1996; Fink and Neumann, 2007; Lu and Ramamurthy, 2011).

Many academic papers have been published on the corporate value of IT (Bharadwaj, 2000; Fink and Neumann, 2007; Zhang et al., 2008; Kim et al., 2011; Chae et al., 2014; Chen et al., 2014). These researchers insist on a higher level of attention from both scholars and practitioners regarding IT capability. Santhanam and Hartono (2003, p.128) suggest that "the concept of IT capability was developed using the premise that while resources can be easily duplicated, a unique set of capabilities mobilised by a firm cannot be easily duplicated".

Terminology relating to ITC has been developing since the end of the 20th century. The first dedicated articles were by Ross et al. (1996) and Bharadwaj et al. (1999). Bharadwaj then alone issued another article, entitled "A Resource-Based Perspective on Information Technology Capability and Firm Performance: An Empirical Investigation", published by *MIS Quarterly* (2000). After that, several articles started concentrating on IT capability as a new phenomenon and a hot topic in the IS field. Table 2.7 provides the main articles and their interest in IT capabilities.

Table 2.7: Historical timeline of IT capability themes

Author(s)	Description
Fink (2011); Tallon and Pinsonneault, (2011); Rai et al. (2015)	Discusses how IT capabilities create strategic value.
Teece et al. (1997); Bharadwaj (2000); Wade and Hulland (2004); Bhatt et al. (2005);	Defines and classifies IT capability into tangibles, such as IT infrastructure, resources, and human, and intangibles such as patents, brand names and trademarks, reputation, copyright and business processes.
Bharadwaj (2000); Santhanam and Hartono (2003); Zhang et al. (2008); Kim et al. (2011); Wang et al. (2013); Chen et al. (2014); Chae et al. (2014); Sandberg et al. (2014); Choi and George (2016)	Develops the concept of IT as an organisational capability and empirically examines the association between IT capability and firm performance.
Ross et al. (1996); Fink and Neumann (2007); Ngai et al. (2011); Lu and Ramamurthy (2011)	Empirically examines the link between the technical, behavioural, and business capabilities of IT personnel and IT infrastructure capabilities, and how the latter are associated with IT-dependent organisational agility.
Bi et al. (2011); Tanriverdi and Uysal (2013)	Conceptualises IT capability as the outcome of a path-specific resource-building process driven by the business skills and knowledge of a firm's IT human resources.
Bhatt et al. (2005); Tallon and Pinsonneault (2011); Sandberg et al. (2014); Saunders and Brynjolfsson (2016)	Studies information technology roles to co-create relational value in the context of inter-firm relationships.

According to the above table, numerous authors have focused on the linkage between IT capability and organisational performance because of the close association of IT with daily operations. However, IT capability can go beyond that, enhancing business processes and objectives at both managerial and operational levels (Fink and Neumann, 2007). IT can provide competitive advantage to any organisation (Fink, 2011; Tallon and Pinsonneault, 2011). There is an increasingly operational contribution of IT in many organisations, particularly where the products and services are themselves virtual (Bhatt et al., 2010; Bi et al., 2011; Wang et al., 2013; Setia et al., 2013)

The next sections present frameworks and definitions for these capabilities. Three main capabilities have been recognised and applied based on the degree of importance, the definitions, and some of the debates on particular capabilities.

2.5.1 Evolution of the Understanding of ITC

The term 'IT capability' comprises two parts: IT and capability. IT is widely known and understood as a phenomenon. However, it is essential to define the terms 'capability' and then 'IT capability' in the context of this research study. An organisation has multiple capabilities that represent its power in the market. However, in this case, the key is to consolidate and manage these capabilities for the benefit of the organisation (Bharadwaj, 2000; Bi et al., 2011). For example, "Capabilities are developed through the combination of resources, and they denote high-performing business processes that are repeated over time to execute business tasks" (Rai et al., 2012, p.5). Amit and Schoemaker (1993, p.35) define capability as a

> Firm's capacity to deploy resources, usually in combination, using organisational processes, to effect a desired end. They are information-based, tangible or intangible processes that are firm-specific and are developed over time through complex interactions among the firm's resources.

Teece et al. (1997, p.515) also define the term 'capabilities' as "the key role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organisational skills, resources, and functional competences to match the requirements of a changing environment". To others, capability is "a distinctive set of human resource-based skills, orientations, attitudes, motivations and behaviours that have the potential, in suitable contexts, to contribute to achieving specific activities and influencing business performance" (Willcocks et al., 2006, p.29).

In order to differentiate between IT and other capabilities, IT capabilities have distinctive specifications or structures. Two structural capabilities are strongly present within IT (Rai and Tang, 2010):

1. IT integration, which is the ability to integrate data, transactions and collaboration applications and communication technologies; and

2. IT reconfiguration, which is the ability of a firm to extend and recombine IT resources.

IT capabilities terminology has followed a gradual evolution over the past two decades. It is noted that these definitions have become more sophisticated, from simple and individual understanding to wide-ranging and holistic definitions that involve integral resources and interdependent relationships, as demonstrated in Table 2.8.

Table 2.8: Sample of the evolution of ITC definitions

Author	**Definition**
Bharadwaj (2000)	The ability to mobilise and deploy IT-based resources in combination or co-present with other resources and capabilities.
Peppard and Ward (2004)	The individual competencies of skills and knowledge to accomplish the effect.
Curley (2007)	The focused strategic deployment of IT resources and competencies in support of the organisation's goals. In summary, it is what IT can collectively do for the enterprise.
Stoel and Muhann (2009)	"A complex set of IT resources, skills and knowledge generated within the business process, which allow enterprises to coordinate activities and to use IT resources to achieve the desired results."
Pintaric and Bronzin (2013)	"Bond of competencies (skills and knowledge) and IT resources (infrastructure) … and is implemented through activities to achieve business objectives."
Rai et al. (2015)	"IT capabilities are heterogeneously distributed across firms and are sources of business value for firms."
Saunders and Brynjolfsson (2016)	The management capability and human resource capability to facilitate or prevent IT investment, and the internal and external communications with other capabilities.

Table 2.8 presents references defining IT capability as an evolving concept. Like many complex phenomena in the IS discipline, it is difficult to identify complete agreement across the definitions. For the purpose of this research, the researcher has derived a working definition of IT capability:

> *An organisation's ability to acquire, deploy, and leverage its IT resources in combination with other resources and capabilities in order to achieve business strategies and customer engagement.*

This definition can be characterised by three dynamic elements, as shown in Table 2.9. The terms 'acquire', 'deploy' and 'leverage' involve actions in a sequential mode, the term 'combination' refers to the relationship between IT capability and the

remaining capabilities of the organisation, and, in the final row, the target is to achieve organisational goals and meet customer expectations.

Table 2.9: Definition of IT capability

Definition	
Action	A firm's ability to acquire, deploy, and leverage
Relationship	its IT resources in combination with other resources and capabilities
Target	in order to achieve business strategies and *customer engagement*.

An IT capabilities framework represents the responsibilities and boundaries of IT components and manages the interactions between them. An information capabilities framework has been defined as "the people, process and technology-agnostic set of capabilities needed to describe, organise, integrate, share and govern an organisation's information assets in an application-independent manner in support of its enterprise information management goals" (Gartner, 2013, p.1). Therefore, the main aim of an IT framework is to help organisations develop the governance and management of IT capabilities and their internal and external interactions.

According to the physical, human and organisational elements of a taxonomy or framework (Barney, 1991), IT capability can be classified into three capabilities, as shown in Figure 2.8: 1) IT personnel capability, 2) IT management capability, and 3) IT infrastructure capability (Ross et al., 1996; Ray et al., 2005; Kim et al., 2011).

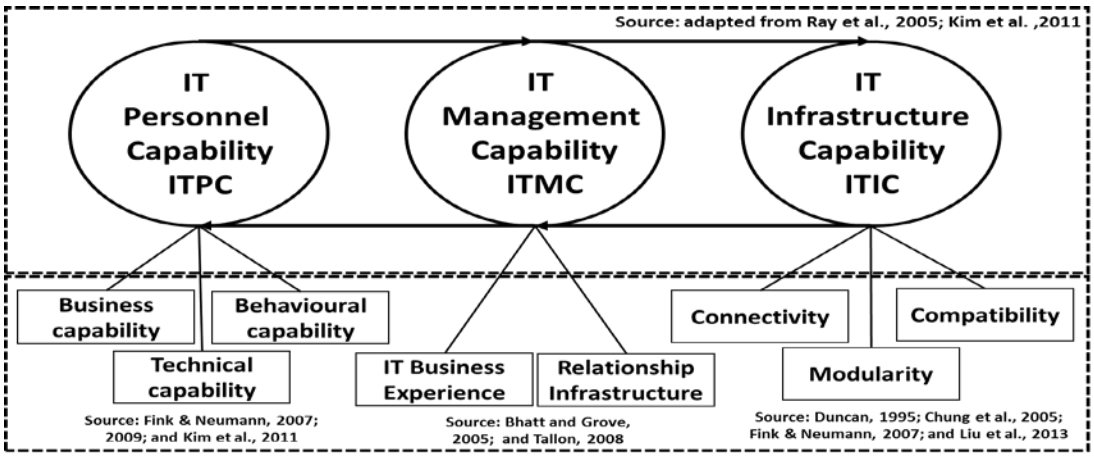


Figure 2.8: Conceptual view of ITC

IT personnel are defined as those with the ability to deploy, use, and manage IT knowledge; such skills are advanced and complex (Wade and Hulland, 2004). IT

management is the ability to leverage technology resources in the internal and external IT environment to achieve strategic IT objectives (Wang et al., 2013). IT infrastructure manifests as physical and tangible IT core assets, such as computers and communication technologies, shared technical platforms and databases (Bharadwaj, 2000; Zhang et al., 2008; Kim et al., 2011). All these definitions emphasise the 'capability' terms; however, they differ in terms of function. The next sections detail the capabilities in turn.

2.6 IT Personnel Capability (ITPC)

Human resources are the architects of key capabilities in an organisation. According to Bhatt et al. (2005), only qualified human resources are able to differentiate and create unique IT capabilities. Wade and Hulland (2004) define IT personnel as those with the ability to deploy, use, and manage IT knowledge; such skills are advanced and complex, and, therefore, difficult to imitate. Ray et al. (2005) refer to technical IT skills as the known and obvious skills, such as programming or engineering, possessed by IT staff that are needed to develop IT applications. Bharadwaj (2000) focuses on technical IT skills, such as systems analysis and design, programming, competencies in emerging technologies, level of training, experience, relationships, and insight. Fink (2011) and Kim et al. (2011) suggest that IT staff need to possess professional knowledge of technologies, business functions, interpersonal skills, and technology management in order to undertake assigned tasks effectively. Lu and Ramamurthy (2011) argue that IT resources represent the proactive exploration of ways to exploit the effectiveness of existing IT resources or embrace IT innovations to create business opportunities. Tallon (2008, p.11) also refers to "the ability of IT personnel to acquire and apply a broad range of IT skills covering a diverse programming methodologies and IT platforms".

Skilled IT personnel can align IT strategies with business strategies, develop capable and effectual systems, and estimate the IT needs of a business (Santhanam and Hartono, 2003; Bhatt et al., 2005; Kim et al., 2011). IT resources are intended to create business opportunities by seeking new ways of using IT to enhance effectiveness (Lu and Ramamurthy, 2011). Innovative IT personnel may also have

common ground with IT entrepreneurs (Chae et al., 2014). The following table refers briefly to the key characterisation of ITPC.

Table 2.10: Characterisation of ITPC

Authors	**Main specification**	**Trait**
Bharadwaj (2000)	Qualifications and knowledge	Know
Wade and Hulland (2004)	Ability to manage and deploy	Can
Fink (2011); Kim et al. (2011)	Responsibility and relationship	Manage
Lu and Ramamurthy (2011)	Proactive exploration and innovation	Invent

In Table 2.10, IT personnel have valuable traits. An IT person has a propensity to learn and know, and to manage and administer the other capabilities. An IT professional represents the common sense of IT. This type of knowledge worker has the capability to invent new ideas that may be beneficial to the organisation (Lu and Ramamurthy, 2011).

The ability to combine and improve various knowledge sets and skills is a characteristic trait of IT staff. Fink and Neumann (2007) and Kim et al. (2011) classify IT personnel capability according to three constructs:

1. Technical capability: particular expertise in specific technical areas, such as competencies in emerging technologies integration or technical administration skills.
2. Behavioural capability: the interpersonal ability to interact with and manage others, such as by effective communication, proactive teamwork environments, planning or project leading.
3. Business capability: the ability to know and understand business functions and organisation-specific knowledge, such as strategies and policies.

Bharadwaj (2000) identifies certain obvious benefits of IT personnel capabilities for organisations as follows:

- Effective interdependence and integration between IT and business.
- Reliability and effectiveness that support business to achieve the firm's objectives.
- Predicting business needs and aspirations by valuable productivity and new innovations.

Ultimately, IT-qualified staff have become the main players in the success of a firm since the revolution in technology (Byrd and Turner, 2001). Therefore, understanding the IT capabilities of human resources is important for building effective IT. In practice, skilled IT personnel are the unsung heroes of a firm's IT capabilities. The next sections provide a brief outline of three constructs of IT personnel capability.

2.6.1 Technical Capability

Technical capability is the main supportive capability of IT personnel in enabling identification, integration, and utilisation of the technical components in developing and maintaining processes (Fink and Neumann, 2007). Technical knowledge and skills are crucial for integrating new and old systems effectively, distributing data across locations and platforms (Ross et al., 1996), optimising IT investments, and recognising suitable times and technical methods for implementing new technologies (Duncan, 1995). Technical capability refers to the technical knowledge and skills of IT personnel based on their specific ability in technical areas (Fink, 2011). Technology has moved from a focus on hardware, software and telecommunications to one that also encompasses information and data management, such as cloud services and virtual environments, for shaping information content to be used in an effective way (Bi et al., 2011). Clark et al. (1997) suggest that knowledge and experience are requisite skill sets for IT personnel to develop and support a portfolio of application projects. For instance, Bi et al. (2011) posit that e-business-centric IT expertise could be exploited to provide the right information for the right customers at the right time, giving growth to an organisation-specific IT capability.

2.6.2 Behavioural Capability

Human-resource-based skills, orientations, attitudes, motivations and behaviours are a distinctive set of IT capabilities (Willcocks et al., 2006). Behavioural capability means an effective interpersonal attitude, including such skills as communication, teamwork, planning, consolidating, and leading. The cumulative effect of behavioural capability can be the grounds for executing collective work more successfully and building better business partnerships (Fink and Neumann, 2007). Behavioural capability includes the interpersonal and management skills of IT personnel in interacting and

dealing with others (Fink, 2011). Soft interpersonal skill is strongly required by IT personnel in order to raise productivity (Willcocks et al., 2006). The quality of the interaction between IT personnel and users enhances the ability to introduce IT innovations (Fink and Neumann, 2007). Combining the technical knowledge and behavioural skills of IT personnel supports the readiness of an organisation to detect threats and opportunities because this is a factor that enables the alignment between IT and business (Tallon and Pinsonneault, 2011).

2.6.3 Business Capability

The business capability of IT personnel covers the in-depth understanding they have of their organisation's strategy and business needs (Duncan, 1995), the overall business environment, specific organisational situations (Fink and Neumann, 2007), their superior knowledge of business strategy, competition, and opportunities in the market (Bhatt et al., 2005), the various functions within the business (Fink and Neumann, 2007) and what they know about business plans (Ross et al., 1996).

Business capability involves close working relationships because staff who operate very closely with clients are able to recognise the benefits from their efforts, which often results in the higher motivation of IT staff (Ross et al., 1996). The business capability of IT personnel nurtures shared IT-business domain knowledge because it can improve social relationships, such as the common language and mutual understanding between an IT unit and a business unit (Fink and Neumann, 2007), and can improve market agility through a process of experiential learning (Bhatt et al., 2005).

Generally, the business capability of IT personnel aligns IT and business strategies (Duncan, 1995). The actions and accumulated experience of IT personnel increase the observation of business processes to solve business problems and anticipate implementation needs (Ross et al., 1996).

2.7 IT Management Capability

IT management is the critical capability of an organisation to enable smooth adaptation to competition in the market (Ngai et al., 2011; Wang et al., 2013). Mata

et al. (1995, cited by Bhatt et al., 2005) provide two reasons for this: first, learning by doing – such as through friendship, trust, and interpersonal communication – gives heterogeneous experience to IT managers across firms; second, the development of relationships over time between IT managers' other business functions fosters the ability to take decisions in a socially complex environment.

IT management is an umbrella term covering IT personnel and IT infrastructure. It is a communication circle with other interfaces. Wang et al. (2013) define IT management as the ability to acquire, deploy, and leverage technology resources, both internal and external, to achieve strategic IT objectives. Zhang et al. (2008, p.368) refer to IT management capability as "the firm's ability to effectively implement IT project management practices, systems development practices and IT evaluation and control systems, among others". Thus, IT management is mainly responsible for achieving the following: (1) working with both formal and informal processes and practices (Kim et al., 2011); (2) aiming to understand the value of IT investments and to predict and exploit IT resources and multi-faceted activities (Bharadwaj, 2000); (3) enhancing and integrating business objectives (Lu and Ramamurthy, 2011); (4) examining the ability to analyse and resolve problem situations and the ability to synchronise IT strategic planning with strategic vision (Zhang, 2008); (5) determining the strategic use of IT and its relationship with an organisation's strategies (Ray et al., 2005); and (6) reallocating the time of IT resources and re-evaluating IT priorities (Wang et al., 2013). The following table refers to the main specifications of ITMC.

Table 2.11: IT management capability

Author	**Capability**	**Type**
Bharadwaj (2000)	Effective management and skills	Active
Ray et al. (2005)	Strategic use of IT to achieve business goals.	Strategic
Zhang et al. (2008)	Problem solving and decision making.	Reactive
Lu and Ramamurthy (2011)	Envisioning and exploiting technology.	Proactive
Kim et al. (2011)	Formal and informal processes and practices.	Structural

According to Table 2.11, an IT manager needs to manage the issues addressed in previous work (reactive), manage ongoing activities (active), and prepare the planning and resources for upcoming activities (proactive). If a manager is capable of

managing these three phases, this will support and enable the productivity of the IT department. Indeed, Wang et al. (2013, p.9) opine that "Firms with a high level of IT planning and project management skills can rapidly and efficiently implement new systems, deploy new applications, and solve maintenance hurdles associated with old systems".

IT management capability can be classified in terms of providing the capacity for system planning and design, applications delivery, project management, and planning for standards and controls. Therefore, IT management capability is demonstrated by a collection of IT processes in the areas of planning, investment decision making, coordination, and control (Kim et al., 2011; Wang et al., 2013).

- IT planning gives understanding to the formation of shared IT values and raises IT personnel collaboration to achieve common goals.
- IT investment decision making is grounded on the expected value of IT in supporting or assisting a strategic position of a firm.
- IT coordination involves harmonising multi-interactive efforts through multi-mechanisms between IT management units and others.
- IT control involves allocating IT budgets, defining roles, responsibilities and priorities, controlling IT staff, resource planning and execution, and monitoring the performance of IT.

As a result, IT managers have specific actions: they work as planners at both an operational and strategic level in the organisation, as decision makers supporting the IT function, as coordinators with organisational management levels on behalf of IT, while controlling all these responsibilities in order to achieve IT goals and working towards the organisation's strategic goal (Bharadwaj, 2000). IT management is an internal and external contact point. It is the 'brain' of IT because it needs planning, thinking and deciding more than doing and acting. Specifically, Bhatt et al. (2005) and Tallon (2008) argue two main capabilities of IT management: (1) the IT-business experience, which is the IT group's understanding of the business and its strategic planning; and (2) the IT-business relationship, which is the positive relationship between IT and business. The next sections describe these two capabilities.

2.7.1 IT-Business Experience

The investment in IT planning and functions is important to IT management, as well as investment in new hardware and software (King, 2002), because IT hardware, software, networks and skills are adapted to ensure that IT can continue to support the organisation's business strategy depending on market and business scenarios (Tallon, 2008; Lu and Ramamurthy, 2011). IT business experience provides the ability to build integration between IT and business strategies, develop reliability and effectiveness in business systems, and anticipate business needs (Bhatt et al., 2005). The business experience of IT management personnel is more likely to enable the building of integration between IT functions and core business processes in order to initiate lean and agile operations and deliver organisation-wide IT management capabilities (Chen and Wu, 2011). The important characteristics of IT management sophistication are an awareness of the organisation's long-term plans and the ability to consider these plans during IT planning. IT performance evaluation also depends on the contribution to the organisation's objectives (Sabherwal and Kirs, 1994).

IT business experience capability is the ability to visualise and utilise IT resources to contribute to and enhance business values and objectives (Bharadwaj et al., 1999; Zhang et al., 2008). It is "a capability that reflects the extent to which the firm develops a clear IT strategic vision, integrates business and IT strategic planning, and enables management's ability to understand the value of IT investments" (Lu and Ramamurthy, 2011, p.935). It is also the skills and knowledge of an IT manager in acting as a leader in dealing with organisational renovation and risk management in order to execute business management practices and envision ways in which to provide synergies between IT and organisational performance (Chen and Wu, 2011).

IT-business partnerships and accountability lead to the sharing of the risk and responsibility between IT and business management (Ross et al., 1996). These closer IT-business partnerships foster trust and mutual respect between IT and business, and the ability to communicate, coordinate, or negotiate quickly and effectively (Ross et al., 1996; Tallon, 2008). These mutual respect and shared responsibility between IT and business managers allow them to build positive IT-business experience and relationship. The IT-business relationship is described in the next section.

2.7.2 IT-Business Relationship

Organisational knowledge helps IT managers to 'see the big picture' regarding the role of IT in their organisation and to make connections between different divisions and tasks, ensuring that benefits are realised by leveraging the fit between IT and the specific organisational setting (Chen and Wu, 2011). Relationship knowledge reflects the ability of IT managers to understand business needs and create a partnership with business groups to work together to meet these needs and exploit new business opportunities together. A company's ability to take advantage of IT resources depends crucially on the interaction of IT managers with business units. Bhatt et al. (2005) assume that once an organisation has succeeded in the formation of trust between IT managers and the managers of the business units, their interaction allows the flow and dissemination of knowledge throughout the organisation, which is likely to bring a greater appreciation of the work of each unit and the breadth of experience in the organisation.

Managerial relationship skills involve the effective management of the IS function, coordination and interaction with the user community, and project management and leadership skills (Zhang et al., 2008). These skills could also mean that the managerial ability to coordinate the multi-faceted activities associated with IT implementation is a key distinguishing feature of successful firms (Bassellier et al., 2001). According to Duncombe and Heeks (2003), the problem-solving skills that relate to the ability to analyse and resolve problematic situations are valuable to firms in enabling superior marketing and cost reductions.

However, IT management and IT personnel need IT infrastructure to deploy technology efficiently and effectively to keep the processes and services of the organisation up and running (Tallon, 2008; Chen et al., 2014). The next section discusses IT infrastructure capability in detail.

2.8 IT Infrastructure Capability

IT infrastructure has received close attention from both practitioners and academics, mainly concerning the factors required for IT infrastructure flexibility (Chung et al., 2005). Flexibility is one of the most important traits and characteristics of IT

infrastructure capability (Byrd and Turner, 2000; Liu et al., 2013). The greater the flexibility of the resource, the more diverse the options available to a firm related to the end product (Duncan, 1995).

Commercially, firms rely on IT infrastructures to provide continuous and consistent access to their customer, production, order, and market data (Bhatt et al., 2010). Infrastructure expenses are over 58% of an organisation's IT budget and this percentage grows by around 11% every year (Byrd and Turner, 2000). Adding small costs to flexible IT systems can also support firms in realising cost and demand synergies for marketing new products and services (Bharadwaj, 2000). In addition, IS executives recognise that IT infrastructure is a key factor in saving development time and costs, and is an assurance of the feasibility of implementing an innovative system (Duncan, 1995). In practical terms, firms recognise that IT infrastructure capability is superior compared with other utilities, especially when their IT unit offers a wide range of infrastructure services (Fink and Neumann, 2007). IT infrastructure has been considered an important organisational capability because it is a direct and effective source of value (Bharadwaj, 2000).

It is crucial to define IT infrastructure as part of this study clearly in order to avoid confusion with seemingly similar terminology, such as IT infrastructure readiness. Ray et al. (2005) consider IT infrastructure as capital resources that provide a foundation on which to build specific IT applications. Byrd and Turner (2000) and Chung et al. (2005) define IT infrastructure as the shared IT resources responsible for a unique technological foundation in order to (1) achieve interchanges of widespread communications across an organisation and (2) design, develop, implement, and maintain live and future business applications. Bharadwaj (2000), Zhang et al. (2008) and Kim et al. (2011) define IT infrastructure as physical and tangible IT core assets, such as computers and communications technologies, shared technical platforms and databases. Fink (2011) and Lu and Ramamurthy (2011) argue that IT infrastructure capability is the ability of a firm to manage its shareable data, applications and services in a sufficient and in the best possible way. Liu et al. (2013) define it as a specifically designed and developed type of technology based on

present and future needs, which can react quickly to any change due to business orientation, either from within the organisation or outside it.

Specific characteristics have been distinguished in IT infrastructure. These characteristics appear in the following examples:

- Ray et al. (2005, p.630) mention that "A flexible IT infrastructure is a complex set of technological resources carefully planned for and developed over time".
- Fink and Neumann (2007) confirm the ability of an IT unit to provide wide-ranging IT infrastructure services that support the organisation's business processes.
- Kim et al. (2011) clarify that IT infrastructure capability is the availability of infrastructure services to the whole enterprise, not just to the business unit or a single function area.

In accordance with the above descriptions, Table 2.12 shows the significant traits of ITIC.

Table 2.12: IT infrastructure capability

Authors	**Trait**
Bharadwaj (2000)	Supportiveness
Fink and Neumann (2007)	Extensiveness
Kim et al. (2011)	Availability
Lu and Ramamurthy (2011)	Agility and accessibility
Liu et al. (2013), Ray et al. (2005)	Flexibility

In Table 2.12, accessibility is one of the characteristics of IT, meaning the facility for users to gain access to resources from anywhere at any time (Lu and Ramamurthy, 2011). Supportiveness and extensiveness in this view relate to the ability of the IT infrastructure to integrate with several interfaces without the mediation of 'plug and play' (Bharadwaj, 2000; Fink and Neumann, 2007). Availability and flexibility reflect the readiness of IT inside any environment or under any condition technically to provide the most valid and useful information (Kim et al., 2011).

According to Bharadwaj (2000) and Zhang et al. (2008), the obvious benefits of an IT infrastructure for a firm and its business are: (1) sharing information across different units and functions, (2) utilising business opportunities, (3) flexibility in responding to environmental or business changes, and (4) unifying the common standards and policies within a firm. The points above provide the importance of IT infrastructure

because only IT infrastructure can provide such benefits to an organisation. It is difficult to handle information distribution and sharing without IT infrastructure (Ross et al., 1996). A logical classification of IT infrastructure is clear when Byrd and Turner (2000) classify it into four primary elements: (1) a computing platform (hardware and operating systems), (2) a communications network, (3) critical shared data, and (4) core data processing applications. The next section explains ITIC flexibility in detail as the leading trait of IT infrastructure.

2.8.1 ITIC Flexibility

From a management perspective, flexibility in IT infrastructure has become a major concern, particularly with the challenge of an investment decision in choosing the optimum IT infrastructure (Chanopas et al., 2006).

IT infrastructure flexibility is one of the IT success constructs. According to Byrd and Turner (2001), such flexibility has been shown to be critically important in research work for the following reasons:

- The development of a flexible IT infrastructure has been known as the top priority among all IT management issues in several recent surveys.
- Some researchers have discussed how a flexible IT infrastructure can be a strategic weapon, and have argued that it is critical in the emergence of sustained competitive advantage.

Bhatt et al. (2010) address two important and sensitive aspects with regard to this issue: they purport that (1) chief information officers (CIOs) often rank the ability to develop an efficient and flexible IT infrastructure as their most important priority in the innovation and better performance of their organisation; and (2) an inflexible IT infrastructure may lead to delays, unsuitable implementations, and a lack of information sharing, thus preventing a firm responding to market opportunities. Ray et al. (2005) also refer to the negative implications of an inflexible IT infrastructure as it might block important initiatives, limiting the freedom of an organisation in responding to market forces and being able to innovate.

ITIC flexibility has an almost unified definition. Duncan (1995), Ray et al. (2005) and Liu et al. (2013) define flexible IT infrastructure as a firm's ability to construct a

complete set of technological resources that provide the foundation for the planning and development of IT applications over time. Bhatt et al. (2010) define it as the ability of IT infrastructure to react and adapt to environment changes and requirements. Table 2.13 provides a list of definitions of ITIC flexibility.

Table 2.13: Definitions regarding the flexibility of ITIC

Author(s)/Year	Definition
Byrd and Turner (2001)	A set of shared, tangible technological resources that form a foundation for business applications.
Chung et al. (2005)	The shared IT resources of a technical component that provide a unique technological foundation.
Fink and Neumann (2007)	The ability of IT infrastructure to adapt to new, different, or changing business requirements.
Bhatt et al. (2010)	Allows an organisation to respond to environmental change.
Tallon and Pinsonneault (2011)	The extent to which key IT resources can scale and adapt for different purposes.
Wang et al. (2013)	Flexibility with adequate modularity via selective standardisation and integration in data and processes.
Liu et al. (2013)	A firm's ability to establish a set of technological resources to provide an IT foundation.
Kumar and Stylianou (2014)	Associated with the ability to respond to any kind of uncertainty or change.

Table 2.13 considers a number of definitions relating to the flexibility of IT infrastructure capability: the ability to respond (Kumar and Stylianou, 2014), standardisation and processes (Wang et al., 2013), reliability and foundation (Liu et al., 2013), and scalability and adaptability (Tallon and Pinsonneault, 2011).

Duncan (1995) also observes that IT infrastructure flexibility is the sharable and reusable degree of IT resources. The level and amount of sharing and interfacing in IT infrastructure internally and externally is the 'muscle' that determines and measures its effectiveness and impact. To take Duncan's (1995) point, the next part of the discussion examines the dimensions of infrastructure flexibility.

2.8.2 Measurement of ITIC Flexibility Dimensions

ITIC dimensions are a valid, reliable measure of the IT infrastructure flexibility construct (Byrd and Turner, 2000). These dimensions enable us to assess the presence of flexibility values in an organisation (Duncan, 1995). Many researchers

(Byrd and Turner, 2000, 2001; Chung et al., 2003; Chung et al., 2005; Chanopas et al., 2006; Liu et al., 2013) agree with the description of IT infrastructure capability offered by Duncan (1995), which is extracted from empirical evidence. This structure has been classified into three dimensions: connectivity, compatibility, and modularity. Table 2.14 shows the frequency of these dimensions in academic works from 2000 to 2014.

Table 2.14: Recurrence of dimensions in the literature (2000-2014)

Author(s)/Year	**Connectivity**	**Application functionality**	**Compatibility**	**Data transparency**	**Scalability**	**Modularity**	**Adaptability**	**Continuity**	**Rapidity**	**Facility**	**Modernity**
Kumar and Stylianou (2014)	X		X								
Liu et al. (2013)	X		X			X					
Wang et al. (2013)			X		X	X					
Tallon and Pinsonneault (2011)					X		X				
Bhatt et al. (2010)			X		X	X					
Fink and Neumann (2007)	X		X			X					
Chanopas et al. (2006)	X		X		X	X		X	X	X	X
Chung et al. (2005)	X		X			X					
Chung et al. (2003)	X		X			X					
Byrd and Turner (2001)	X	X	X	X		X					
Byrd and Turner (2000)	X	X	X	X		X					
Total	***8***	***2***	***10***	***2***	***4***	***9***	***1***	***1***	***1***	***1***	***1***

As demonstrated in Table 2.14, much attention has been attributed to connectivity, compatibility, and modularity dimensions in recent years. Furthermore, most authors in Table 2.14 agreed on similar definitions for each of the dimensions, as follows:

- Connectivity is the ability of any technology component to communicate with any of the other components inside and outside an organisational environment.
- Compatibility is the ability to share any type of information, such as data, videos, images, text, and audio, among others, across any IT component within a firm or with channel partners.
- Modularity is the ability to add to, modify and remove any software, hardware or data component of the infrastructure with ease with no major overall effect.

It is noted in Table 2.14 that Chanopas et al. (2006) provide a number of components of ITIC flexibility. The results are developed from four recognised components (connectivity, compatibility, modularity and IT personnel competency) from the literature and by revealing five further components: scalability, continuity, rapidity, facility and modernity. Accordingly, they mention in their paper the need for more examination in order to define convergent and discriminant validity between these components. This leads to retaining the same above classification unless new academic research provides validation for something else.

Tallon and Pinsonneault (2011) use different terms for ITIC flexibility components: scalability and adaptability. Scalability is the extent to which IT capacity is able to expand or contract. In practice, it is the ability to add or remove hardware or software capacity. Adaptability refers to the extent to which an IT infrastructure is able to support different IT needs. These two meanings seem to be broader and more general, and also need to be broken down further for them to be measured as operational factors. Nevertheless, their meanings are derived from the same categories that have the highest ranking in Table 2.14. Although Tallon and Pinsonneault (2011, p.473) mention explicitly that "Scalability is typically interpreted as software modularity…. and network connectivity", they frequently use the three terms 'connectivity', 'compatibility' and 'modularity' in their paper. As a result, it is more logical to keep the list mentioned previously as it is.

In addition, it is noteworthy that scalability has been used four times, by Chanopas et al. (2006), Bhatt et al. (2010), Tallon and Pinsonneault (2011), and Wang et al. (2013). They define scalability using different meanings, since Bhatt et al. (2010) focus on the distribution of new information across organisational sub-units, Tallon and Pinsonneault (2011) focus on IT capacity, and Chanopas et al. (2006) concentrate on the scale of the upgrading. In addition, scalability has been argued in an earlier paragraph as being covered by modularity and connectivity.

Notwithstanding the above, Byrd and Turner (2000, 2001) add two other dimensions from their empirical work:

- Application functionality, which is the ability to add, adapt, and remove business applications modules with no effects on the applications collectively.
- Data transparency, which is the capability for the flow of data and free retrieval between authorised entities in an organisation or between organisations regardless of the primary database standards utilised.

It is clear that the definition of application functionality could be covered by that for modularity, which is more comprehensive and improved. The definition of data transparency has the same meaning as compatibility regarding information sharing and is also enacted by the same performers (inside or outside the organisation). As a result, these two dimensions will be omitted from the ITIC flexibility dimensions under consideration to avoid duplication. Byrd and Turner (2000, 2001) and Chung et al. (2005) combine IT connectivity and IT compatibility under one category: IT integration. However, they describe each one separately and also use both dimensions in their measurement separately. On the other hand, Wang et al. (2013) distinguish between IT infrastructure and IT integration and consider them to be at the same level as key IT capabilities.

Just as it is important to understand the concept of IT capabilities, it is equally important to understand the interrelationships between these capabilities. An understanding of the interrelationships supports fulfilling the research objective and an exploration of the relationships between information technology and customer-focused strategies. The next section provides an analysis of the interrelationships between IT capabilities.

2.9 Interrelationship Processes between IT Capabilities

A set of IT capabilities needs to organise, integrate and govern the interaction and interrelationship processes between them. Three main IT capabilities (management, personnel, and infrastructure) work in a complementary manner and a connection exists between them. The internal and external relationships of an IT department are of critical importance (Van Der Heijden, 2001) in order to confirm the value of IT in an organisation. However, the relationship between the IT capabilities themselves is of utmost importance to people in the IT organisation and deserves investigation for greater understanding and clarification. According to Kim et al. (2011), the

relationship can be divided into three categories. These relationships are shown in Figure 2.9:

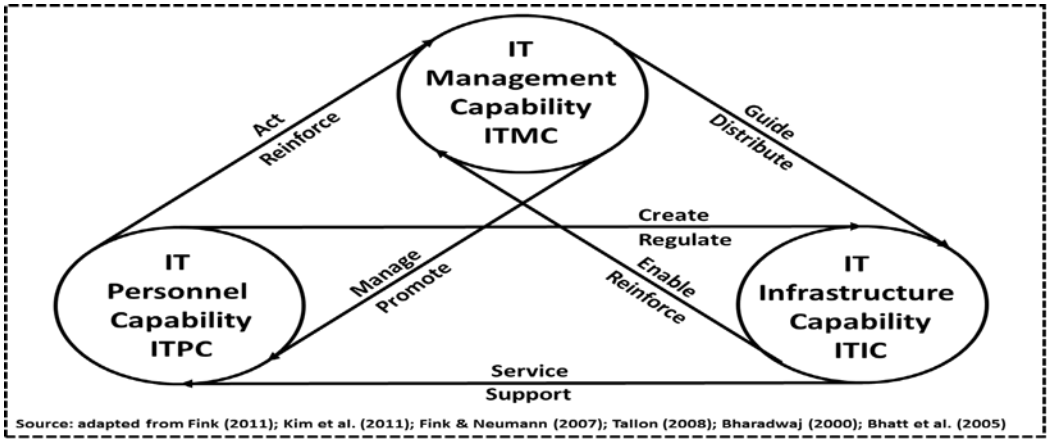


Figure 2.9: Interrelationship between IT capabilities

The interrelationships are discussed in the following sections in detail by explaining the type and direction of each relationship to ensure there is no overlap between the responsibilities of each IT capability. This explanation is also undertaken to establish holistic understanding for the reader of how IT capability components work to support each other.

2.9.1 IT Personnel Capability and IT Management Capability

One of the main duties of IT staff is the structuring of multi-processes into adequate formal and informal practices to develop and reinforce IT management capabilities (Ross et al., 1996). The relationship between technical and managerial IT skills needs a long period of time and accumulated experience to be enriched (Bharadwaj, 2000; Bhatt et al., 2005) because this type of relationship is interpersonal, more tacit (Bharadwaj, 2000), and depends on learning-by-doing and routine patterns (Bhatt et al., 2005).

Typically, IT personnel expertise affects the capabilities of IT management (Kim et al., 2011). The combination of the strong business and IT experience of an IT manager has a direct determination on the ability of an organisation to develop rapidly and set up critical systems for permanent competitive advantage (Bhatt et al., 2005). A strong team of an IT leader and staff can learn to work closely with business staff to develop practicable solutions and, therefore, increase communication between IT and business staff (Ross et al., 1996). From the perspective of senior managers, the

abilities of personnel and managerial knowledge and skills are important capabilities, particularly for IT professionals and during IT project management (Fink and Neumann, 2007). The behavioural capability of IT personnel has an effect on the management of IT services due to the horizontal job hierarchy and the role of IT personnel in linking the network or systems of an organisation with an external source (Fink, 2011). The technical skills of IT staff support IT management by building a bridge between old and new systems, delivering data across multi-locations and multi-applications, and increasing opportunities for innovation through new technologies (Ross et al., 1996).

Interpersonal relationships, business functions, and IT management capabilities guide IT personnel in the alignment of organisational and business strategies. Building a team is a critical interpersonal and business capabilities requirement of an IT manager, who works consistently with overall strategies and tactics, creates wide-ranging understanding, and enforces jargon-free communication between the team and the organisation (Chen and Wu, 2011) in order to deliver information services and focus on the effect of changing technologies as agents of change (Duncan, 1995; Chen and Wu, 2011). According to Tallon (2008, p.24), "Managerial IT capabilities are able to leverage a firm's technical capabilities, directing IT resources to where they are needed most".

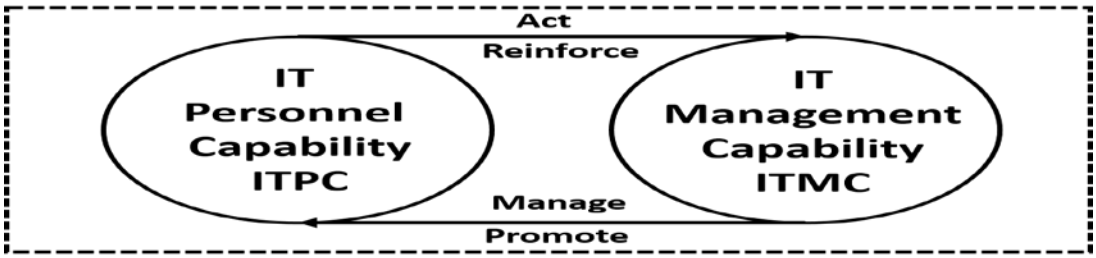


Figure 2.10: Interrelationship between ITPC and ITMC

Consequently, Figure 2.10 shows that IT personnel play a significant role in formatting and refining IT management capabilities. At the same time, capable IT management

leads to better performance of IT personnel in their knowledge of and competence in technologies.

2.9.2 IT Infrastructure Capability and IT Personnel Capability

The dependency between IT personnel capability and IT infrastructure capability is crucial to the maturity of an organisation's IT capability. The relationship between IT personnel and IT infrastructure capabilities depends on cause and effect and requires the presence of one of the factors for the emergence of the other (Fink and Neumann, 2007).

IS researchers recognise the contribution of IT professionals to the flexibility of an organisation's IT infrastructure (Byrd and Turner, 2001; Kim et al., 2011). IT professionals can also integrate technology components to shape the capability of an IT infrastructure (Duncan, 1995; Ross et al., 1996).

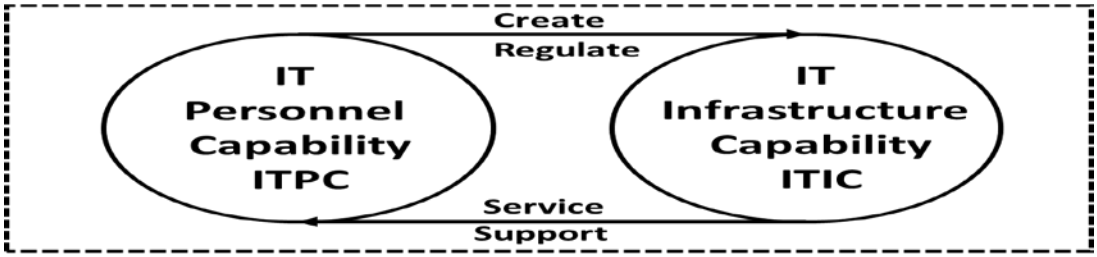


Figure 2.11: Interrelationship between ITPC and ITIC

According to Fink and Neumann (2007), a capable IT workforce leads to a flexible IT infrastructure because the level of balance between competence in business and IT needs, as well as technical expertise, is a critical factor in successful integration between systems or the development of new systems. The main prerequisite for a flexible IT infrastructure is superior IT expertise (Kim et al., 2011).

As shown in Figure 2.11, technical infrastructure capability allows IT personnel to classify, integrate, and use technical components in the process of developing and maintaining the required work. Capable IT infrastructure supports IT personnel capability in submitting their tasks in sufficient time and ensuring quality outputs. It can also support IT personnel in capturing more data and information, and provides greater facility and professionalism (Bi et al., 2011).

2.9.3 IT Infrastructure Capability and IT Management Capability

It is known that cooperation between IT management and IT personnel expertise creates a capable IT infrastructure. An IT management role is present in guiding and supervising people to implement and integrate IT infrastructure in a timely and adequate manner and then distributing and managing the infrastructure resources across the firm, thus enabling IT infrastructure and IT personnel to integrate in a harmonious manner (Kim et al., 2011).

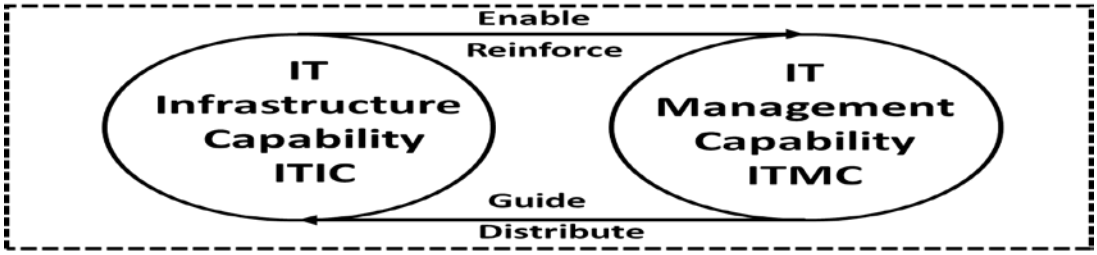


Figure 2.12: Interrelationship between ITIC and ITMC

A flexible IT infrastructure means increasing IT management capability through extended learning-by-doing experience, achieving the required inputs and information, and enabling quick adaptation to change or improvement (Bharadwaj, 2000). Organisations with greater technical capability have a higher level of managerial capability (Fink, 2011) because an organisation with a solid IT infrastructure and IT management ability can: deploy new solutions efficiently and effectively and solve maintenance obstacles associated with old systems (Chen et al., 2014), provide a quick response to changes (Tallon, 2008), and minimise costs and maintain high-quality support (Ross et al., 1996). Fink and Neumann (2007) argue that IT management first decides on the appropriate level of infrastructure capabilities that best supports existing and emerging business needs, and then develops the IT personnel capabilities needed for infrastructure management. Chen et al. (2014) indicate management responsibilities to build IT infrastructure by applying an integrated set of available and reliable IT infrastructure components, services, or functions in order to achieve all business objectives, supporting both existing applications and new initiatives; connecting different business functional units; and providing a network infrastructure to link organisation stakeholders. Further to this, Ross et al. (1996) contend that IT management has a responsibility to

make sure the standards and rules of IT infrastructure are adequate and followed by IT staff and users. Duncan (1995) argues that IT management provides guidance for IT personnel and establishes the necessary conditions for IT flexibility. However, IT management also needs to ensure that the standards do not restrict business units in working towards their objectives (Ross et al., 1996).

IT management capabilities have a significant influence on IT infrastructure flexibility (Kim et al., 2011). Effective and relevant infrastructure design and development are dependent on IT management understanding business needs (Wang et al., 2013). As a consequence, this minimises the downside risk of inflexibility and maximises the opportunity of stability and agility (Tallon, 2008), and builds an efficient communication and information exchange inside and outside the organisation boundaries (Chen et al., 2014). However, an organisation with a low level of IT management capabilities, such as poor decision making in relation to the replacement of legacy systems, may fail to respond to changes in customers' needs and competitors effectively and quickly (Wang et al., 2013) due to the weakness of the technology asset (Ross et al., 1996; Kim et al., 2011).

ITIC lies at the core of the IT function as the information supplier and service provider of IT management (Fink, 2011). Thus, the significance of the relationship of IT infrastructure capability lies in its role in supporting other IT capabilities to complete their assigned tasks to the full.

2.10 Conclusion

This chapter performs a literature review of customer-focus research papers. The rationale for visiting literature is to illustrate the evolution of the research focus from product quality to service quality and, more recently, to customer interaction. The organisational implications of a heightened customer focus contribute an aspect of customer focus to the knowledge of an organisation's staff, the organisational culture and management beliefs. These implications are the foundation of enabling a highly positive interaction experience with customers. Some authors demand the presence of a chief executive in the experience and service to customers in the development of the interaction with customers (Berry et al., 2006; Rust et al., 2010; Palmer, 2010).

In addition, the organisational management and staff should provide a high level of service efficiency and effectiveness to the customer when using processes and tools specific to facing customers. The focus of the management, staff and processes on the customer enables the organisation to customise its products or services according to the customer's expectations.

The degree of priority given to the customer supports the acquisition of customer loyalty and advocacy and the creation of a long-term relationship and shared values with the customer. Organisations seek to transform customer loyalty into customers becoming advocates for the organisation. Sometimes, the customer become the first defenders of the organisation because they have had a good experience and are satisfied with the organisation. Thus, the usual relationship between organisation and customer has shifted to one of advocacy. This relationship requires consideration of the customer as the main and most valuable asset of the organisation. Organisations provide a value determination process for reflecting customer value within every process and product because customers' aspirations with regard to the organisation have been raised.

The historic overview model (Figure 2.4) presents a high-level view of the key phenomenon in the customer interaction approach; this includes the facets of a customer interaction approach: TQM, SERVQUAL, CRM, and CEM. The researcher seeks to convey the importance of the consolidation of the roles of emotion, value, and interaction in the characteristics of CEM, as outlined in Table 2.6. In addition, the researcher conducts a comparison of two recent interaction approaches, CRM and CEM, by illustrating their similarities and differences to clarify that CEM is not a substitute for CRM, moreover, expressing the relationship between CRM and CEM as complementary. Both CRM and CEM are capable of benefiting each other by uniting their abilities to manage and enhance customer interaction, as presented in Figure 2.6.

This chapter conducts a review of a significant body of work on IT capability. The researcher reflects the synthesis in this area in the conceptual framework presented in Figure 2.8. The model presents a high-level view of the key phenomenon and includes the facets of IT capability: IT personnel, IT management and IT infrastructure.

IT personnel are the main players in the success of IT capabilities, as IT-qualified staff possess the ability to combine and improve various knowledge sets and skills. The existing literature classifies IT personnel capability into technical capability, behavioural capability and business capability. Technical capability is present in the identification, integration, and utilisation of technical components. Such technical capability has moved in accordance with the revolution in technology and information to a focus on cloud, mobile, and virtual technology. Soft behavioural skills are needed by IT personnel in order to raise productivity. Business capability is also needed to solve business problems. IT personnel who have these capabilities can create efficient IT and play their role effectively within their organisation.

Experience from 'learning by doing' and the development of a relationship with business over time give heterogeneous experience to IT managers. IT managers represent the values of IT within their organisation, and can build integration between IT strategies and business strategies. Managing the tasks of IT resources and activities associated with IT implementation is a key distinguishing capability of IT managers. These managerial relationship skills and experience bring a greater appreciation of IT work among the rest of the organisation. IT management is the critical capability of an organisation to enable smooth adaptation and swift change. IT management possesses the infrastructure, technology and resources to support organisational change.

IT infrastructure is of high value to organisations because it has a direct impact on the services provided for external customers. Organisations rely on IT infrastructures to provide continuous and consistent access and services to their customers. The literature presents the importance of IT infrastructure and its relationship with IT capabilities, and argues for promoting the consistency and legitimacy of connectivity, compatibility, and modularity as the main dimensions of ITIC flexibility. These dimensions enable a measure of the presence of flexibility values in an organisation. These dimensions have the ability to communicate, share and modify data and information within the organisation and with customers. The greater the flexibility of the resource, the more diverse the options available to an organisation related to the end customer and its product.

This study relies on the literature in forming a conceptual framework of the CFS and ITC material considered in this chapter. According to Marshall and Rossmann (1999, p.52), "The literature review provides theoretical constructs, categories, and their properties that can be used to organize the data and discover new connections between theory and real-world phenomena". This framework presents insights into a synthesis of the literature review regarding customer-focused strategy and IT capabilities, as shown in Figure 2.13.

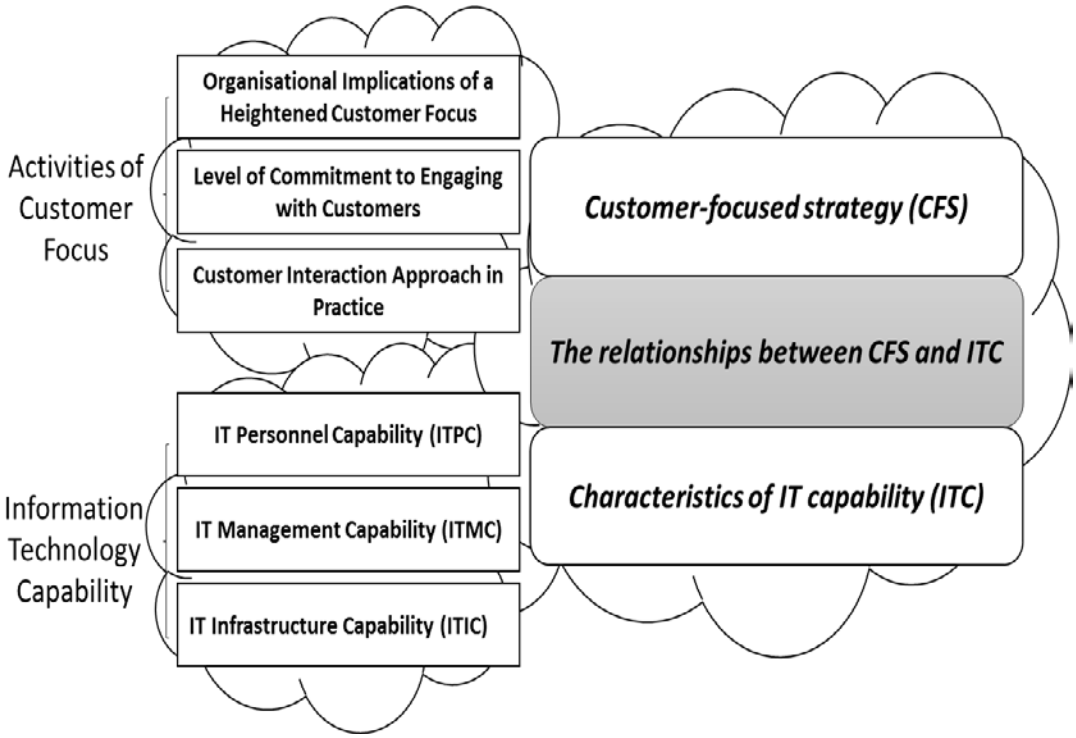


Figure 2.13: IT-enabled customer focus framework

The structure of customer focus activities supports defining and understanding organisations' approaches to focusing on customers (Ranaweera et al., 2005; Galbraith, 2011) and establishing strategies to achieve this (Woodruff, 1997; Urban, 2004; Shaw and Ivens, 2005). The literature review provides a construct of the organisational implications of a heightened customer focus that aims at achieving a customer-focused strategy that is operationally efficient and functionally effective (Kaplan and Norton, 2005; Kamaladevi, 2010). Customer focus activities seek to ensure an outstanding customer experience and maintain the delivery of products and services to customers (Payne and Frow, 2005; Thompson, 2006; Palmer, 2010). These activities create active ways to engage with customers and add dynamic value

for the customer that is also associated with profit for the organisation (Schmitt, 2003; Verhoef et al., 2009; Palmer, 2010). Organisations expend their capabilities to maintain and strengthen their relationship and interaction with their customers (Winer, 2001; Verhoef et al., 2009; Galbraith, 2011).

A key capability in terms of excellent customer relationships and service is the ability to track and manage changing customer preferences (Hansotia, 2002; Payne and Frow, 2005), and IT allows organisations to track and manage customer choices and needs (Baharadwaj, 2000; Setia et al., 2013). The literature review conducted in this research provides a concept of ITC and the attributes used to organise the data collected. This supports an exploration of the role of IT and its characteristics. According to Ray et al. (2005) and Kim et al. (2011), the structuring of ITC involves an integrated framework combining all three IT capabilities: IT management capability (ITMC), IT personnel capability (ITPC), and IT infrastructure capability (ITIC). This presents IT capability as an evolving conceptual framework. An IT capabilities framework represents the responsibilities and boundaries of IT components and manages the interactions between these capabilities and the wider environment of the company (Van Der Heijden, 2001; Curley, 2007; Kim et al., 2011). An understanding of the concept of IT capabilities and their interrelationships supports fulfilling the research objective and an exploration of the relationships between information technology and customer-focused strategies.

The exploration of the literature acknowledges an ambiguity in the relationship between the capabilities of IT and a customer-focused strategy (Lu and Ramamurthy, 2011; Granados and Gupta, 2013). Existing research studies call for more knowledge of the nature of the relationship between business and IT in delivering a customer-focused strategy. Thus, this research study seeks to address this research gap. The next chapter discusses the research methods and how they are applied to serve the research objective in exploring customer-focused strategies, the characteristics of ITC, and the relationship between IT capability and the customer-focused strategy in organisations.

CHAPTER THREE RESEARCH METHODOLOGY

3.0 Introduction

In chapter one, the research topic, objective and questions are clearly bounded and theorised. Chapter two introduced the topics of customer-focused strategy (CFS) and IT capability (ITC) as sets of characteristics. The purpose of this chapter is to outline and discuss the research method adopted. This chapter demonstrates the steps that were taken for the selected case studies in order to explore the relationship between IT capability and customer-focused strategies. Figure 3.1 provides an overview of the research methodology followed.

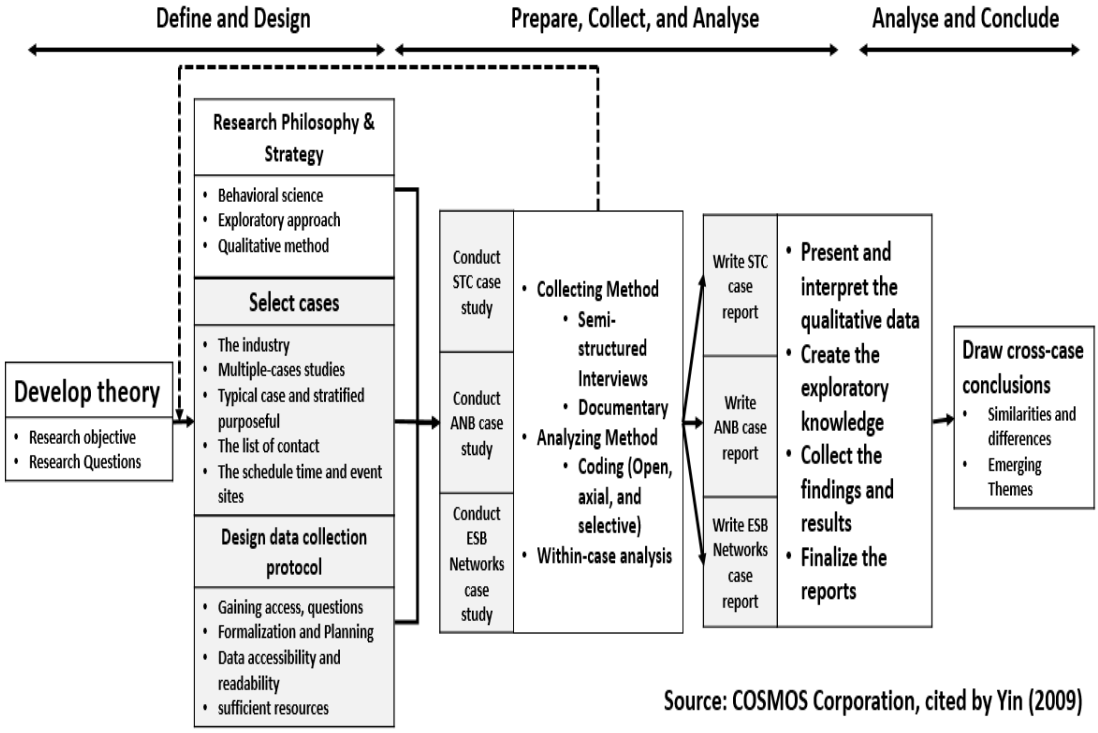


Figure 3.1: Adapted and modified framework for a multiple-case study design

The initial step of problem definition is the most important in designing a study, because it includes theory development, case selection and the definition of specific measures that will lead to more detailed and confident data gathering and analysis (Yin, 2009). In this study, the researcher evaluates the strengths and weaknesses of different research designs to produce a list of the most appropriate for this research study. The qualitative method and exploratory approach are considered appropriate in the context of this study. A multi-site exploratory study is favoured for the better

understanding of phenomena, such as by answering 'what' and 'how' questions (Miles and Huberman, 1994; Yin, 2009). Key questions posed in semi-structured interviews are the main technique for collecting the data in this study, and the data collected have been analysed using coding techniques. Each of these decisions is discussed in this chapter, beginning with a summary of the research objective and questions.

3.1 Research Objective and Questions

Research methods can change from one research project to another. There is no rule for selecting the perfect research method. In most cases, the method depends on the research objective and questions (Yin, 2009). A clear definition of the research objective and questions is essential in designing a research methodology because such definitions can permit the researcher to specify the unit of analysis to be adopted and the type of data to be collected (Eisenhardt, 1989). Ritchie and Lewis (2013) suggest linking the research objective and questions to the research design and method in order to enable the most relevant, comprehensive and richest information to be collected.

The research aims to address the perceived gap in the literature concerning the relationship between information technology capability and customer-focused strategies.

The objective of this research is to explore the relationship between IT capability (ITC) and customer-focused strategies (CFS) in an organisation

This objective seeks to improve our understanding of the relationship between the capabilities of information technology and the organisational goal of achieving a customer-focused strategy. The findings will, therefore, help to establish an understanding of the role of ITC in improving customer focus, thus making a contribution to the work of academics and practitioners in both fields.

The main goals of this research are:

1. To understand the strategic view of an organisation with respect to its customer focus. This includes covering factors such as the organisational implications of a

heightened customer focus, the approach to interaction with customers, and the level of commitment to engaging with customers.

2. To understand the capabilities of information technology and their characteristics, including management, personnel and infrastructure.
3. To understand the relationship between these IT capabilities and customer-focused strategies.
4. To understand how IT capabilities enable the adaption of customer-focused strategies in organisations.

In order to achieve the research objective of the research study, the research questions are formulated as follows.

Research Question One: What are the customer-focused strategies of the organisation?

In chapter two, customer-focused strategy is classified according to three factors: 1) the organisational implications of a heightened customer focus, 2) the level of commitment to engaging with customers, and 3) the customer interaction approach. A CFS is an organisational strategy that is aimed at building a long-term and consistent relationship with the customer in order to enhance customer satisfaction and loyalty (Colgate and Danaher, 2000; Chen and Popovich, 2003). This relationship is characterised by mutual understanding and values shared between the different functions within the organisation and the customer.

In order to improve the understanding of CFS, this research question seeks to explore and categorise the customer-focused strategies in the context of each organisation. This question seeks to understand how organisations transform their strategic orientations to improve customer satisfaction into clearly understood and actionable strategies. The enhanced customer focus means ensuring that these strategies are understood right across the different functional domains of the organisation and, therefore, have an influence on the customer's experience and relationship with the organisation.

Learning about customer-focused strategies leads to a better perception of the relationship between IT capabilities and such strategies. The third and fourth

research questions address the exploration of working relationships between IT and business and how the characteristics of IT capabilities support the customer-focused strategies explored in this research question. Therefore, understanding the strategies for focusing on the customer is essential to examining them in the third and fourth research questions.

Research Question Two: What are the characteristics of the IT capability in the organisation?

In chapter two, IT capabilities are defined according to three core concepts: 1) personnel, 2) management, and 3) infrastructure. Bearing in mind the debate identified in the literature review regarding the capabilities of IT (Ray et al., 2005; Kim et al., 2011), describing IT capabilities has traditionally been a challenge because of the subtle mix of people, processes and technology capabilities involved (Fink and Neumann, 2007; Kim et al., 2011). However, satisfying customers involves a blend of all three capabilities and, in a service context that is increasingly digital, it is possible that other elements come to bear that can make the customer's experience merely satisfactory or better.

Therefore, this question seeks to explore and categorise the characteristics of IT capability in the context of each organisation. This research question seeks to understand the mix of IT capabilities that combine to deliver an excellent customer experience and fulfil the customer's needs. Combining IT capabilities ensures that their characteristics are defined and known across the organisation and, therefore, IT has an influence on business in achieving the customer's needs and meeting his or her demands.

Defining and understanding the characteristics of ITC serves the research objective of exploring the roles of ITC in enabling a customer-focused strategy. IT capabilities and their characteristics support IT in imposing its role within the organisation. In addition, understanding the characteristics of ITC is essential to examining them in the third and fourth research questions. The third research question addresses an exploration of the working relationships between IT and business. The fourth research question addresses how the characteristics of IT capabilities support customer-focused strategies.

Research Question Three: How do IT and business work together in delivering a customer-focused strategy?

Organisations deploy and develop IT operations and customer-facing processes in order to improve and deliver excellent customer services. The literature shows an ongoing evolution in the coordination and consistency between IT and business to align the work of both back-office IT service delivery and customer-facing platforms and services (Bharadwaj, 2000; Ngai et al., 2011; Lu and Ramamurthy, 2011). However, as shown in the literature, there is a dearth of research on the organisational interdependencies between these two increasingly interdependent entities (Lu and Ramamurthy, 2011; Granados and Gupta, 2013). This research question explores the characteristics that influence the success of the collaboration between IT and business counterparts in the context of customer-focused strategies.

Research questions one and two seek to understand and study customer-focused strategies and IT capabilities independently. It is useful to consider them independently and then consider the interplay between the two constructs. Understanding the working relationship between IT and business completes the understanding of aspects of these two constructs, and thus helps in achieving the objective of the research, which aims to understand the relationship between the capabilities of IT and strategies focused on the customer.

Exploring both the customer-focused strategies and the IT capabilities of organisations provides insights for understanding the relationship between business and IT in achieving a customer-focused strategy. The understanding of customer-focused strategies and IT capabilities gained from research questions one and two facilitates the study of their relationship in this research question. This question is intended to enable a relationship map to be drawn associating IT personnel capability, IT management capability, and IT infrastructure capability. This map informs the organisational implications of customer focus, the level of commitment to engaging with customers, and the customer interaction approach. This question seeks, therefore, to explore the characteristics of these relationships.

Research Question Four: How can the characteristics of IT capability drive customer-focused strategies in organisations?

The technological and digital revolution has equipped IT to drive innovation and creativity in customer service delivery. This revolution is reshaping the requirements and aspirations of customers with regard to services and their interactions with organisations towards greater digitalisation. The literature shows that IT is a vital and integral part of business success in relation to these changes (Tallon, 2008; Bhatt et al., 2010). However, there is a need to undertake research into the classification and definition of IT roles in enabling a customer-focused strategy (Lu and Ramamurthy, 2011).

This research question supports the research objective by attempting to improve understanding of the categories and relationships that have been generated within the cases. This research question facilitates further abstraction of the multi-site data. The association of customer focus strategies and IT capabilities offers roles and initiatives for customer service. Both CFS and ITC add initiatives that drive changes for the benefit of customers. Understanding the roles provided by IT capability in enabling initiatives for customers is derived from an understanding of ITC and CFS.

This research question is concerned with the driving of customer-focused strategy into organisational philosophy and describing how IT capability instigates customer-focused strategies in the context of an organisation. The research question provides, therefore, an understanding of the context and role of ITC in prompting a customer focus throughout an organisation. It illustrates those roles and initiatives that are common between the characteristics of IT capabilities and organisational strategies towards the customer.

There are various methods and approaches for applying research methodology in IS studies and the selection of the most appropriate is an important step towards the success of a research study. The next section discusses the research paradigms and basic beliefs of alternative inquiry paradigms in the IS field.

3.2 Research Philosophy

The purpose of this section is to define and present the common research paradigms in IS research and to discuss the selected pragmatic approach for the investigation of the relationship between IT capability and customer-focused strategy.

3.2.1 Research Paradigms in the IS Field

Typically, research in the IS area is of two types: (1) *behavioural science* seeks to test concepts and patterns by using empirical data to explore, explain or predict identified group and human needs in order to understand a problem or discover a truth; and (2) the *design-science* paradigm seeks to infer theoretical concepts from observed data and create new or innovative artefacts to extend human or organisation boundaries in order to solve a problem (Henver et al., 2004).

In order to gather sufficient knowledge on the proposed research topic from reviewing the literature, this research follows a traditional behavioural science approach. The researcher started with the research gap and the motivation to conduct the proposed research. The objective and the research questions were then developed from the literature review.

Guba and Lincoln (1994, p.108) categorise the basic beliefs that can represent paradigms in IS research into three major questions:

- The ontological question: What is the form and nature of reality and, therefore, what is there that can be known about it?
- The epistemological question: What is the nature of the relationship between the knower or would-be knower and what can be known?
- The methodological question: How can the inquirer go about finding out whatever he or she believes can be known?

A research paradigm is the "basic belief system or worldview that guides the investigator not only in choices of method but in ontologically and epistemologically fundamental ways" (Guba and Lincoln, 1994, p.105). In simple terms, paradigms are shaped by two philosophical assumptions: ontology and epistemology. Ontology comes from human assumptions about how we see the world. Epistemology comes

from human assumptions about the best way to study the world (Guba and Lincoln, 1994).

Three main inquiry paradigms are used in IS research: positivism, interpretivism and post-positivism, Bhattacherjee (2012) defines the paradigms as follows:

- Positivism depends exclusively on theories that can be directly tested on observed data to lead to empiricism, and tend to reject any attempt to extend or reason beyond the facts.
- Interpretivism (or anti-positivism) holds that a social action must be studied through interpretive means based on understanding the meaning and purpose.
- Post-positivism argues that combining empirical observations with logical reasoning can enable reasonable inferences about a phenomenon of interest.

Following paradigms is important to acquiring knowledge in the IS field because it is positioned at the confluence of people, organisations and technology (Henver et al., 2004).

Lincoln et al. (2011) provide a description of the research paradigms used in IS research according to their philosophical standpoint and inquiring paradigms, as shown in the following table.

Table 3.1: Basic beliefs of alternative inquiry paradigms

Belief	Positivism	Post-Positivism	Critical Theory *et al.*	Interpretivist (Constructivism)	Participatory *
Ontological	naïve realism – "real" reality but apprehendable	critical realism – "real" reality but only imperfectly and probabilistically apprehendable	historical realism – virtual reality shaped by social, political, cultural, economic, ethnic, and gender values; crystallized over time	relativism – local and specific constructed realities	Participative reality-subjective-objective reality, cocreated by mind and given cosmos
Epistemological	dualist/objectivist; findings true	modified dualist/objectivist; critical tradition/community; findings probably true	transactional/ subjectivist; value-mediated findings	transactional/ subjectivist; created findings	Critical subjectivity in participatory transaction with cosmos; extended epistemology of experiential, propositional, and practical knowing; cocreated findings
Methodological	experimental/ manipulative; verification of hypotheses; chiefly quantitative methods	modified experimental/ manipulative; critical multiplism; falsification of hypotheses; may include qualitative methods	dialogic/dialectical	hermeneutical/ dialectical	Political participation in collaborative action inquiry; primacy of the practical; use of language grounded in shared experiential context

Source: Guba and Lincoln (2000), the participatory column is based on Heron and Reason (1997).*

Table 3.1 presents three belief systems: ontology represents the nature of reality and what can be known about it; epistemology depicts the nature of knowledge and how it can be acquired; and methodology presents the processes for studying reality and adding knowledge (Creswell, 2003; Ritchie and Lewis, 2013). In addition, Table 3.1 presents the five basic beliefs of alternative inquiry paradigms. Debates on the way to conduct IS research – such as taking a positivist or interpretivist approach – have been the focus of much recent attention from a philosophical standpoint (Henver et al., 2004). In the next sections, the researcher provides the basic outline for a common paradigm.

3.2.1.1 Introduction to Positivist Paradigm

The French philosopher Auguste Comte (1798–1857) – the founder of the discipline of sociology – endeavoured to blend rationalism and empiricism by using the then-new doctrine of positivism (Bhattacherjee, 2012). The positivist approach has come to be recognised as the 'natural-science model'. It maintains that "the methods of natural science constitute the only legitimate methods for use in social science" (Lee, 1991, p.343). Positivism focuses on proof and verification in starting the separation of modern science from philosophy and metaphysics, as well as on the further development of 'the scientific method' as the primary means to prove scientific claims (Bhattacherjee, 2012).

Bhattacherjee (2012) suggests that theory and observations depend on each other. While theories may be created by thinking and reasoning, they can only be reliable if they can be confirmed through observation. Lee (1991) argues that the positivist approach requires the manipulation of theoretical propositions using the rules of formal and hypothetico-deductive logic. Positivism is bound up with quantitative research methods, such as experiments and surveys, without any explicit philosophical commitments (Bhattacherjee, 2012).

Positivism tends towards blind faith in observed data and to rejecting any attempt to extend beyond observable facts; positivism believes that knowledge is actually certain (Hirschheim, 1985; Bhattacherjee, 2012). The post-positivist approach is developed to exceed this limitation of positivism (Hirschheim, 1985). A post-positivist lens depends on observation and measurement of the objective reality that exists

"out there" in the world (Creswell, 2003). Post-positivism combines empirical observations with logical reasoning to make reasonable inferences about a phenomenon (Bhattacherjee, 2012). According to Hirschheim (1985, p.32), "An interesting part of post-positivist thought is its belief in what might be termed 'methodological pluralism', the assertion that there is no one correct method of science but many methods". Thus, the post-positivist approach needs to examine causes that influence the outcomes of problems, such as the issues examined in experiments (Creswell, 2003).

According to Lee (1991, p.342), "The interpretive approach to organisational research has been gaining attention in recent years as an alternative to the more traditional positivist approach". In the early 20th century, a strong dependence on positivism was rejected by interpretive sociologists (anti-positivism scholars) who belonged to the German idealism school of thought (Bhattacherjee, 2012). The interpretive approach claims that the methods of natural science are insufficient for the study of social reality (Lee, 1991). Thus, anti-positivism scholars hold that social actions must be studied through interpretive means based on the understanding of meaning and purposes that individuals link to their personal actions (Bhattacherjee, 2012).

Significant differences between the positivist and interpretivist approaches depend on their aims. For example, "In the positivist approach, the origin of all deduced propositions must be found in the explanation's own 'objective' foundational premises" (Lee, 1991, p.344). In an interpretive approach, people create their own subjective and inter-subjective meanings by interacting with their world (Orlikowski and Baroudi, 1991). The positivist approach employs deductive reasoning to start with theory and tests theoretical postulates through the use of empirical data. In contrast, the interpretive approach employs inductive reasoning to build a theory that revolves around the phenomenon of interest from the observed data (Bhattacherjee, 2012). The next section provides an overview of the interpretivist paradigm.

3.2.1.2 The Interpretivist Paradigm

The interpretivist approach has received close attention and gained popularity in many social science fields because the aim of interpretivism is to gain a richer

understanding of a particular environment from the perspective of those who live in it (Lee, 1991; Orlikowski and Baroudi, 1991). Applied to the IS field, the interpretivist approach can be used to develop an understanding of the relationship between information systems and their context. According to Walsham (1993, pp.4–5), this is a "broadly interpretive method of research, aimed at producing an understanding of the context of information systems and the process whereby the information system influences and is influenced by its context".

According to Orlikowski and Baroudi (1991) and Bhattacherjee (2012), interpretivism is a framework of research based on the assumption that social reality is not a single or objective reality but is shaped through human experience and social contexts (ontology). The best way to study this social reality is, therefore, in its historical and social context through conciliation between subjective interpretations of other objectives for a variety of participants in the study (epistemology). Interpretive researchers look to social reality as an integral part of the social environment. It is not stripped of its social setting, so the interpretation of reality is achieved through a sense-making process, not through a hypothesis-testing process.

All interpretive research is committed to certain principles (Lee, 1991; Bhattacherjee, 2012), as described in Table 3.2.

Table 3.2: Summary of the interpretive principles

Principles	**Summary**
Naturalistic inquiry	Social phenomena must be studied in their natural setting.
Researcher as instrument	Researchers are often an integral part of the social context in which they are studying.
Interpretive analysis	Observations are interpreted from the perspective of the participants.
Use of expressive language	Documenting the verbal and non-verbal language of participants.
Temporal nature	Deep involvement in the study site for an extended period of time.
Hermeneutic circle	A 'theoretical saturation', whereby no more insights and ideas are generated in any additional iteration related to the phenomenon.

In terms of data collection and analysis, interpretivism is typically equated with qualitative methods, such as interviews and observation techniques in the case study approach, because the paradigm has a strong connection with building explicit and

philosophical commitments (Bhattacherjee, 2012). According to Kaplan and Duchon (1988, p.573),

> *Researchers develop categories and meanings from the data through an iterative process that starts by developing an initial understanding of the perspectives of those being studied.*

Following consideration of the above definitions of research paradigms, this research study seeks to understand the purpose behind an activity (Walsham, 2006). The objective of the proposed research is to understand how multiple realities exist by applying a dialectic between the researcher and the respondents in order to enable and interpret the construction of an understanding (Guba and Lincoln, 1994). Lee (1991, p.347) emphasises the idea that "the same physical artefact, the same institution, or the same human action, can have different meanings for different human subjects, as well as for the observing social scientist".

In this section, the researcher discussed the most common research paradigms in the IS field, describing the basic beliefs of alternative inquiry paradigms in IS. The following section discusses the operationalisation of these choices in a research strategy.

3.3 Research Strategy

This section discusses the research strategy followed in this study according to the most commonly used approaches and methods in the IS field. A research strategy defines the theoretical scope and boundaries of the proposed research study. Section 3.3.1 provides definitions of, and a justification for, the exploratory approach adopted. In section 3.3.2, a qualitative research method is selected as a suitable research method. Research validity is presented in section 3.3.3.

3.3.1 Research Approaches

It is recognised that each research project has a purpose that needs to be achieved. Marshall and Rossmann (1989) and Bhattacherjee (2012) classify research approaches according to three main purposes: exploratory, descriptive and explanatory research. However, Marshall and Rossmann (1989) add predictive

research as a fourth type. Table 3.3 outlines the characteristics of each approach and maps a purpose to the type of research.

Table 3.3: Matching research purpose with research methodology

Research Purpose	What	How	by	In
Exploratory				
to investigate little understood phenomena/ to identify or discover important variables/ to generate hypotheses for further research	What is happening in this social program? What are the salient themes or patterns in participants' meaning structures? How are these patterns linked with one another?	(1) conducting in new areas of inquiry, (2) extent of a particular phenomenon, problem, or behavior, (3) generating some initial ideas about that phenomenon, (4) testing the feasibility of undertaking a more extensive study regarding that phenomenon, (5) more qualitative method	**Participant observation In-depth interviewing Elite interviewing**	**Field study Case study**
Descriptive				
to document the phenomenon of interest	What are the salient behaviors, events, beliefs, attitudes, structures, processes occurring in this phenomenon?	(1) direct at making careful observations and detailed documentation of a phenomenon of interest, (2) (3) descriptive questions for each independent and dependent variable, or (4) more Quantitative method	**Participant observation in-depth interviews Questionnaire Document analysis**	**Multisite case study History Field study**
Explanatory				
to explain the forces causing the phenomena in question/ to identify plausible causal networks shaping the phenomenon	What events, beliefs, attitudes, policies are shaping this phenomenon? How do these forces interact to result in the phenomenon?	(1) explanations of observed phenomena, problems, or behaviors, (3) understanding the reasons behind the phenomena, problems, or behaviors, (4) more appropriate for causal case studies, or (5) requires strong theoretical and interpretation skills, and personal experience	**Participant observation In-depth interviews Document analysis Questionnaire**	**Field study Case study**
Predictive				
to predict the outcomes of the phenomenon/ to forecast the events and behaviors resulting from the phenomenon	What will occur as a result of this phenomenon?	(1) More Quantitative methods, (2) suit to future or unknown events such as trends and behaviour patterns, (3) depending on the data analysis and assumptions	**Questionnaire (representative sample) Proxemics/kinesics, content analysis**	**Experiment Quasi-experiment**

Source: Adapted and amended from Marshall and Rossmann (1989) and Bhattacherjee (2012)

The objective of this research is to investigate the relationship between IT capability and customer-focused strategies. In other words, the implementation of this research study requires an in-depth exploration of the nature of ITC and CFS in a particular unit of analysis. The study is exploratory in nature and the rationale is as follows: (1) the research topic is new in the academic field and can uncover ideas that may be useful to both practitioners and researchers. In addition, the research domain

is still under investigation, so following an exploratory approach is preferable for gaining richer understanding of the domain and the particular relationship between the two contexts (Eisenhardt, 1989); (2) the nature of the research questions is exploratory. RQ1 and RQ2, presented earlier in section 3.1, aim to discover the characteristics of IT capability and customer-focused strategy in order to operationalise the primary constructs of the research model (see RQ3). As a result of gaining answers to RQ3, the types and extents of relationships can be recognised (Yin, 2009). In addition, the cumulative answers to RQ1, RQ2 and RQ3 inform the emergent answer to RQ4; (3) this study is not confirmatory because it is not looking to confirm any predefined relationship. Instead, its purpose is to understand *the nature of the relationship* between IT capability and customer-focused strategy (Gregor, 2006); and (4) there are various social variables in the research, such as human behaviour, emotions and interaction factors, in addition to the IT perspectives, such as the flexibility of the IT infrastructure, the ability of the IT personnel and the experience of the IT management. These multiple variables require exploratory investigation to decipher their relative importance (Creswell, 2003).

Once the research approach has been defined, the researcher usually needs to define the means to translate and describe the nature of reality (Guba and Lincoln, 1994). The following section discusses the types of research methods adopted.

3.3.2 Research Methods

Research methods tend to involve a quantitative, qualitative or mixed methods approach. Table 3.4 identifies the distinctions that are useful in choosing a suitable approach.

Table 3.4: Characteristics of research methods

Characteristics	Method		
Tend to	Qualitative	Quantitative	Mixed methods
Use these philosophical assumptions	Constructivist/ advocacy/ participatory knowledge claims	Post-positivist knowledge claims	Pragmatic knowledge claims
Employ these strategies of inquiry	Phenomenology, grounded theory, ethnography, case study, and narrative	Surveys and experiments	Sequential, concurrent, and transformative
Employ these methods	Open-ended questions, emerging approaches, text or image data	Closed-ended questions, predetermined approaches, numeric data	open- and closed-ended questions, emerging and predetermined approaches, and quantitative and qualitative data and analysis

Source: adapted from Creswell (2003)

The quantitative method requires defined variables/hypotheses or questions to be examined. These variables are not applicable in the proposed research (Bhattacherjee, 2012). The extent of the relationship between IT and customer-focused strategy is not yet defined and requires investigation, so it is not possible to test (as yet) undefined attributes of IT capability or customer-focused strategy before discovering them from the field. In addition, using quantitative methods may affect the outcome of the research by creating truncated or contextually stripped situations if the researcher focuses on selected subsets of variables and inadvertently ignores another set during the research consideration, which might cause some results or findings to be blocked (Guba and Lincoln, 1994).

Furthermore, there are suggestions from authors who have implemented research on IT capability and used a quantitative method that they would prefer to use a qualitative rather than a quantitative research method. For example, Fink and Neumann (2007) would prefer to use qualitative methodologies in future research to analyse dynamic data over time. Kim et al. (2011) suggest conducting qualitative research to obtain data from different samples in order to gain more rigorous research. Bhatt et al. (2005) refer to qualitative methodologies as a more useful method for knowing how IT capabilities are created and leveraged over longer periods of time in order to cover the limitation of quantitative method in their research.

As described previously in the research objective sections (1.2 and 3.1), this research study aims to explore the relationship between ITC and customer-focused strategy. The research depends primarily on constructivist perspectives, such as historical experiences and the holistic overview of specific participants of the context under investigation (Creswell, 2003). In addition, the type of research questions presented in section 3.1 (‘what are’ and ‘how is’) can be best answered qualitatively (Creswell, 2003; Gregor, 2006; Yin, 2009). A qualitative approach is useful in exploring and describing the reality of the participants in contextual-based information (Guba and Lincoln, 1994; Miles and Huberman, 1994; Gregor, 2006). Thus, a qualitative approach is considered appropriate in the context of this study, as it facilitates a wider and more comprehensive exploration and analysis of the role of IT capability

in a customer-focused strategy. Consequently, the researcher can refine the constructs of the research study derived from the literature in chapter one by identifying the relationships between the two contexts, and by considering emergent themes (Eisenhardt, 1989; Miles and Huberman, 1994; Ritchie and Lewis, 2013). Furthermore, the researcher can refine this study by focusing on the validity and reliability of the research design in the next section.

3.3.3 Research Validity and Reliability

Researchers require criteria or standards to check the validity of case study designs and judge the rigour of their research. Yin (2009) proposes four criteria for testing a research study: construct validity, internal validity, external validity, and reliability, and defines them as follows:

- Construct validity: identifying correct operational measures for the concepts being studied.
- Internal validity: seeking to establish a causal relationship, whereby certain conditions are believed to lead to other conditions, as distinguished from spurious relationships.
- External validity: defining the domain to which a study's findings can be generalised.
- Reliability: demonstrating that the operations of a study, such as the data collection procedures, can be repeated with the same results.

Yin (2009) comments that the above four tests are common to all social science methods, although he mentions that internal validity is a test for explanatory or causal studies only and is not suitable for descriptive or exploratory studies. Therefore, in order to identify criteria which are applicable to and appropriate for qualitative research, Bhattacherjee (2012) proposes four considerations to address the limitations in the above-mentioned criteria: trustworthiness in terms of credibility, transferability, dependability and conformability. Table 3.5 describes these four criteria.

Table 3.5: Trustworthiness

Criteria	Technique
Credibility	• The extent to which the data and data analysis are believable and trustworthy. • Credibility is analogous to internal validity
Transferability	• Research findings are transferable or generalisable only if they fit into a different context or new contexts outside the actual study context. • Transferability is analogous to external validity
Dependability	• The consistency of observing the same finding under similar circumstances. • Dependability is analogous to reliability.
Conformability	• The degree to which the research findings can be confirmed or corroborated by others. • It is analogous to construct

Source: adapted from Bhattacherjee, 2012

Consideration of the criteria listed by Bhattacherjee (2012) with the assistance of the list of criteria from Yin (2009) can enable the validation of research design where applicable. Credibility may be enriched by matching a number of patterns from the data analysis or by an explanation of rival comparisons. Transferability can be enriched using replication logic during multiple-case studies in the target organisations (Eisenhart, 1989). This tactic can be employed during the whole research design. Dependability can be enriched by documenting the same procedures followed during all cases. This tactic helps to minimise errors and biases in a study. This kind of reliability strongly supports arriving at similar findings as a first step and might be the foundation for generalisation in future research. Conformability can be enriched by using multiple sources of evidence in data collecting so that each can support the others, and one source or piece of evidence can be corroborated by another source or piece of evidence. Triangulation is another way to confirm research findings by building a chain of evidence (Yin, 2009) across all the cases according to logic sequences. In conclusion, all validity tests are important for the researcher to double-check the data collection and analysis methods, particularly in the case of the appearance of non-logical elements, such as inconsistency in the findings or discrepancies in the data.

To avoid obstacles in data collection, such as unanticipated results, whether through difficulties in or opportunities from sampling, response inconsistency, and weakness in a participant's motivation, researchers should approach data collection as a project that needs a plan to be followed and revised according to progress (Stanton, 1998). This formalisation helps coordination when multiple investigators work together or multiple cases work in parallel. The approach also enables some separation between data collection and data analysis.

The collected data have a positive link with the accuracy of the research questions or objectives and the unit of analysis. The researcher needs to ensure the full preparation of all the required materials, questions, documents and facilities. Therefore, a study must involve a detailed outline of the questions based on a master design and the researcher must manage the time spent on each site and the targeted participants and resources appropriately (Benbasat et al., 1987). The researcher needs to be meticulous in keeping records. Precious data may be lost when entrusted to memory or not organised as soon after collection as possible. This approach is critical and important in multiple-case designs where, as time passes, the details of various sites tend to run together. In consequence, the researcher's goal should be to collect data in such a way that the researcher could pick it up and immediately understand it and work with it (Benbasat et al., 1987; Darke et al., 1998). Therefore, accurate and well-organised data collection leads to reliability, sensitivity and appropriateness for the whole research. The following section elaborates the design of the case studies used in this research and considers the appropriacy of the unit of analysis, the case study approach and the sampling strategy for this study.

3.4 Designing Case Studies

The design of the case studies of the units under investigation aims to articulate the borders for conducting the fieldwork within the research study and to gain evidence to fulfil the research objectives and answer the research questions. In section 3.4.1, the organisation is selected as a suitable unit of analysis in accordance with answering the research objective and questions. In section 3.4.2, multiple case studies are discussed and justified as an approach to addressing the proposed research study. Section 3.4.3 discusses the sampling strategies according to the

classification list compiled by Patton (1990) and selects the combination of typical case and stratified purposeful sampling as an appropriate sampling strategy.

3.4.1 Unit of Analysis

It is important to identify the unit of analysis in a piece of research. The researcher needs to narrow the scope of choice of possible units to a particular context and focus on individuals, groups or an entire organisation (Benbasat et al., 1987). The unit of analysis refers to the technology, collective, or object that is the target of the investigation and any other entity about which the researcher wants to draw inferences (Bhattacherjee, 2012). According to Patton (1990, p.168), "The appropriate unit of analysis is to decide what it is you want to be able to say something about at the end of the study". The researcher needs to select the most appropriate unit of analysis according to the purpose of the study to be conducted (Benbasat et al., 1987). It is important to understand the unit of analysis, as it is the main factor in shaping the type of data to be collected and who should collect it (Bhattacherjee, 2012). It is worth noting that the organisation has been selected as the unit of analysis from numerous studies in which IT capability is the prime factor of the research (Rai et al., 2012).

In the case of this research, chapter two focuses on the organisational implications of a heightened customer focus, the customisation of the organisation according to customer needs, and the commitment of the organisation to dealing with customers. These activities depend on functions across the organisation implemented to achieve a customer-focused strategy. Chapter two also introduces IT capability as an organisation's ability to acquire, deploy and leverage IT resources. The organisation has been included explicitly in the definition of IT capability and components of customer-focused strategy, which means that the organisation is the main target of inquiry (Yin, 2009). The purpose of this study is to focus on generating knowledge from the holistic characteristics of IT capability and customer-focused strategy. This means understanding how organisations interact with their customers and customise their products/services according to the customers' needs and how IT can support the organisation in achieving these strategies. Therefore, it makes sense to select the

organisation as the unit of analysis in order to ensure all related characteristics are included in the research study. Furthermore, the nature of a strategy or strategic view means that searching lower than at the organisation level is not sufficient for the research purpose because strategy is a concept of organisational aspiration and is usually present at the management level of an organisation (Mintzberg, 1987).

The next section discusses the case study approach. The justification for using multiple cases to fulfil the purpose of the study is provided along with a brief description of each organisation.

3.4.2 Case Study Approach

Empirically, there are multiple approaches to examining research, such as the use of experiments, surveys, field studies, and ethnographic and case study research (Yin, 2009). Case studies can be used to accomplish the aim of generating theory from collected data (Eisenhart, 1989). “The term ‘case study’ is strongly associated with qualitative research although it is used in a variety of ways” (Ritchie and Lewis, 2013, p.51). Therefore, the case study approach is preferred here and is more relevant, since the research questions seek to explore a current organisational context. This is appropriate for an exploratory phase in which the boundaries are not well defined between phenomena and the target context. There is ambiguity in the relationship between IT capability (technology), customer focus (strategy), and organisation (people).

Creswell (2003) suggests that time and activities are the main components of the case study. The researcher needs to explore and collect data from organisations and verify the research objectives during a certain period of time. Stake (1995) categorise case study types as multiple-case studies, single-case studies and intrinsic case. Table 3.6 identifies the characteristics of each type of case study.

Table 3.6: Types of case study

Multiple-case studies	Single-case study	Intrinsic case study
• Involve a comparison process to explore differences or similarities within and between cases. The goal is to replicate findings across cases. • Cases should be chosen carefully to unify standards and avoid any unexpected result that might affect the results across cases. • Collective-case studies.	• Involves investigating in depth and the context(s) scrutinised. • Used to accomplish something other than understanding a particular situation or a supportive role in facilitating our understanding of something else. • Provides insight into an issue or helps to refine a theory. • Instrumental case study.	• The case itself is of interest and the concern is to better understand the case. • Its particularity and ordinariness assist in illustrating a particular trait or problem.
• Require time and effort • Need special skills • Offer a more generalised aspect • Need access and relationships	• Reflects ordinary activities • Not necessary to be able to replicate it in another case.	• Difficult to be primarily case • The case can be representative of other cases.

Source: adapted from Stake (1995)

Replicating and comparing the analysis in a single case with other case studies is not achievable. Furthermore, the observational and integrative ability of the researcher is crucial in the interpretation of the findings. This ability becomes even more important when the researcher needs "to establish causality, and findings from a single case site may not be readily generalized to other case sites" (Bhattacherjee, 2012, p.40). The absence of the possibility of replication between cases in a single case study may prevent better understanding of the phenomenon under investigation (Yin, 2009).

The multiple-case approach is favoured for a better understanding of phenomena, such as by answering 'what' and 'how' questions (Miles and Huberman, 1994; Yin, 2009), and is thus an ideal approach for this exploratory study. Moreover, the use of multiple-case studies enhances the validity and stability of research design (Ngai et al., 2011). The findings from the multiple-case approach are considered to represent more convincing evidence (Yin, 2009). A multiple-case approach allows the researcher to analyse data within each case and across cases (Baxter and Jack, 2008). Therefore, this study employs multiple-case studies to enable comprehensive comparisons across organisations (multi-site analysis) in order to achieve literal replication (Yin, 2009).

The requirements that need to be considered during the selected cases are the existence of the two main constructs of the research study – IT capability and customer-focused strategy – and applying the same data collecting design. Data collection is implemented for different sizes and ages of organisation (Santhanam and Hartono, 2003) in order to minimise the potential bias arising from size (Ngai et al., 2011) and strive to have convergent results (Pan and Pan, 2006). In addition, typical criteria regarding sample size are also irrelevant to this research study as they are more relevant to the decision of a researcher to reflect a number of case replications (Yin, 2009). However, according to Eisenhardt (1989), it may be necessary for the researcher to plan a number of cases in advance because of the availability of resources and time constraints.

3.4.3 Sampling Strategy

A qualitative research approach was selected as appropriate in the context of this study. In section 3.4.1, the organisation itself is selected as the unit of analysis in accordance with the research objective and questions. Typically, qualitative inquiry focuses on small samples, although this type of small sample is intended for cases involving rich information and knowledge in order to conduct an in-depth study of a phenomenon (Eisenhardt, 1989; Patton, 1990). Thus, purposeful sampling can be used to address and learn a great deal about issues of central importance to the purpose of the research to meet the research objective and answer the research questions (Patton, 1990). Purposefully selecting information-rich cases is a great strength of this type of sampling and is used in this research to address and better understand the relationship between ITC and CFS.

The researcher reviewed various sampling strategies (Patton, 1990) in order to select one that would be appropriate for this research study. The combination of *typical case sampling* and *stratified purposeful sampling* (Patton, 1990) is an appropriate sampling strategy for bridging the gaps in knowledge identified by the study.

Typical case sampling can be useful in providing descriptions and illustrations (i.e., a qualitative profile) of cases that are ‘normal’ or ‘average’ (Patton, 1990). A research topic cannot be addressed by considering normal cases or people with no prior

knowledge; it needs knowledgeable people (Patton, 1990). A typical case strategy focuses on enabling the cooperation of key informants or knowledgeable participants about overall patterns of response (Ritchie and Lewis, 2013).

In addition, stratified purposeful sampling aims to increase the accuracy of analysis, explore the case and support in-depth interviewing. In this study, the researcher can employ stratified purposeful sampling with qualitative research methods to explore the key characteristics of IT capability and customer-focused strategy (Patton, 1990).

Initially, three organisations were selected during the preparation of the research methodology. Patton (1990, p.186) indicates that the researcher "is absolutely obligated to discuss how the sample affected the findings, the strengths and weaknesses of the sampling procedures, and any other design decisions that are relevant for interpreting and understanding the reported results". However, the researcher stops adding new cases and participants once he or she is convinced that the data collection has achieved a level sufficient to fit the research objective and questions, or once the researcher feels a new case or participant is simply a duplicate of previous ones. Eisenhardt (1989, p.545) recommends that "researchers should stop adding cases when theoretical saturation is reached", theoretical saturation meaning "the point at which incremental learning is minimal because the researchers are observing phenomena seen before".

The researcher aimed to include various and different samples from the fieldwork (Santhanam and Hartono, 2003; Shanks et al., 2009) to minimise the potential bias that might arise from considering a single industry (Ngai et al., 2011). This approach also ensures that the selected cases are information-rich and appropriate for in-depth study (Patton, 1990) to ensure these organisations are able to provide an understanding of the current situation and are representative of similar organisations in the same industry.

Therefore, the three cases selected for their business overview are the Saudi Telecom Company (STC), the Arab National Bank (ANB), and the Electricity Supply Board Networks (ESB Networks). Preliminary information is included for each case in Table 3.7.

Table 3.7: Preliminary information of the selected cases

	STC الاتصالات السعودية	العربي anb	ESB NETWORKS
The scope	Telecommunication services provider	Comprehensive commercial and investment banking services	The electricity distribution network
The fields	The Middle East and North Africa	Saudi Arabia and UK	The Republic of Ireland
Number of employees	12000 employees	3,600 employees	3,000 employees
Diversity of customers base	Personal and business	Personal and corporate	Domestic, commercial and industrial customers

An overview of the profile and lists of the core activities of each case are outlined extensively in the following sections for each of the organisations considered in this study.

3.4.3.1 Saudi Telecom Company

The Saudi Telecom Company (STC) is the largest telecommunication services provider in the Middle East. One of the main telecommunications operators within the Kingdom of Saudi Arabia, its international presence extends to nine countries (the Kingdom of Saudi Arabia, Bahrain, Kuwait, Malaysia, Lebanon, Jordan, India, Turkey, and South Africa).

STC, established in 1998 to bring together the state telecommunications services, became a semi-state-owned company in 2002 when the state ceded control of 30% of its shares. The company's headquarters are in Riyadh, and there are 270 service offices in all 13 districts of the Kingdom. STC has approximately 12,000 employees operating in locations throughout the Kingdom. Table 3.8 details the core activities of STC.

Table 3.8: The core activities of STC

Activities	Description
Telecommunication networks	Establishing, managing, operating and maintaining fixed and mobile telecommunication networks and systems.
Telecommunication services	Delivering, providing, maintaining and managing diverse telecommunication services to customers (mobile, landline, and broadband).
Telecommunication consulting services	Preparing the required plans and studies to develop, execute and provide telecommunication services from all technical, financial and managerial aspects.
	Preparing and executing training plans in the telecommunication field,

	providing or obtaining consulting services which are directly or indirectly related to the company's business and activities.
Telecommunication devices and equipment	Expanding and developing telecommunication networks and systems by utilising up-to-date, modern devices and equipment in telecommunication technology, particularly in the field of providing and managing services.
	Providing information, technologies and systems that depend on customers' information, including preparing, printing and distributing telephone and commercial directories, brochures, information, and data.
Internet service provider	Providing the required communication means to transfer (internet) services and any telecommunication activities or services the company provides, whether for media, trade, advertising or any other purposes the company considers appropriate.

The next section discusses the profile of ANB and its core activities.

3.4.3.2 Arab National Bank

Arab National Bank (ANB) was established in 1979, by Royal Decree, taking over the existing operations of Arab Bank in the Kingdom of Saudi Arabia. ANB, a Saudi Listed Joint Stock Company, now ranks amongst the 10-15 largest banks in the Middle East. Headquartered in the capital city of Riyadh, the bank is supported by Regional Offices in Jeddah and Khobar, and has a branch in London. Over the past 35 years, ANB has been committed to living up to its brand promise of being "A Friend Indeed".

The ANB Group offers comprehensive commercial and investment banking services, in addition to specialised services in the fields of heavy equipment leasing and home finance. ANB is a commercial bank catering for the diverse needs of its Corporate and Retail clients. To service a large and varied customer base which exceeds 2 million, ANB has an extensive distribution network, with 315 premises spanning the Kingdom. These include upwards of 203 branches of which 49 are Ladies' Branches or Sections, 95 remittance centres (TeleMoney), and 17 sales centres. Complementing the traditional distribution points, ANB has more than 1,200 ATMs, around 11,000 point-of-sale terminals, an award-winning customer contact centre and a technologically advanced, yet customer-friendly, online banking service. ANB Invest, a wholly-owned subsidiary of ANB, is the investment banking arm of the Group. It provides advisory services in addition to brokerage and asset management. Al-Arabi Heavy Equipment Leasing (AHEL), a 62.5%-owned subsidiary, specialises in lease-financing for heavy equipment. Saudi Home Loans (SHL), a 40%-owned affiliate in partnership with the

International Finance Corporation (IFC) and Dar Al-Arkan, caters for the growing needs of home finance. ANB Insurance, a Saudi joint stock company, with ANB, MetLife Alico and Chartis (AIG) as joint-venture partners, provides corporate and personal insurance products.

ANB has several core activities, summarised in Table 3.9.

Table 3.9: Core activities of ANB

The activities	The Description
Retail and Private Banking	Serving the Individual customer, ANB offers a wide suite of products and services through an extensive branch network and a technologically advanced self-service delivery offering.
Corporate Banking	ANB's Corporate Banking Group (CBG) focuses on providing a customised suite of financial products and services to large and medium-sized Saudi entities in both the Public and Private sectors as well as to International and Joint Venture companies.
Commercial Banking	The Bank actively supports small businesses operating in the Kingdom with dedicated and specialised teams in each region. ANB is an active participant in the "Kafala" guarantee scheme.
Treasury Services	Treasury provides a wide range of standard and customised products and services. These include trading, hedging and investment products.
Project and Structured Finance	ANB has activity in arranging a multitude of highly structured syndicated financings in the field of Project and Structured Finance in the Kingdom. ANB offers a comprehensive portfolio of products and services through a dedicated and experienced team.
London Branch	ANB established its London Branch in 1991. The branch is strategically located in the Mayfair District and performs an important role in supporting the international business interests of the Bank's clientele in the United Kingdom.

The next section discusses the profile of ESB Networks and its core activities.

3.4.3.3 The Electricity Distribution Network

The Rural Electrification of Ireland began in 1946, as a visionary project to install the electricity infrastructure which would provide power to the people of Ireland, supplying energy, light, heat and enhancing their quality of life. These networks and the power they supplied enabled the social, economic and industrial development which saw Ireland grow from an underdeveloped peripheral region to one of the developed countries in the world. ESB Networks has continued to develop and refurbish the Irish electricity infrastructure to a world-class standard, catering for today's Irish economy. ESB Networks is responsible for constructing all the sub-transmission, medium- and low-voltage electricity network infrastructure in Ireland and for managing this infrastructure, which is owned by ESB. ESB Networks manages

the transmission assets and ensures that the transmission infrastructure is developed and maintained in accordance with the requirements set down by the state-owned electric power transmission operator in Ireland (Eirgrid).

ESB Networks encompasses all the distribution stations, overhead electricity lines, poles and underground cables that are used to bring power to more than two million domestic, commercial and industrial customers in Ireland. ESB Networks business builds, operates and maintains a nationwide distribution system that includes 235,000 transformers and almost 160,000 km of distribution networks (e.g., overhead lines and underground cables). These activities are undertaken by ESB Networks staff, who are located in 34 geographic areas throughout the country. As owners of the nationwide transmission system, ESB is also responsible for carrying out the construction and maintenance of the high-voltage 400 kV, 220 kV and 110 kV transmission systems, comprising over 6,600 km of overhead lines and 30 large transmission stations. In addition, ESB Networks has core activities, the core activities of ESB Networks include those shown in Table 3.10.

Table 3.10: Core activities of ESB Networks

Activity	Description
Serving all electricity customers	Ensuring electricity reaches the homes and businesses of the company's 2.4 million electricity customers in Ireland in a safe and efficient manner at all times.
Increasing electricity network reliability	Building a smart network that has significantly increased network reliability, continuing the roll out of a smarter network and the distribution of world-leading self-healing network solutions.
Delivering an electricity distribution network	The electricity distribution network includes all distribution stations, overhead electricity lines, poles and underground cables.
Facilitating a competitive electricity market	As a meter operator, the company installs, maintains and reads the meters of electricity customers up to four times annually and provides this information to suppliers.
Providing power for the future	The distribution system is being adapted as part of the drive towards a lower carbon energy future, in line with Ireland's commitment to meet 40% of its electricity needs from renewable sources by 2020.

The rationale for selecting the three organisations referred to above is outlined for each and considered in the next section.

3.4.4 Rationale for Selecting the Cases

All three of the cases selected sell standardised and highly regulated products in mass markets, and have moved from being traditionally focused on operational efficiency and continuity of supply to a customer focus. From the profile of the three organisations, they are considered as being excellent in their customer service development. These cases also have a distinct focus on the use of technology in the service of both the business and its customers. A synthesis of the case selection strategy is illustrated in Table 3.11.

Table 3.11: Sampling criteria for selecting the cases

	STC	ANB	ESB Networks
Customer focus	• **The different customer segments.** • **The high number of customers (around 12 million) and 270 service offices.**	• **The diversity of its customers (which exceed 2 million).** • **Its diverse network of 203 branches.**	• **Highly diversified segments of customers (2.4 million).** • **Diversity of service offices (located in 34 geographic areas).**
Market position	• **The largest telecommunication services provider in the Middle East.** • **An international presence in nine countries.**	• **The largest bank in Saudi Arabia.** • **Ranks amongst the 10-15 largest banks in the Middle East.**	• **The first electricity provider in Ireland.** • **The only provider responsible for managing and maintaining the electricity network infrastructure in Ireland.**
Use of technology in customer services	• **Diversity and evolution of services (landline, mobile and broadband).** • **The services are predominantly technical in nature.**	• **Comprehensive commercial and investment banking services.** • **Various technology-based products and services (online banking).**	• **Evolution of smart services through smart networks (smart metering, smart reads, and smart homes).**
Awards for customer focus	• **The fastest-responding among all global telecommunication companies on Twitter and Facebook (2015).**	• **Winner of the 10th Annual Customer Experience Benchmarking Index 2014 in the Gulf Cooperation Council (GCC).**	• **ESB Networks has achieved recognition for a Hexagon Safety and Infrastructure Icon Award for its visionary use of GIS software and business systems (2015).**

Source: adapted from Stake, 1995

The rationale for selecting the three organisations referred to above is described in detail in the following sections.

3.4.4.1 Rationale for selecting the STC case

The rationale behind selecting STC is the diversity and evolution of its telecommunication provision (such as landline, mobile and broadband services). STC is considered a rich case due to the number of customers and the different customer segments. STC is also considered to be excellent in dealing with the interests of different generations of customers. The CUSTOMER CARE account on Twitter (@STCCare) has achieved first place for making STC the fastest-responding company among all global telecommunication companies on Twitter and Facebook.[1] This achievement reflects a sense of maturity regarding STC's understanding of its customer-focused strategy.

In addition, STC is well positioned to deliver value to shareholders, has a strong market position in the Kingdom of Saudi Arabia (KSA) and an expanding presence in key regional growth markets. STC services are technology-based, so it is appropriate to explore the characteristics of the company's IT capability. The diversity of the organisation's customers and the maturity of its understanding of customer focus are important criteria in the sampling strategy.

3.4.4.2 Rationale for selecting the ANB case

ANB is one of the largest banks in Saudi Arabia, with a network of branches and different customer categories. Like STC, ANB has achieved recognition for its customer focus. ANB was announced the winner of the 10th Annual Customer Experience Benchmarking Index 2014 in the Gulf Cooperation Council (GCC) as the Best Customer Experience Overall Website.[2]

ANB products are also technology-based, and the diversity of its customers and mature understanding of customer focus are also important in the sampling strategy. Thus, ANB is an appropriate choice to explore the characteristics of IT capability and a customer-focused strategy.

[1] http://www.stc.com.sa/wps/wcm/connect/english/stc/aboutSTC/Awards
[2] http://www.ethosplc.com/customer-experience-measurement/customer-experience-benchmarking-index/

3.4.4.3 Rationale for selecting the ESB Networks case

ESB Networks is highly diversified in terms of the different segments of customers to which the company offers services (i.e., all types and levels of Irish and non-Irish organisations in Ireland). The customer diversity and rapid expansion of the service are indications of the rich information it is possible to extract from the organisation.

ESB Networks has achieved recognition with a Hexagon Safety and Infrastructure Icon Award[3] for its visionary use of software. It has successfully developed and managed 160,000 km of electricity network, serving more than two million customers and improving the safety of its field crews. ESB Networks has also undertaken an ambitious programme to implement a new geographic information system (GIS) solution and comprehensively integrate it with corporate IT systems and infrastructure.

The aforementioned reasons (technology-based products, customer-oriented products, and customer diversity) support the selection of ESB Networks as one of the cases to be examined in this study. The next section describes the mechanism for collecting data from the three organisations selected for this research.

3.5 Data Collection

Data collection design is part of the research approach and is known to and followed by most researchers and academics. In typical research, when the theoretical aspect has been identified and explained, researchers will collect data in a way that seeks to guarantee the conformity of the data collection with the level of the theoretical work. According to Klein et al. (1994, pp.193-194),

> *If the level of a theory is certain, researchers may enhance the fairness and rigor of their research by employing data-collection strategies.*

Polkinghorne (2005) argues that the purpose of data collection is to provide evidence that produces a core description of an experience. The researcher demonstrates the findings are generated from the collected data to illustrate the investigation of ideas and thoughts in order to express them as evidence in presenting the analysis of the

[3] http://www.hexagonsafetyinfrastructure.com/case-studies/esb-networks-modernizes-gis-to-meet-infrastructure-and-customer-needs

case studies. This evidence can be direct or indirect, according to the content of the data gathered and the outputs. Creswell (2003, p.15) characterises data collection in a case study as taking place over a "sustained period of time". Data collection has a start and end point as the researcher searches for evidence.

Yin (2009) encourages the researcher to have fully triangulated the data when collecting information from multiple sources and to aim at verifying the same fact or phenomenon, because "case studies using multiple sources of evidence were rated more highly, in terms of their overall quality, than those that relied on only single sources of information" (COSMOS Corporation, 1983, cited by Yin, 2009, p.117). In addition, triangulation from multiple data collection methods may provide substantiation for the constructs of a research study (Eisenhart, 1989). In this research study, multiple data collection techniques support efforts to uncover the relationship(s) between ITC and CFS. Interviews and documentary sources are the selected techniques. The following sections describe these techniques and provide the justification for their selection.

3.5.1 Interview Technique

Interviews are an important data collection source for case study research (Yin, 2009). Interviewing is the primary and most widely used approach within the interpretive studies (Walsham, 2006) because it involves an organised conversation to gain information from the history and experience of the respondent (Yin, 2009). Interviews are very useful in allowing people to be free to describe their perceptions and effective in allowing the interviewer to understand other signs and social worlds around people, such as body language and circumstances (Miles and Huberman, 1994; Bhattacherjee, 2012).

Two common categories of interview are theoretically valuable and useful to research: the individual interview, which is engaged by person-to-person discussion, and a group interview, which is engaged in by a team (Bhattacherjee, 2012; Ritchie and Lewis, 2013). The researcher in this study relied on individual interviews due to the nature of the research subject and the various constructs of the research study.

The main rules for undertaking useful interviewing are ensuring the 'quality of response' and distinguishing between narrative responses that have a beginning-middle-end structure and the particulars of specific occurrences or courses of events, or other forms of speech such as uncommunicative responses. At the same time, the researcher is able to observe associated reactions from the interviewee, such as gestures and body language (Bhattacherjee, 2012). The most frequently used tool recommended for the interview technique is tape/digital-recording in order to guarantee the quality and effectiveness of the data collection (see section 3.3.3). Recording acts to save time and collect complete responses and comments to support the researcher if he or she needs to listen to an interview again. However, recording may prevent the interviewee being open or truthful (Walsham, 2006). If recording is not allowed, extensive notes can be taken during the meeting and then written up immediately afterwards (Walsham, 2006).

Semi-structured interviews are the most suitable type of interview for this study because they depend on key questions posed in the same design each time (Ritchie and Lewis, 2013). Semi-structured interviews are suitable for an exploration of the opinions and insights of IT and business managers regarding the relationship between IT capability and customer-focused strategy (Barriball and While, 1994). Semi-structured interviews also facilitate comparability by standardising the interview design in order to conduct cross-analysis between the target organisations (Barriball and While, 1994).

This researcher used open-ended questions to collect data and identify and develop the emerging themes or patterns that can be fundamental steps towards generating a possible theory, or at least explore the boundaries and best understanding of existing relationships (Creswell, 2003). The key questions for the semi-structured interviews are provided in *Appendix A*. The development and refinement of the interview instrument followed a series of expert consultants and a pilot study (see *Appendix B*).

With the interview questions and instrument ready to progress to the interview stage, the next section discusses the criteria for selecting the interviewees.

3.5.2 Selecting the Interviewees

Once the selection of an organisation has been decided, the researcher then works to identify the rules for selecting the interviewees. In this study, the researcher selected a cross-section of managers in the three cases to avoid self-selection bias (Heckman, 1979). The managers were from different functional levels, departments and positions (Harvey and James, 2006). The interviewees included IT managers who are close to business and interact directly and daily with the business departments, such as business relationship coordinators, and some managers who are more distant from the business and only interact in specific cases, such as an enterprise service delivery manager. This study collected data from multiple and varied business interviewees, such as from sales and marketing departments, as well as experts concerned with the customer experience.

Interviews were conducted at several management levels. For example, there were interviews with managers at the senior management level, such as the vice president of business operations, and with team leaders responsible for development. The goal of this diversity is to cover the largest possible segment of organisational managers and reflect the reality within each organisation in terms of taking data from different levels and triangulating (Eisenhardt, 1989). This method helped the researcher to learn the contexts of the target organisations.

The researcher adopted a different filtering process depending on the level of knowledge and influence of the interviewees within each organisation. According to Knoke (1994), there are four generic techniques for locating actors:

(1) Positional methods: persons or organisations occupying the key roles in the analytical system, such as the elected or executive positions in major units.
(2) Decisional methods: actors that participate in making or influencing the major decisions for the system as a whole.
(3) Reputational methods: actors widely believed by knowledgeable observers to possess the potential to ‘move and shake’ the system.
(4) Relational methods: actors that maintain important political relations with other system members.

For the purposes of this study, the interviewees were required to have specific powers of decision-making and a knowledge background. Interviews were conducted with managers from IT and business functions. These are IT professionals holding managerial positions (Fink and Neuman, 2007), IT managers with a superior IT capability background (Chae et al., 2014), business executives or directors (Tallon and Pinsonneault, 2011), or senior information system executives and senior business executives (Lu and Ramamurthy, 2011; Wang et al., 2013). Therefore, this research study conducted interviews with business managers who have knowledge and experience in customer management, as well as IT managers who have sufficient knowledge and experience of IT capability to answer specific research questions. The researcher was also able to identify additional interviewees who had direct contact with those already interviewed due to their reputation in terms of knowledge of IT or business functions. A total of 35 business and IT managers were interviewed. Table 3.12 provides information about the positions and numbers of the participants, together with interview durations and dates. It is worth noting here that 'manager' is not a job title, but a means of referring to the interviewees.

Table 3.12: Positions of interviewees and interview duration and dates

Saudi Telecom Company							
Organisational level	*Position/Department*	*Time-Duration*	*Title*	*Organisational level*	*Position/Department*	*Time-Duration*	*Title*
Operational	VAS and Application Manager/ Multimedia Management-PBU	05/08/15 00:54:46	Business manager 1	Managerial	Data Services and Solutions Director/ Network Services Solutions	06/08/15 00:33:22	IT manager 5
Managerial	Business Intelligence Director/ IT Sector	02/08/15 00:26:10	IT manager 1	Operational	Service Quality Expert/Field Operations and Technical Customer Care	18/08/15 00:41:37	Business manager 6
Operational	Planning and Performance Director / Field Operations and Technical Customer Care	02/08/15 00:53:40	Business manager 2	Operational	Messaging and Roaming Service Manager/ Network Services Solutions	19/08/15 00:48:55	IT manager 6
Managerial	Mobility Demand Manager/ IT Sector	05/08/15 00:42:08	IT manager 2	Strategic	Business Portfolio Mgmt. Director/ Group CSO	03/08/15 01:01:53	Business manager 7
Managerial	Complaints Management Director/ Customer Care and Experience Sector	09/08/15 01:14:39	Business manager 3	Managerial	EBU Demand Management Manager/ IT Sector	12/08/15 00:40:27	IT manager 7
Strategic	Vice President of business operations/Business operations	06/08/15 00:50:31	IT manager 3	Operational	Journey and Touchpoints Director/ Customer Care and Experience Sector	19/08/15 00:33:30	Business manager 8
Managerial	CE Programs Design and Reporting Director/Customer Care and Experience Sector	12/08/15 00:57:07	Business manager 4	Managerial	WBU Demand Management Manager/ IT Sector	10/08/15 00:38:17	IT manager 8
Managerial	Customer Experience Systems Manager/ Network Services Solutions	11/08/15 00:50:17	IT manager 4	Operational	Product Development Support Director/ Marketing	20/08/15 01:05:19	Business manager 9
Operational	Systems Operations Director/Field Operations and Technical Customer Care	17/08/15 00:38:25	Business manager 5	Statistics: 17 face to face interviews, 8 from IT, 9 from business, 12 site visits,			

Arab National Bank				ESB Networks			
Organisational level	*Position/Department*	*Time-Duration*	*Title*	*Organisational level*	*Position/Department*	*Time-Duration*	*Title*
Strategic	Senior Marketing Officer/ Consumer Bank	12/08/15 00:52:21	Business manager 1	Operational	Customer Brand and Social Media Manager/ Distribution and Customer Services	22/06/15 00:56:36	Business manager 1
Strategic	Head of Technology Services Division/ IT Group	07/07/15 00:39:09	IT manager 1	Managerial	IT Middle Manager/ IT Service	29/06/15 00:37:38	IT manager 1
Managerial	National Sales Manager-Auto Leasing/ Consumer Bank	08/07/15 00:53:38	Business manager 2	Operational	Customer Care Logistics Manager/ Customer Care	23/06/15 00:46:30	Business manager 2
Operational	Business Project Manager/ IT Group	06/07/15 01:04:29	IT manager 2	Managerial	Business Relationship Manager/ IT Service	29/06/15 00:32:41	IT manager 2
Strategic	Head of Customer Experience and Service Standards/ Consumer Bank	08/07/15 01:21:18	Business manager 3	Managerial	Customer Relations Manager/ Distribution and Customer Services	19/02/16 00:56:36	Business manager 3
Managerial	Customer Service Delivery Manager/ IT Group	10/07/15 00:33:06	IT manager 3	Strategic	ESB Network's Portfolio Manager/ IT Service	15/02/16 00:40:07	IT manager 3
Operational	Retail Internet Banking Manager/ Alternate Delivery Channels	11/08/15 00:54:43	Business manager 4	Strategic	Manager Customer and Business Performance/ Distribution and Customer Services	29/06/15 00:51:34	Business manager 4
Managerial	Business Application Portfolio Manager/ IT Group	07/07/15 00:37:36	IT manager 4	Managerial	Enterprise Service Delivery Manager/ IT Service	29/06/15 00:30:01	IT manager 4
Operational	Development Team leader/ IT Group	09/07/15 00:33:36	IT manager 5	Operational	National Customer Contact Centre Manager/Customer Care	11/02/16 01:07:29	Business manager 5
Statistics: 9 face to face interviews, 5 from IT, 4 from business, 7 site visits,				Statistics: 9 face to face interviews, 4 from IT, 5 from business, 6 site visits			

The researcher asked the interview participants if there were any official or unofficial documents related to the research topic that could support the interview discussion and enable the collection of historical data in this regard. The following section describes the documentation sources technique and provides some of the basic concepts in regard to collecting the documents.

3.5.3 Documentation Sources Technique

Documentation is very useful in case studies because documents are helpful in verifying the correct terminology and concepts of organisations that might have been mentioned in an interview, or to corroborate information from other sources (Yin, 2009). However, some academics consider documentation as a secondary technique because it acts to support major research techniques such as interviews and questionnaires (Sim and Wright, 2000). Thus, documentation is used in this study as a technique complementary to the interviews in cases where information was difficult to collect from the participants during the interview session. In addition, it is a useful technique for discovering historical data and can be active in avoiding bias from the participants' side (Yin, 2009).

A researcher often collects a range of documents from sites (Miles and Huberman, 1994). The documentation technique can involve unofficial documents such as memoranda and newspapers, official materials such as management reports or strategy and policy documents, or even performance measurements or internal documents such as archive records, organisational structures, and individual or financial references (Miles and Huberman, 1994; Sim and Wright, 2000; Yin, 2009). Documents can be for public or private purposes and the term 'documentation' is used more for interpreting narrative interviews (Sim and Wright, 2000).

A sample of the documents used in this study is summarised in Table 3.13, coded according to Miles and Huberman (1994).

Table 3.13: Document summary form

Consumption	Purpose	Case study	Site, date received	Appendix
1. STC Consumer Business Report				
Private*	Official	STC	Riyadh, 05/08/2015	*
2. Product and service tariffs				
Public	Official	ANB	Riyadh, 08/07/2015	C
3. Customer Service Improvement Plan 2013-2016				
Public	Official	ESB Networks	Dublin, 22/06/2015	D
4. Customer Satisfaction Survey-Q1 2015				
Private*	Official	ESB Networks	Dublin, 22/06/2015	*

** Note: 'Private' indicates a paper copy for information only and not for publication as per the request.*

The collection and analysis of qualitative data is an interactive process between the data and the researcher (Strauss and Corbin, 1998). The collection and analysis of qualitative data is a simultaneous and iterative process (Marshal and Rossman, 1989; Bhattacherjee, 2012; Ridder et al., 2014). The next section discusses the data analysis process followed in this study.

3.6 Data Analysis

Qualitative data analysis is a process of interpreting, cleaning, converting, and modelling data into useful information to develop empirical knowledge (Corbin and Strauss, 2008). Ridder et al. (2014) define qualitative data analysis as a process of reading through the data and interpreting them, and as a continual process throughout a research project. Walsham (2006) refers to qualitative data analysis as the learning approach from the field data in generating a more organised set of data. Bhattacherjee (2012) argues that focusing on qualitative data analysis is 'sense making' and a means of understanding the phenomenon under study. However, data analysis is the least developed and most difficult part of undertaking case studies and requires systematic techniques to separate data from conclusions (Eisenhardt, 1989; Yen, 2009).

Analysis of the data for this study began during the data collection process. The multiple cases are stationed in two countries, as mentioned in section 3.4, so data collection was conducted in sporadic intervals. Converting qualitative data into useful meaning requires a particular technique. Therefore, coding was used for data analysis

from the outset. Qualitative data analysis and coding are equivalent (Saldana, 2009). Walsham (2006) warns that "'coding' is a subjective process to some extent, because the researcher chooses the concepts to focus on". The concepts and implementation of coding are explained in the next section.

3.6.1 Coding

The process of coding represents a fundamental stage in the extraction of meaning from the field data collected. Coding involves converting a piece of data into numerical or character form in order to characterise the data (Denzin and Lincoln, 2005; Bryman, 2012). In the presence of huge amounts of data collected from interviews, data coding significantly supports data reduction, which facilitates the data analysis process (Eisenhardt, 1989; Miles and Huberman, 1994). In the same vein, coding helps identify the important topics and categories, particularly in multi-site analysis, as the coding process facilitates comparison across cases (Eisenhardt, 1989).

In this study, each interview transcript is around 16 pages (c. 6,000 words) and around six pages (c. 2,000 words) for each document from the field. In addition, some interviews were conducted in Arabic language and some in English, which gives the coding utmost importance in reconciling the two interview languages (Walsham, 2006; Saldana, 2009).

According to the classification of coding techniques undertaken by Strauss and Corbin (1998), coding techniques are open, axial or selective coding (Figure 3.2).

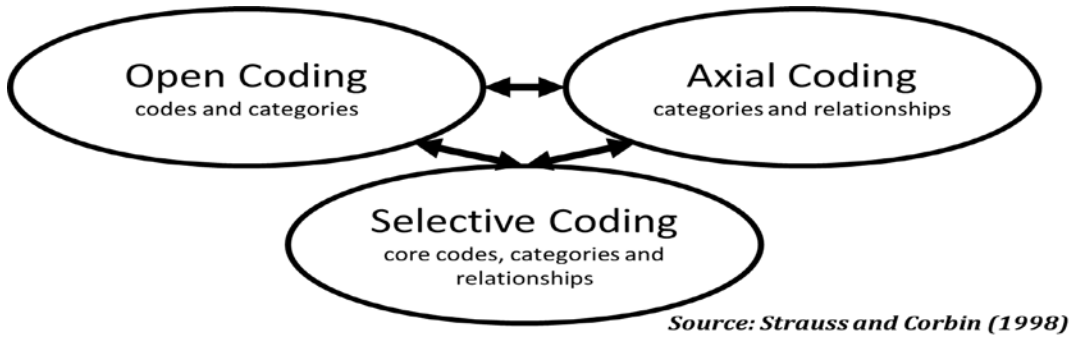


Figure 3.2: Coding techniques

In this study, data collected was analysed and categorised through an open coding process. Axial coding was then used to establish relationships between the categories. Finally, selective coding, which involves identifying the core codes and central

categories for use during the presentation and discussion of the findings, was applied. The following section lists and explains the coding techniques used in this study.

3.6.2 Within-Case Analysis

In order to avoid 'death by asphyxiation' due to huge amounts of data (Pettigrew, 1988, cited by Eisenhardt, 1989), each individual case is used to analyse the data in detail as effectively as possible. Eisenhardt (1989) typically requests in-detail writing for each site to perform within-case analysis. In-detail writing supports the researcher becoming closer and more familiar with the data, and this helps to develop a good understanding of both the content and related categories and patterns.

Saldana (2009, p.21) requires the researcher to "perform manual coding and qualitative data analysis using paper and pencil on hard copies of data, entered and formatted with basic word-processing software only". Manual coding was conducted within case for each case study. It started with the first cases, namely STC and ANB, and ended with the last case of ESB Networks. Put simply, the task meant underlining the codes and defining the main ideas. The example in Figure 3.3 gives an indication of the extent of manual coding, a process which gives the researcher a better perception of the data collected, resulting in more control and ownership of the analysis (Eisenhardt, 1989; Saldana, 2009).

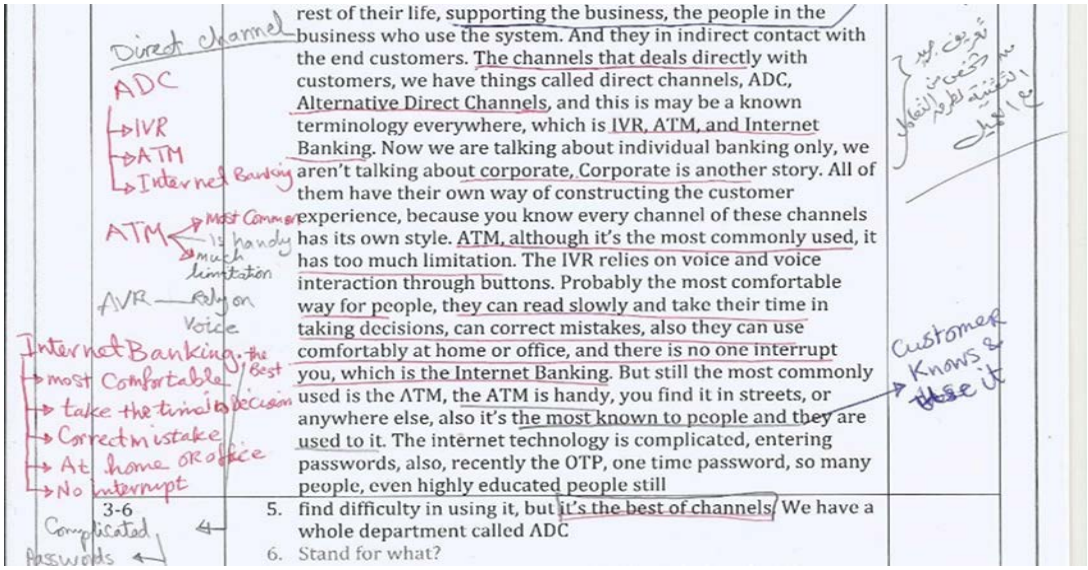


Figure 3.3: Sample of manual coding

3.6.2.1 Open Coding

Open coding is used to identify the main themes within the data that are likely to be related to the phenomenon under study. At the same time, searching for new concepts and improving old ones is an ongoing task during the coding process. Some of the codes are simple, some are complex. Some of the codes are expressed in sentences and some in paragraphs.

For example, there is complexity in explaining the interaction channels with the customer in some cases. On the other hand, there is a lack of evidence in some cases of the concept of customer loyalty. The role of the researcher is vital here to understand the context of the data. Bhattacherjee (2012, p.113) suggests that "a creative and investigative mind-set is needed for qualitative analysis, based on an ethically enlightened and participant-in-context attitude, and a set of analytic strategies". The researcher develops a specific strategy to support the manual coding sheets, involving the naming of the most frequently occurring categories.

Knowledge gained from the literature has a role in distinguishing the main codes related to the phenomenon, serving to answer RQ1, RQ2, and RQ3 referred to in section 3.1. With this in mind, the researcher is open to exploring and identifying new concepts relevant to the phenomenon under study. The initial open coding resulted in the code template. The code number, category, label code and priority are the main columns for each case. Analysis involved distributing the codes into categories, and identifying initial connections in terms of similarities or differences. This gives a priority to some of the codes, which is clearly linked to the research objective or questions. Figure 3.4 shows a sample of the open coding used.

Code	Time	Transcription	Category	Label	Priority
1.1.2	0-3	1. [AH]: If possible, would you mention your position and years of experience? 2. [AO]: Position : Responsible for a division in the IT – my answers will be simple and short as possible – In the Arab banking sector nor the other sectors, in the others sectors' there are remarks on it, is the market customer centric or not. But we are customer centric, which means we are mainly driven by the demands of the customers and the demands, the competition offerings [AH]: Ok	Customer's demand	Similar to 20	positive 3

Figure 3.4: Sample of open coding

3.6.2.2 Axial Coding

For the purpose of contextualising the observed phenomenon, a further step is the axial coding process. "The purpose of axial coding is to begin the process of reassembling data that were fractured during open coding" (Strauss and Corbin, 1998, p.124). Axial coding depends on the classification of the major categories and sub-categories to complete explorations about phenomena. Axial coding combines a number of categories in families, known as *coding families*. Strauss and Corbin (1998) propose a "coding paradigm" as a framework to understand the categories and their relationships (circumstances, actions and interactions, and consequences).

Eisenhardt (1989, p.540) argues that "in fact, there are probably as many approaches as researchers. However, the overall idea is to become intimately familiar with each case as a stand-alone entity". Strauss and Corbin (1998) suggest several techniques that can be used to facilitate the identification and integration of categories, such as a storyline memo or concept mapping. 'Pictures are worth a thousand words', so '*Concept mapping'* was selected to convey the observations from the case study data. Concept mapping is the graphical representation of each of the categories and the relationships that exist between those categories. The categories are connected with each other through the use of boxes and arrows. In addition, charts were adjusted to fit better with any data observed.

In practice, axial analysis prompted the emergence of the categories and sub-categories linked to groups based on parent-child relationships between categories. Codes are then assembled based on these groups. Figure 3.5 illustrates a sample of the axial coding process in the ANB case.

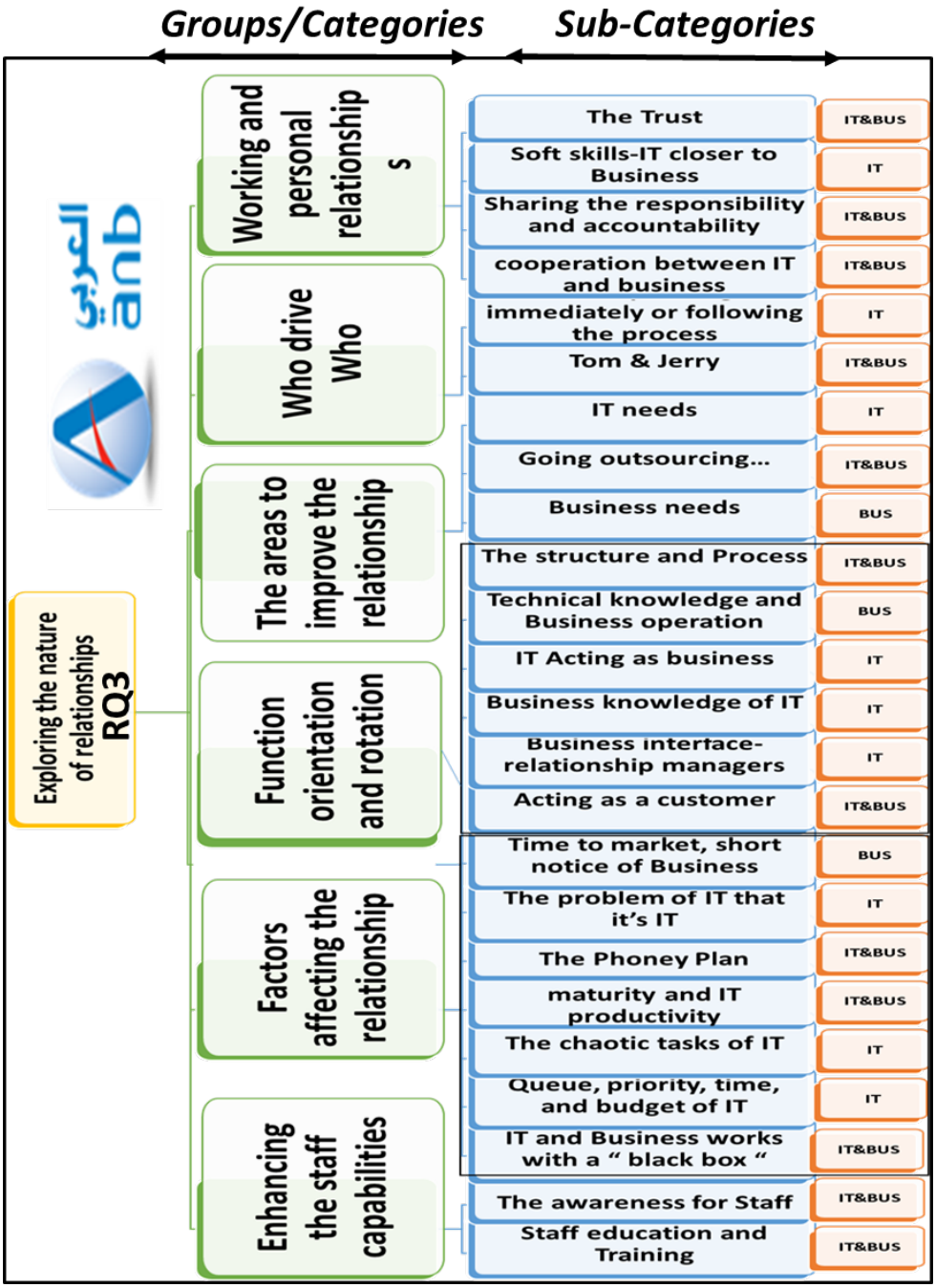


Figure 3.5: Sample of initial data coding of transcripts for the axial coding process

Although the axial coding process did not give a final figure of the main themes, it is a necessary step towards a coherent representation of emerging themes.

3.6.2.3 Selective Coding

The last step of the coding technique is selective coding. Selective coding is "the process of integrating and refining categories" (Strauss and Corbin, 1998, p.143). In order to reduce the amounts of data (Miles and Huberman, 1994), fast filtering is

applied to the coded data. Duplicate codes are deleted or merged, particularly if the codes occurred in the same interview transcript. In addition, the concepts that are the least relevant to the phenomenon are suspended. On completion of the fast filtering process, the central categories are identified and linked to the relevant core codes. These central categories and core codes are arranged according to the research questions. For example, all the categories that belong to the first research question are collected under one central category, labelled customer-focused strategies. Similarly, the same technique was applied to the second and third research questions.

According to Eisenhardt (1989), within-case analysis allows the generation of insight. This concept mapping and selective coding are modified and improved several times. With each update of category mapping, the researcher gains a better perception of categories and relationships.

With the completion of selective coding, a clearer and more mature perception of each individual case emerged. Within-case analysis may have taken a long time in the analysis stage, but is an important factor in determining the main and preliminary patterns across cases. This analysis gives the common patterns according to which the research questions are answered objectively.

At this point, the manual coding process has been completed for each case study and the common patterns defined. The process for the electronic coding of common patterns is given in the next section.

3.6.2.4 Common Patterns Analysis using NVivo

A new phase began using dedicated NVivo software for the analysis of qualitative data. Saldana (2009) suggests that after the researcher feels that they are symbols of a fairly good set of initial print work, then move the icons to the electronic file. The goal of the use of electronic programs is to give precision and quality to the final written work. In this regard, QSR NVivo 11 for Windows is the software selected. According to Ridder et al. (2014), NVivo is a program designed for qualitative data, speeding up the analysis process, making it easier for researchers to investigate the

different codes, check different relationships, facilitating displays of emerging themes and the preparation of research reports.

In practice, the interview transcripts and documents are imported to NVivo in PDF format and then coded. By using NVivo for electronic coding processes, the codes under each node are reviewed and revised to determine the codes most related to the research questions. These codes are used to build a chain-of-evidence report (Yin, 2009).

There is a report for each node, with each node containing a group of related codes as a chain of evidence. For example, Figure 3.6 shows excerpts from the report for the *online service* sub-category under the category of *digital transformation* in the ESB Networks case.

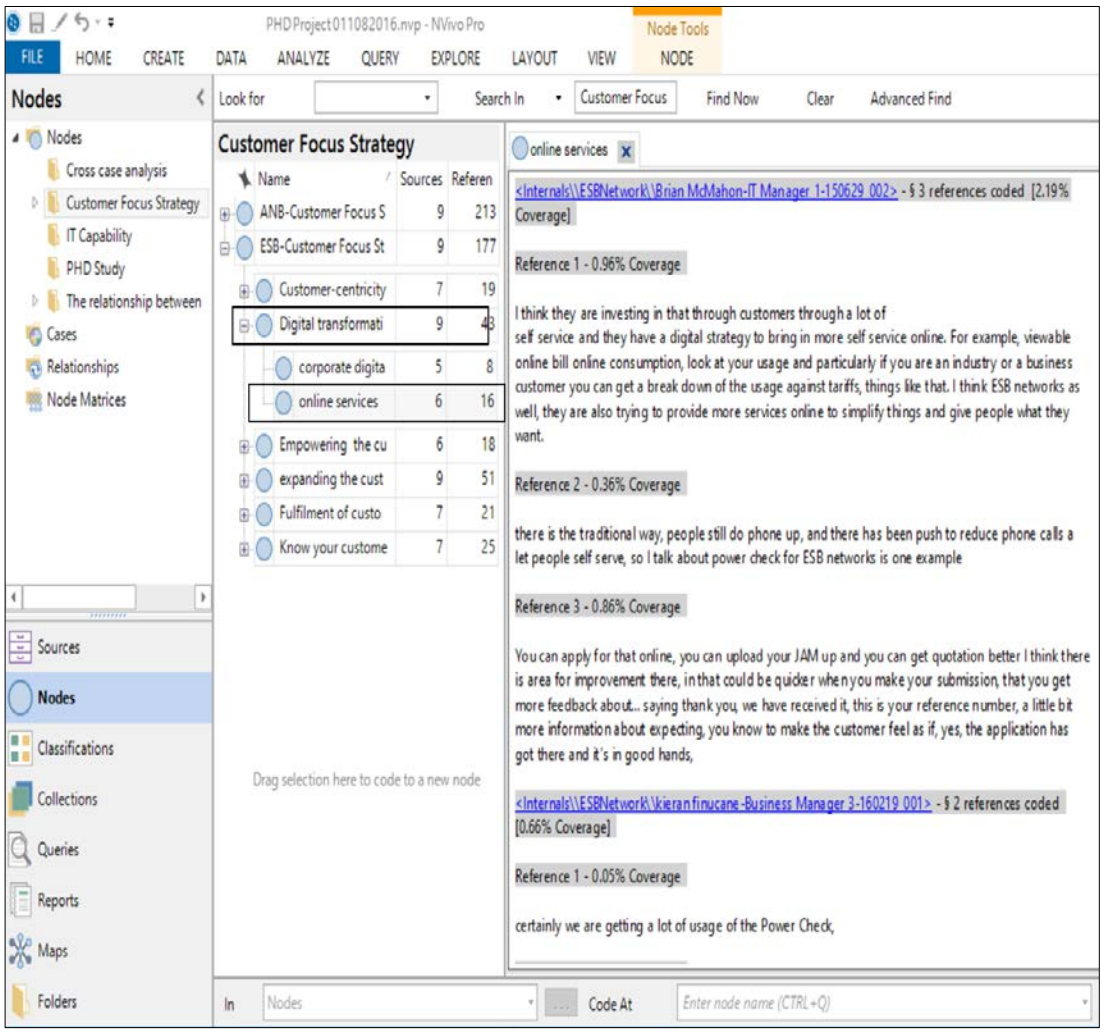


Figure 3.6: Sample NVivo report, the category of digital transformation

The NVivo program has the ability to identify and classify coding electronically according to specific categories. The program helps the researcher to organise, store and retrieve chains of evidence. Each of the chains of evidence is collected under each of the central categories and analysed as a basic building block for writing up and presenting the research data in chapters four, five and six.

The NVivo program also has other functions, such as counting the number of sources and references used, and the ability to search text and facilitate data displays for comparison when multi-site analyses are to be conducted. The next section discusses the data comparison technique used during the multi-site analysis.

3.6.3 Multi-Site Analysis

Multi-site exploratory studies are a popular research design in organisational research (Louis, 1982; Eisenhardt, 1989; Yin, 2009). The intention behind multi-site qualitative research is to optimise description and conduct research that compares alternative data collection patterns (Herriott and Firestone, 1983; Bryman and Burgess, 2002). The rationale for carrying out a multi-site analysis is: 1) to improve the initial perception of categories and relationships that have been generated within cases (Eisenhardt, 1989); and 2) to support a general understanding of common patterns that occur across cases (Miles and Huberman, 1994). Therefore, multi-site analysis involves making comparisons between case studies to capitalise on the similarities and differences between the organisations selected. Multi-site analysis moves from knowledge at the individual level of each case study to the cumulative knowledge gained from, in this case, all three case studies (Khan and VanWynsberghe, 2008). Multi-site analysis presents a development of the knowledge gained from the answers to the research questions and the data collected in order to fulfil the fourth research question: *to explore how characteristics of IT capability can drive customer-focused strategies in organisations.*

Eisenhardt (1989) has proposed three search tactics for undertaking multi-site analysis. The first tactic is to identify categories or themes and their dimensions, and then to search for similarities and differences across the cases. The second tactic is to choose pairs of cases, and then list the similarities and differences between each

pair. The third tactic is to divide the data among researchers. The third tactic is not applicable in this study because there is only one researcher. Nor is the second tactic applicable, as it requires the juxtaposition of seemingly similar cases, while the cases in this study are three different organisations in different sectors (telecommunications, utilities and financial services), each providing different services in different countries. Therefore, the first tactic is appropriate for conducting multi-site analysis of the study cases.

Some of the themes extracted from the individual organisations emerged as being common to all the cases. Thus, in this research, multi-site analysis is accompanied by within-case analysis, in order to examine the comparison and understand the similarities and differences between the case studies (Baxter and Jack, 2008; Bhattacherjee, 2012). Figure 3.7 provides an example of the chain of evidence in a comparison of the instances of the codes selected and that relate to self-service. The figure shows the number and percentages of the references made by the participants in each case study in this regard. This example shows a different perspective and the chain of evidence between the empirical data and the themes that emerged.

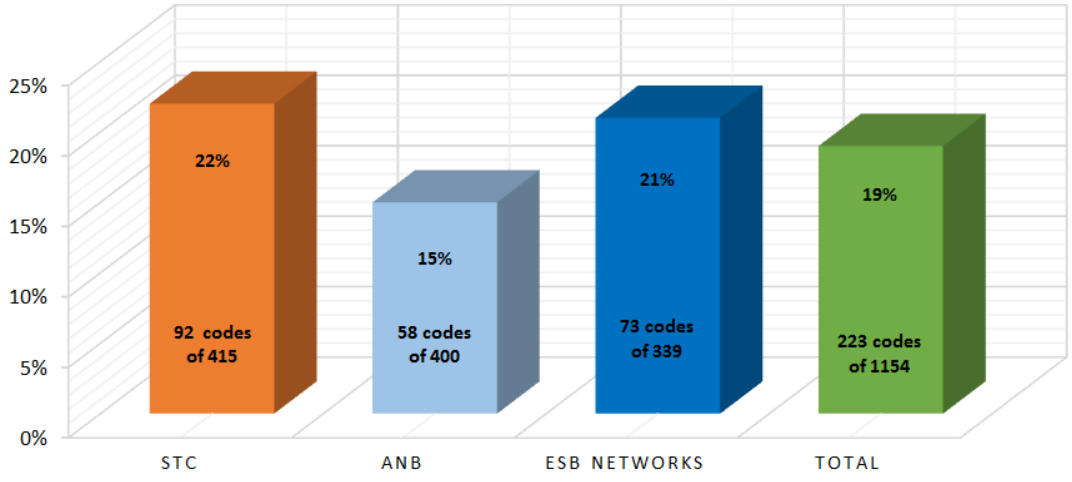


Figure 3.7: Example of the chain of evidence related to self-service

However, the key to a good comparison between cases, and ensuring neutrality in data processing, is to consider data in many divergent ways (Eisenhardt, 1989). A thorough scrutiny of the context and data of each individual case (Miles and Huberman, 1994; Strauss and Corbin, 1998), and ongoing discussions with the research supervisors (Eisenhardt, 1989), are prime factors for gaining a good

perspective across case studies. At the same time, this avoids data-processing biases by undue attention being paid to one or more of the entire array of cases (Yin, 2009). Figure 3.8 shows a sample poster developed during the multi-site analysis in this study to determine the characteristics of ITC roles across the case studies.

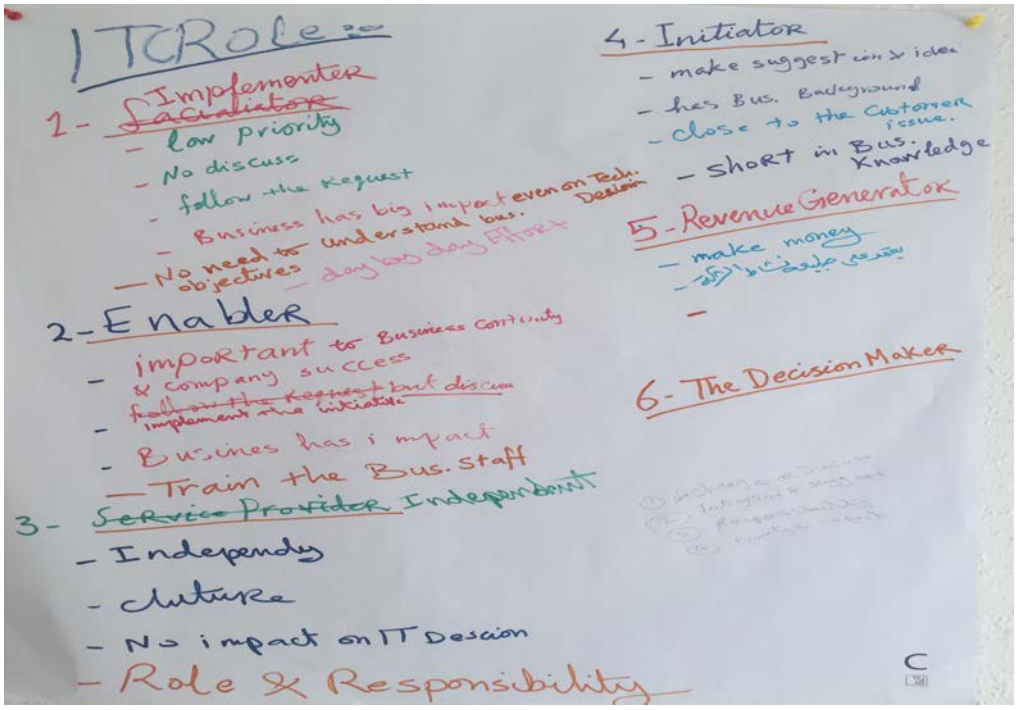


Figure 3.8: Sample poster to determine the characteristics of ITC roles

Accordingly, multi-site analysis demonstrates the initiatives for customers developed through the association emerging from the combination of IT capabilities and customer-focused strategies, referred to in the first and second research questions; ITC roles in the delivery of customer-focused strategy are developed from the association of IT capabilities and their relationships with customer-focused strategies, emerging from the second and third research questions; digital solutions capability (DSC) is developed from the association of IT capabilities, customer-focused strategies and their relationships, emerging from the first, second and third research questions. Table 3.14 shows the articulation of the association of the three research questions in developing the multi-site analysis themes.

Table 3.14: Association of the three research questions

Themes emerged	Cross-case	RQ1	RQ2	RQ3
CFS and IT initiatives aimed at customers	**Similarities**	***X***	***X***	
Roles of ITC in delivering CFS	**Differences**		***X***	***X***
Digital solutions capability (DSC)	**Similarities**	***X***	***X***	***X***

The data thus generated are rich in displaying and presenting the comparisons between the three case studies. The researcher created a worksheet in Microsoft Excel (2016) for a series of data displays used in the multi-site analysis. Data displays such as tables, matrices, and charts are included in the multi-site analysis to present the information systematically (Miles and Huberman, 1994) and provide an illustrative figure for comparisons between the outputs of the case studies. Chapter seven addresses RQ4 and discusses the learning from the multi-site analysis for this study in more detail.

3.7 Conclusion

In this chapter, the research methodology and case study design are presented and justified. This study focuses on developing an understanding of the purpose and meaning behind activities. A qualitative approach allows a very rich exploration of case studies, and description of the reality of the field and the participants in contextual-based observation. Analysis of abstract behavioural phenomena, such as the new relationship between business, IT and the customer, requires rich qualitative data. This type of rich data needs in-depth investigation approached from several standpoints, allowing emergent themes to develop. The organisation was deemed the most appropriate unit of analysis, with its IT capabilities and customer-focused strategies the target of inquiry. The multiple-case approach was favoured to allow the researcher to analyse data within each case and across cases.

The primary sources of data are interviews. Interviews were deemed suitable for an exploration of the opinions and insights of IT and business managers regarding the relationship between IT capability and customer-focused strategy. Interviews were conducted with both IT and business managers from three large organisations from the telecommunications, utilities and financial industries in Saudi Arabia and Ireland. The data analysis consisted of three major steps: 1) transcribing the interviews, 2) coding the interview transcripts, and 3) categorising the CFS and the characteristics of ITC. Therefore, the data collected were analysed into codes and categories through an open coding process, followed by an axial coding approach to establish parent-child relationships between categories. This was followed by a selective coding

approach, which involved identifying the core codes and categories for discussion of the findings.

The interview transcripts were then imported to NVivo (V11) in PDF format and coded. NVivo supports the generation of a report for each node (each node contains groups of related codes). The codes under each node were reviewed and revised to determine the codes most related to the research questions. These codes were used to build a chain-of-evidence table. This chain of evidence was used to write the results of the study.

Chapters four, five and six, respectively, present and analyse the research data collected from the Saudi Telecom Company (STC), the Arab National Bank (ANB), and Electricity Distribution Networks (ESB Networks). Chapter seven discusses the multi-site analysis.

CHAPTER FOUR PRESENTATION AND ANALYSIS OF RESEARCH QUESTION ONE: CUSTOMER-FOCUSED STRATEGIES OF THE ORGANISATION

4.0 Introduction

This chapter addresses research question one by analysing and presenting the customer-focused strategies of the organisation. This research question seeks to explore and categorise customer-focused strategies in the context of each organisation. This question seeks to understand how organisations transform their strategic orientations to improve customer satisfaction into clearly understood and actionable strategies. The enhanced customer focus means ensuring that these strategies are understood right across the different functional domains of the organisation and, therefore, have an influence on the customer's experience and relationship with the organisation.

This chapter introduces customer-focused strategy, then describes the customer-focused strategies for each organisation. The answers to the first research question reveal five customer-focused strategies carried out by the three organisations: 1) empowering the customer experience and customer care, 2) expanding the customer interaction channels, 3) knowing the customer, 4) improving the fulfilment time for customers, and 5) transforming customer services to digital.

The customer-focused strategies of STC, ANB and ESB Networks are addressed and analysed in sections 4.1, 4.2 and 4.3, respectively. Section 4.5, the conclusion, reviews the key arguments of the customer-focused strategies in the context of these three organisations.

4.1 STC: Customer-Focused Strategies

STC has undertaken a cultural change programme to increase the organisational focus on the customer. The data evidences a high level of commitment to this change programme. This programme is administered by the President of the company; it aims to change the company from an organisation focused on the business to a company focused on the customer. Figure 4.1 shows images of the kick-off workshop

(June 2013) with the participation of the STC President (Dr Khaled Biyari), VPs, and executives of STC.



Source: The internal company website

Figure 4.1: Cultural Change programme kicked-off

The data suggests a positive reaction to this cultural change programme from all parties at the company, with employees, management and operations seemingly willing to internalise the objectives of the programme. The following is one example that indicates how the company has begun to change its stance towards the customer:

> *We had an initiative that we launched two years ago, which is the Cultural Change programme, which is how to turn the company from being business-focused to being customer-focused. This programme aims to make everyone do his part. The human resources, the business, and the technologies, all work together in serving the customer (Business manager 3).*

Two new business sections are created to coincide with the company's new orientation towards the customer, with responsibilities that are predominantly associated with customer concepts, such as customer value, customer life cycle, customer experience, customer journey and touchpoints. These two sections report to the STC president directly. Figure 4.2 lists some of the departments that have been created for this purpose under the new sections.

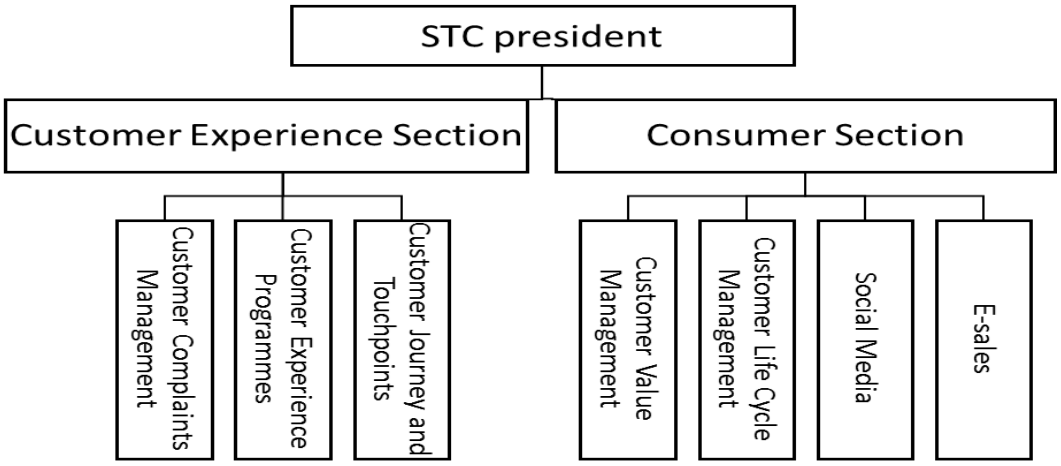


Figure 4.2: STC's customer support departments

The titles of the departments in the Figure 4.2 reflect the level of specialisation and the responsibilities that support the cultural change programme. The statements made by the study participants are closely compatible with the distribution of responsibilities listed above. For example, when an interviewee referred to customer experience, he/she directly mentioned the general administration of the Customer Experience Section and, when referred to revenue and the economic value attributable to the customer, he/she mentioned Customer Value Management. Thus, gaining acceptance of a new type of language and organisation is a step towards focusing on the customer.

The next section discusses these organisational changes and their focus on customer experience in STC.

4.1.1 Empowering the Customer Experience and Customer Care

The Customer Experience Department is the representatives of the customer inside STC, they are the "voice of the customer". The role of the Customer Experience Department is to control the relationship between the desire to increase the company's revenue and the interests and satisfaction of the customer.

A weekly meeting under the leadership of the Customer Experience Management team and attended by the general managers of the operations, technical, sales and marketing groups take place to discuss the fundamental complaints regarding customer services, and to review the short-term goals in order to retain customers and raise the level of their satisfaction. The Customer Experience Management team

ensures that the services or offers that are presented to the customer achieve a positive experience for the customer. For example:

> *Even the strategic decisions have to be sent to Customer Experience to give us feedback. Previously, we did not have that and the business was just looking to their financial targets and the customer experience had no control, but today they have control. And the control is not from sales or marketing, it's out of these [sales and marketing] departments. We like a microscope over them so that no one uses their power to enforce things (IT manager 8).*

The example above is affirmation of the control role that is played by the Customer Experience Department in standing up for the customer's side. The independence of Customer Experience Department from other departments in STC provides a balance between STC and the customer. Thus, this balance helps both the customer and STC. STC continuing to provide high-quality and satisfactory customer services means the continuation of income from the customer. Adding the role of Customer Experience to final decisions regarding customer services strongly indicates that STC strive to provide services compatible with customers' expectations.

Previously, Customer Experience Management had been a small division under the Marketing Department, so lacked the ability to make unbiased decisions because of insufficient managerial power. Customer Experience personnel could not make absolute decisions in the past. Today, however, they derive their power from the senior management at STC:

> *Customer Experience was under Marketing, then it was moved to Customer Care, so that it was under the control of Marketing and Sales. Under Marketing, you cannot take unbiased decisions. Customer Experience was just a division; now it's a General Department with support from upper management. Now, we have full support and we hope it lasts (Business manager 8).*

This new role caused other departments to feel that the Customer Experience Department is forcing themselves into every area. This situation is the cause of tension:

It's been very challenging because Customer Experience interfaces with all the departments. There are challenges, people sometimes feel that we are interfering in their work (Business manager 4).

The challenge described above may become an obstacle to the participation of the customer effectively in the company's strategic decisions. Nonetheless, there is evidence that customer experience efforts are able to give the customer authority regarding the services and complaints received by STC.

The activation of services and the closure of complaints is carried out by sending a code to the customer's mobile. This service is called Customer Code Confirmation (Treble C). This code is secret; no one from the STC staff can access it. The code is set up automatically by the Complaints system and thus STC Staff are not able to close the loop on any service or complaint without this code. The customer, however, can give the code to technicians responsible for solving the problem, in the case of customer satisfaction with the quality of service. If customers are not satisfied or feel that they have not received the best service, they can refuse to provide the code. Figure 4.3 presents an adapted scenario of customer code confirmation (Treble C).

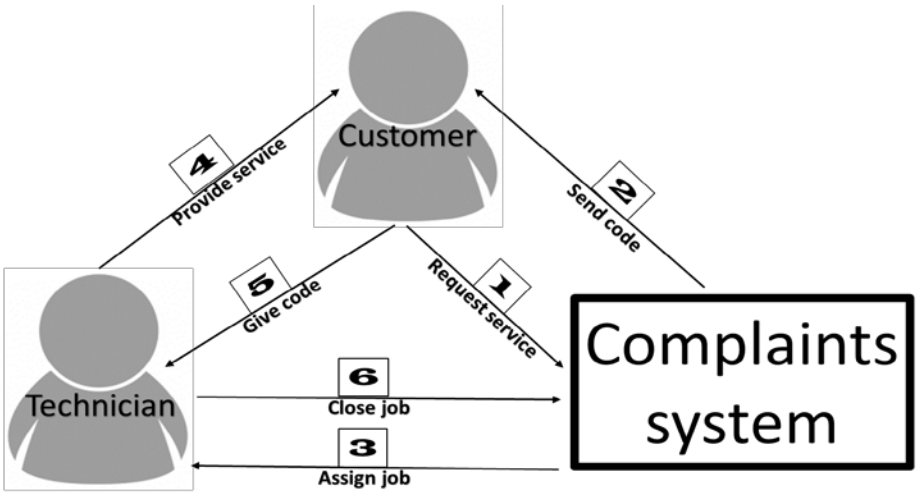


Figure 4.3: Adapted scenario of customer code confirmation (Treble C)

There are advantages to this service, which are identified by the customer experience participants during the interviews conducted. For example, this service helps to verify the customer's identity, so that STC can ensure that the customer him/herself has made a request or cancelled a service. In addition, in order to accommodate its customers, STC has enabled them to interact with the company through multiple

channels. The next section discusses the expansion of the customer interaction channels.

4.1.2 Expanding Customer Interaction Channels

The multiplicity of customers' tastes and interests has been resolved by the multiplicity and variety of the customer interaction channels at STC, as shown in Figure 4.4 (source: analysis of the STC data).

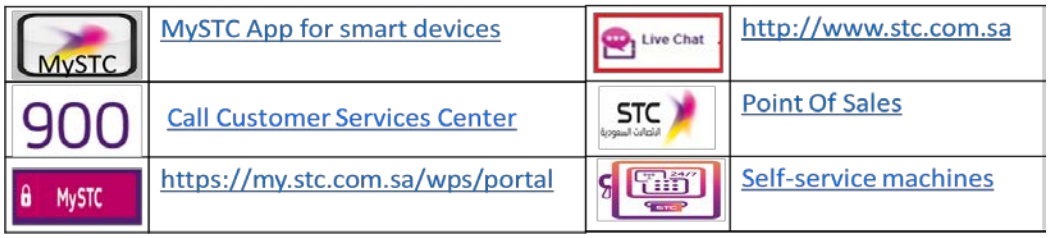


Figure 4.4: Multiplicity of interaction channels in STC

STC takes care of customer interaction channels as part of an effort to follow customer-focused strategies. It is evident from the data that the customer interaction channels are a priority for the company, particularly those that rely on digital channels. The customer needs to interact with the company to implement service requests through the multiple options available. This link between customer-focused strategies and an interest in customer interaction channels is referred to by more than one participant during the interviews conducted. The participants recognised that the presence of physical and digital interaction channels reflects the ability of STC to provide customers with sustainable access to all the company's services, for example:

> *STC is taking a new orientation in that STC started to care more about the customer. Clear evidence for that is focusing on the channels of interaction with the customer from all sides, the physical and the digital (Business manager 1).*

Verhoef et al. (2009) argue that the impression of the customer is formed through interactions with the company and may leave a positive or negative impression for the rest of his or her life with the company. In this regard, a continuous process to improve the performance of these channels had been conducted at STC, which kept pace with the expectations of the customer. According to one participant,

We had a major KPI for how the customer interacts with STC. We said that the customer interacts through the channels, and these are the call centres, the shops, the website, the mobile apps or social media that we have today. Through these we can measure and improve our performance (Business manager 7).

In addition, customers' interaction through the STC website channel portal is increasing significantly. The increase in the number of users is confirmed by the Manager of Value-Added Services and Applications in the Consumer Section:

The digital channels are more prominent, as one of the biggest websites concerning traffic is the STC website. I think we are the only operator in the region that has a website that supports six languages and this was to meet the needs of our customers (Business manager 1).

Saudi Arabia is a multinational country with the number of non-Saudis in the Kingdom reaching 9.4 million in 2015, which makes up about one-third of the Kingdom's population[4]. The above example shows that STC has provided support for multiple languages on its website as a response to the many non-Arabic speaking customers.

In addition, all contact numbers for the customer service centres have been unified using the number 900, which makes it easier for customers to communicate with the company. An important feature, for example, is the addition of an interaction feature for text messages that can be sent to the 900 service.

Now it's just one call centre number, the 900 service. You send an SMS to 900 and you get an automatic reply. Then you send messages in simple language, you ask how much is the bill, or any other question and the reply comes automatically (IT manager 8).

Older customers may still wish to discuss their requirements by visiting the offices because they do not favour the use of technology, while some women might prefer to contact call centres as it is easier for them to make a call from home rather than going to an office. Younger people support the use of mobile applications because they are accustomed to dealing with these technologies and can use them quickly and easily. According to one Business manager,

[4] Source: General Authority for Statistics in Saudi Arabia, http://www.stats.gov.sa/.

The multiple channels of interaction make the customer more comfortable and offer more usability, he sees and checks and gets his issues solved as soon as possible (Business manager 1).

As mentioned in the example above, when STC offered multiple customer interaction channels, it provided a form of convenience to its diverse range of customers. The multiplicity and variety of customer interaction channels is therefore a factor that increases customers' ability to make use of the channels. In addition, making multiple customer interaction channels accessible to the customer reduced the time it takes for customers to resolve issues.

All the previous examples in this section show the diversity of the channels of interaction with the customer, but they represent only one direction of communication: from the customer to STC. Data highlights that STC is suffering from the problem of communication from the company to the customer, which may be due to the large size of the company or the number of services and customers. The company experiences problems, particularly when it comes to alerting customers in the event of a breakdown or a stoppage in services. This situation is confirmed by the Director of Complaints Management, when he stresses that this situation has a negative impact on communication with customers:

Maintenance downtime (MDT) is the negative part, this always impacts the customer. For example, when we have maintenance downtime, we do not, unfortunately, know the customers who will suffer from MDT, so that we cannot add a flag saying that we have a service down. It is not good to communicate this way with the customer (Business manager 3).

The customer presumes there will be stability in, and continuity of, services and, at the very least, notification in the event of a breakdown or a stoppage in services. Customers do not want to be surprised and may take precautions in order not to have their work hampered. The problem in the above example leads to a question regarding the extent of the knowledge of: 1) what is happening on the customer side; and 2) whether this is positive or negative. The next section discusses the strategy for knowing the customer, which works by STC providing services according to what STC knows about customers' situations.

4.1.3 Knowing the Customer

STC pays attention to knowing its customers and identifying their needs in order to provide an appropriate service to fulfil their aspirations. The Business Intelligence Director in IT draws a link between understanding the customer and the services provided to the customer:

> *STC knows what customers need and tries to provide a product and service based on its understanding of the customer (IT manager 1).*

Closer inspection of the data suggests that STC follows three approaches to knowing its customers: 1) the use of multiple feedback to study and analyse the feedback and suggestions of customers; 2) the company's employees act as customers before and during the launch of a service; and 3) knowing the customer segments and assigning tasks relating to these segments to specialised departments. These three approaches are discussed in the following paragraphs.

Use of multiple feedback

STC uses a number of systems to define and manage the customer relationship. These customer systems are different in terms of function and purpose, and sometimes in the way that the information is used. The sum of the data collected shows that STC uses the following systems to know its customers and their intentions, as shown in Figure 4.5.

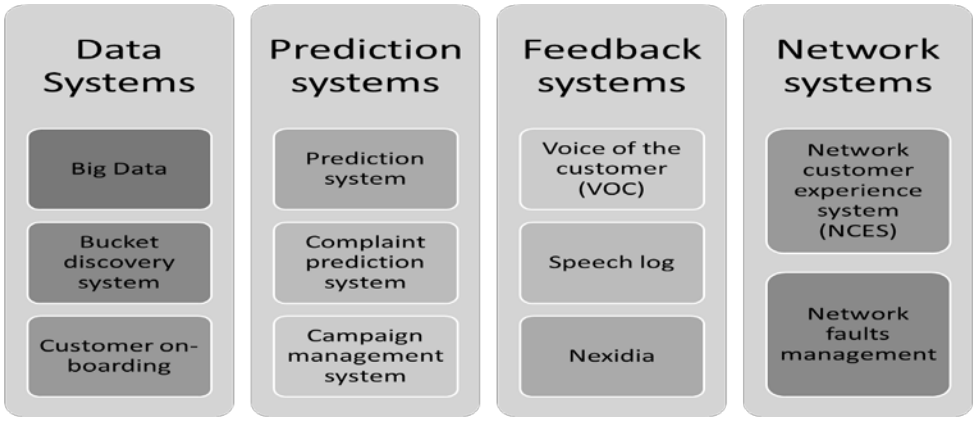


Figure 4.5: Adapted classification of customer systems in STC

Ray (2005) and Saunders and Brynjolfsson (2016) strongly suggest using technology for customer service, since customer service processes without technology show slow performance compared to those supported by technologies. Thus, from the

above list of systems, the level of evolution and specialisation in STC's business is evident in this domain. Each system has a specific function. For example, VOC focuses on analysing sentences and paragraphs, while the 'Nexidia' system focuses on the vocabulary most repeated by customers. NCES is interested in knowing customers' behaviour within the telecommunication network and the behaviour of the telecommunication network itself, while the complaint prediction system detects faults before they occur or before the customer opens a ticket. The data analysis reveals the success of voice of the customer (VOC), which is a major project in STC to capture customers' feedback, whether text or voice, electronically from physical and digital channels. It has Arabic capability, which is quite complex, and can collect structural information from a specific database or unstructured conversations from social media.

STC employees playing the role of customers

As mentioned in section 4.1.1, the Customer Experience Department needs to approve any service being offered to customers before it is launched. The goal is to assess the impact on the customer in terms of value and experience. From this standpoint, it can be inferred from the case study that the departments relevant to a particular service have their employees test that service (known as soft-launching) before launching it in order to identify any issues associated with it and try to avoid these issues before the service is progressed to the customer. The following is one of several examples from the data collected that demonstrate this behaviour:

> *We act proactively for any service that we are launching or offer, we test it as customers, so we act as customers and give feedback as customers and, when it is launched, we collect from the channels and the things people say about the issues and suggestions and we offer it and work together in understanding it (Business manager 3).*

It is clear from the above example that the service check undertaken by STC staff is a process that begins before and continues during and after the launch of a service. Ease of use and availability of mobiles and telephones may have a role in the spread of this process. The noteworthy point in the above example is the word 'proactively'. The context of the example shows that 'proactive' means an element of control: controlling a situation by testing the service in order to know whether it is a good

experience for the customer. To support the previous point, the following example from the Manager of Customer Experience Systems shows that the focus is moving towards a good experience, not simply ensuring that a service works well:

> *Employees must have experienced it, there is a difference when it's actually working and when it is a good experience (IT manager 4).*

In addition, it is apparent from the analysis of the data that the customers' suggestions to STC are not given absolute priority. These suggestions may conflict with the interests of the company, or it may be the case that numerous STC customers have reason to maintain a certain level of services and prefer to avoid significant change, for example:

> *If change impacts other customers, we may give them special services, or more care, so that we satisfy them without making a major change (IT manager 6).*

This does not preclude cases in which STC has provided a service based on a customer's suggestion. One example regarding broadband services is provided by Business manager 7:

> *Based on a customer suggestion, we created a new service called 'Jood-Net'. According to this service, they pay only for the internet and nothing else.*

The point to be taken from the above examples is that there is a perceived balance to be maintained between individual customers' suggestions and the resources required to improve services in accordance with all customers' wishes. STC implements a change if it is perceived to have no major negative impact on services, and if it is for the benefit of customers. Further details regarding the fulfilment of customer expectations and needs can be found in section 4.1.4.

Knowing customer segments

Identifying customer segments is the starting point for understanding customer value (Payne and Frow, 2005, 2006). The following example illustrates how STC is interested in knowing all its customer segments:

> *The customer comes first in everything, in giving more care to segmentation and giving more care to special customers and creating a department especially for them, also giving*

more care to the youth segment and being involved in the sports activities that young people are interested in (IT manager 6).

Customer segments are a major source of input for the customer systems mentioned above in section 4.1.3, such as the prediction and bucket discovery systems. Knowing the customer segments also helps the company to target a particular segment, such as expatriates who are targeted for prepaid services, as explained with regard to providing multiple languages on the STC website (see section 4.1.2). Nevertheless, lack of understanding of the customer is the reason for problems with the provision of some STC services, the following example demonstrates that:

Lately, we have had lots of issues concerning the internet and fibre. This is due to the lack of understanding of the customer's need regarding a suitable internet bandwidth. His need and his feedback are very important (Business manager 1).

Conversely, a lack of understanding of customer needs has left STC with related customer issues in fulfilling the service, which may cause anger among its customers. The next section discusses STC's fulfilment time to customers.

4.1.4 Improving the Fulfilment Time for Customers

The approach to new and expansion projects followed by STC has changed with the changes in the company's strategies towards the customer. The willingness to improve services has come to depend primarily on the requirements of the customer in the first place. Services and related offers have moved to being in line with customer and market behaviour. This is exemplified in the following example:

The current and future projects of STC are based on the requirements of the customer, not on profit and loss. This is concerning improving the network, improving value-added services, increasing customer loyalty by giving customers more reduction in price, and offering exclusive and unique services (IT manager 6).

This represents STC's strategic orientation towards the fulfilment of customer needs. The quality of the services provided to the customer has become the focus of competition within STC. A business-oriented strategy that depends on generating revenue and reducing costs is no longer STC's chosen strategy. The balance between quality of service and price is clear from the above example. IT manager 6 combines

distinctive servicing for the customer and the price of the service to win customer loyalty (Duncombe and Heeks, 2003).

The data analysis reveals that another approach is followed by STC as a kind of focus on the customer. STC behaves proactively in bridging the gaps in the services used, or in the vulnerability of the telecommunication network. The following example highlights this strategy:

> *One of the things that we have been doing to become customer-centric is, instead of being reactive, we think of the complaints that might come and we resolve them, we try to be proactive. We are trying to minimise the root causes of these complaints before the customer comes in or calls us (Business manager 4).*

Section 4.1.3 refers to the complaint prediction system. This system enables STC to anticipate a failure before it happens or before the customer notices any deficiencies in a service. Another example below demonstrates concern for the discovery of an error in the Telecom network:

> *It related to customer care, it has a great relation, for example the system of network faults. Previously, we knew about an error through the customer's complaint, but now, having this system, it helps us to know that there is an error before the customers call (IT manager 3).*

Such proactive activities help STC to reduce the number of customer complaints dramatically. Reducing the number of faults increases customer satisfaction due to the stability and quality of the services provided (Shanks et al., 2009).

In addition, in the case of a failure in a particular service or network, STC has launched a new rule, which is heightened compatible with a focus on a customer satisfaction. This rule is referred to by the Director of Planning and Performance in Field Operations and Technical Customer Care:

> *Focusing on the customer is now represented in us trying to close the tickets in 24 hours. Previously, we had three days to fix an issue. Now our understanding is that a customer can't wait, so we fulfil that target to a greater level (Business manager 2).*

This understanding enables STC to target 24 hours as the time in which to solve a customer issue.

However, STC still has not reached the desired level of the strategic change with respect to the level at which decisions are based on customer experience and feedback. For example:

> *The customer feedback isn't the main motive for a change. We can't deny that the customer is an important factor but it's not the main factor. Currently, when it conflicts with other things, such as the short term, it may be that short-term objectives favour the customer experience. Mainly, it can conflict with other things that need to be achieved, like company interests (Business manager 3).*

This example, given by the Director of Complaints Management in the Customer Experience Section (which is the closest to customer complaints and experience) suggests that there are changes and processes occurring on the ground that may be harmful to the customer journey or to customer value. The company's financial or competitive interests may overcome the customers' interests, as mentioned in section 4.1.3. Customer experience could be impacted negatively because some changes could be in conflict with customers' expectations. Nonetheless, concerted efforts are made by STC to positively impact customer satisfaction, notably moving STC's customers to being more comfortable with new the digital environment. The next section discusses the facilities STC provides for the customer, particularly following the implementation of the digital transformation strategy.

4.1.5 Transforming Customer Services to Digital

The transformation of STC functions into the digital world is highlighted by the availability of core services through digital channels and a self-service environment. The data analysis reveals that STC aims to shift customers to using digital and self-service channels (for example, service activation and cancellation, bill payments, complaints opening and closure,) through a mobile app and the STC website. In addition, self-service features apply to bill printing, delivery of mobile SIM cards, top-up recharging from self-service machines. STC migration to the digital world has almost become a hallmark of the business, judging by the responses from interviewees. These transformations are listed in more detail in the following section. According to one Business manager,

Digital is used much more than physical transactions, around three times more than the physical transactions. It's very clear that customers tend to use digital more. And this is due to it being easy and interacting with our customers through digital ways is better than the physical way, so we give priority to the digital (Business manager 3).

The above example shows the dominance of the transactions that take place across the digital channels over those that take place through physical channels. The main promoter of digital dominance is the desire of the customer to use digital channels, while ease of use and quick access are the promoter of customers' use of digital channels. It could be inferred from the above example that there is a direct relationship between the following three elements: ease of use, the customer's desires, and giving priority to digital transformation. Increasing the ease of use of digital channels has increased the customer's desire to use these channels, and thus raised the company's priorities in terms of digital transformation. These three concepts are almost the key to the research topic of this study. The organisation's orientation towards achieving customers' desires highlights a customer-focused strategy, while the role of information technology draws attention to ITC's characteristics of ease and speed of use of services across digital channels. The last point is discussed in the answer to RQ2 (see section 5.1). According to one participant,

Through the MySTC you can do anything, like adding services, cancelling services, understanding services. This is the most noticeable element in customer relations, there are many other elements that care about the customer's experience of the service (Business manager 1).

MySTC is the formal mobile app, providing services for mobiles, landline, and broadband, as well as an evaluation feature of the customer experience on the app and the services offered. A screenshot of some of the functions of the MySTC application is shown in Figure 4.6.

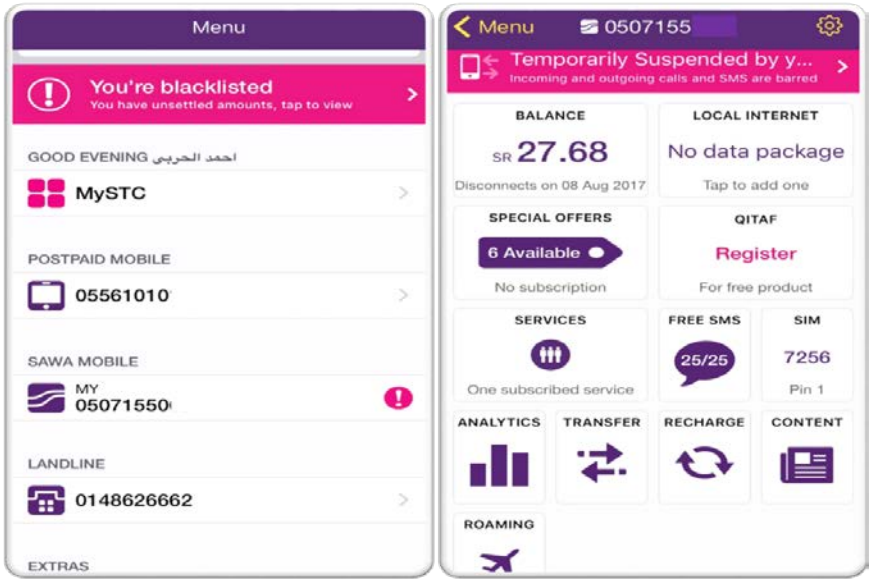


Figure 4.6: Screenshot of the MySTC application

One important data source that is obtained through the interviews conducted is the hardcopy documents given to the researcher by the participants, which indicated that the MySTC app is used by over 3 million customers. In the same manner, the MySTC portal goes hand in hand with the MySTC app. It contains all the services, such as being easy to open and following-up customer complaints, which attracts customers to using the MySTC portal, as shown in the next example:

> *Today the customer can send his complaint through the website, and this has facilitated the way…. I think this has greatly facilitated it and made the customer like using the website for services (Business manager 7).*

In addition, one key finding from the data analysis is that STC has employees in the Marketing Department who have transformed the traditional advertising and communication with customers. They have started to employ celebrities from among Saudi youth culture, such as those in stand-up comedy or new YouTube stars, leveraged to explain a certain service to customers in a simple and enjoyable way. The Director of Product Development Support in Marketing comments on this point when stating:

> *It is a new idea for communicating with the customers (Business manager 9).*

This enables the marketing approach to keep pace with changes in the interests of customers using new and creative ideas, as referred to in the previous example.

Digital transformation is possible for electronic operations that do not have a physical element, such as replacing mobile SIM cards or charging cards. STC supplied around 205 self-service machines capable of handling most of the operations performed by the employees in the sales office. STC officials believe that the customer is a partner, and take steps to enable customers to do what they want with all the services for themselves, and not to need to engage employees or to stand in a queue to complete their tasks. A Director of Programme Design and Reporting in the Customer Care and Experience Section refers to this partnership:

> *The self-serve environment where the customer can serve himself, give him the tools and everything, this is very important, engaging him directly in the partnership (Business manager 4).*

Despite the keenness of STC on digital transformation, as introduced in this section, the digital transformation is incomplete at STC. The shortfall is clear in the following example:

> *I think we need to have an agreement with the delivery company. The customer is supposed to get the equipment delivered to his house and he doesn't need to come to the office to buy a phone (Business manager 7).*

STC suffers from an inability to offer device delivery services to customers' premises. Devices and equipment as part of telecommunication technology sales is one of the core services that the company offers (see section 3.4.3.1), but the customer still needs to go to the main centres or points of sale to receive equipment from STC, such as a mobile phone or modem. The case could harm the process of the digital transformation strategy in STC.

4.1.6 Summary

In conclusion, this section relating to the customer-focused strategy followed in STC shows that controlling the desire to increase company revenue and customer interests has meant that customer satisfaction is viable, thus earning the customer a successful and positive experience. Empowering the customer experience and customer care strategy with the support of a digital transformation strategy helps to shift the customer's direction towards the company's online services. Enabling the

customer to gain a good experience through the use of digital channels and services has transformed the customer's pattern of self-service, bringing the customer to the stage of being able to depend more on him or herself. There has been a gradual forming of a relationship between the customer experience, self-service, and digital transformation. Self-service is revealed to be a habit rather than a new experience and customers are accustomed to evaluating a company through the success or failure of their experience with the digital services offered.

The next case is ANB, which is similar to STC in its strategy of digital transformation and focus on activating digital channels and services. However, ANB differs from STC in terms of focusing more on customer complaints than customer suggestions. This highlights the difference between proactive work to learn of a problem before it occurs or before the customer knows about it and reactive work to solve a problem after it has arisen. The next section discusses the strategies followed by ANB to enable the organisation to focus on its customers.

4.2 ANB: Customer-Focused Strategies

ANB is committed to ensuring customer retention and customer satisfaction through the diversity and quality of the products and services offered to customers. The bank also presents offers and benefits in order to attract and retain customers. ANB has to provide some products or services (interest free money) just to suit the customer's situation. For example:

> *This is responding to the market and the customers in Ramadan, that they can't pay. And the bank has lost in this, we have spent heavily in this deal. When you take down your rate from almost [5%] to [0%], and get only a simple contribution (Business manager 2).*

In the above example, the holy month of Ramadan prompts people in Saudi Arabia to buy a lot of food and kitchen appliances, so their level of expenses increases. ANB has studied and considered this situation and provided products to customers without making any additional charges. On the other hand, there are participants who think of the interests of the customer and others who think about them but prefer to focus on the way they drive business. According to Table 4.1, ANB is in the middle, between being a customer-centric and a product-centric organisation:

Table 4.1: Orientation of ANB towards the customer

IT manager 4	*We are **in the middle**, sometimes the bank **focuses on a certain product**. Sometimes you find them doing something just **for the customer**, they think they might not benefit directly from it but they are **doing it for the customer**.*
IT manager 5	*We have types of business that consider **the customer the "first and last",** in everything the customer is **the most important**…There are other people who think of **the business and focus on business more than anything else**.*
IT manager 1	***Customer-centric** has a lot of meanings that **aren't well** fulfilled in the market of the bank.*
Business manager 3	*The programme before being **customer-centric is changing the culture** of the whole organisation…. so **changing the culture** on all levels from the top management to all the staff, and it takes time.*

It can be inferred from the above examples that ANB works to ensure that the financial targets will not overcome customer satisfaction and strive to create a balance between functionality and profitability as far as possible. However, a balance between customer benefits and the bank's financial interests seems difficult to achieve in order to make both the customer and the bank happy, because the setting of financial targets could have an impact on the customer focus, as mentioned above. IT manager 1 points to the lack of knowledge of the real meaning of 'customer-centric'. In addition, Business manager 3 refers to the step needed to achieve a customer-centric orientation when he focuses on changing the culture of the bank. The next section provides some of the steps followed by the bank's customer departments to improve the customer experience with the bank.

4.2.1 Empowering the Customer Experience and Customer Care

The Customer Experience and Service Standards (CESS) Department presents customers' concerns and aspirations to the bank. The case data shows that the CESS defends the interests of the customers against the need for the bank to increase profits. In addition, the CESS receives all regulations from SAMA with respect to customers. Customer experience staff ensure that the regulations are implemented and that the process of implementation is continuous. Diligence with regard to customer rights and responsibilities from the top of the pyramid of Saudi finance is evident through the data collected from ANB. During the last two years, the Saudi Arabian Monetary Agency (SAMA) has approached all Saudi banks with new

regulations, which are known as 'consumer finance protection principles'. These principles must be implemented by every bank operating under the jurisdiction of SAMA. SAMA also enforces compliance with these regulations. According to one Business manager,

> *Consumer protection principles are major changes, and you can consider it all being customer-centric, focusing on the customer's rights, focusing on the customer's duties, transparency, and integrity (Business manager 3).*

The data analysis reveals that the board of directors of ANB is committed to these principles, and this commitment is cascaded from the board of directors down to the bottom of the company. ANB management has a dedicated policy to ensure that consumer protection principles are implemented across the bank. On the other hand, the CESS is part of internal committee that works together when SAMA comes to perform checks. The committee is keen to have evidence of successful implementation of the regulations. In addition, CESS works with the training centre, HR and branch network, the key areas of which are the consumer finance protection principles and the customer experience. The department is charged with reflecting the importance of the customer experience in every aspect of the corporate environment. It holds ongoing workshops and all the bank's employees have attended these workshops since they began.

However, closer inspection of the data suggests that ANB have activated two functions in order to make the customer experience a more efficient process: 1) the Customer Voice Unit (CVU); and 2) the Transformation Team. These two functions are discussed in the following paragraphs.

The Customer Voice Unit (CVU)

CVU conducts research, focus groups, satisfaction surveys, mystery shopper activities and in-depth gauges, checking the 'pulse' on all aspects of the customer experience, from the products to the services delivered, in the branches and throughout the various channels. The focus group is a very important part of this monitoring process, for example:

The Customer Voice, they are actually doing great work with us. They have research and stuff like that and they work mainly with us here in Auto [Leasing], and they are the ones who helped us to make the booklet that we give to the customers and has all the services, so they represent the customer to the bank (Business manager 2).

Analysis of the data presents that the main task of the CVU is studying the front and back offices, identifying any gaps in terms of delivering a coherent customer experience, and comparing these gaps with feedback gathered from customers. The unit then identifies key areas for development and suggests projects or plans for improvement or corrective action, either by system enhancemen, procedure enhancement, or knowledge transfer.

The Transformation Team

This team investigates whether all steps in a process are always carried out as intended. It also measures if the outcome is as expected and whether the impact of the change has been good for all customers. Transformation teams operate in parallel in all regions of the Kingdom. They are responsible for certain branches and their job is to visit these branches regularly. According to Business manager 3,

Transformation teams get missions from here, we see and we get feedback, they are our eyes and ears, and these guys have the experience, they are a mix of men and women.

The field data reflects that the Transformation Team visits the branches at least twice a month and then they guide or coach the employees to ensure that what is required is implemented; not in terms of operations, but in terms of customer service, customer attention, product knowledge, how to deal with customers, and how to cross-sell to customers.

However, there are some limitations to managing the customer experience and service standards in the ANB case:

We don't normally collect the needs from the customers themselves; we collect them from the people that work with them. We ask customer service by the end of the day to fill in a questionnaire or a report and say that today I had these issues, or I had this customer asking about such a product and we don't have it (IT manager 5).

It is evident during the data collecting that ANB does not have a customer experience

tool that supports direct communication with customers. There is a lack of awareness and analysis of the concerns and expectations of customers. As mentioned in the example above, manual work and human intervention are used to support ANB decision makers in taking decisions. The examples in Table 4.2 illustrate these points.

Table 4.2: Lack of a customer experience tool

Business manager 2	*If we are talking about **tool designed for full understanding of the customers** and **their expectations**, what improvements we need to do, **we don't have** that tool.*
Business manager 4	*Unfortunately, there is **no systematic work**, something that can be collected as an initiative and then **build decisions upon it.***

It is clear from the above examples that the lack of a customer experience tool could represent a missed chance to know a customer's expectation well. Manual work can be sufficient, but is not efficient at improving understanding of the ANB customer. However, there are systematic activities being undertaken in ANB to indicate the beginnings of focusing on the customer, such as managing customers' complaints through customer interaction channels and resolving issues immediately. This is discussed further in the next section.

4.2.2 Expanding Customer Interaction Channels

The customer of ANB finds multiple options for accessing the bank. Analysis of the data reveals that there are three main categories of customer interaction channels at ANB: 1) alternative direct channels (ADC), which deal directly with customers. There are three main sub-channels within the ADC: interactive voice response (IVR) software, automated teller machines (ATMs) and internet banking; 2) the branches as a non-direct channel (the branches are not considered direct channels because walk-in customers arrive and employees serve them through customer service systems or through a cashier) and 3) digital marketing, which comes under digital signs and bank identity and includes social media and SMS dispatches. According to the analysis of data for ANB, internet banking channels are the most convenient because the transactions require less physical activity and are less pressured. Digital marketing channels are the most effective because they are popular and closer to the customer. Branches and ATMs are the most reliable because they are tangible and transactions are documented.

The field data shows that ANB has had some issues in enhancing the customer services through IVR. The IVR at ANB offers a long list of choices without sorting them in a way that would enable the customer to go directly and easily to his or her choice. Sometimes, the system delivers a long speech about banking services, even though the customer may not be interested in them. In addition, the language used in the IVR is not always easy for people to understand. As IT manager 2 comments,

> *When you provide a service, be realistic in the service you provide. In the IVR, don't add these services that only certain people use and aren't used frequently and add them to the beginning of the menu. They should be at the end.*

However, there is evidence to indicate that the main strategy related to customer interaction channels is to collect customer complaints and suggestions through the interaction channels. ANB gives high priority to customers' complaints and to solving them. Significant efforts have already been made by ANB to minimise the number of complaints in order to gain greater customer satisfaction. The examples in Table 4.3 display some of these efforts and interests.

Table 4.3: The high priority given to complaints

Interview participant	Response
IT manager 1	*Through **the amount of complaints**, I can see that there is **a good effort** being done in this area, people who are responsible for complaints know the sources of complaints.*
Business manager 3	*One of **the important channels** that we see is **the customer complaint**.*
Business manager 4	*Any **complaint** from any customer, we **take seriously**.*

Table 4.3 illustrates the extent of the readiness and interest regarding addressing the problems and complaints received from customers. ANB focuses on knowing the sources of complaints to avoid the repetition of an issue. Two of the participants who are considered to be on the senior level of management, and one participant who is a retail internet banking manager and deals directly with complaints on the frontline with customers, explicitly confirm the importance of taking a complaint seriously and solving it. The most important factor is keeping the running services at a satisfactory level. Thus, as the current service is without complaints, this is the start of ensuring that ANB is on the right track to achieving a customer-focused approach. One illustration of this comes from IT manager 2:

As I mentioned, the customers are more wanting this kind of issue to be solved, rather than suggesting a new thing.

It could be inferred from the above example that a significant amount of work has been done by ANB in relation to its customers in resolving issues within the existing service.

One key finding from the data analysis is that ANB applies its complaints management process to monitoring and controlling the complaints stream. The significance of the complaints management process lies in documenting the interactions between customers and ANB, which guarantees the rights of the customer and places ANB under the supervision of the regulator. This approach addresses the customers' interests first, regardless of the costs incurred because of the work required to solve a particular problem. The following chart simulates this process based on data analysis.

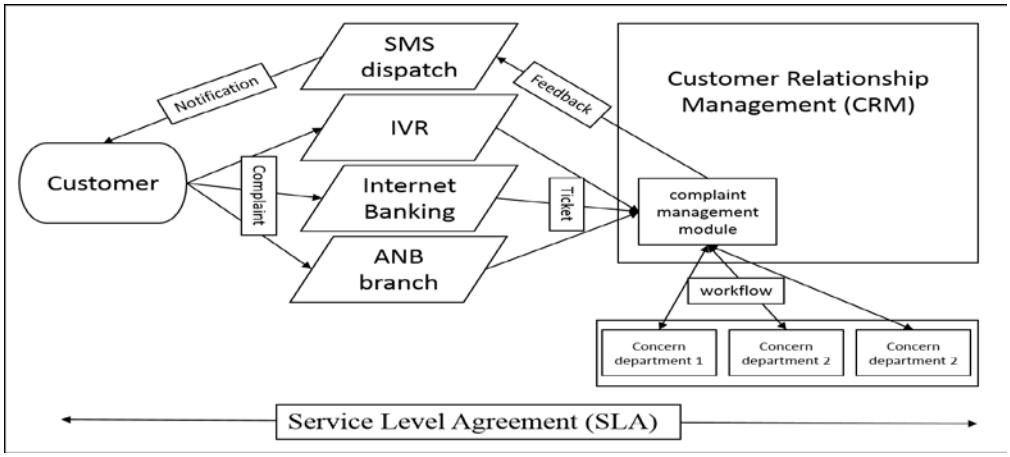


Figure 4.7: Graphical simulation of complaints management process

As shown in Figure 4.7, ANB applies a tightly controlled service level agreement (SLA) to solving customers' complaints or feeding back to the customer regarding the progress of a complaint. The complaints management team has an SLA between initiating a complaint and coming back to the customer, although it depends on the category of the complaint and whether it is simple, medium or complicated. They have an SLA from one day to three days and they have to reply to the customer within that period:

We should respond in a certain period of time, and provide all the evidence related to solving the customer's issue (IT manager 4).

Moreover, the data analysis suggests that if the customer is still not satisfied, he or she can go to higher levels to SAMA and escalate the issue. Based on the SLA, if the bank does not respond, SAMA monitor the situation and write monthly reports about ANB's performance in responding to its customers. SAMA monitor the number of complaints, as well as the percentage of complaints resolved, the type of complaints, the response time from the bank, and the complaint according to the SLA detected.

However, ANB is distracted by the need to deal with customer complaints. When it comes to the topic of improving services based on suggestions from customers, a level of commitment is required that is different from the resources available to the complaints side. While ANB is occupied with issues related to compliance, SAMA mandates in response to problems that occur. As IT manager 5 reports,

> *The complaints take the lion's share of the attention, and we focus on this in a way that makes us neglect other issues, which are the things that are important for the customer.*

Using the NVivo program, Table 4.4 shows the frequency of the word 'complain' or its derivatives* and the frequency of the word 'suggest' or its derivatives* in the interview transcripts for all the ANB interview participants.

Table 4.4 : Frequency of the words 'complain' and 'suggest'

Word	**Occurrence**	**Word**	**Occurrence**
Complain* words frequency = 110		***Suggest**** words frequency = 45	

From Table 4.4, the topic of customers' complaints receives the highest percentage of participants' responses, which suggests the level of interest of the bank in the suggestions that come from customers. The focus on the complaints side of customer service distracts the management and employees of the bank from focusing on changes based on customer suggestions. In turn, ANB needs to know the changes that customers want. The next section describes the activities involved in knowing each customer.

4.2.3 Knowing the Customer

ANB follows the 'know your customer' (KYC) rule. The case data shows that KYC requires a bank, when a customer opens an account, to acquire the main profile information, such as email address, income, address, interests, education and job

title. KYC keeps the continuous updating of customer information immediate and mandatory. According to IT manager 2,

> *Knowing the customer is very important, customers are like your children, everyone has their own style…. Know what your customer wants, this is the key to keeping your customer (IT manager 2).*

By using KYC, ANB is building an important database and can know in detail how many male and female customers it has, how many are educated, how many are employed or unemployed, etc. Through KYC, ANB can design a product specifically for certain groups of customers or suggest certain products for them:

> *The business owner or any participant of a certain project puts himself in the customer's place. We really go hand in hand with the customer and know their needs (IT manager 5).*

Knowing the customer supports ANB in evaluating each customer, in order to place all of them in the proper segment and offer them the right product if they are eligible. The following paragraphs discuss some scenarios (acting like a customer, a cross-checking, segmentation strategy, and opportunity management) that ANB has adapted, demonstrating the importance of customer experience and behaviour in KYC as ANB.

Acting as a customer

Both business and IT employees act as customers based on their individual experience. They try to understand the customer experience of their services or products. Acting as a customer increases the employee's ability to understand what customers want done. They brainstorm as a focus group to understand the customer. They reject changes in certain services or products for the purpose of preventing future negative impacts on the customer, or because they are interested in the benefits to the customer. For example,

> *We may reject it from a customer experience side. The customer won't do this. This is not comfortable for the customer (IT manager 4).*

These employees are driven by customer focus and can, for example, suggest a soft launch, or test a product on closed groups, so that they can identify any problems before releasing the product to customers. The notion of acting as a customer (or

putting yourself in the customer's place) is very strong within the bank. Most of the interview participants point to this habit in some way or other. Table 4.5 provides the responses from the participants in this regard.

Table 4.5: The importance of knowing the customer

Interview participant	Response
Business manager 4	*We consider **ourselves as customers of the bank** before being a team and employees in the bank.*
IT manager 1	*I'm someone in the banking business and **I'm also a customer**… in the end, we are customers before being employees.*
Business manager 1	*You need to go on the ground, ask people around you and see **what customers think** about you.*
IT manager 2	*When a customer complains about something and when **I log into my bank account**, I find the issue is still the same.*

In Table 4.5, ANB employees confirm they are customers before being employees: they use the same services that the customers use. Any shortage in or problem with the bank's services is going to have an impact on them just as with any of the customers, so their experience is the same as that of the customers.

The cross-checking method

Checking the sources of a problem makes it easier to solve quickly, which means faster access to meeting the demands of customers. From the case data, it is evident that ANB operates a cross-checking method to do this. The cross-checking method involves related departments, headed by the Customer Experience Department, checking data from various sources to regulate the accuracy of feedback.



Figure 4.8: Simulation descriptive of a list of various sources

The case data suggests that this list has more than one source, and the most important is the feedback that comes from the customer. ANB also relies on other sources, such as feedback from the Transformation Team. Furthermore, mystery

shoppers provide observations regarding customers' complaints. Focus groups are also used, since employees can shed light on specific topics when it comes to issues in the systems, the processes, or the ATMs. For example,

> *If I take comments from the research, or the dipstick research, I cross-check it with the complaints…We don't take one side. Yes, we do have different functions, yes, and this gives you more strength to take it to make corrective actions on it (Business manager 3).*

The above example is evidence of the concentration of ANB on customer problems. Gap analysis resulting from the cross-checking process enhances the customer interaction channels and all the initiatives taken to satisfy customers. Thus, the relevant departments can choose the most appropriate solution through the most effective channel to communicate with and serve a specific customer.

The segmentation strategy

Evidence from the data collected for implementing a customer segmentation strategy is given by the Segments Department Team, which analyses customer segments. They examine the various customer segments and identify their behaviour and patterns. The team also manages the segmentation strategy and how it is reflected on all customers. Every customer is given a segment and a different programme, focus and approach. The team also segments the queue management system (Qmatic) according to customer segment. The Qmatic system helps to organise the customers and gives every customer priority according to his or her segment. According to Business manager 3,

> *We give high wealth individuals a fast track, even in the application process, even in the delivery, and they are prominent in the system. In the branches, they have special rooms as a priority and they have relationship officers, the "upper mass".*

Setia et al. (2013) argue that understanding the customer is the key to knowing the perfect opportunity to provide a specific service and how it will be explained, delivered and billed. The field data reflects that the Marketing Department receives benefits from the segmentation strategy by attracting customers with offers in line with their interests.

The Marketing Department uses an opportunity management system (OMS), which

takes information regarding customers' segments from the CRM, processes it, and turns it into opportunities offered to customers when the IVR communicates with them, when they open the website or even through an ATM. There are specific customer segments for a certain product or service. According to one Business manager,

> *How our opportunity management team works, you will plug in this list inside the system and whenever the customer contacts the bank through an ATM, through online, or through visiting the branch, this message will be related to him (Business manager 1).*

KYC helps ANB to provide a quality of service that is considered higher than, if not equal to, customer expectations. Knowing the needs of customers means that ANB is always trying to maintain trust and keep these customers. The next section discusses ANB's strategies for keeping customers and fulfilling their needs.

4.2.4 Improving the Fulfilment Time for Customers

Keeping customers is important to keep a business, but it's not always easy work. ANB knows that dealing with customers requires intense care and attention, as customers may become bored with monotonous regularity or upset because they are interacting in a negative way with the bank:

> *If you leave customers in "settled water" for a long time, they may go to another bank, and they might find that the other bank is providing more services and newer services to their customers (Business manager 4).*

Closer analysis of the data presents two main approaches that ANB pursues to fulfil customer expectations and needs: 1) disclosure and transparency with the customer; and 2) commitment to improving the service. The following paragraphs discuss these two approaches.

Disclosure and transparency

Disclosure and transparency have become a way of maintaining customer retention levels and relates to being clear and honest with customers. Management of ANB commits to high standards of disclosure and transparency, for example:

We are bankers, we should give a clear image, of transparency, honesty, integrity, working justly. All these are good things but the challenge to all is to reflect it on practical grounds (Business manager 3).

Clarity inspire confidence, and the customer will come back to ANB again. Two main procedures around disclosure and transparency are deduced from the data:

- Giving clear instructions - to the employees who are on the front line with the customers - to announce the conditions and tariffs of charges applicable to the requested product or service. The instructions from ANB ensure that sales should tell customers to read the conditions and tariffs and, if they have any questions, to go back to ask at any time (see *Appendix* C). ANB has added all tariff fees and all their terms and conditions to its website under internal communication. Any customer can go to the website and access information regarding the fees of the whole bank and read about the conditions and consequences.
- A dedicated consulting unit to advice customers. ANB has assigned a unit that includes a credit consultant or an advisory unit in the call centre. Data collected reveals that this is another of SAMA's requirements for banks. Each advisor is well trained and knowledgeable and presents customers with the best options so that they can choose the most suitable. Advisors simply advise customers of their benefits; their job is not to sell or to persuade but their job is to advise customers after gaining an understanding of their financial situation.

The commitment to improving the service

The objective of improving service aims to ensure that customers remain with the bank and to make the services as attractive as possible. It is evident from the case data that commitment to service improvement is highly valued inside ANB. According to Business manager 2,

The more commitment we give to the customer, the more we get positive indicators, you see the customers coming back.

Marketing employees at ANB are close to the customer and are interested in improving procedures when the customer comes to the bank to complete an application form, decreasing the time spent delivering the service to the customer

and, in parallel, achieving the desired business target. ANB aims to reduce the pressure on the branches to serve the customers and reassure customers that they will be served quickly and efficiently and any issued solved. As Business manager 1 reports:

> *We want people to reduce the amount of time they spend on communicating with the bank, making it easy for them, either for complaining, or for reaching or applying or whatever, or getting information, because you want people, whoever wants anything from the bank, a question, a complaint, it needs to be done easily. They should be one phone call or one click away from finding out anything they want to know.*

The collected data presents two examples of ANB improving its service and making processes easier for customers during and after sales. The first example is of a customer who wants to make a purchase through the bank, such as buying a car. He or she is given quick approval, signs a contract, and receives his or her purchase order the same day. The second example is renewing an insurance policy, whereby the customer is sent a link to his or her cell phone and, when he clicks on it, receives a renewed insurance policy.

ANB has introduced a new department, called after-sales services with developing new system, and this develops in parallel with sales. Business manager 2 reports the following:

> *We are developing systems that can help us provide after-sales services to customers, such as you can receive permission through the internet, you can email us and we will reply promptly. We have started a call centre, different from the call centre of the bank.*

It can be inferred from the above example that the customers feel respected when they call the bank asking about a certain service and the After-Sales Department answers them at the same time. Customers' concerns are resolved and the After-Sales Department gives optimum reassurance to the customer about the care given by the bank to its customers.

However, the case data demonstrates that ANB puts the customer in the position of having to do unnecessary work, such as registering the basic customer information that is already held in the bank database. Even if the information becomes one document instead of a folder, according to IT manager 4, this will

Enhance the customer experience. I am still not happy about the branch process and how it's done. When you visit a branch today, I personally am not happy, because I see a very good opportunity to automate and enhance the process. The manual work, we have to work on it.

The IT manager in the above example mentions that the above issue may affect the customer experience if it makes life more difficult for customers when they deal with ANB. He focuses on the possibility that ANB may need to consider changing from in-branch registration to enhancing the registration process itself online if it is currently having a negative effect on levels of customer satisfaction. ANB is, therefore, working hard to move customers from calling the call centre or visiting the branch to running all the services or transactions through the digital environment. The next section discusses digital transformation in detail.

4.2.5 Transforming Customer Services to Digital

The previous section mentions that an objective for the customer experience and ANB is endeavouring to have transactions completed online. The fewer the customers who use the branches, the better it is for the customers and the bank, as everything that takes place is physical, with a rise in traffic and the number of transactions, particularly for regular transactions that do not need customer interaction with the staff. For example,

Our strategy is to eliminate the visits of the customer to the branch to increase his satisfaction…to be honest, we are trying to decrease the customer's visits to the branch, and this will increase his satisfaction, we are trying to migrate the transactions from the branch to the channels. We try to migrate the transactions from the branch to our first choice, which is internet banking (Business manager 4).

According to the above example, ANB is repositioning its use of the internet and mobile banking as the bank wants them to be the preferred channels for customers because this is the cheapest method for the bank and the easiest for the customers.

One key finding from the data analysis is that ANB has recently introduced mobile banking, which uses a very easy, interactive application, and anyone with an Android or iPhone device can log in, whether it is customised in the Kingdom or they are

outside, if they have to pay a bill, credit cards, transfer funds, or top up mobiles. Everything is on the customer's mobile phone and accessible through an application that is very customer friendly and simple screens allow the customer to perform transactions easily. Figure 4.9 shows a screenshot of mobile banking functions.



Figure 4.9: Screenshot of the mobile banking application

According to the digital transformation in ANB, the field data highlights a new service that will be available at ANB, although this is not yet fully activated in the Saudi market. This service is online payment, such as PayPal. Some customers demand this service, so ANB has been working to launch it as soon as possible due to this demand:

> *Talking about the necessary services, sometimes there are unnecessary services, which must also be provided, to compete. And there are well-known services, these days, the trend issue, like online payments like PayPal (IT manager 2).*

The above example shows that ANB has created a "copycat" service that is already available at any competitor's bank but not available at ANB, just to allow customers to stay with the bank. In addition, retaining customers is prominent at ANB due to the fierce competition between banks. ANB believes that if customers are happy with the services and their channels, they will apply for another service the following day.

4.2.6 Summary

In conclusion, the customers have strongly welcomed this move to digital. Customers do not need to call any more. They do not need to ask customer service, as everything

is done online, 24/7, any time and during holidays, which is a big step. Furthermore, some customers have started to evaluate the bank based on its digital services and what the bank gives them; if they can reduce their visits to the branch, they will be satisfied with the bank.

The next case is in line with the two previous cases in terms of digital transformation and activating the role of the customer experience departments. However, this case is characterised by the existence of a common culture of customer service excellence at all levels of the organisation. This case has a culture of fulfilling retrieval services for the customer in a timely manner, if not earlier than anticipated. This culture reflects positively on the clarity of strategic objectives among all the departments concerned with customer service. The next section discusses the customer-focused strategies of ESB Networks.

4.3 ESB Networks: Customer-Focused Strategies

ESB Networks is subject to standards and objectives determined by the Commission of Energy Regulations (CER) in Ireland. The regulator's role in steering ESB Networks towards customers is almost tangible and is evident throughout the interviews conducted. Most of the participants are focused on the effect of the CER for the sake of fulfilling customer service properly and professionally. CER acts as a judge between ESB Networks and the customer. In the event that ESB Networks fails in its customer service, the CER applies sanctions on the organisation. The following example demonstrates the influence of CER:

> *We are completely regulated by the CER. I suppose, essentially, if they said "jump" we say "how high?" It's not quite like that. There is a lot of good interaction. But, if we don't hit set figures regarding the customers, ESB Networks is under a penalty. The regulator says that we are not good at what we are doing any more (Business manager 5).*

According to Business manager 5, CER deals with managers of ESB Networks in providing feedback and guidance regarding corrective actions in order to improve services to the customer. In line with the orientations of CER, ESB Networks has identified 10 areas as part of a Customer Service Improvement Plan to improve services and achieve customer satisfaction, including making it easier for customers

to deal with ESB Networks. The plan drives strategies in delivering customer service, as well as a commitment around safety and continuity of supply (see *Appendix* D for more information). The major objective of this plan is:

> *To ensure that a culture of customer service excellence exists at all levels of staff in our organisation (Customer Service Improvement Plan 2013-2016).*

This plan provides a common language, with implications for understanding more about a customer-focused strategy as a common language among the staff. Furthermore, the data collected shows the use of this guide as part of the culture within the organisation for all the staff, especially those personnel who deal directly with customers. Accordingly, the Manager of Customer and Business Performance draws the borders followed by ESB Networks in customer service. These outlines require the provision of high-quality services while ensuring the continuity of electricity service to the customer, as described in the following example:

> *ESB Networks is the only part of the ESB Group that actually deals with the customer, so we are very conscious of that, and the need to provide good customer service, particularly, ensuring that people continue to have electricity supply and the supply is not interrupted (Business manager 4).*

Business manager 4 draws attention to the awareness and consciousness within the organisation regarding their responsibility towards the customer. First, this responsibility prompted Business manager 4 to mention the technicians who work daily in the field in order to ensure service continuity and satisfy customers.

> *If it's interrupted, that people get their electricity back very quickly and we can see that if we have major outages or storms, the technicians would work around the clock to restore power to people, very conscious of that role in terms of customer service.*

Second, this consciousness has made her aware of the needs of customers and how to take care of them, as she refers to good customer service in order to improve customers' experience with the organisation. The borders in the previous example fall under the procedures and actions undertaken by ESB Networks in order to improve customer care and raise the level of the customer experience. The next section discusses the customer experience further and the care taken by ESB Networks.

4.3.1 Empowering the Customer Experience and Customer Care

ESB Networks pays great attention to customer care through a National Customer Contact Centre. This centre is located in the city of Cork, there is an integrated crew running the centre, which is directly responsible for dealing with the organisation's customers around the country. However, the centre lacked a department or section that specialised in customer experience management. Nevertheless, there is a degree of attention in the customer experience by ESB Networks. The term 'customer experience' resonates within ESB Networks, taking into consideration the best options for the customer, which may be an initiative of the organisation itself. Three axes that lead the organisation: 1) the customer experience, 2) the conditions of the regulator (CER) and 3) the organisation's capabilities.

> *We are led by customers in terms of their experience, we are led by customers in terms of CER expectations of us but we are also leading customers. We are giving them, "this is what we are, and this is what we can do" (Business manager 5).*

At the level of the regulator, CER monitors the standards of the staff and the organisation in dealing with customers and the quality of the service provided, from the first response to a customer's call to the implementation of the service requested. Mystery shoppers from CER frequently contact the call centre in the organisation to request specific services and, therefore, to ascertain the ability of employees and the organisation to take care of the customer and his or her request. For example,

> *Mystery shoppers have 18 or 20 scenarios, it could be…a simple one, tree cutting… Also there is a big scenario where no supply, I suppose, almost a tick sheet, points that they have to get across (Business manager 5).*

Consequently, a quality targets report is feedback from the mystery shopping process. This report is sent each quarter to the managers and team leaders at ESB Networks and contains details of the issues and faults that have been identified and collected. This highlights the ethical and behavioural aspects of the staff. Each manager also discusses this report with his or her staff in order to avoid mistakes and improve customer service. An example of this process can be seen in the following comment:

We have quality targets to meet as well, around the quality of the service we provide to customers, and those targets are quarterly targets, and they are based on mystery shopping … it is giving the feedback in relation to contacting the call centre and particularly in relation to the agent's behaviour around being courteous, being friendly, being willing to help (Business manager 2).

The mystery shopping process is outside the organisation's control. This point lends credibility to the results and feedback because they come from a third party. The mystery shopping process has become instrumental in enhancing the customer experience and customer care, to the point of comparing results from one region to another and through the transmission of the lessons learned from each state or region.

ESB Networks qualifies its technicians internally for the external network through specialised courses. These courses contain vivid examples of the customer experience and the best ways for the technicians to deal with events they may face. For example,

There are customer service training modules for our network technicians. When they are being sort of trained up before they qualify, they get that and there are also refresher courses on dealing with customer issues (Business manager 3).

The above example refers to refresher courses for staff to deal with the broad segments of customers. Such courses may be a positive factor when technicians are interacting with an unhappy customer who has a problem with the service, as indicated by Business manager 3 when referring to "*customer issues*". With regard to courses on dealing with customers and interacting with them positively, this point leads to the next section, which reviews the advantages and disadvantages of the interaction channels followed by ESB Networks with its customers.

4.3.2 Expanding the Customer Interaction Channels

Interaction with the customer is one of the means for achieving customer happiness. A customer who receives a positive reaction shifts from being disgruntled to being someone who is happy with the organisation. This approach is demonstrated by the Manager of the National Customer Contact Centre:

After 35 years, you can always make customers happy, whatever you are doing and the best way to keep them happy is to interact with them positively (Business manager 5).

However, Business manager 5 suggests an improvement to the language of interaction used with customers. He refers to a kind of 'Americanisation' when the agents speak to the customer, and feels that customers require a softer and smoother tone when spoken to. A customer who speaks with an agent expects that he or she is always right, so a quieter approach and a more resonant use of words strengthen this sense of the importance of the customer inside ESB Networks. The same manager makes the following comment:

It's equally frightening, I think, when you have this sort of "Hi! So glad you called me today! How can I help you?" This is even Americanisation, you know, Irish people don't really like it... that's the kind of tone ringing, we do a lot of work with our own people in terms of how they answer a call (Business manager 5).

There has been a paradigm shift by customers in the use of the official ESB Networks website. Customers have begun to go to the portal site in order to enquire about services, present queries or obtain the information they want. This shift is reflected in the number of interactions cited by one of the IT managers.

In general, it's starting to increase now on the web, there is ...I think 70,000 interactions with the website…we are heavily investing, probably having 2 million [euros] over the next two years in the website (IT manager 2).

This highlights that ESB Networks aspires to make its website an official channel and attractive to customers. ESB Networks has an interest in investing in this aspect of communication in line with the increase in customer interest and appetite for the use of the website. IT manager 2 states that the actual objective of the increased interest in bringing customers to the website is to reduce the pressure on the call centres.

One key finding is ESB Networks' ability to notify customers of faults in a practical and effective way, whether these are planned or unplanned power outages. Taking care to inform customers before the customers communicate with the organisation is one of the most prominent aspects of the participants' statements throughout the interviews conducted. A mobile application called 'PowerCheck' is one of the ways in which ESB Networks informs customers proactively. IT manager 1 explains the

advantages of PowerCheck application.

> *Recently we had PowerCheck, which allows customers if they discover they have no electricity, to check … they can know the estimated time of restoration. So it saves to minimise the customer making a call, which is good … although they are disappointed because there is no electricity, they will be somewhat happier to know that we know about it and even happier to know that we have somebody working on it (IT manager 1).*

The previous example provides two points articulated regarding PowerCheck. First, the convergence of the customer with the service used. The customer becomes familiar with the power outage and the time of its return. This situation eases customers' resentment of interruptions. Second, it eases the pressure on the call centres and thus reduces the time and effort spent on answering a large number of very similar customer calls. A screenshot of some of the functions of the PowerCheck application is given in the figure below.

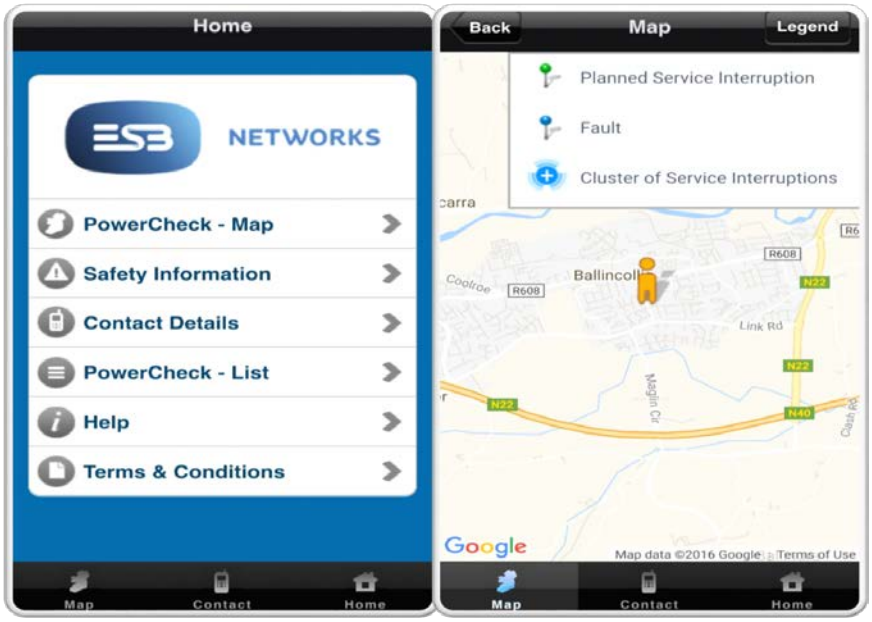


Figure 4.10: Screenshot of the PowerCheck application

Moreover, ESB Networks' customers rely on a modern interaction channel to ascertain the expected occurrence of outages during storms such as Twitter, the social networking service:

> *Twitter has grown very successful, particularly when we have had large-scale outages and storms. We have used it to warn people in advance. I think it has helped people's perceptions, that we look a bit younger and we are developing an online service as well (Business manager 4).*

The Twitter handle @ESBNetworks is seen as an effective channel, with the number of customers using it increasing by the day. A large number of followers interact with this account. There is also a dedicated manager responsible for updating the account and interacting with inquiries and customer complaints. Information in English and Gaeilge (Irish language) as used by ESB Networks on Twitter to inform its customers.

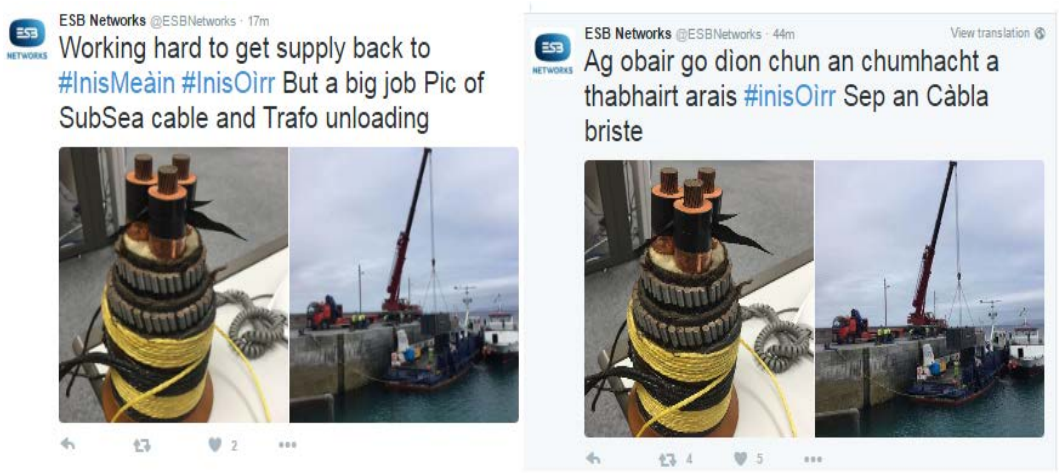


Figure 4.11: Screenshot of work on a subsea cable outage

The customer shift from traditional to more modern interaction channels is evident in the case of ESB Networks. The number of customers who use modern channels is almost three times the number of those who call:

> *When we looked at the figures for the actual storm, less than 16% of the people rang, whereas 58% as a number did PowerCheck and Twitter (Business manager 5).*

This provides an indication of customers' actual use of channels with easier access and that require less effort to access real-time and accurate updates. In the event of an emergency, it can be difficult to contact or access the nearest office services, so a digital option is probably the best and safest means of communication.

This section highlights a number of strategies used by ESB Networks to interact with customers. The next section discusses the strategies used by ESB Networks to know its customers and their expectations, whether through interaction channels or in other ways such as 'Rep-track survey' and 'Customer usability testing'.

4.3.3 Knowing the Customer

ESB Networks attaches importance to understanding customers and identifying customer needs in order to provide customer services. Several measures are undertaken by the organisation, such as market research, whereby ESB Networks receives feedback through customer call backs that are undertaken by an external company. ESB Networks sends a random selection of names and telephone numbers of customers who have contacted the organisation across any of the channels to the external company. The external company then calls the customers to establish the purpose of the call, the relevance and accuracy of the information, the services provided.

> *Every week we give 100 customers' numbers to REDC, a kind of a polling company. They ensure a customer satisfaction. ….. Then they come back to us and present every month and they say here is our findings for this month, you're up in this, and they tell us about our overall customer satisfaction, if it's up or down (Business manager 5).*

This shows the feedback process for customers after they have received a service. The feedback process is part of a quality targets report (see section 4.3.1). This feedback gives an indication of customers' evaluation of the organisation and the services provided to them, as well as identifying the advantages and disadvantages that accompanied the interaction. ESB Networks knows its actual position with its customers. There is interest in the information extracted from the feedback at all managerial levels and that the outcomes are taken seriously.

In addition, the organisation applies surveys to track its reputation and what customers think about ESB Networks on the internet. The Customer Care Department pays a great deal of attention to the customer satisfaction surveys. The mechanism utilised by ESB Networks to know the customer and his or her reactions is as follows:

> *ESB does a Rep-track survey, it tracks the reputation of ESB against other utilities. That's quite a big survey as well. ESB attracts social media, we have a tracking mechanism every month. We do analytics of all of our social media, what's positive, what's negative and they target Twitter, blogs and boards as well. They look at what people are saying about us (Business manager 4).*

Internally, ESB Networks staff test the services provided to customers before a launch.

Experiments are undertaken by both current and former employees and their families to test some of the website services. The intention of this process is to identify any weaknesses that may be associated with a new service, so that these can be resolved prior to the service being placed in the hands of customers. The data analysis also indicates that even knowledge relating to customer behaviour towards a particular service or a new change could be examined by the organisation's employees, helped by the honesty of employees acting as customers, as mentioned in the next example:

> *We did customer usability testing before the launch…. we targeted staff first and retired staff as well, and got their feedback. They are customers as well because they'll be very honest (Business manager 1).*

There are some indications that 'Customer usability testing' helps to determine the viability of certain services for customers. Employees or former employees are customers first and employees are able to give specific and quick feedback to the owner of the service. Business manager 1 focuses on this point because of the nature of her work, as she is responsible for the development of the e-services project in ESB Networks. As part of this roles, she is encouraged to gain feedback from staff because it is easy to obtain and does not require a great deal of effort from the owner of the service.

This section considers the processes followed by ESB Networks to acquire knowledge and understanding of customer strategies. As a result, ESB Networks sometimes makes changes according to the knowledge it gains from customers and sometimes based on other factors such as 'Customer usability testing'. The next section details the strategies of the organisation in achieving the fulfilment time to Customers.

4.3.4 Improving the Fulfilment Time for Customers

ESB Networks' strategy towards customers is to maintain the continuity of supply, whatever the circumstances. Electricity needs to be constantly available to the customer, as illustrated in the following example:

> *There is a great pride in the continuity of supply to the customers. It's always about the continuity of supply. If there is a planned outage, they do their best to get it back before*

the time and not having over rounds. I think it is part of the ethic within the company and it certainly hasn't changed in my time in the company. It's there. It's a culture, I think there is a pride in serving the customers (Business manager 2).

This reveals that the organisation has a culture of fulfilling retrieval services to the customer in a timely manner, if not earlier than anticipated. There is a sense of staff pride in customer service and dedication to it. Business manager 2 mentions that customer service and meeting its needs are part of the staff's principles. Thus, staff try to provide the best customer service from the start, without the need to make the customer wait or give him or her cause for complaint. In addition, practical examples may also be used to reveal the presence of crews of technicians on the ground who represent the organisation in dealing with customers directly. The technicians are on the front line and mostly deal with customers face-to-face. For example,

We have very distinctive yellow vans. They are branded ESB Networks and they have our internal logo serving all electricity customers. So, they are out there and, you know, we have them in all parts of the country, rural, urban or whatever to keep electricity up and running. So, that becomes, I suppose, in terms of visibility and promoting ourselves (Business manager 3).

Business manager 3 applies the term 'brand' to the work of the technicians on the ground. The fulfilment by these technicians of the needs of customers raises the reputation of the organisation. When there is an 'army' of "*distinctive yellow vans*" everywhere, this reassures customers about the organisation's services. As a brand name, ESB Networks moves in a positive way between customers via word of mouth. Providing an integrated service to the customer is positive publicity for ESB Networks.

However, some participants request the facilitation of as many services on the website for the customer as possible. For example, improved ease of use of ESB Networks' website when customers complete an application form or registration information. The examples in Table 4.6 illustrate these points.

Table 4.6: Request for service facilitation

Interviewee	Response
Business manager 5	*I understand what has to be done, why it is not great, … **it's not Amazon**, and this is a voice of a generation, it is to order something, pay money, and*

	track it, and if there is a problem, ***Amazon comes to me*** *and says sorry that they can't deliver, …. Absolutely!* ***Simplify the process*** *and that's exactly the way the* ***new customers see life****.*
IT manager 1	*We really want* ***customers to love ESB****, so even the simple things have to be simple,* ***easy and nice and give them that feeling****, it's very important to interface and how* ***many fields you ask to fill in*** *and all that, has been thought through,* ***there has been a lot put into usability, use of cases, make it easy as possible.***
Business manager 1	*If a customer is without supply, I just think* ***the last thing the customer*** *wants to be doing is discovering that* ***he needs to set up an account first.***

The 'Amazon model', i.e. simplifying the customer process, is also a demand from Business manager 5. This is a model that enables the organisation to provide service to the customer simply and smoothly. The new customers or 'the voice of a generation' - as referred to by Business manager 5 - is a reality. The new generation of customers want to have requests and follow-up processes eased and does not want to have to accomplish such tasks manually. In addition, ease of use is more likely to attract customers to ESB Networks' services, as mentioned by IT manager 1. Small or intricate factors can be reasons for gaining or losing customer satisfaction. For example, the number and order of the fields in a particular application form might cause the customer to question the benefits of completing these fields, and thus to begin to complain about it. Business manager 1 suggests that the customer may be experiencing an exceptional situation, such as a power outage. The customer will begin to resent the introduction of information not related to the interruption of the service that could take the customer's time, instead of the customer communicating with the service provider to solve the problem.

In order to move towards more organised facilities for ESB Networks, the organisation has pursued a digital corporate strategy. This strategy has achieved some of the aspirations of the employees and customers in terms of usability and simplicity, as illustrated in the next section. The next section provides an explanation of the digital transformation strategy pursued by ESB Networks.

4.3.5 Transforming Customer Services to Digital

Customers are still trying to make their voices heard through traditional media, such as well-known radio programmes. The case data presents that the lack of certain

features and functions of the digital channels are one of the reasons customers turned away from digital channels. The complaint function on the website needs to be updated and improved to persuade customers to move away from making complaints. For example, customer call 'Joe Duffy' the current presenter of Liveline, which is broadcast on Raidió Teilifís Éireann (RTÉ) Radio 1, the national public service broadcaster in Ireland. ESB Networks needs to make some improvements and additions to its online services:

> *The whole digital piece needs to kind of be more up to date, the website, online services, listening to customers...today their stuff on the radio, it's a Joe Duffy show on the radio, sometimes complaints come on the radio (IT manager 3).*

Digital transformation is expected and demanded by ESB Networks. Customer transformation from using traditional to digital channels is a strategic objective at the corporate level. The data analysis reveals that there is a strategic project known as the 'corporate digital strategy'. This project is concerned with converting all the tasks and functions that serve customers to the website:

> *There is a big digital project now, an entire rewrite and revamp of the website and that is based on customer feedback. That's good to be more fresh, a bit more online, a bit more ability to self-serve (IT manager 4).*

The improvement and development of this project depends on feedback from the organisation's customers. IT manager 4 points to the customers being given the option of self-service. Self-service means that customers can rely on themselves in requesting or performing a specific service that assists them in reducing the time and effort expended. Another objective is improving the customer experience and persuading customers that they will find effective and easy digital services as part of the additional changes. For example:

> *We are going on a corporate digital strategy where we want people to go to our website to find out how easy it is to change things and easy to move meters and it's not a big problem and it's all more efficient, and that's the kind of experience we want to give to our customers (IT manager 2).*

Achieving a good customer experience is the objective of the digital transformation of ESB Networks. Customers become more motivated when they find ease and

effectiveness, thus positively reflecting on the customer experience and improving expectations. There is also a financial goal in terms of the benefits for ESB Networks, as digital transformation reduces costs. When customers use the organisation's website, this decreases the company's financial expenses. The customer does not need to contact the sales offices or speak to the staff at these offices, or complete paperwork in the case of a request over the internet. ESB Networks also wants self-service to reduce the complexity of transaction processes and human intervention. ESB Networks wants to facilitate services while reducing the rate of errors and the duration of transaction processes. The next example demonstrates the previous points regarding the orientation of ESB Networks to self-service:

> *The customers' self-serving is going to drive down the cost. So in those ways, we hope to drive down the cost and the complexity of our processes at the minute (Business manager 1).*

The approach illustrated complies with staff requests in the previous section regarding facilitating the use of the organisation's website. Thereby, ESB Networks' orientation towards this strategy, as well as the desire of its staff and customers, has yielded the first phase of the digital transformation project. Certain services and functions are available on ESB Networks' website, as well as the PowerCheck application for use by customers. Closer inspection of the data suggests that ESB Networks has, during the first phase of the provision, been able to offer some services, such as submitting a meter reading, viewing usage history, registering a power outage, accessing updates and power restoration times, viewing future planned outages, registering and tracking a service request for a new connection, and printing an online invoice. The second phase of the digital transformation project is intended to enable the rest of the services on the website and complete the link between ESB Networks' systems and the SAP system.

4.3.6 Summary

In conclusion, ESB Networks has, as part of a Customer Service Improvement Plan, identified areas in which to improve services and achieve customer satisfaction. ESB Networks aims to improve the customer experience through effective and easy

digital services. ESB Networks is working to make its website and mobile application an official channel that is considered by customers to be the best choice when seeking information. Thus, ESB Networks focuses on a corporate digital strategy project to achieve customer and organisational objectives in terms of digital transformation.

4.4 Conclusion

This chapter addresses research question one by analysing and presenting the customer-focused strategies of the three case studies. At the beginning of this chapter, the findings of the STC case study were presented and analysed. Through an exploration of the research data for the first research question, it can be concluded that STC has been conducting a cultural change programme, and there is evidence of the high level of attention being paid to this programme by STC employees. This programme aims to change the company from an organisation focused on the business to one that is focused on the customer. In addition, the field data support the independent and effective role that is leading by the Customer Experience Department to stand up for the customers' side. The role of the Customer Experience Department is to control the relationship between the desire for sales management and marketing to increase the company's revenue and the interests and satisfaction of the customer. Customer Experience Team efforts are able to give the customer authority in relation to the services and any complaints provided through achievements such as customer code confirmation (Treble C).

STC uses multiple systems to study and analyse the feedback and suggestions of customers, such as using VOC for analysing sentences and paragraphs, and the 'Nexidia' system for analysing the vocabulary most repeated by customers. In addition, STC offers its core services through digital channels and a self-service environment, digital transactions used around three times more often than physical transactions. Customer interaction via the STC website and mobile application are increasing significantly.

The analysis of the research data from ANB for Customer Focused Strategies to answer RQ1 leads to conclusions that ANB works to ensure that its financial targets

will not overcome customer satisfaction and creates a balance between the importance of functionality and profitability as far as possible. The Customer Experiences and Service Standards Department of the bank acts as the customer's protection from the desire of the bank to increase a profit. ANB makes a great effort to limit the number of complaints in order to achieve more customer satisfaction, however, new customer suggestions are present to a lesser degree than customer complaints. ANB's strategy is to eliminate the need for customers to visit a branch and replace this with digital channels to increase customer satisfaction and reduce effort, which helps the customer. Internet banking channels are seen as being more convenient and highly effective. In addition, the mobile banking application is one of the digital channels of what ANB provides to its customers.

The revision and analysis of the research data from ESB Networks for customer-focused strategies (RQ1) lead to the conclusions that ESB Networks has identified 10 areas as part of a Customer Service Improvement Plan to improve customer service and satisfaction. ESB Networks case shows awareness of its responsibility towards customers and improving their services and experience. At the digital interaction level, ESB Networks applies surveys to track its reputation and what its customers think about it on the internet. In the same manner, ESB Networks takes part in scenarios to recognise the validity of services in defining customers' acceptance of them, such as 'customer usability testing', which helps to determine the viability of certain services for customers. The research data from ESB Networks also show that there is an internal aspiration to make the ESB Networks website an official channel that is attractive to customers. Furthermore, taking care to inform customers before customers call or complain is one of the most notable aspects of ESB Networks. The 'PowerCheck' mobile application is one of the ways in which ESB Networks informs customers proactively. Therefore, ESB Networks is aware of this shift among customers towards the use of digital channels. Digital transformation is expected and indeed demanded by ESB Networks.

In considering the three cases, STC has a specialised programme for changing the culture of employees towards the customer, while the data analysis highlights that the staff at ESB Networks have been effective at putting this type of culture towards

its customers into practice. ANB is still in the process of planning to change the culture of its employees towards the customer and the participants had the view that the organisation needed to work on this change. On the other hand, there was a positive role for the customer experience departments in STC and ANB to activate and support customer needs within the organisation. ESB Networks lacks such departments, and improving the customer experience is almost a common and clear goal among the participants of the interviews at ESB Networks.

'Knowing the customer' is a customer-focused strategy followed in all the study cases. All three organisations are keen to know the needs and expectations of their customers. However, the approaches sometimes differ among these organisations. For example, STC and ESB Networks use advanced analytics systems to analyse feedback from customers, whereas ANB is satisfied with feedback from customer service staff or the Transformation Team to know its customers. However, there is a desire among all the organisations for the digital transformation of all services and channels of interaction. The most prominent examples of this transformation are the activation of mobile applications for all the core services and the provision of services through the websites dedicated to these organisations.

This chapter helps to improve understanding of customer-focused strategies. These strategies have a positive and beneficial impact on both the customer and the organisation. The data show that these organisations try to ensure that the customer experience is positive and comprehensive, from the first contact between the customer and the organisation until after the sale. Therefore, the organisations are keen to have channels of interaction with the customer that are more sophisticated and attractive than those of their competitors. Thus, digital channels have become one of the preferred options for both customer and organisation. These digital channels are easy for the customer to access and smooth to use, are very stable and provide continuity of service.

The use of advanced systems and 'acting as a customer' in order to learn customer behaviour and predict customer needs are approaches deployed in the organisations. Such approaches support these organisations' wish to meet the demands of customers in a timely manner and with ease and accuracy. The customer is also more

familiar with what is happening within the organisation. The customer receives guidance and notification of all services from the organisation as a result of the availability of up-to-date and accurate information. The above strategies and projects to achieve customer and organisational objectives in terms of digital transformation need the support of IT. Thus, in order to consider the support for meeting the requirements and needs of customers, this study explores the IT side in achieving these strategies, in accordance with the research objectives. The next chapter discusses the characteristics of ITC in the organisations to answer RQ2.

CHAPTER FIVE PRESENTATION AND ANALYSIS OF RESEARCH QUESTION TWO: CHARACTERISTICS OF THE IT CAPABILITY IN THE ORGANISATION

5.0 Introduction

This chapter presents and analyses the findings of research question two. This question seeks to explore and categorise the characteristics of IT capability in the context of each organisation. This research question aims to understand the mix of IT capabilities that combine to deliver an excellent customer experience and fulfil the customer's needs. Combining IT capabilities ensures that their characteristics are defined and known across the organisation and, therefore, IT has an influence on business in achieving the customer's needs and meeting his or her demands.

This chapter begins by identifying the introduction of ITC within each organisation and the extent of IT participation in strategic decision making in relation to the customer. The second research question discusses the characteristics of ITC based on the following five characteristics: 1) the fulfilment of business requirements on time, 2) the automation of business processes, 3) supporting business continuity, 4) the integration of multiple business systems and applications, and 5) the availability of timely and correct information. Each characteristic contains strengths and weaknesses in supporting the business in achieving the customer's needs and meeting his or her demands. Each characteristic has a noticeable role in supporting the customer-focused strategy, as discussed in RQ1.

Sections 5.1, 5.2 and 5.3 discuss, in turn, the characteristics of IT capability in STC, ANB and ESB Networks. These sections discuss and present the answers to the second research question posed in this study based on data collected from the three case studies. In section 5.5, the conclusion summarises the important findings regarding ITC characteristics and considers how they might affect the organisation's customer-focused strategy.

5.1 STC: Characteristics of IT capability in STC

IT plays a fundamental role in STC, mainly in the services provided to the customer, and contributes towards the company's success. Unlike in the past, IT Department is now essential to the success of STC. This change in the role of IT is revealed in the following example:

> *Previously, IT was looked at as a secondary part of the company, now they play an essential role in the success of any company (IT manager 3).*

The prominent role of IT Department in the company is evident during the data collection. There are many responses by the interview participants, specifically from Business managers, in this regard. Table 5.1 shows the extent of the importance of IT to the Business Departments and includes statements from the Business managers themselves.

Table 5.1: The importance of IT to the business

Interviewee	Position	Response
Business manager 1	*Value Added Service and Application Manager*	*STC is one of the strongest companies in IT. **IT has many arms and important backbones**, and it plays **a big role** in keeping up to date with new services.*
Business manager 4	*CE Program Design and Reporting Director*	*IT to me is **an umbrella**, because IT components are **a main part** of our work.*
Business manager 9	*Product Development Support Director*	*Technology is **the heart of the telecom** environment, and without IT, you can't provide a service.*

Some business managers referred to the services provided to customers becoming powerless or weak without IT. For more understanding of the roles of IT, the next section presents the role of IT at STC.

5.1.1 The Role of IT at STC

IT has a principle role in supporting the business in its dealings with customers and meeting their requirements. According to one IT managers,

> *The main role in IT in general is satisfying the customers through implementing the requests submitted to us from the Marketing and Sales Departments. IT in the end is the enabler of the requests that come from the business (IT manager 6).*

According to the data, this '*enabler*' role is the acknowledged name used among the Business Departments for the IT Department.

> *We call IT the enabler because they implement our initiatives (Business manager 3).*

Converting initiatives into actions and making them available to the business and the customer is the role played by IT. IT acts as *the creator* of the technical solutions that serve the business. The responsibilities of the IT Department go beyond the implementation of the dictates from the Business Departments. IT chooses appropriate technical solutions and trains the business staff to ensure that they are ready to use these solutions in order to serve the customer in the best possible way:

> *We are the enablers, we prepare the solutions that the Business Departments use, we also do enhancements and keep up with the new technology, and we also train them in how to use the tools in serving the customer (IT manager 8).*

In the role of *enabler*, the IT Department has been given a voice within company discussions regarding the solutions and services provided to the customer. One IT manager confirms the influence of IT in the following comment:

> *STC has only recently become a technology-based organisation. Technology people have a voice in how things will be run (IT manager 3).*

Moreover, IT also performs the role of *mentor*, when there is a shortage of business knowledge regarding a particular service or when there are innovative solutions that help businesses with the speed and ease of services provided to the customer. Table 5.2 presents an evidence that shows that IT is the mentor inside STC for the benefit of services and customers.

Table 5.2: ITC as mentor

*IT manager 1: IT discusses **initiatives with the business**, and **we convince them** it's good for the customer, and we enhance it together to have something beneficial and usable in the end.*	*IT manager 2: In marketing IT, sometimes we already have the functionality of the systems and services, but it's not utilised by the business. **We may do marketing of these services**, tell them that we have this system and it's not utilised.*
*IT manager 4: Sometimes the business is not mature enough but the technology is advanced and there are tools to help, so **we go to the business and tell them***	*IT manager 5: We usually do **workshops for the business**, tell them about the trends and the new technologies, and **the things we can do for the customer**. They take it and study it from a*

about what we have *and they realise that it will* ***benefit the business****.*	*business perspective, then they decide and send feedback to us.*
IT manager 8: Business said that there is ***an initiative from IT****, it can be done. Thus,* ***we started some initiatives*** *in 2014, like the* ***900 initiative****.*	*Business manager 1: We might even* ***get ideas from IT.*** *They might say, why don't you launch this? They give us ready solutions and they show us how this makes money, and* ***how it gives a value to the customer****.*

Table 5.2 shows that IT promotes some of the unused or new functions. IT provides awareness of these functions and how they can be used to reflect positively on the business and the customer. Awareness of the functions may be raised through workshops, as pointed out by IT manager 5, demonstrating new technical trends. IT manager 1 explains that these IT initiatives require the follow-up and cooperation of IT in becoming real achievements on the ground. IT initiatives may indeed become strategic objectives on a company-wide scale, such as the conversion of all contact numbers to a unified number (900), as discussed in section 4.1.2.

One key finding is that on occasion IT in STC can be *a generator of revenue*. The services concerned are purely digital in nature and are associated with other core services and form the basis of the financial income of STC. These services, such as Internet Protocol TV (IPTV) and ring back tone services, rely on technology for their implementation and operation, for example:

> *The IPTV and the ring back tone services aim to increase the ARPU [average return per user] on the basic services (IT manager 3).*

It is also possible to take advantage of IT as a generator of revenue in another way, as the data available in the database may be a source of income for the company. One of the Business managers comments that:

> *Currently, IT is also trying to look at how we can maximise STC revenues. For example, if we look at big data, they are looking at how we can harness the big data to make revenue. IT is proactive in getting revenues (Business manager 4).*

The two examples above are changing the stereotypes of IT. The stereotype that people are accustomed to is that IT is the source of cost. The new image of IT may appear in the two examples above, which is that IT is the generator of revenue, as is the case with marketing and sales.

To return to a typical situation, business employees collect customers' requirements, prioritise the needs and then send the requirements to IT in the form of a request. If the request is feasible, IT starts fulfilling the business requirements. From this standpoint, the next section discusses how IT fulfils the requirements that are identified by the business.

5.1.2 The Fulfilment of Business Requirements on Time

The IT Department at STC takes responsibility for implementing changes and requirements that are received from the Business Departments, turning business initiatives into systemic functions. A tracking system is used to receive and process system modification requests. More detail regarding this system can be seen in the answers to RQ3 regarding the nature of working relationships (section 6.1). The Director of Planning and Performance Management in the Customer Experience Section addresses this process:

> *IT is supporting us, they get our requirements, how to reach the customer better or how to serve him better, they get the requirements and work on them (Business manager 2).*

This example shows that IT, similar to the business, aims to serve the customer better. For example, during a campaign on Twitter against STC in June/July 2015 following the cancellation of an open internet package, IT had a vital role in implementing quick solutions to restore customer satisfaction. One Business manager in the Marketing Department points to the speed of the response of IT in solving this problem:

> *To deal with the dissatisfaction of the customers regarding unlimited internet, this was sent to IT and it was implemented. This whole cycle was completed in less than 10 days, the cycle included studying the customers' issues, and offers were launched to absorb their anger (Business manager 9).*

Both examples above indicate that IT understands and supports business requirements in order to complete their work. However, IT has a deficit in its abilities to provide all the business and customer requirements on time. IT can provide support in accordance with its capabilities but sometimes these capabilities are limited, for example:

Honestly, IT understands the amount of work, and they provide it to us, but in the end it's based on their capabilities and sometimes it's difficult for them (Business manager 5).

Two main reasons for the lack of IT's ability to meet all business requirements have been identified. The first reason is the capacity of the IT resources. One IT manager admits that this is a problem in IT. He highlights the delay in the delivery of some of the requirements due to the shortage of IT resources. While this manager argues that IT do not fail to do its duty as required, the reason for the delay is the high demand for services through IT:

IT takes longer in implementing requests because of the resources capacity. The demand is high and IT is doing their best but we have a queue (IT manager 7).

The second reason are the processes followed when requesting a change. As noted previously, a tracking system governs the change requests that pass between the Business and IT Departments. The process slows the steps taken to complete a change request, which causes the business problems due to having to wait for the completion of prerequisites prior to implementation:

IT can't fulfil 100% of the requests, so they have to place you in a queue and a process. We sometimes complain about the slow process, the steps of the process and the length of time between the deliveries of more than one service (Business manager 2).

Sometimes, this inability of IT to meet the business demands in a timely manner have an impact on the time taken for a service to reach the market. The data analysis suggests that there is a relationship between a completed service reaching the customer at the right time and the performance of IT functions as required. This is demonstrated here:

There was a mistake in the text messages about customers exceeding their credit limit. The correction change is supposed to be within three days. It has been like this for around two months. And this is a bad experience with IT, and it impacts the customer in the end (Business manager 8).

Change such as the correction of texts regarding the content of a text message causes the departments to fail to reach customers with the right solution at the right time (see section 4.1.4). The department concerned had a negative impression of IT

because of this problem, which lead to mistrust, as discussed in the answer to RQ3 concerning the nature of working relationships (section 6.1.1).

IT has control over the time taken for a service to reach the market, as illustrated in the next example:

> *People in IT need to understand that I have a customer and I have a time to market and there is an opportunity that I need to take. Others shouldn't go live before me, there is a value in all of these aspects. It's a good thing that the IT Department has started to understand this. They have started to realise (Business manager 1).*

When IT is effective in meeting business requirements on time, the Business Departments gain customers before the company's competitors. Failure to provide a service in a timely manner may provide an opportunity for competitors. Nevertheless, Business manager 1 comments that IT employees have begun to understand the importance of the time to market and customer.

The examples in this section refer to IT having an impact on the business and on the customer. Business is affected because of the limitations in IT resources. However, if IT has a problem with the introduction of new requests on time, they have achievements in automating the current business processes. The following section discusses how IT has automated the manual work of STC and its business.

5.1.3 The Automation of Business Processes

The diverse systems used by the business to know the customers in STC are touched upon when answering RQ1 in section 4.1.3. For example, some of these systems have transformed the business, such as by employing big data and prediction systems to discover customers' needs and problems rather than using a survey to gain customer feedback regarding the use of advanced systems. IT has a role in this transformation.

More fundamentally, IT has always provided systems and applications to the business that have turned manual tasks into automated services. The Director of CE Programs Design and Reporting refers to IT's efforts in this regard:

> *Transforming the business work to become more self-service, which means relying on technology purely. IT is helping us a lot now. The information is there, the parameters are there, the tools are there (Business manager 4).*

This automation of business processes enables the business and the customers to depend on themselves entirely. Customers can obtain services electronically without the need to go to an office or wait in a queue in order to access a particular service. Furthermore, business employees have access to the system and information and are able to serve the customer automatically.

This study also finds that IT submitted the MySTC application in collaboration with the business side. Customers have avoided the trouble of going to the branches because of this application. MySTC places all STC's services in the hands of the customer, for example:

> *It's excellent, the availability of the MySTC app. The customers can see all of their data, bundles, sales, SIM cards, and they don't have to go to the branches, and we say "your branch is in your cell phone". We consider this a big achievement. There is a high level of satisfaction with the mobile app (IT manager 8).*

This IT manager provides a hint by stating that "*your branch is in your cell phone*". This shows the turning of office work, which requires the customer and the branch employees to use paper forms to process any request, into the push of a button in the MySTC application. In addition, IT manager 8 points to customer satisfaction with this application. Customer satisfaction is compatible with the expansion of the use of the MySTC application among customers, addressed in section 4.1.5, as one of the aspects of the digital transformation strategy pursued by STC.

IT enables the business employees to reach a customer's mobile if there is a technical problem. For example, an IT support employee can access a customer's mobile remotely to run modernisation or update programs and settings. This approach means that the customer does not need to go to the branch or contact the Customer Service Centre and follow the direction of an employee to repair a specific malfunction, which may sometimes be a waste of time and effort for both the customer and the employee. Instead, the customer will be serviced as he or she is sitting in front of the employee. The Manager of Value Added Service and Application comments on this when he refers to the over-the-air (OTA) system:

> *The over-the-air (OTA) system allows me to contact the customer through the network, I don't need to send an SMS, and I can just make a pop-up message in his phone, and*

redirect him… Add services for him, give him advice, and know what his mobile situation is, so I can do optimisation. It's hard for him to call sometimes, it serves the customer and gets his satisfaction (Business manager 1).

Furthermore, the presence of the automation of standards and measurements in STC systems helps in mastering the work and in achieving a fair outcome for customers and STC, particularly in measuring customer satisfaction and gaining feedback. The above characteristics are confirmed by one business manager in the Field Operations and Technical Customer Care Department in the following example:

We have certain measures with an agreed formula. It works automatically, there is no manipulation in it, there are no hands in it, it's completely automated and completes system measures. Based on the system, the formula that we agreed upon, we get values (Business manager 2).

The automation of work helps STC to achieve the goal of accessing customers on time:

So we assign the orders to technicians based on the automated schedule function if this automation is down for four or five days. This function runs 22,000 work orders within around a maximum of 10-15 minutes, it runs several times a day. Can you imagine scheduling 22,000 orders manually? This will impact the technicians as they won't be able to take their load and they won't go to the customer on time (Business manager 6).

Referring to the position of this manager, a Service Quality Expert, reflects the requirement for data processing efficiency and service stability and quality. In this regard, the next section discusses IT characteristics in supporting business continuity for these kinds of automated business services.

5.1.4 Supporting Business Continuity

The continuity and stability of business systems are vital for the Business departments at STC, as a stable system helps the business in maintaining the stability of its customer services. From this standpoint, the business needs IT support to ensure continuity of service, and the support of IT employees is a noticeable element:

To be honest, the guys in IT, and this is not just to pay compliments, they actually give us great support (Business manager 2).

A customer who has a stable and uninterrupted service is satisfied. The stability of a service is a result of continuity in the functioning of the system. An example of the role of IT in supporting business continuity and solving customer problems is shown in the following:

IT are responsible for solving the customers' issues. With IT, we have fewer issues and we have better initiatives for the customer (Business manager 3).

IT's ability to maintain the systems that serve both business and customers without breakdowns reduces the time spent on customer service problems, enabling the Business Departments concerned to spend more time on new initiatives and solutions. For example, service interruptions or delays result in the business spending most of its time solving these problems.

In addition, IT supports the business quickly in the event of a malfunction. IT ensures continuity of service, regardless of the type or priority of the problem, for example:

IT employees respond fast. I call the person responsible, who will solve the problem in the end, to be honest, they are supportive of us to a great extent in such issues, even in the minor changes (Business manager 6).

However, there are some obstacles to continuity of service. For example, the instability of the broadband internet service creates significant problems for STC's customers. Customers face continual interruptions to internet provision, referred to in the following:

Internet disconnection is very bad and nothing happens. Many customers suffer [from STC] for this reason (IT manager 4).

This highlights continued connectivity complaints from customers and STC's continuing failure to find a solution. Business manager 1 also confirms the existence of a problem with the internet and put the blame on technology:

As a customer, complaint number one is the internet stability, this is definitely a technology issue (Business manager 1).

There are technical problems with slow internet speed or incorrect readings and offering an appropriate speed to customers. The lack of internet service stability leads to competitive disadvantage.

Furthermore, there are some technical weaknesses that result in time lost when legacy systems are performing the work. These inherited weaknesses are recognised by one IT manager who is responsible for communicating with the Mobile Business Departments:

> *I think the level of services is impacted. I think the satisfaction will not reach 100% because some of the old systems already have limitations and have a certain capacity (IT manager 2).*

These obstacles to IT capacity may be accompanied by other problems, such as the difficulty of integrating the new systems with the old. The next section discusses the integration of multiple systems and functions.

5.1.5 The Integration of Multiple Business Systems and Applications

IT has an impact on the integration between the different systems and multiple applications at STC. The business side looks to IT as the operational partner in linking and integrating business systems. One such link is the customer journey through systems within the company. This journey may need to pass through the registration and activation systems, for example, and may need to be documented in the billing systems to calculate bills or integrated with other databases to update or change the profile of a customer. Business manager 4 underlines the importance of IT in integrating multiple systems when he comments that the business could not take advantage of the process of the customer journey without the presence of the IT role:

> *IT is an operational partner for the business. Without IT, customer experience cannot be effectively managed across the customer journey because of multiple systems and platforms. We won't be able to leave a positive customer experience without IT (Business manager 4).*

Business manager 4 draws attention to the direct link between IT integration and customer experience. IT integration used to be a problem for employees, now it is a problem for customers. Because of digital transformation, back-end interoperability now has a direct impact on customers. Customers have a good impression of STC and this is a successful and positive experience when they do not need to move between systems or web pages.

There are numerous business systems and applications in STC. IT maintains connections between around 270 service offices, around 205 self-service machines, and 12,000 employees in front and back offices in order to serve numerous customers. IT is responsible for the integration and smooth running of the system's services and data for all these entities, so any business service, whether simple or complex, needs to go through multiple interfaces. All customer facing operations, such as payments, activations or cancellations (whether initiated on MySTC, the STC website or in offices of STC) require a sequence of technical actions. For example, one Business manager in Field Operations and Technical Customer Care gives the example of activating an internet line for a customer. The execution of the activation function electronically interfaces with different systems in order to complete the technician's task:

> *There are many things that the customer doesn't see, we do them in the background, when the technician installs the service for him, there must be 10 systems working together so that it provides the service. These systems are working in the background (Business manager 2).*

The above example shows the capability of IT to integrate different operational systems. Customer-focused strategy (RQ1) can therefore become a function of IT capability to integrate (RQ2). From a customer's point of view, it is only a cable installation but, behind this, there is an army of systems and applications that interact with each other to complete this service. System integration shortens the time that the technician spends in activating a process because a series of electronic procedures are performed before and while providing such a service. Such a process is not just for one technician; there are a large number of technicians, as mentioned in the following example:

> *We have around 3,500-4,000 technicians in the KSA, you can imagine if the integration between the CRM and the WFMS is down, you can imagine how sensitive this would be! (Business manager 5).*

Internally, STC has adopted a project entitled Business Support Systems (BSS) Transformation, which aims to unify all the systems under a single screen in the call centres and service offices. Business employees do not need to move between

system screens to complete a service for a customer. They find a single screen containing all the required functions, which helps them do their work quickly and professionally. The customer also receives a service quickly and in a satisfactory manner. The Vice President of Business Operations refers to the BSS project in the next example:

> *We have a big project which is BSS Transformation, to integrate systems so that when the customer goes to an office or calls the call centre, he can be served through one single view, and the employee is trained to deal with this one system instead of multiple systems (IT manager 3).*

Furthermore, the next section discusses how IT at STC provides timely and reliable information for the Business Departments and the advantages and disadvantages that accompany the process of providing this information.

5.1.6 The Availability of Timely and Accurate Information

STC depends on the validity and accuracy of customer information in decision making. IT facilitates the Business Departments in accessing the information that enables them to serve their customers properly. The findings suggest that IT in STC has a role in supporting the decision-makers to take appropriate decisions. IT supports the business side by providing the correct information and data relating to customers and services. This role is clearly presented by one IT manager, who is responsible for data analysis and decision support:

> *Our role is to support the decision-maker, provide the data and the information that he needs to deal with the end customer (IT manager 1).*

Providing the correct information allows Business managers to identify what the next step will be, which may be necessary for improving the work environment or changing the method of working of a customer service for the better. In addition, IT helps some Business Departments to recognise weaknesses and then avoid them, as a result of information received from IT. The next example shows the importance of customer services providing the correct information to Call Centre Departments.

> *We have real-time information, the numbers of customers in line, how many are being served, how long is the queue? We give information, so business can take decisions, the*

call centre manager may take decisions regarding the employees, increasing their number or reducing it. The most important is that he gets the information at different frequencies; it can be real-time, daily or weekly according to the need (IT manager 1).

The above example highlights a characteristic of IT in providing timely information to the Business Departments, as well as to the customer. There is a separation of roles here: one for keeping systems operational, and one for keeping customers informed.

IT is aware of the importance of this point, and seeks to make appropriate service information available in real time. Thus, IT manager 1 begins with the word *"real-time"*. This indicates that if the information comes at the right time but is not real, it may have a negative impact on the plans of the Business Departments and thus may lead to providing incorrect information to the customer or giving him or her an inappropriate service. Providing real information too late, means that the benefit from the information is almost insignificant, if not irrelevant.

Another point in the above example refers to IT's ability to provide the correct information at the right time. IT gives the responsibility for conducting the analytics and insight tasks to the business side. When business employees want to generate a report, they do not need to go to IT; they just go to their own systems, pull out, drag and drop the required parameters and generate their report. Inevitably, Business Departments develop specialised resources to issue their own reports, without the need to return to IT to request a particular report or change the parameters:

There is a new division for reporting in Customer Experience, and the same divisions were created in Marketing and Sales. In every department, you find their own reporting system. This is one of the parts that you can say that IT is not taking their responsibility in (Business manager 3).

Reducing the time and effort between IT and business in issuing reports is clearly due to the availability of information to business users. It seems to be a general trend to embed analytics skills in Business Departments, given the trend to derive meaning from data produced by increasingly complex and integrated processes.

5.1.7 Summary

The facilities and advantages of digital transformation provided by the IT Department

to the business units and customers at STC are presented and discussed in detail in the above sections. Numerous technical and digital solutions are provided by IT to automate customer services to satisfy those customers who prefer digital services. The automation of business processes enables a business and its customers to rely on themselves entirely. For example, MySTC is an effective application in facilitating services to STC customers.

However, the capacity of IT resources and the high demand from business departments are reasons for the lack of IT's ability to meet all business requirements. The same problem of resource limitations is faced by ANB. IT at the bank is keen to meet business demands related to customers. However, IT is unable to meet these demands at times due to a resource problem and sometimes because of the intervention of the management in business in some technical decisions. More details relating to the characteristics of IT capability at ANB are discussed in the next section.

5.2 ANB: Characteristics of IT Capability

At the Arab National Bank, IT is responsible for business project analysis and implementation, as well as for application development. The responsibility of IT is supporting the business in order to serve the customer in a better way and finding the best, fastest, and simplest approach in order to achieve that.

> *Currently, this is very clear to everyone, IT is the backbone of the bank. Without IT, you can't serve a customer in a professional way (IT manager 5).*

IT is the source of a stable IT environment in which to launch business services. The business could not serve the customer in a professional way without the IT, issuing a card or checking a customer's profile, and a number of ANB's customer services require IT support. Customers interact with sales points most of the time, a Customer Service Delivery Manager, reports:

> *IT has a very major place. Without applications in this century, you can't even dream of having a customer-centric company or bank, because everyone is running towards technology, everyone wants a stable environment, everyone wants automation in the work stream. All these can be achieved by technology (IT manager 3).*

Thus, IT is an influential factor in supporting the business in making life better for the customer. Inferred from the previous example are some of the characteristics of ITC. The stability of the work environment is reflective of the need to ensure the continuity of work (see section 5.2.4), and automation in the work stream is the automation of business processes in the department (section 5.2.3). Furthermore, IT carries out the tasks entrusted to it to the full, working towards the conducting of better business and ensuring as many satisfied customers as possible. Therefore, the quality of IT is reflected in how easily and quickly the business can serve the customer. For more understanding of the roles of IT, the next section presents the role of ITC at ANB.

5.2.1 The Role of IT at ANB

IT is considered a *facilitator* for the business at ANB. IT follows business orders, business employees declare what they need, and IT finds a way to make the orders happen. IT employees do not initiate any suggestions or solutions by themselves to improve the organisation's performance towards a customer-focused strategy:

> *We are now ultimately facilitators for the business, so our initiative should be to extend their initiatives. So we serve them to reach the ultimate goal, which is the customer's satisfaction in the end. The vision may not be very clear to us, but there are agreements between IT and the business to run the request (IT manager 5).*

The above example shows that IT has no role in participating from the start of the preparation of customer services. The role of IT comes after the business initiatives are ready. Business employees convert initiatives to change requests (CRs) and forward them to IT employees. The business tells IT what needs to be done and IT works on the CRs to provide solutions. IT facilitates services and speeds up the time required for a service to reach the customer, and achieves the desired business target without offering any suggestions for new solutions or ideas. For more understanding of this point, examples of this kind of limitation in the role of IT in relation to the customer are presented in the next paragraphs.

The data suggest that the role of IT is in forming the missing link in formatting the right decisions for better customer service. IT engagement with the business is

represented in issues of ensuring that technology can have a role, but strategic decisions regarding the customer experience and customer satisfaction are still not a common perspective:

> *I don't involve IT when I cook the promotion, the business is the front end for the customers. If there is any technical issue, the business will solve it with IT and operations, but a customer doesn't usually have contact with IT (Business manager 1).*

In the above example, the role of IT is limited. IT employees are in the back office, not at the front of the organisation, and are not really involved in concerns related to ANB's customers as front contacts. IT does not normally make decisions relating to the customer, so IT employees do not consider the needs of the customer like a business or share the notion that the customer needs a particular service. Worse than that is the freezing out of the role of IT in deciding the best technical solutions. The business is trying to impose technical solutions on IT. For example, business employees might come with a proposal from a technical company that wants to work with ANB and then start involving themselves in what are purely technical concerns. IT management rejects this situation and tries to change it. IT then asks the business to go back to the problem, so that IT can then offer a solution.

> *What is happening is that the patient doesn't just come with symptoms, but also with a prescription, so business comes with the problem and the solution… Sometimes, they come and say we have a technical company and they want to work with us. However, we are trying to change that (IT manager 1).*

The above example is evidence of the lack of the participation of IT in decisions and solutions for the customer or for improving the customer experience. It illustrates the significant power of the business over the bank's decisions related to the customer. Furthermore, technology vendors go behind the back of IT to sell solutions directly to the business. This clearly demonstrates the weaknesses and limitations of the "facilitator" role of IT within ANB.

Furthermore, IT has generated some limitations itself due to a shortage in capacity and resources. For example, IT has an issue with fulfilling business requirements at the proper time and according to the required scope. The next section discusses

these internal limitations and their influence on the customer experience and level of customer satisfaction.

5.2.2 The Fulfilment of Business Requirements on Time

IT management takes into account all the necessary IT resources and capacity to deliver technical services and plans according to the requirements of the work of the business in the short, medium and long term. IT has a process through which to serve the business.

The issue with IT resources and capacity is the queue constraint that is involved. Business requests are placed in a queue: a queue means time, and IT has an issue with providing IT resources and capacity within a convenient amount of time.

> *Business has major enhancement services. We have many new services and it's all reflecting on the customer. But every time, business needs to queue in the pipeline with IT (Business manager 3).*

IT has control over the time taken for a service to reach the market. Appropriately implemented, IT can give a business the required solution on time to utilise an opportunity and access the customer first. Thus, the business is able to offer a service on the market to the customer before the other banks.

In practice, IT provides the required solution late, because IT does not have enough resources or there is a delay in the handover of the service. In ANB Bank's case, IT resources and capacity are considered an obstacle to business progression. Lack of technical capacity pulls the business to the bottom because of delays in customer service implementation or a reduction in service features. Thus, the business may miss an opportunity and could lose customers. There is a possibility that competitors will prioritise such a service feature because of a delay in implementation by ANB bank.

> *Time is money. In the market, the one who is an entrepreneur, who offers first is the winner. If you are the one who does it first, even if it's a trivial idea, but because you have offered it first, you get it. So we need immediate solutions and we don't need these protocols. IT service desk sometimes receives a request or complaint but doesn't solve it.*

It probably takes from 4 to 5 hours and I may lose 20 customers in that time (Business manager 2).

However, IT has certain requirements and IT employees have to follow each process precisely, even if the service is already the best and a source of profit for the bank, or the change request comes from a customer's demands. IT is strict in following a check list, such as one relating to information security or access permission. For example, IT takes a long time to gain approval access on the Virtual Private Network (VPN) of the bank because of the need for information security. This is good practice for saving bank and customer data, but creates a bottleneck because it takes a long time. Thus, the process causes delays in servicing the customer quickly. This method may weaken the bank's position in facilitating and increasing the speed of customer service. A Business Project Manager in IT admits this explicitly:

IT in the end has constraints, resources, security, and sometimes the service may be the best and you are the reason for the high profit, but it's not secured. Here, these things, I have certain processes, I have to follow each precisely, and the processes are time consuming, there is bureaucracy. Time is the issue; we are always having issues regarding time when the business asks for something (IT manager 2).

This tangibly demonstrates that IT has an impact on both the business and on the customer. The business is going to be effected because the limitations in IT resources prevent or delay progress. Customers become upset by incomplete actions or delays in services. However, if IT has an issue with providing new business requests on time, IT has significant achievements in automating current business processes. The next section discusses how IT at ANB Bank has automated the manual tasks of the bank and its business.

5.2.3 The Automation of Business Processes

IT is working on transferring all cross-functions between the branches and offices of the business so that they are available on as many systems as possible. For example, IT is primarily responsible for the bank website and mobile banking. These two main transformations are aimed at converting the business processes from manual to automated work. IT plays an important and vital role in this transformation. The role

of IT begins with understanding the processes applied in the branches and offices. IT transfers the processes electronically in the form of web and mobile applications. Through the interviews conducted, it is clear that there is keen interest from the IT Department. For example, the IT Customer Service Delivery Manager, who supervises the delivery of technology services to ANB's customers, explains:

> *The applications are all customer-focused applications. If we talk about the brand side, we try to make the process automated, so the customer doesn't have to stay in queues, or to wait for feedback or wait for his work to be done in an efficient and quick manner (IT manager 3).*

The Customer Service Delivery Manager considers the transformation as part of the focus on the customer, because there is no need to have the customer wait in a queue or use paper as in the past. A simple example of this is that registering a customer's information previously required paperwork which was then stored in the office records. IT has transferred these processes to the CRM system.

Another recent success of IT is mobile banking at ANB Bank, which highlights the role of IT in keeping pace with the rapid growth of technology. IT has shortened the time and effort required for the customer to access and implement his or her services automatically.

There are shortcomings, however, in automating some of the purchases and sales functions. For example, employees in the bank's car loans department are still using the method of copying customers' documents using photocopiers and sending the application form and documents manually to head office to implement the orders on the CRM system. This problem became clear through the interview with the National Sales Manager at the bank, who expresses his frustration:

> *What is my dream? My dream is that my representatives get an iPad with only one form to be filled, then take photos of the documents of the customer and send them to be implemented. This is my dream, without scanning the documents (Business manager 2).*

This example illustrates that the automation of the business processes is not complete. This affects the customer's satisfaction when he or she is intending to apply for a car instalment from the bank. According to the data collected, the business function at ANB Bank considers that today's customers live in a world of

technology. The customer may criticise a perceived service shortcoming, and could then add a comment about it on social media and be the cause of reluctance among other customers to use the bank services.

The endeavours of IT in transforming the ANB Bank into an automated environment are a significant characteristic of IT's role. Tangible evidence of this is the effectiveness of the use of the bank website, as ANB bank is announced the winner of the 10th Annual Customer Experience Benchmarking Index 2014 in the Gulf Cooperation Council (GCC). Converting to automated processes requires maintaining continuity in the processes of that business. In this regard, IT characteristics supporting business continuity is discussed in the next section.

5.2.4 Supporting Business Continuity

IT is used in an attempt to develop applications on which a business can rely, so that the business can promote that function. Stable systems are a result of stable services, and in turn both business and customer are happy. The integration of multiple systems and applications supports service improvement. The ANB bank's strategic focus on the customer is reflected in its commitment to improve customer services. The Business Project Manager gives an example of the continuous support of the business and the customer by IT.

> *The application support managers continue to support the system, the business, and the people in the business who use the system, for the rest of their lives. These application managers indirectly support the end customers (IT manager 2).*

This demonstrates that, after launching a business service, IT continues to support business continuity by maintaining the business systems. This situation shows that IT indirectly supports the end customer. There might be a customer whose card does not work or has been rejected during a payment process due to a technical issue. IT is the first direct and last line of defence for the business to solve the customer's technical issue. Calling or opening a ticket with IT is the first action taken by the business. At the same time, IT is involved in staying with the business until the last moment to make sure that the issue has been solved completely. The interaction

between IT and the business is very strong. It has to be effective or the work will stop, which will have a negative impact on the customer. For example,

> *If I send an email, their reaction is good, in the limits of their capabilities, but in the limits of their capabilities. Honestly, they are fast. For example, if I call the Applications Support Manager, he gives me full support, and the same applies if I talk to the head of IT, so this way we have interaction, like a beehive (Business manager 2).*

IT knows that it is extremely important for the ongoing business to have high systems availability. Otherwise, the business and the customers are going to complain. A customer will not complain unless he or she is in need of something, so a customer will start to talk about the bank once an issue has occurred. In this regard, IT equips its resources and there is continuous work done to resolve issues in active services. Such continuous work means that it is rare for infrastructure or applications to go down, but, when any service does go down, IT will address it and resolve it immediately. This work is intended to eliminate threats to the stability of the infrastructure and maximise the availability of functions (Ray et al., 2005; Kim et al., 2011; and Liu et al., 2013). The inevitable result of stability and availability is the continuity of business services and thereby the customer receives the required service without hindrance:

> *Rarely do you find employees in their offices, they are always sitting with the business, solving issues. They are with the other IT functions fixing a certain issue the business is complaining about, or a customer is complaining about something, or something may be needing to be solved, and they ask them to finish it, this is important (IT manager 4).*

This observation from Business Application Portfolio Manager, who manages IT relationships within the business, is a good example of strong IT support for the business in serving the customer. There is a high degree of interest among IT employees in minimising customers' complaints by having as few technical problems as possible. IT undertakes several procedures and actions in order to maintain active services and business continuity. The following points summarise these procedures and actions taken by IT in the case of the bank.

1. A monitoring and alerting tool: this is used to monitor an application's measurements, such as database usage, the speed of transactions and the rejection rate.

2. A 24/7 service desk: dedicated technical engineers to support the business.
3. Virtual Private Network (VPN): a secure connectivity network over a public network that provides remote access to the bank network's offices and employees.
4. Disaster recovery (DR): the DR environment has to be equivalent to the systems for production. There is no difference between them. If something fatal happens during an operation, the DR is sufficiently scalable to take the load.
5. Operational Level Agreement (OLA): the OLA defines how and when IT will address and solve a service issue. IT is involved in repairing an issue within 24 hours in large cities such as Riyadh, Jeddah, and Dammam, and three days in more remote cities.

Previous technical procedures are an indication of the interest of IT in the continuity of business systems and applications. Monitoring and operating business systems and applications, securing connectivity networks and maintaining viable alternative environments in the event of disasters are reasons to maintain the business processes and customer services.

Unfortunately, ensuring business continuity is only satisfactory to a certain level. There are some technical weaknesses that are harming the business and customers are affected due to idle time when operating legacy systems. In addition, a lack of on-time customer data when needed or incompatibility between legacy and other systems. These weaknesses are recognised by the Business Application Portfolio Manager, who meets directly with the business and feels their frustrations:

> *We enhance a lot but still, I don't see that we have reached satisfaction yet. Some of the services still stop and we don't know about it, we bring it back for monitoring, because these are old services on legacy systems, or they're not compatible. We have to spend some time migrating and things like that stop business. I don't see their satisfaction, at least it is not convincing to me. Someone probably says that he is satisfied, but you can still see some frustration (IT manager 4).*

Legacy systems need a great deal of technical preparation in order to be synchronised with the monitoring tool or to be addressed by technical support. It is possible that this issue relates back to: 1) the lack of IT resources in developing new systems instead of the legacy systems discussed in the previous section, or 2) they may be due to the organisation avoiding associated costs. Integration between a legacy

system and newer systems is a type of drain on IT capacity and time, due to the differences in the interface protocols and the capabilities between them. As a result, the transfer of orders or data between them takes a long time or a lot of work. This point leads to the next section, which discusses the integration of multiple systems and multiple functions.

5.2.5 The Integration of Multiple Business Systems and Applications

The integration of multiple business systems and applications is carried out by IT. This integration involves the creation of systematic connections across the departments concerned and the functions of the bank in order to provide integrated services to the customer. Integration of these systems is considered a characteristic of ITC. Without the presence of IT, the integration process would be very difficult:

> *Things that have enhancement, the customer may ask for something, internet banking or services through these channels that interact with the customer directly. In fact, it is not just an interface, it has lots of integration and other systems in the background. The bank is very interested in this (IT manager 2).*

Integration helps to quickly and easily moving data and information between business systems. Business employees deal with a single view, without the need to go from one system to another or from screen to screen. An integrated service means that the customer is not aware of any shortcomings, and the business is not required to carry out a lot of work to activate or cancel a customer's requests. The customer feels that the services are running smoothly due to the speed of the fulfilment of his or her requests. Thus, the bank increases customer satisfaction and keeps the customer.

There are numerous business systems and applications in the bank. The bank also runs around 203 branches, 1,200 ATMs, and 11,000 points-of-sale. IT is responsible for the integration and smooth running of the system's services for all these entities, so any business service, whether simple or complicated, needs to go through multiple interfaces. All the operations, such as payments, transferring transactions across the departments concerned, and money withdrawals or deposits though ATMs or branches in the bank require sequences of technical actions.

For example, the Head of Customer Experience and Service Standards cites a simple request, which is the cancellation of an SMS notification based on a customer's request. The execution of the cancellation request electronically interfaces with different systems which are able to deal with several aspects, both internally and externally, to deal with the telecommunications companies' systems in order to complete the removal of the notification service from the customer's list:

> *You have to tick if you want to receive promotional SMSs or not. It's not a matter of ticking, it has enhancements from IT and they get involved with you. It's not the matter and we put the focus, we have to reflect on the systems, true, because it's the main thing. This small tick was one of many things that were required from the IT. There is a major integration, you have to exclude them on any lists for messages, and many times IT makes a system and starts it and then makes it joint (Business manager 3).*

The ability of IT to integrate is highlighted in this episode. This is one of a number of examples demonstrating the capability of IT in integrating business systems. From a customer's point of view, it is seemingly a small tick to subscribe or unsubscribe in the list of the recipients of SMS messages. While, in the background, there is a list of systems that operate in compliance for the completion of what may look like a simple change. Overall, analysis of the field data indicates that, any service in the bank requires checking the customer profile, if he or she is eligible for this service, and then requires interfacing with the financial systems in order to add service charges if needed.

However, the same shortage in the implementation of a new service due to the limitation of IT resources and capacity happens when the business requests a new piece of integration. The service may be ready on the system, but the business cannot launch it to the customers because it depends on input or output from other sources. This limitation sometimes forces the business to change its strategy in relation to the customer, or may cause the business to provide services of lower quality. This causes anger in the customer or prompts him or her to think of changing banks. A Retail Internet Banking Manager, takes umbrage over IT's inability to implement a link between the internet banking channel and the treasury system to complete a

customer's registration service as required. He explains that the problem came from the integration, as follows:

> *This isn't easy. One of the recent projects we had, we had an initiative to do in-branch registration for customers, in the branch. When he opens an account, we directly enrol him on the internet and the mobile banking. It took more time than expected and, in the end, IT said that the integration won't be easy between the channel and the treasury, which is the core banking system here, and we will definitely face performance issues. This made us change the whole initiative based on the constraint that we encountered (Business manager 4).*

This challenge is mentioned once during the interview process. There is little empirical evidence identifying problems relating to the integration between business systems. Ultimately, the customer does not recognise this situation. He or she will think about leaving the bank with the first sense of the inability/incompetency of the part of the bank. The customer wants an integrated service. The business wants both to avoid any issues with legacy system integration and for data to move smoothly between the required systems to service the customer. However, the smooth transfer of data or information is not the only important criterion for serving the customer. Correct and available information is also important to the business and the customer. The next section deals with how IT at the bank provides timely and reliable information.

5.2.6 The Availability of Timely and Accurate Information

ANB bank depends on the validity and accuracy of customer information in taking decisions. The business also cares about the availability of service information in real time. Access to information that is correct enables the bank to serve its customers properly. The bank is interested in possessing accurate information about customers, such as personal, functional, or financial data, in order to provide services compatible with their physical and financial potential. In contrast, incorrect information, either about a customer or the service provided, leads to providing a service to the wrong customer or the wrong service to a particular customer. From the point of view of the business, the availability of timely and accurately information is important for them to do their work properly. The National Sales Manager elaborates upon this:

As a sales manager, what is the most important thing for me? Information. You are the commander in a "battle" and, when you get information, you save time and effort and win a customer.

With competition between banks, information remains a strong weapon that marks the differences between institutions. The Business Departments at the bank try to ensure that as much information as possible is ready when they need it. They know the importance of such information to the continued success in customer servicing. This highlights the characteristic of ITC in providing information in a timely manner to the Business Departments, as well as to the customer. IT is aware of the importance of this point and endeavours to make on-time information available. The Director General of IT stresses that IT in the bank is the owner of this information, and is responsible for providing such data to the Business Departments or to the customers:

I have all the information for the whole organisation, all the information of the organisation is in a certain database or a certain system, and in the end, I own the data warehouse, I own the information, so IT can provide measurements, IT can measure the trends of business markets (IT manager 1).

In addition, the field data collected indicates that IT is responsible for data management. There is a unified database under the CRM system, which contains all the customer information and services data. The CRM system is linked with all the other systems in order to update the data on an ongoing basis.

The capability of IT to provide on-time information helps the bank in general and the Business Departments in particular to establish the real situation at the bank. The higher-management level at the bank takes the right strategic decisions towards the customer with the presence of information in terms of customers' ability to stay with the bank or their desire to interact with or leave the bank.

Information is also an important factor for the Business Departments in setting expansion plans, as well as considering when it is appropriate to exploit opportunities in the market. The following example links the importance of having customer information and the success of the customer experience. Knowing your customer (KYC) helps to meet the customer's actual needs and fulfil his or her wishes.

Whenever a business possesses the correct information about a customer, it can estimate what is required to achieve the customer's wishes:

> *Designing the service frames is part of the customer experience and we want to make sure that the customer experience is at its best. What kind of information to show the customer and when, what input we ask the customer for and at what stage, this is very important (Business manager 4).*

In collaboration with IT, this manager is responsible for design on the bank's website. The service frame needs to be desirable for the customer to enhance his or her experience. The exact location of the service on the website is a factor that may attract the customer. Information accompanying the service in terms of quality and quantity is vital and needs professionalism. Likewise, type of input request from the customer and its time sequences. All accompanying features of the service underscore the importance of knowing the service frame to improve customer experiences. In contrast, simple icon is not clear or is disabled may be the reason that the customer takes a bad impression about the bank website.

In practice, possessing the correct information is considered essential for the proper issuing of reports by the systems used in all the departments. There are statistical and financial reports that are derived from having information that is as accurate as possible, which are managed by IT group:

> *IT gives reports, every time: why don't you do such and such. Then I make a standard report that will give the business the information better than the old report. Makes my life easier, and the life of all easier, and gives me better information (Business manager 3).*

IT is responsible for the reports developed for the Business Departments, and designs electronic reports based on business requirements that rely primarily on having accurate information. Having one information source, which is the IT, makes business life easier in terms of having more accurate information.

With the above capability of IT to provide correct and on-time information, there are restrictions and conditions to accessing some of that information. The greatest restriction is the sensitivity of specific information, such as data concerning VIP

accounts or belonging to government or private agencies. The goal is the protection and security of information. For example,

> *Unfortunately, the market doesn't allow someone to take the whole service… you know how sensitive the customer's information is, you can't give everything to everyone. If they get all the information, this might be leaked somewhere else (Business manager 2).*

Both IT and the Business Departments suffer from the need to protect the privacy of specific information, which means that there can be difficulties in providing the required data in a timely manner. Incomplete information can create a misleading picture with regard to a customer's needs, which may be a negative trend for the bank and the services provided and then becomes a case of customer dissatisfaction.

5.2.7 Summary

This section highlights the impact of IT in delivering business services to customers. IT at Arab Bank controls the time required to serve the customer in terms of its ability to provide effective technical solutions on time. IT in ANB has an effective role but this may intersect with some business interventions. In contrast, the analysis of ESB Networks in the next sections is characterised by the complete independence of the IT role in the implementation of technical solutions.

The facilities and benefits of digital transformation and online services are offered with the support of IT professionals to the business units and customers of ESB Networks and discussed in detail in the following sections during the answer to RQ2. The next section discusses the characteristics of ITC at ESB Networks.

5.3 ESB Networks: Characteristics of the IT Capability

ESB Networks includes technology in its Customer Service Improvement Plan (see *Appendix* D). Taking advantage of the best technologies to better serve the customer is one of the areas in which the organisation intends to improve services. This point is in fourth place in the Customer Service Improvement Plan, immediately after being able to deal more easily with the customer, the delivery of financial value to the customer, and the safety of customers.

Leveraging the Best Available Technologies: We commit to always seeking to use the most up-to-date technology available (Customer Service Improvement Plan 2013-2016).

The inclusion of technology demonstrates that it is essential to the success of ESB Networks, as well as indicating the importance of technology in delivering the best services to customers. This importance emerged clearly through the participants' responses during the interviews conducted. The role of IT in enabling the organisation to serve the customer is recognised and some examples are given in Table 5.3.

Table 5.3: IT use in enabling ESB Networks to serve the customer

Business manager 4	***IT manager 1***
IT has moved more from the background ***to the foreground****, that's the way I see it. Very quickly, it has become more to the foreground* ***as customers and people really rely on technology*** *more and more to do their business, to communicate, to find information, and it has moved so quickly, just rapidly.*	*It's* ***a key****, it is part of that process and the IT part has gotten bigger and bigger. It's not the only thing but* ***it's significant.*** *It's the reason why we are here. In most cases, for any system* ***that serves customers, it's significant****, it means that we have* ***to be looking at customer needs.***

Table 5.3 illustrates that IT has come to be in front position for the organisation. The part IT plays has become much greater than in the past. This position emerged from changing customers' orientation towards technology. Customers are becoming more widely used to technology. In the past, there were many offices and ESB showrooms for selling electrical equipment – these no longer exist, and customers have become accustomed to checking faults on the PowerCheck application before contacting the call centres. This trend corresponds fully with the digital transformation strategy mentioned in the responses to RQ1. Another point referred to in the table above is that IT has a key role in building systems that serve the customers and meet their needs. The next section presents the role of IT at ESB Networks.

5.3.1 The Role of IT at ESB Networks

IT looks after the management of the systems that support the core service across ESB Networks. The data from the ESB Networks case show that IT has enabled the development of websites and switch plans and various initiatives that support ESB Networks' digital strategy, as shown in the following example:

IT enables the business to achieve their goals, which is to deliver a better service to the customers at the end of the day (IT manager 3).

In addition, IT acts as *a service provider*. This role has given full responsibility to the IT Department in the selection of appropriate technical solutions and the right tools. The IT Department has some autonomy in the organisation in making technical decisions and bearing the consequences of these decisions. The IT Department provides a service to the business, in order for the business to provide a better service to its customers, as commented upon in the following example:

IT very much is a service provider, enabling the business to give the best possible service to their customers (IT manager 4).

Business staff at ESB are dependent on the IT staff in technical subjects. The focus of the role of IT staff lies in creating advanced technology solutions because of the awareness of the business staff that they are not experts in technology. This conviction is illustrated by the following example from one of the Business managers:

We are just looking at what customers are saying to us. I don't know, I'm not a technical person and I don't know the technical possibilities (Business manager 4).

It can be inferred from the above example that the responsibilities and tasks are widely known and determined within ESB Networks. Further discussion of the responsibilities in terms of the working relationships between the business and IT staff is presented in the responses to RQ3. Knowledge and determination of the responsibilities passed by Business manager 4 may be a sign of the ability of IT staff to fulfil business requirements. Thus, the next section discusses how IT fulfils business requirements.

5.3.2 The Fulfilment of Business Requirements on Time

The IT Department enables the business to achieve its goals by turning business initiatives into systemic functions. IT staff deal with business initiatives as change requests. The IT Department has accurate processes in place to accommodate change requests from the business side; these processes are common and well known to the IT and Business Departments. The processes applied by the IT Department offer steadiness and harmony in delivering services as they should be:

We have effective and common business processes in place, so we can deliver a good service with consistency as well (IT manager 3).

The business staff also agree regarding the effectiveness of these processes, which are structured to help the clarity of the work associated with change requests. One Business manager points in the next example to the effectiveness of IT processes in receiving business requests:

IT has quite a structured process of having people responsible for the various stages, having a very clearly defined process, linking the request from the business (Business manager 3).

The two examples may be relevant to what has been mentioned in the previous section on defining responsibilities and having conviction in the ability of IT staff to perform their functions. The IT Department implements business requirements by identifying people who are assigned to these requirements early, as mentioned in the example above. This technique provides a strength to complete the task within the IT Department. Nonetheless, despite efficient IT processes, the business staff are still not convinced that progress has been made, and there has been some criticism by the business staff of progress in IT. For example, there has been resentment from business regarding the time taken to complete requirements. The major concern among the business participants during the interviews is the delay in customer service, and that any delay made customer service more difficult and complicated, as illustrated in the following example:

If I want something done urgently, it's very difficult, particularly if it's SAP, you have to plan ahead. What I'm saying is I'm not sure if some of those big technologies are able to be as quickly responsive to customer service needs (Business manager 4).

This suggests that business employees suffer from a slow response to requests for customer services, particularly those that are emergencies and of an urgent nature. The customer needs to receive services quickly; in practice, these services remain hostage to the capability of IT. These technical capabilities are often unsatisfactory in business. The Business manager mentions that, even with a strategic system such as SAP, it is still difficult to deliver fast customer service at the appropriate time. She is surprised that, in spite of the size and reputation of large systems such as SAP, the

business still faced the problem of delays in the delivery of service to customers. In addition, delays in the delivery and implementation of change is also known to the IT Department. In the following example, IT manager 3 admits this and considers the time consumed by the completion of requirements as a significant problem:

> *I think there is a lot of confidence in the skills that IT has, the big issue would be how long it takes to get things done… However, there is a balance that has to be placed there, but definitely it has been put to us and it's an active challenge with us, how can we be more responsive. But at the same time we need to preserve the integrity of the solutions (IT manager 3).*

IT manager 3 makes clear that it is the desire of the IT Department to respond to customer service requests. However, she justifies the delay by the need to protect the systems and applications; balance is required in such cases for fear of the risk of an impact on other systems in operation. Reducing the risks that may be associated with new changes is the challenge facing the IT Department. This view is also confirmed by one of the Business managers.

> *It's even more important that our IT system stays up. So I can understand to a degree why IT's employees have to have a stringent plan and minimise the risk (Business manager 1).*

A number of such examples that highlight the keenness of IT staff to reduce changes in running systems as much as possible. In the case of a change, there must be observance of accuracy and care to reduce any negative impacts. In addition, all stakeholders, particularly the suppliers, have to learn about the change and possible downtime. Suppliers have special significance because they are ultimately considered to be customers. Suppliers' systems are linked with the SAP system directly to carry out all their services with respect to customers, whether citizens or enterprises. This point also leads to some examples of tasks carried out by the IT Department between ESB Networks and its suppliers in fulfilling the requirements of customers. For example, IT manage the text messaging system for all the changes that occur in the customers' sites or services. The next example illustrates the messages sent through the IT system to serve customers:

> *If a customer has changed a supplier's meter reading or bill, everything goes through ESB Networks. The IT system processes 100,000 messages every day between ESB Networks*

and these suppliers, on behalf of the customers, and about 20,000,000 messages annually. So, really, ESB Networks is very reliant on IT systems (IT manager 4).

This highlights the importance of the coordination of the work between all parties in order to offer a complete service to customers. Customers want service provided to them that is complete and ready. IT systems act as liaison between ESB Networks and the service providers. Change must be reflected in all the systems that participate in providing a service to the customer immediately and automatically. One message or one connection drop may make a difference to service information or a customer request. For instance, this could have an impact by issuing inaccurate bills to customers. Furthermore, connecting the suppliers and the mother company (ESB Networks) with customers is one of the customer focus strategies, which has also been mentioned in the answer to RQ1, expanding the customer interaction channels section (4.3.2). In addition, IT has a role in automating current business processes. The next section discusses how IT at ESB Networks has automated the manual tasks of the business and its customers.

5.3.3 The Automation of Business Processes

The role of IT in automating the functions and services pertaining to customers has been referred to in RQ1 through the effectiveness of the PowerCheck application in its role of informing customers of outages or through the new functions that have been developed on the ESB Networks website. The business side also praised the role of the IT Department in transforming manual services to an online format:

I can see how online services have been improved by the IT Department but many people are looking for things from the IT Department (Business manager 4).

This reveals the desire of business for more achievements from IT on the matter of online services. Another Business manager points to the influence of IT on creating online services, but asks for more automated services in order to simplify the request and implementation of services to customers, as illustrated in the following example:

IT did some services online at the moment but the process has been streamlined further. I mean, customers can fill in the form online and submit it online. That's going further

now, it's going to go into the system now and the system is going to automatically generate a quotation or that sort of thing for the customer (Business manager 3).

The automation of some services to customers using IT is illustrated in this example. The customer can request a particular service and complete an application form automatically. The customer then receives a response from the website, which includes the initial pricing and agreement. After being informed of the pricing and reading the agreement, the customer has the choice of accepting the service or not. This online service can be carried out by the customer without the need to talk to or meet an ESB Networks employee. The role of IT appears in the automation of other business processes, such as the management of the scheduling of the daily tasks of the technicians in the field. Analysis of the data shows that technicians have their work scheduled by the Optimised Scheduling System. The system automatically schedules tasks to the appropriate network technicians throughout the working day. The technicians are given tablets and the jobs arrive on these devices on a daily basis. In addition, the system provides the most appropriate and fastest path to reach the customer. The following example explains this feature:

The systems do all of the scheduling for the technicians. If a man in a van needs to visit a customer, the IT systems will route the call and find the fastest route, etc. ... I suppose that IT is inherent in everything that ESB Networks does. It is actually going to help deliver a more efficient service to the customer (IT manager 4).

IT manager 4 points to the efficiency factor in customer service as a result of the automation of the work of technicians. This automation enables work to be more effective because it is becoming more organised and precisely assigned, with no overlap between the work of the technicians on two tasks or areas. There is also a shortening of the time required for technical access to the customer and the time spent by technicians in finishing their work for the customer. IT manager 4 also points out that IT has become a part of every task at ESB Networks, which is compatible with the digital transformation strategy previously mentioned in section 4.3.5. ESB Networks now relies on technology and continues to transform as much as possible to the digital and smart world. Thus, ESB Networks has already achieved some of the work of rolling out a smart network for all its electricity services. ESB Networks is,

with the support of IT staff, working to convert manual to automatic control through a smart network. Integrated systems control the smart network remotely from the centre of ESB Networks, Leopardstown, Dublin, as shown in the following example:

> *In conjunction with the automation of IT systems, we have gone for what is called smart networks and control smart using various electronic control systems on our networks to remove a lot of the manual work, the person going along working on the sub-stations, that a lot of it is now controlled from Leopardstown covering the whole country (Business manager 3).*

This demonstrates that a great deal of the previously manual work has been automated. IT systems has provided access to smart networks. Employees no longer need to go to a site to monitor or manage the electrical station. They can control and monitor the operation of an electrical station by the systems at their desks. Thus, the effort and time involved are reduced dramatically and customer service is faster and of higher quality. The cost of mobilising employees is also reduced. The data collected reveals a reduction in cost due to the automation of business processes. Cost reduction comes from reducing dependence on additional expenses. Services delivered through online or electronic as a result of service automation lead to lower costs. The next example emphasises the link between automation and self-service in reducing costs:

> *Automation will drive the customers to self-serving, which is going to drive down the cost (Business manager 1).*

This section reveals that IT has a role in changing manual methods so that they are part of an automated or self-service environment that depends on technology. Furthermore, the IT characteristic of automation facilitates and streamlines the business, reducing the time required to serve the customer and, at the same time, reduced costs. However, automation processes need systems, and servers and IT infrastructures are working around the clock to meet customer demands at anytime, anywhere. Deficiencies in online services or disconnections between customers and the website or the PowerCheck application may mean that the desired goal of automation is not achieved fully. The next section deals with the strengths and weaknesses of supporting business continuity.

5.3.4 Supporting Business Continuity

The IT Department is obliged to uphold the continuity of the business systems in order to ensure continuity of services to customers. The role of IT emerges when a service stops because of a malfunction in one of the business systems or the IT infrastructure. A stoppage in one or more services can result in customers becoming dissatisfied and then calling the call centres to complain.

> *IT for us is vital and it ranges from the simple stuff like social media if PowerCheck is down and it has gone down on one occasion. It is a problem, because all the customers who go to PowerCheck, and they find it down, they ring and instead of getting 10 calls we get 100. So, the maintenance of IT is vital, IT comes across many platforms for ESB (Business manager 5).*

Business manager 5 links the level of customer complaints with the ability of the IT Department to maintain the systems that provide services, such as the PowerCheck application. The work of the IT Department has an effect on whether a greater or smaller number of complaints are received and hence the level of customer satisfaction. A customer who is used to a particular service wants that service to be ready and available when it is needed. Business manager 5 also points to the widening of the maintenance service and support in business continuity. This maintenance includes all the software and IT solutions for the organisation. The characteristic of supporting business continuity is referenced at several points during the interviews conducted. For example, the Manager of Customer Brand and Social Media notes the speed with which the IT Department solves problems in order to make services available:

> *Generally, wouldn't have any complaints about the system availability. You know, if there are any issues, they're addressed fairly quickly. Change requests would be a slower process, but anything supportive on a day-to-day basis, I think they are very good (Business manager 1).*

Although Business manager 1 refers to the problem of the slow implementation of change requests, she is satisfied with the support provided to her department by the IT personnel and, in particular, the day-to-day assistance. Given the nature of the function of this manager, social media is subject to continuous updates and changes.

Thus, daily IT support is vital in this regard, when bearing in mind that ESB Networks relies on analytics mechanisms to track customer feedback and for the notification of its customers, as discussed in section 4.3.3. The IT Department is strongly aware of this job, as well as recognising that the continuity of the business support processes enables the business staff to service customers to the fullest extent. In addition, all IT systems and solutions are the responsibility of the IT Department alone, because they are the only providers of these solutions.

> *As such, we support the website; we support all of the systems that make sure ESB Networks is able to do its job for customers (IT manager 4).*

The case data demonstrates that the technical measures are an indication of the interest the IT Department takes in the continuity of the organisation's business systems and applications. The IT Department has undertaken several procedures and actions in order to maintain active services and business continuity. ESB Networks has advanced technologies and enterprise systems with a high- speed network and two data centres with advanced data storage capability. One IT manager demonstrates that the ability of IT in terms of the business continuity of customer services is due to the stability of the IT infrastructure.

> *The infrastructure is the foundation for IT systems, they are all sitting on this infrastructure, and then IT systems ultimately provide the service out to the customer. A lot of work is done in the infrastructure space to maintain...we have an expectation from IT systems, up to 100% availability. We don't have downtime in the systems, and we take that very seriously (IT manager 4).*

Although the previous examples in this section highlight some of the capabilities of IT in preserving the continuity of the business processes and customer services, closer inspection of the data suggests that ESB Networks is facing two obstacles to making the support of business continuity a more efficient process: 1) some systems are starting to age and the maintenance and support of the old systems have become costly and complicated. These old systems have become one of the obstacles in the process of completing continuity in business because of the repeated outages in these systems; and 2) some critical systems are beyond the control of the IT Department. These systems are created by third parties, such as IT vendors, or are

the results of the efforts of the Business Departments. IT staff face challenges in taking and managing these systems in relation to current standards and protocols.

The obstacles mentioned above may be accompanied by other barriers, such as difficulties in the integration of legacy systems and other business systems. The next section discusses the integration of multiple business systems and applications in detail.

5.3.5 The Integration of Multiple Business Systems and Applications

IT represents the role of systems integrator in combining systems and sub-systems into a whole and ensuring that these systems work together properly. The purpose of IT is to focus on integrating new systems with existing ones, or to link existing systems together. The Business Departments need IT to link the systems and their functions, as these systems may be dispersed in various places, such as the customer systems in two call centres in Cork and Dublin. The IT Department has the primary responsibility within the organisation for performing technical integration. The following example highlights the integration characteristics and explains some of their roles:

> *IT now has to be the system integrator choice for its customers. If any part of the business wants to engage in a project …, they all come to IT, everything must be treated through IT. We are the system integrator choice. Up to now, a lot of the business had their own systems out on their own sites and they were responsible for it, now we have one IT where IT wants to become responsible for everyone's systems (IT manager 2).*

The above reveals that the IT Department is solely responsible for the integration and the functions of the systems. This point is in line with the discussion in section 5.3.1 of the role of ITC and the independence of the roles it plays. In addition, the data suggests that ESB Networks contains a mixture of IT and telecommunication systems, such as SAP, the outage management system (OMS), the telephony system, and many more. Some of these systems depend on other systems to complete their tasks. There are also applications or interaction channels based on a combination of more than one system, as in the following case:

The map of PowerCheck is linked to our OMS. If there is a planned outage, our fault in the area, it will have pins in it and tell the number of customers. Also, customers can see it in the web (Business manager 1).

ESB Networks' ability to inform customers proactively about faults is referred to in expanding the customer interaction channels (see section 4.3.2). The prominent method is PowerCheck and this application is the reason for customer satisfaction at the same time as reducing pressure on the call centres. From this standpoint, the direct relationship with IT appears in helping the customer and the business side of ESB Networks. The IT Department has integrated the PowerCheck application with OMS, and OMS has been integrated with the operation systems in the field. On the customer side, IT links the customer with what is happening, from failures and changes to the service used. This integration is the direct cause of the success of the business in delivering the right information to the customer as required without the inconvenience of searching or making enquiries. Integration between OMS and the field operation systems, such as the GIS solution, is also the reason behind ESB Networks being given the Hexagon Safety and Infrastructure Icon Award. This award is one of the motives for the selection of ESB Networks for this case study, as mentioned in section 3.4.3.3. It seems that ESB Networks has achieved integration between the sophisticated GIS and the key IT and business systems. About 1,000 employees at ESB Networks and its affiliated suppliers benefit from this solution. Network technicians and customer service staff are the greatest beneficiaries.

There is also integration at the level of the call centres. Since SAP contains customer information, such as personal, financial and services details, and OMS contains area information, such as network outages and digging or installation operations. The Interactive Voice Response (IVR) system responds to the customer and provides him or her with information that will answer the inquiry without the need for the customer to contact a call centre agent.

Considerable effort has been expended by IT staff in the integration of the information between each of the business systems. For example, the integration of caller information with a location as well as related services requires a degree of compatibility and the ability to move smoothly between the systems and the IT

infrastructure. In contrast, if the information is migrated incorrectly or is not migrated at all, this may be misleading to the customer or the organisation. An outage in a customer's area might not have been updated from OMS, while, in reality, the customer is facing a power outage, or there might be a difference in the time expected to provide a particular service to a customer. Such inconveniences may cause a form of backlash from the customer and, if a customer has a bad experience with the organisation, this may harm the company's reputation, as shown in the following example:

> *If something happens on the networking retail system, it will affect the reputation of ESB (IT manager 3).*

This section elaborates upon the contribution of IT to the integration between the business systems that serve the customers, and in the transfer of information between these systems. IT has a role to play in relation to the information, which is in providing the right information at the right time. Business employees and customers require information to be to hand in time of need. Therefore, the next section presents aspects and examples of the availability of timely and correct information in ESB Networks.

5.3.6 The Availability of Timely and Accurate Information

Having correct information may be as important in reaching customers as providing the service itself. Sometimes, the customer needs to know what is happening. ESB Networks is aware of this important factor and makes an effort to deliver information to the customer that is correct and timely. An example of this is that, business staff, in collaboration with the IT personnel, focus on having information in front of the customers in critical situations, such as the frequency of electrical outages in Ireland that occur because of the storms. This is illustrated in the following example:

> *When people need to find storm information, we have to be able to give them the information as quick and as clearly as possible. I think ESB Networks, along with IT, have made significant advances in that area in the last few years. We were the first in what is called the British Isles in the UK to have a power check-up, and our Twitter account has grown very well (IT manager 1).*

IT manager 1 argues that IT has a role in completing the task of delivering information, as IT systems can update information quickly and clearly. The IT Department is the owner of the design and management of the business systems projects. IT manager 1 also points out that the cooperation between the business and IT sides has produced growth in the use of the PowerCheck application, the Twitter account and the ESB Networks website. These technology solutions have become important channels used by customers to investigate and search for information. Furthermore, the business interview participants argue that technology have become the carrier of information for the customer. For example, one of the Business managers mentioned the role of technology in supporting customers regarding outage information, as shown in the following example:

> *Technology basically gives customers real-time information on faults and outages (Business manager 5).*

In addition, IT provides employees of the business sections with real-time information that helped improve their work, if needed. Business managers have come to know the performance of their departments and employees, and could thus take appropriate decisions. According to the Manager of Customer Care Logistics:

> *That's where the real-time information and reporting comes in. So we look at our intervals so we will see during the day where we get the hit, and if it becomes a pattern we need to react to it. That's where reporting, real-time, all of these things, they are all an interactive part of what we do (Business manager 2).*

Managers of the call centres access systematic reports that show the peak times for customer calls. Based on the figures in the reports, the call centre managers decide whatever to increase the number of agents, adjust the schedule, start a shift slightly earlier, or have it finish slightly later. Furthermore, it should be noted that these reports also rely on inputs from OMS. OMS gives real-time information about outages, which enables agent to see concurrent outages. Agents do not need to search for information because they are familiar with the current situation, which is particularly important when a large volume of customer calls began. The aforementioned point is complementary to the discussion in the previous section on integrating the IVR system with both SAP and OMS. The role of IT is not just that of integration, but also

to provide updated information on time through the migration. In the same context, it is evident that the IT Department entrusted the responsibility for updating the new ESB Networks website to the business side. Business staff need to update their data on a regular or irregular basis. Thus, business has gained control over the web content, as shown in the following comment:

> *Business can make changes to their site as quickly as they wish, they are using a web content management system. Until recently, if they wanted to make a change, they had to come through IT. Now, just since the first of June, they had Sitefinity, which is a web content management system, which helps them to do all the content, when and how they wish (IT manager 1).*

This illustrates that the content management system provides the Business Department with more ownership of content. When business employees want to update information concerning the business, they no longer needed to go to the IT staff; they simply go to their own content management system and change the required information. Furthermore, it can be inferred from the above example that having the control of the information in the hands of the business staff helps to reduce the time and effort expended by both IT and business personnel. In addition, business staff are enabled to take full responsibility for their own information. Therefore, this approach has the potential to reduce the number of misunderstandings that can occur as a result of the transfer of information between two departments.

5.3.7 Summary

This section on the characteristics of ITC shows the role and effectiveness of ITC in ESB Networks in providing and supporting the business services provided to customers. The role of IT is prominent in maintaining the continuity of business services in business systems. IT also has the advantage of providing information to customers and business employees in a timely manner. However, there is a conviction among business staff that IT is one of the reasons for the delayed delivery of new services. IT requires time to implement new services for customers.

5.4 Conclusion

This chapter presents and analyses the findings of research question two through the three case studies considered in this research. The answer of second research question leads to the conclusions that the role of IT in STC is as an enabler, the role of enabler giving a voice to IT within the company for discussion. Furthermore, IT performs the role of mentor and the generator of revenue in rare cases. In addition, IT has a fingerprint in the transformation to automated or serve-self work because it depends on technology. The MySTC application is a good achievement of the automation of customer services to digital channels. IT Support downplayed the problems that the business faces.

IT is the operational partner with the business in linking and integrating the business systems. IT in STC has a role in supporting the decision-makers to take appropriate decisions. IT supports the business by providing the correct information and data regarding customers and services. In addition, the amount of time and effort spent between IT and business in issuing reports is being reduced due to the availability of information in the hands of the business side.

The answer to the second research question addresses the ITC characteristics in ANB Case study. IT is considered a facilitator for business. The findings indicated that ITC characteristics at ANB Bank are configured to have a positive impact on the business and the customer, with benefits of improved time to market and decision making, integrated but stable services, and transformation to digital business platforms. ANB Bank's IT is capable of change and development to give positive results. In addition to the availability of information about the customer, the integration characteristic helps in the speed and ease of transfer of the customer's information between business systems. In an optimum scenario, the customer feels that multiple services run smoothly as one single unit at the speed of completion of his or her requests. Thus, the bank increases customer satisfaction and keeps its customers.

Research Question two addresses the characteristics of ITC in case of ESB Networks. In ESB Networks, IT acts as a service provider. This role has given full responsibility to the IT Department in the selection of appropriate technical solutions and the right

tools. In addition, ESB Networks is, with the support of IT, working to convert manual to automatic control through a smart network. Integrated systems control the smart network remotely from the centre of ESB Networks.

One of the lessons learned from the case of ESB Networks is that the role of ITC is to provide updated information on time. IT in ESB Networks has achieved integration between the GIS and the key IT and business systems. About 1,000 employees at ESB Networks and its affiliated suppliers benefit from this integration. In addition, IT Department is obliged to uphold the continuity of the business systems in order to ensure continuity of services to both the business and the customers. The IT Department has undertaken several procedures and actions in order to maintain active services and business continuity.

The answer to the second research question leads to the conclusion that the characteristics of IT capabilities are important in delivering customer-focused strategies. The availability of IT resources to meet the demands of business is vital in the delivery time of services to customers. IT plays a key role in automating services to become electronic through mobile applications or corporate websites. IT contributes to the activation of smart services through self-service machines and smart networks. The provision of such services helps in the adoption of all such services among the customers themselves. Such an environment supports remote service without the need to move customers or employees between the customer's location and the offices of the organisation.

IT has a role in integrating systems and applications. This supports the rapid and easy movement of data and information for integrated services. The ability of IT to provide real-time information helps organisations know their current position and facilitates making appropriate decisions regarding customers. This also assists in developing expansion plans to exploit opportunities. IT facilitates and places responsibility for conducting analytics and insight tasks on the business side through analytics mechanisms and systems. This enables business personnel to rely on analytics data and reports to track customer feedback. This saves time and effort for both the IT and business sides in issuing reports or acquiring customer information.

In conclusion, this chapter shows the effectiveness of IT capabilities in supporting customer services. However, other characteristics have a role in the satisfaction or dissatisfaction of customers, such as the relationship between the IT and Business Departments. The next chapter discusses the characteristics of the relationships between business and IT across the three case studies to answer RQ3.

CHAPTER SIX PRESENTATION AND ANALYSIS OF RESEARCH QUESTION THREE: THE CHARACTERISTICS OF THE RELATIONSHIPS BETWEEN IT AND BUSINESS IN THE ORGANISATION

6.0 Introduction

This chapter addresses research question three by analysing and presenting the characteristics of the relationships between business and IT staff in the selected organisations. This research question explores the characteristics that influence the success of the collaboration between IT and business counterparts in the context of customer-focused strategies. This question is intended to enable a relationship map to be drawn associating IT personnel capability, IT management capability, and IT infrastructure capability. This map informs the organisational implications of customer focus, the level of commitment to engaging with customers, and the customer interaction approach. This question seeks, therefore, to explore the characteristics of these relationships.

This chapter presents the findings for the third research question. It begins with an introduction to the relationships between the business and IT staff and then discusses the five characteristics of these relationships: 1) the nature of the working relationships, 2) functional orientation, 3) knowledge orientation, 4) conducting an agile methodology, and 5) leadership and partnership. All these relationships are marked by the participation of the business and the IT sides. The answers to the third research question discuss advantages and disadvantages of the characteristics of the relationships between the Business and IT Departments.

Sections 6.1, 6.2 and 6.3 discuss, in turn, the characteristics of the relationships between IT and Business in STC, ANB and ESB Networks. In section 6.5, the conclusion summarises the important findings regarding characteristics of these relationships and considers how they might affect the organisation's customer-focused strategy. The next sections discuss the characteristics of the relationships between the Business and IT Departments in STC to deliver a customer-focused strategy.

6.1 IT and Business Working Together to Deliver a Customer-Focused Strategy at STC

This section discusses the nature of the working relationships at STC and provides evidence of rotation and orientation between the IT and Business Departments. This section also presents the balance of knowledge and work with an accompanying agility in tasks between the Business and IT Departments and the balance in the leadership and partnership between the two parties.

6.1.1 The Nature of the Working Relationships at STC

The working relationship between IT and business is dominated by the unifying goal of agreeing on what is in the customer's interests and of benefit, for example:

> *Our relationship with IT is good and strong. We may have differences in the way we serve the customer, but in the end we agree on what is good for the customer and the company (Business manager 2).*

In regard to governing the working relationships between the IT Departments on the one hand and the Business Departments on the other, STC relies on one system for managing requests between the Business and IT Departments, known as a 'tracking system'. This tracking system governs the working relationships between the staff in the two departments. The system determines the owner of the task, as well as the type of tasks that need to be entrusted to that owner. The case data shows that the tracking system is the only channel for receiving business requests. IT rejects any verbal or written request if it has not been registered in the system. The advantage that characterises the tracking system is that it can determine responsibilities and processes. The system has helped make clear the responsibilities between the Business and IT Departments. For example:

> *It is clear as a process, the process made the relationship between us and IT very clear, our responsibilities and their responsibilities. We initiate a request through the tracking system and the system controls the request until it is finished (Business manager 3).*

There is also another advantage of the tracking system, which is awareness of the higher management of the progress of service requests and knowing what happens between the business and IT staff on a computerised basis. This property has helped

to raise productivity and improve customer service delivery speed, according to one IT manager:

> *Previously, only the project manager knew where exactly the progress was in services. Now it's different because anyone, department managers or GMs, can login and get a full report and this is being improved regarding productivity and delivery time for the business (IT manager 6).*

However, differing goals and functions due to the nature of IT and business do not prevent them from sharing responsibility. The two departments apply the principle of team spirit to solve problems in services and systems. Business manager 4 reveals the sharing of responsibilities in the following example:

> *The way we work with IT is a sharing of responsibility. For example, if you take the Voice of the Customer Project, we have two project managers, me on the business side and the Project Manager on the IT side. If something goes wrong, I'm not going to tell him it's your fault and neither will he. We work together to solve it. It's a symbiotic relationship whereby we work together. It's two separate functions, but it's like a team (Business manager 4).*

In the above example, Business manager 4 explains that placing blame is not his way or the way of his counterpart in IT. That he is persuaded that blaming the other party will not solve the problem is clear. Instead, he is convinced that there is another way: to focus on the solution rather than blame. Regardless of the source of the problem, the two sides work collectively to solve the problem. It is worth drawing attention to the previous example in that Business manager 4 refers to a symbiotic relationship as a description of the type of relationship between him and the IT Project Manager. This symbiotic relationship shows their dependence on each other and their willingness to collaborate to achieve success in their work. It is also possible to deduce from the symbiotic relationship that mutualism is in play in order to achieve objectives shared by both sides.

Despite the clarity of the responsibilities between the Business and IT Departments, the evidence from the STC case suggests that this trust is sometimes shaken. This feeling stems from the two parties: the business side still does not fully trust IT; IT

believes that business does not trust them because business thinks IT is a source of its problems. One IT manager points to such a situation in the following example:

> *Business doesn't trust IT, and they all think that IT causes them issues, such as delays (IT manager 8).*

The next example shows the reason behind the Business Department's lack of trust in IT: the lack of the ability of IT to implement some customer services properly. Business wants to trust in IT but, according to their experience, IT has disappointed them in some cases. Therefore, the business side is wary of placing full trust in IT:

> *Our target - in the end - is to benefit the customer. But do I trust the output of IT? We have done many Business Requirements Documents (BRDs), in loyalty and other things and we launch it, and in testing it I don't get what I was expecting. Trust is there, but I don't expect to get every BRD 100% as I expected (Business manager 8).*

During the answer to RQ2 in section 5.1.2, the inability of IT to meet some of the business requirements in time is addressed, as it has an impact on the time it takes for a service to access the market. The discussion concerns the limits of IT resources in meeting a changing market and the needs of the business and the customers. This deficit in IT capability might have had an impact on the trust of the Business Departments in IT. Business manager 8 also touches on the customer's benefit and loyalty in the previous example. He mentions the lack of trust associated with elements such as loyalty services. Just as the business staff expect full services from IT, the customers also expect a complete service from the Business Departments. The quality of a service and the timing of its launch, therefore, have a relationship with the mutual trust between the Business and IT Departments. However, mutual trust having been shaken between the Business and IT Departments does not seem to prevent the staff in the two sections having mutual understanding and knowledge. The next two sections provide evidence and comparisons between the IT and Business Departments in terms of rotation and orientation.

6.1.2 Functional Orientation

Knowledge exchange between Business and IT Departments may be a factor in the ease of the rotation process between the managers of the two departments. One of

the key findings of the data analysis is the move of a number of IT managers to work as Business managers. Perhaps the nature of STC, which relies on technology, has helped them in this rotation (see section 3.4.3.1). According to one Business manager,

> *In November 2007, I went to Gartner Place and they said IT managers will become Business managers soon because they understand business more than the business themselves. Based on the experience that I have today, I can name some of the IT managers who became Business managers (Business manager 7).*

Structurally, IT and business allocated departments that act as an interface for them to deal with each other as a single point of contact. Figure 6.1 illustrates the two departments.

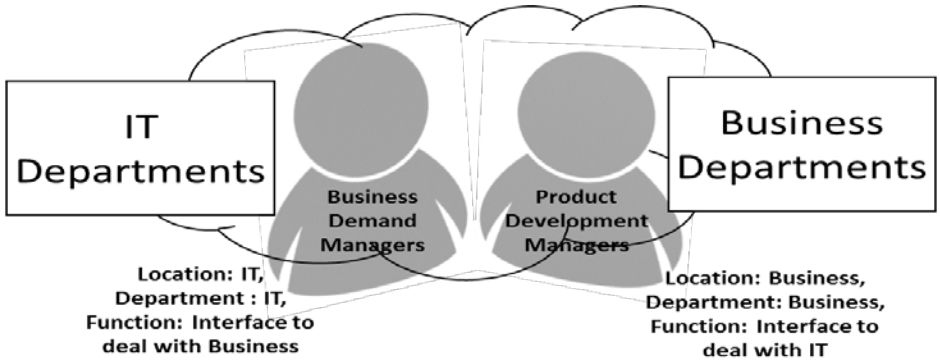


Figure 6.1: Restructuring the interface functions between the IT and business

The task of these departments is to maintain the relationship and follow the workflow between them. The functions of these departments is to transform technical languages into the language of business, or vice versa, in order to find a common language, for example:

> *We have someone in the middle who really works as a transformer. When he works with IT, he puts on a business hat, and when he works with business, he puts on an IT hat. He translates the work in an appropriate way (Business manager 7).*

The data from the STC case reveals that IT allocated a department that goes under the name of Business Demand Management (BDM). This department is divided according to the target customers in STC. For example, one section takes care of individual customers' services and another is concerned with enterprise customers' services. These functional descriptions are based on the segmentation of STC's

customers and give an indication that STC is close to being a customer-centric organisation (Galbraith, 2011), as discussed during the answer to RQ1 in section 4.1.

On the business side, the Product Development Services (PDS) Department has been allocated to interface with the IT Department. The employees in this department recognise them as 'technology partners'. The Manager of PDS explains the orientation and duties of his department in depth:

> *We organise the relationship so that there are no conflicting requests. We do a technical study of a request in a more comprehensive way, and everything works according to procedures. Everything that might impact the services is studied and we work to solve any issue. This is why we are here. A more comprehensive focus (Business manager 9).*

It is evident during the data collection that there is a state of satisfaction regarding the performance of PDS on both sides, whether IT or business. Perhaps one of the reasons for the satisfaction is the comprehensive knowledge of the technology partners of the services provided to the customers, which is associated with a comprehensive knowledge of the systems and applications that can work for these services, as mentioned by Business manager 9 in the above example. The data analysis also reveals that the business side has become better able to overcome the problem of the repetition of the same services or effects between services because of the existence of PDS. In this regard, the next section discusses knowledge orientation in detail.

6.1.3 Knowledge Orientation

STC's staff awareness of the importance of mutual understanding is remarked upon in almost all of the responses in the interviews conducted. The participants know that common understanding is in the interests of the company and its customers. They agree that understanding between the two parties - IT and business - is the right way to serve the customer in a professional manner. Analysis of the data gives signs of the keenness of STC staff to understand the knowledge of the other party. This orientation is evident in many examples, including:

> *We are under one company, and we need to have mutual understanding so that we can serve the customer better (Business manager 2).*

Understanding of the IT employees of the value of the work that they accomplish is an incentive for them to do a good job. IT manager 1 indicates that even a technical developer who deals with the programming language needs to know the goals of the business and realise the consequences of what is provided by the customer service element:

Even on a developer's level, if he knows about the target behind a request, he will provide a better service, and he will feel the value of the work he is doing, which is that they have provided a service and it had its impacts on the promotions that he can see in the media, and everywhere. If he knows that his work leads to such results, they will be proud of their work.

The previous example highlights that IT employees are proud if they have a part to accomplish. This feeling encourages employees to provide the best of their experience and skills. At the business end, the understanding of the business employees of the capabilities and characteristics of the various applications and systems helps them to take advantage of these technologies and to better exploit them. If business employees have technical knowledge, they can make the right decision. The next example illustrates that the technical understanding of business employees enables them to be successful in their work:

The business line has a level of technology background. We have skilful people on the technical side. When they work in business, with their technical knowledge, they can succeed in taking the best choice (Business manager 9).

However, there is concern among the IT employees about the business staff understanding the technical side. They believe that the business staff are probably trying to understand the smallest technical details, which leads to an overlap between functions, and thus the IT Department may lose its role, for example:

Unfortunately, I see people in business who think that they should understand all the technical details and this is a great mistake. To have good technical solutions, you need good technical rules or knowledge (IT manager 4).

Another IT manager refers to the sensitive behaviour of IT employees with regard to the technical knowledge of the business employees. However, he presents another

reason for this, as the desire of some of the IT staff to keep the technical secrets amongst themselves:

> *Still the technology people are sensitive towards people who talk about technology, they think it's like a big wall that no one from business should come close to. I think this is one of the gaps we have and it should be transparent. They may come with an idea and I may add an idea. And in the end it's a joint team (IT manager 5).*

The above example reveals that this sensitive behaviour affects the principle of transparency. The less transparency there is, the greater the blurring of the work. A further point in the previous example is the impact upon innovation among employees. Business employees may see strengths in technology that reflect positively on the work as a whole, particularly as they are closer to the customers than the IT personnel tend to be and know of the customers' frustrations in being unable to access services. These ideas might lead to the better use of technology in serving STC's customers.

Functional and knowledge orientation between IT and business is coupled with some agility by IT in fulfilling business services. Thus, the next section highlights some of the points of consensus and differences in thinking and implementation in discussing the conduct of agile methodologies.

6.1.4 Conducting Agile Methodologies

The nature of the work of the IT Department has made their thinking more logical, and their dealings with devices and systems have made the IT staff more accurate. IT is more traditional because they are process-based (see section 6.1.1), they tend to follow processes more than the business. Business wants to serve the customer as quickly as possible, so it is more flexible from a business perspective than the IT perspective. The field data reflects that the Business Departments care about a short time to market, as this will bring revenue; while the technology side cares about the time to implementation and technology not causing problems when deployed. For example:

> *The main issue between the two managements is the thinking. As a business, we think we should do things as fast as we can, and this is very important, and IT is more realistic from*

a systems point of view. They believe in doing it the best way, sometimes it's good to have it, but for some reason, it will take more time and we have a serious - regarding the customers - need to finish it faster (Business manager 5).

The example above refers to a strong case for justifying inflexibility with regard to IT not implementing service requests quickly.

The data analysis reveals, therefore, the existence of initiatives around the agility of the methodologies in STC. There is some agility in providing services to customers quickly and within a short period of time. Table 6.1 shows that agile methodologies have become more apparent in the requests between business and IT.

Table 6.1: Comparison of vocabulary concerning "agility" from business and IT

*IT manager 3: Now there are a lot of methodologies, **like an agile methodology**. There are cases and initiatives from some of IT **towards an agile methodology**, but **it's not structured well** in STC.*	*IT manager 8: We are implementing **an agile approach internally** to reflect on the business, and we are trying to build **a cross-functional team** so that we have stable layers and management internally.*
*Business manager 4: We need **agility to be able to manage the market** this effectively, but if you look at the last three or four years, you find that **IT has evolved and has got much better**.*	*Business manager 6: There is a **sort of agility** and **proactivity** between us and the IT. We have **exceeded the quota** so many times and IT are still welcoming.*

Table 6.1 shows some internal changes in understanding of agility across the organisation. For example, the teamwork across IT functions: this team moves smoothly between sections as needed or based on the load required by the service requirements. Table 6.1 also shows the relationship between agile methodology and managing the market effectively. Agile methodologies help businesses to manage the market. Agile methodologies in the dealings between the Business and IT Departments increase the productivity of the business, as mentioned by Business manager 6. Thus, business achievements in a customer-focused strategy are related to the effectiveness of IT in fulfilling business and customer needs, in accordance with what is discussed in the answer to RQ2.

Business manager 6 also touches on the increasing acceptance of unplanned or unexpected requests by IT. The data collected shows that IT follows up the fast-track process through the tracking system. This fast-tracking allows a certain percentage

of urgent or emergency requests from business to be implemented quickly, for example:

> *We have fast-tracking, and fast-track forms 10-20% of the high priority requests. So we take this into consideration (IT manager 5).*

However, the view of the customer service from end to end is considered a problem. A closer inspection of the data suggests that IT staff deal with the systems separately upon the occurrence of a problem for a customer. Each team checks its own system without looking holistically. The customer's problem then turns into a problem with the system, and this remains competitive when trying to solve an issue in a particular system in isolation. This view emerged in several of the responses during the interviews, for example:

> *Business always looks after the customer end to end because our department is responsible for the systems that serve the customer. While IT cares about certain areas, and this creates a problem. Each IT team considers the system that they support (Business manager 5).*

The proportion of the balance of knowledge and work with an accompanying agility in the work between the Business and IT Departments has generated some balance in the leadership and partnership between the two parties. However, the weight has often tended to be on the business side. The next section discusses leadership and partnership.

6.1.5 Leadership and Partnership

In STC, business looks to IT as a strategic partner in completing its objectives and tasks. This partnership is consistent with the role of IT in STC as an enabler of business services (see section 5.1.1). IT has a role in serving the business and the company's customers. Business requirements have strengthened the position of IT within STC, as IT has the ability to fulfil and automate customer services and provide support for the continuity of the business processes, as reflected in the answer to RQ2 regarding the STC case. Thus, IT is a vital factor and a strategic partner with the business side. The strategic partnership between IT and business emerged through several responses during the data collection, for example:

It's a strategic partnership with IT. IT depends on us to give them innovation in services, and at the same time we depend on them to deliver the services (Business manager 4).

Another Business manager points to a similar definition to indicate the partnership between IT and business. He expresses himself emotionally on the importance of IT in the lives of the staff of the business side when he states:

It's a partnership, "we can't clap with one hand" (Business manager 9).

The assumption in the above example is that IT is one of the hands and the business side is the other, and is an expression of the weakness and helplessness when two hands are separated. It could also be an expression of equality in the control and power of IT and business within STC. This balance of control and power is shown consistently in the relationship between business and IT. The data analysis reveals the keenness of the staff in the two departments to find a compromise through discussing solutions and problems:

We try to find the middle ground; we hold the stick from the middle. My relationship with the business is more than excellent; it is a harmonic relationship (IT manager 5).

In the example above, IT manager 5 expresses moderation in the relationship when he states that "we hold the stick from the middle" (an Arabic expression meaning to avoid taking sides so that you can reach a resolution). A moderate relationship is the output of a unified system that determines responsibilities and processes (see section 6.1.1), a common understanding and knowledge (section 6.1.3), and some agility in dealing with emergency issues (section 6.1.4). These characteristics of a relationship meet to form a harmonic relationship. Nevertheless, the case data shows that business is the driver within STC. The business side holds in its hands the decisions that pertain to the customer and chooses the service types and the way they will be provided. Meanwhile, the IT side supports the Business Departments. IT implements what comes from business; IT harnesses its capabilities to achieve the wishes of business for customer satisfaction in the first place.

Currently, the business drives the IT. This is the best practice, as the customer comes first and we have to support the business to achieve customer satisfaction, but IT has to drive the whole processes in IT. IT can help in how the business can serve the customer with regard to tools and experience (IT manager 8).

An important point made in the example above is that the Business Departments do not interfere in the internal control of IT; IT processes are under the control of IT, even though IT is convinced that it is the right of business to take the lead in matters that relate to customers. However, there are cases in which IT looks like the driver. Some of the limited capabilities of IT have meant that the business could not control the time to market and the service the business wants the customer to have:

> *It's supposed that the business drives the IT, but I see that the IT drives us, even we can't fix the time to go to market because of IT limitations (Business manager 3).*

Furthermore, the case data demonstrates that dealing with some events is done unevenly between IT and business. The relationship between them is not without tension all of the time. Perhaps their relationship undergoes some conflicting. According to one Business manager:

> *We can't deny there is fighting. I have priorities and they have priorities. I want to launch my services and they have other tasks they are already working on (Business manager 1).*

The above example may be the result of some different views. As discussed in the previous section, the point of view of business calls for flexibility, and the viewpoint of IT requires accuracy. Differing priorities and objectives have been the cause of a degree of incompatibility between them.

6.1.6 Summary

The use of systems helps STC to manage customer requests between the business and IT departments. This situation is hardly available in the second case, as ANB relies on requests sent by more traditional channels, such as emails (a detailed study of this is given in the next section). The next section details the characteristics of the business and IT relationship in delivering the customer-focused strategies at ANB.

6.2 IT and Business Working Together to Deliver a Customer-Focused Strategy at ANB

This section addresses the characteristics of the relationship between the IT and Business Departments and their employees. This section begins by identifying the working relationship and then discusses the functional and knowledge orientation

between the two departments. Agile methodology and leadership are discussed at the end of the section.

6.2.1 The Nature of the Working Relationships

The relationship between IT and business employees is convincing evidence for discussing customer satisfaction and experience. Both sets of employees share customer experiences and discuss the needs of the customers and aim to improve the service received by the customer.

Table 6.2: Sharing the customer experience between IT and Business

IT manager 5	*Business manager 3*
*The **customer's satisfaction** is definitely **the basis** of discussion with business.*	*IT employees work closely with the business. We work with them to **better understand** the **customer service** and deadlines.*

However, the data analysis shows that shared responsibility at all levels of functions is weak inside ANB and team spirit and teamwork are considered to be low among the employees. Upon the occurrence of a failure, there is an attempt to apportion blame between the two parties and each tries to blame the other. There is usually, for example, a long string of emails between the business side and the IT. This behaviour delays the focus on solving the customer's problem or restoring certain services to customers quickly, because each party is busy with these kinds of arguments and they abandon their main tasks. This is illustrated in the following comment:

> *Responsibility at the level of the management and the staff is very low, with no one taking responsibility, or sharing responsibility. No one says it's our issue as a team or let's solve it together, or everyone is sharing responsibility...blaming for mistakes (Business manager 4).*

Sometimes, IT bears more of the responsibilities than those assigned to them. Whatever the goal, whether it is for the customer's benefit or to ensure that a product functions properly, this can generate a sense of a lack of justice among IT employees. The nature of the IT's role as a facilitator of business and as a follower of the requirements of the business side might also have an impact on the acceptance of extra responsibilities, as discussed in section 5.2.1. Reducing the role generates a

kind of non-resistance due to the dominance of the business decisions within the ANB. Head of Technology Services Division, mentions an example of the overload of responsibility on IT. The overload on IT is referred to by one of the business managers, who also points out that this overload is sometimes a reason for delays in work, as shown in Table 6.3.

Table 6.3: Overload of responsibility on IT

IT manager 1	*Sometimes, IT bears **an extra responsibility** that isn't necessary as a result of trying to provide an ideal product.*
Business manager 2	*Sometimes, part of the delay in IT is due to **work overload on IT.***

This is an acknowledgement that IT suffers from a lack of resources and capacity to carry out its tasks, as described in section 5.2.2. Furthermore, IT bears more responsibility, making it subject to delays in the implementation of faster and easier customer services (see section 4.2.4).

Running from responsibility or taking more responsibility than is necessary are two sides of the low level of responsibility-sharing among employees. Thus, the mistakes and accidents that occur in the systems or applications used may take time to solve because of an evasion of responsibility. Customers want services to be up-and-running; they are not aware of what is happening behind the scenes unless such problems appear on the surface.

Despite fear of taking responsibility among ANB staff, the evidence from the ANB case suggests that there are positive signs of a relationship of mutual trust between employees and managers within the bank. Customer service requests from the business side of the operations draw all the attention of the IT. The Business Department's employees also express satisfaction over the degree of mutual trust. An understanding of the requirements is a source of trust in the exchange between IT and business staff. When the requirements are clear, the other party's doubts begin to disappear (as discussed in detail in section 6.2.3). An understanding of the importance and value of the change or demand also leads to increased interest and thus mutual trust, particularly if it leads to added value for the customer or the ANB. It is noticeable from the field data that the business and IT staff at ANB have found smoother acceptance of each other's requirements. There is a trust between two parties when discussing requirements to ensure that tasks are completed. The mind-

set of sharing trust supports the ANB's strategy in its commitment to providing and improving all its services in order to retain customers, as described in section 4.2.4. In addition, the trust shown by IT shows the keenness of that group to support business continuity, as mentioned in section 5.2.4. The following example supports the suggestion that the business side and IT share trust in order to implement customer services:

> *In fact, there is trust, because IT knows that anything that business requests has a meaning, it's not asking just to ask. Any change you make in the system, since you know it will take time, has to be worth it, otherwise you don't do it. It takes time and it takes money. So to do it, business has already done this job. And anyway, any big request that happens, business, IT, and other members of the bank sit together to evaluate this request (Business manager 1).*

In addition, there is evidence of an open-door policy, which represents the mutual trust between the business and IT staff. When a project manager or business analyst faces a problem in the implementation or the understanding of the request for a particular service, he or she goes to the office of the individual in charge of the service and discusses it in order to reach a solution. Such a case means that neither the customer nor the bank should experience any delay in the service.

Another case might be that when one member of the business staff feels the need to launch a particular service earlier based on the requirements of the market or a customer, he or she goes to the office of the employee responsible for the service in IT and requests it immediately, with no barriers. This type of open-door behaviour is represented in the following example:

> *It's a matter of trust, actually. If I have an issue, I can pick up the folder, I can go to Business, I say this is the problem that I'm facing, please can you help me with that? Why wouldn't they help me out? They also come to me. If there is a timeline, they say we have to finish this very quickly, they can come any time they want (IT manager 3).*

The above extract speaks of the nature of the working relationship between IT and business staff and the open-door policy. IT has dedicated business relationship management. Business relationship management is the window that overlooks the business. Thus, the following section illustrates how this function has a positive

impact on improving the services of the ANB in order to achieve customer satisfaction. The following section also discusses the business tactics when interacting with the IT.

6.2.2 Functional Orientation

IT has allocated a specific department to deal with all aspects of the Business Departments. The department is not primarily oriented towards IT. It is the business face of IT. The department is called Business Relationship Management and its role is to maintain IT relationship with the rest of the business and support the business in the case of the latter having an issue or requesting a solution. The business relationship manager, explains the orientation and duties of his department in depth:

> *We are, here in this department, more business-oriented than IT-oriented. If you ask me now, you will find that I'm not up to the latest in IT, although it's my speciality. You'll find that I'm more experienced in how the business works, what is new there, etc. and the last concern to me is the IT, because I trust to the fact that I have people in IT that I can talk to and who will finish IT part. So, I'm like a bridge here. Sometimes, we, in this department, understand business better than the business themselves (IT manager 4).*

The following figure illustrates the Business Relationship Management Department and its main specifications.

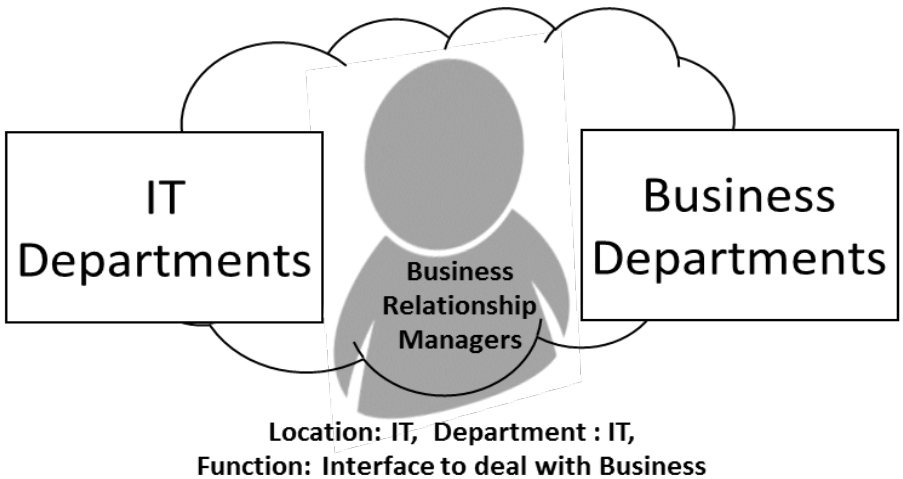


Figure 6.2: Restructuring the interface functions within IT

According to the data analysis, this department has employees aligned with the various business areas. These employees have a certain personality and a certain

level of detailed business knowledge, as well as the ability to understand business and align tasks with the business side of operations. Their position has been built in accordance with the main services at the ANB. For example, there is a project manager and business analyst responsible for ATM cards, and another project manager and business analyst responsible for the IVR. These functional descriptions are based on ANB's products. This provides evidence that ANB is not a fully customer-centric organisation but still focuses on products (Galbraith, 2011), as discussed during the answer to RQ1 in section 4.2.

The advantages of such a department is that it knows the business with regard to the context of its problems and has a sense of what it might be experiencing. IT manager 4 expresses this by saying: "I'm more experienced in how the business works". Furthermore, allocating resources to business relationship management is concerned with interconnecting with business in order to maintain a common understanding of business requirements and expectations. It also makes the process easier for business to have a single point of contact when needed.

> *The interaction is through a dedicated relationship manager. He makes sure that the expectations of the business or the requirements that they send to us are met (IT manager 5).*

The convergence of IT with business means that ANB can be closer to business and, in turn, closer to the customer. Being closer to the customer helps in knowing the customer more clearly, as stated in section 4.2.3, and this fulfils real customer desires and improves services for customers, as explained in section 4.2.4.

At the other end, the data from the ANB case indicates that the business lacks a dedicated department, such as the business relations management team in the IT. As a result, there is no single contact point with the IT; each department deals with IT on its own. Of course, this approach weakens the control and monitoring of business requirements, and does not allow a true picture to be gained for the higher management of the business side of the progress of their work with the IT. During the interviews conducted, it is clear that the Business Departments hired staff who have technical qualifications and there are one or two such employees in every department whose task it is to communicate with IT staff. The problem with this

approach is that employees are not at the level of the general business management but isolated among the Business Departments. Table 6.4 shows that hiring technical employees has become more apparent in the Business Departments.

Table 6.4: Increase in the Business departments hiring technical employees

Interviewee	Position	Response
Business manager 1	Senior Marketing Officer	*We have people that are operations, business but **IT operations**. Those people have lots of **experience in technology** because they deal with it every day, every day they handle any operations **issue with IT**.*
Business manager 3	Head of Customer Experience and Service Standards	*I actually got **people from IT** and made them segment managers because they **know IT**. I don't know IT in detail….. So having someone from IT would be very **useful here**.*
Business manager 4	Retail Internet Banking Manager	*Here in the internet channels, it's necessary that we have **a technical background**. Our Product Manager for Internet Banking, he is **from an IT** and project management background.*

As shown in Table 6.4, the stated goal is to keep pace with technology and to try to communicate with IT using the same technical language. Some of the responses from Business managers shown above point to the real goal seeming to be to compete with IT in the delivery times of services, another goal is to try to prove that business can discover the secrets of what takes place in IT. There is also another goal, which is that some Business Departments exploit their technical employees to solve daily and simple technical issues, rather than waiting in line and suffering the limited IT resources. This example is evidence of what is mentioned in section 5.2.2 regarding the limitations of IT resources and capacity. However, the results may be effective if the work is organised and under the umbrella of an integrated management, such as the case in the IT.

The previous examples indicate that there is a form of business knowledge held by IT staff, as acquiring business knowledge adds value to IT personnel. The next section discusses this form of business knowledge at ANB.

6.2.3 Knowledge Orientation

Business knowledge is the focus of attention among IT participants in the interviews. There is further evidence from one of the business managers when praising the ability of IT staff to acquire knowledge and an understanding of business requirements:

> *Look! I think IT guys have a closer interaction with the business and understand the business more. They don't have to wait until I put in a request, being proactively involved, and they have better understanding and a better presence (Business manager 3).*

Business knowledge enables IT employees to act like business personnel in some cases. Knowledge of business is a key point in being able to discuss the implementation of services confidently with business employees in order to avoid submitting incorrect or incomplete services to the customer. The following example is given:

> *You may work with Business on detailed requirements. Sometimes you talk to Testing, and tell them how their work should go. They may say, "do this a certain way", and if we do it another way, they will have issues in the future, and it should be done differently. Then you are in IT Department and you find yourself doing business tasks although you are in IT office (IT manager 4).*

The above example shows that experience of pursuing business tasks has made IT staff interested in running customer service with the business side. The experience and knowledge of IT staff help in predicting the future more accurately and thus improving the ability to avoid issues. Possessing business knowledge and acting as a business help in being proactive in readiness for addressing problems and complaints received from customers (section 4.2.3). The bank is then better able to contain potential problems before they happen, instead of responding to problems later. Ultimately, the bank is able to reduce the number of customer complaints, which take the lion's share of the time and effort at the bank (section 4.2.2).

In the case of Business Departments, hiring technical staff - discussed in section 6.2.2- has an impact on the acquisition of technical knowledge by business staff. They have become dependent on the technical staff knowing technical details and are satisfied simply with knowing the results and decisions regarding tasks, without knowing the technical information. Lack of understanding and practice with technology is

expressed in the next example from Business manager 1, when he states: “business doesn’t know piano” [an Arabic expression indicating that business knows nothing about technology]. It is possible that technical complexities are a barrier facing business staff, but knowing a minimum of technical knowledge helps them in the success of their services and satisfies their customers, particularly with the transformation of the world into a digital arena. To give one example,

> *Not everyone in business has an IT background, it’s a hobby. There is a difference between having a hobby and practice on the ground. A business guy can’t be an IT guy. Because business doesn’t know piano (Business manager 1).*

The above example shows that technical practice as a hobby, such as the use of public computer programs, does not mean technical knowledge in the systems and applications of ANB. Business manager 1 points to experience of the technical realities of ANB, such as knowing the characteristics and technical capabilities possessed by ANB’s systems and programs. Lack of technical knowledge among the business staff emerges in the next example. Business manager 4 suggests that a lack of technical knowledge among the business staff made it difficult for them to deal with IT staff.

> *The business doesn’t have knowledge of IT infrastructure and technical knowledge. They won’t be able to deal with IT (Business manager 4).*

The above examples given by IT manager 4, Business manager 1 and Business manager 4 show that the level of technical knowledge of the business staff is lower than the level of the business knowledge of the technical staff. This volatility may be caused by differences in understanding each other and thus having different goals and priorities. A high priority for IT might, therefore, be a lower priority for business personnel, and vice versa. This situation could affect service delivery to the customer due to the potential for disagreement regarding preferences for services and notions regarding their importance as discussed in section 5.2.2. The difference in knowledge and understanding also breeds a kind of difference in thinking and expectations. The next section provides details of the shared and different priorities and expectations between IT and business technology.

6.2.4 Conducting an Agile Methodology

The previous section discusses the way in which there are some differences between the understanding and knowledge of IT and business staff. It is possible that a difference in knowledge and understanding also breeds different thinking between IT and Business Departments. The nature of the work of IT has made their thinking more logical, and their dealings with devices and systems have made them more rigid.

IT is IT, they are hard and not flexible (Business manager 3)

On the other hand, the nature of the business side in having to cope with market changes and customers' requirements has also made them more flexible, just as linking the achievements of the business staff with marketing and financial targets has made them keener to achieve these goals by any means possible. Of course, this case does not apply to the IT, as their targets are more operational than financial. The following example demonstrates the difference in thinking between the two parties:

IT thinks logically and technically, how to do things. Marketing thinks outside the box, how to talk to this customer, what would I do here, and it's different from IT. IT is like 1 + 1 = 2. Marketing thinks differently (Business manager 1).

There is also a difference in the way the two sides deal with service requests. IT deals with these requests in accordance with a kind of rigour with the business. IT wants accuracy of detail and clarity, with stated justifications for service requests. While the Business Departments want flexibility from IT in terms of service requests and delivery. Business wants IT to be prepared for market changes and to keep pace with the growth in customer requests. They want to provide services ahead of their competitors and to improve services to the customer as soon as possible (section 4.2.4), so that ANB's customers are convinced that the ANB works to make them happy. One Business manager comments:

IT is not like business; we are friends.... As for profiling, this is their profile. I understand, he may be a very kind or even a fantastic guy, but to change him a bit…and the problem of the business is that they go an extra step with them (Business manager 3).

IT management has a strong case for justifying inflexibility over not accepting incomplete details on services requests. Customer Service Delivery Manager states that IT is keen on the quality of the service provided to the customer. They could deliver the service in part or earlier, but this would be at the expense of quality:

> *So, my major focus is to complete the business request for a particular time and quality. It is not a matter of fixing it partly; it's a matter of fixing it properly (IT manager 3).*

Intuitively, the reason may be convincing to some extent. It is known that there are problems with the quality of service at the ANB, as demonstrated in section 5.2.5. The account above suggests, therefore, that there is another reason for the lack of agility in the delivery of services to the customer quickly and in a short space of time. Analysis of the field data reveals that this other reason may be common to all parties at the ANB: the lack of a real and agreed plan. This is illustrated in the following comment:

> *At the bank here, unfortunately, IT doesn't work according to the plans. There is no ... and this is due to many reasons that I'm going to talk about, but the main issue is that the Arab Bank has no plans for any project or for any CR, and if there is one, it's a phoney plan, and no one goes according to the plans (Business manager 4).*

The example above demonstrates that there are two issues related to the plan: first, there may be a plan but it is not a genuine one. The "phoney" plan exists simply to complete a project or change the prerequisites in order to proceed to implementation. The plan had not been for that end service at all; second, there is a plan, but it is not followed by the two parties. According to the data analysis, this situation may be due to some ambiguity between the two departments and a lack of transparency in dealing with each other.

If there is to be real planning and a commitment from IT and business staff to that plan, then life would be easier and business would run more smoothly. The IT problem is that business personnel come unexpectedly and request a new service or an update of a current service in order to attract customers. IT employees then drop everything and endeavour to achieve it. However, an agile methodology relies on flexibility in dealing with unexpected requirements. IT at ANB experiences difficulties with finding solutions to unexpected or unplanned service requests. It lacks effective

solutions that are compatible with a rapidly changing market and can contribute to accommodating customer requests. This reflects negatively on much of the work and many of the services offered by the ANB to its customers:

> *Initiatives come at short notice, and you don't know how they are linked and how they complete each other, we need to improve this part more. This makes it difficult for any support unit, including the IT, to plan resources, including skills and such to fulfil the needs of business. We need a mobilisation period for resources and in most cases we don't get that luxury, we don't get that chance (IT manager 1).*

Management of unexpected requests or orders that come at the last minute require special skills, particularly if resources are limited. The above example indicates that IT at ANB does not currently have this skill. IT are either not able to accomplish something or played down its role in being effective because of its inability to keep pace with the growth in customer services. Business Departments play the role of driver and decision-maker. The next section discusses the points that caused the Business Departments to take the lead at the ANB.

6.2.5 Leadership and Partnership

Business is the decision-maker within the ANB. Business holds in its hands all the decisions and actions that pertain to the customer and chooses the service types and the way they will be provided. The case data shows that business has the last word on 'Yes' or 'No' with respect to customer services. Meanwhile, IT is a follower of the business side. IT implements what comes from business, which is consistent with the nature of the role of ITC shown in section 5.2.1. One IT manager comments:

> *Honestly, business is the first decision-maker, and we cannot say "No" to them. We are driven by them, unless they ask for something impossible or very difficult. But other than this, we do all that they ask for (IT manager 2).*

The evidence from the ANB case suggests that the relationship between business and IT is almost indestructible, even if some of the employees are keen to keep the last thread in this relationship in order for it not to be cut off. The data reveals that business and IT staff know that the difference in views between them is temporary. They are aware that they are in the same boat and that each party needed the other

to supplement their work. They are, therefore, careful not to break the relationship between them, whatever the circumstances:

> *Both parties keep the relationship stable, which is important, they don't break it…. They know this is a temporary fight and it will go away (IT manager 4).*

This relationship is described as similar to that between the cartoon characters Tom and Jerry: each is trying to beat the other and, in that sense, neither can live without the other. There is conflict within each project or request, but there is also interest and attention. These conflicts are probably the result of a mismatch in the shared responsibilities (section 6.2.1). This is perhaps because of the absence of corporate strategies, such as those for customer-focused strategies (section 4.2). According to one Business manager:

> *You know Tom and Jerry? Usually Business and IT aren't on good terms, they are friends but in business they aren't always on good terms, because Business is always on the receiving part, people are asking for stuff from IT. That's why it's normal for IT not to love Business, because they don't work together, they work on solving issues from Business. It's logical that, friends, they are all friends, but during business, you know that, this person is always asking me: Request…Request...Request... It's not that they hate them, but it's always like, you know, he is coming now, he is going to request something new. It's not that they hate it … (Business manager 1).*

There is other evidence from the previous quotation that IT complains about business requests and the business side is not comfortable with IT outputs, and there is a process of each party trying to pass the blame to the other. Business states that IT is the reason for delays in launching services to customers, while IT argues that business is the reason for the lack of quality in services. The following example illustrates a few of such cases:

> *From the initiatives side, it looks like the business drives the IT, but in fact IT is dragging the business, because this is what happens. We initiate projects and we have huge lists of projects, projects are being initiated. It goes to IT along with approval for the budget and then IT delays us (Business manager 4).*

Strength prevails and each party wants to demonstrate that it is stronger. IT and the business side at the ANB are facing the problem of a tug of war, as each party is trying

to pull the other towards itself. With business having control over strategic decisions towards the customer and IT controlling the implementation of services to the customer. Business may decide solutions are not supported technically by ANB's systems or need time to come into effect. The customer is ultimately affected. Therefore, customers will start looking for another bank that has the type of good internal relationships that will provide greater convenience and better services, According to the Retail Internet Banking Manager:

> *The customer may go to another bank, if he finds that the other bank is providing better services (Business manager 4).*

The above example is the essence of the subject. Customers will leave if they do not get what they want or are not satisfied with the service. Customers are no longer restricted to time or place, as they are not limited to a particular bank but have several choices open to them.

6.2.6 Summary

This section shows the role and effectiveness of IT relationship with Business Departments in providing and supporting the business services provided to customers. However, the work relationship between IT and business staff is tense because of the different strengths of the two parties. Such tension is negatively reflected in the distribution of responsibilities in each department and IT and business staff are very careful when dealing with each other. By contrast, the responsibilities in the next case are clearer and more coded. There is a healthy relationship between the staff of the two departments in providing customer services. The next section discusses the working relationship between IT and business in delivering the customer-focused strategies at ESB Networks.

6.3 IT and Business Working Together to Deliver a Customer-Focused Strategy at ESB Networks

The relationship between the employees in the IT and Business Departments is characterised by a form of partnership, and healthy communication between the two parties and a desire to help in order to complete the work are required to the full. Thus, this section presents some of the characteristics of the nature of the working

relationships within ESB Networks and discusses the function and knowledge orientation between the two departments. This section also presents the flexibility in the agile methodologies followed by ESB Networks and the leadership between the two departments in order to improve the customer service in the organisation as a whole.

6.3.1 The Nature of the Working Relationships within ESB Networks

The working relationships within ESB Networks are characterised by teamwork. IT and business employees try to maintain a good relationship with each other. They look to this relationship as a kind of partnership between the two parties, as shown in the following example:

> *We work very much in partnership, there is always a healthy intention…. it's a very good relationship, very much working together (IT manager 4).*

The point worthy of attention in the above example is the reference to a "*healthy intention*". It seems that IT staff do not mind accepting and adapting to the requests of the business side, whether they are in the range of IT capabilities and capacities. The initial thinking of the IT personnel is that these requests do not exist in a vacuum but reflect a real need for the benefit of the business and of customers. Therefore, IT employees take customer requests and business seriously and initiate work on the implementation of the request.

However, some of the IT participants interviewed have a different opinion. They felt that relationships with the business staff may sometimes depend on the individuals concerned. The longer the relationship an IT employee has with the business staff, the greater the level of trust. Structural changes may cause a lack of trust because of the lack of knowledge of new employees. The following example demonstrates this contrast in trust:

> *The people who have long-established relationships with the business lines, absolutely they are trusted. When there is a lot of change in management structures, that can just cause a bit of upset in that, and it's not that people aren't trusted, it's that they don't know each other yet (IT manager 3).*

IT manager 3 points out that the lack of trust is not due to the employees themselves, but because of a lack of knowledge of or a prior relationship with them. In this regard, there is a trend among the IT staff to gain the confidence of the business staff as far as possible. One example of this trend can be seen in the next excerpt from one of the IT managers' interviews:

> *We want an IT person's head on it. That's probably our biggest challenge at the moment and to gain confidence from the business that we can deliver on all these different things (IT manager 3).*

The above example suggests that IT staff are able to meet the business requirements. This concept is also discussed in section 5.3.2, in which the business staff are not reticent about the skill and ability of IT staff to fulfil the business's requirements, but expressed doubts regarding the time it takes IT to achieve these requirements.

The data also presents another characteristic of the working relationship between the business and IT staff. The lack of the tension and stress felt while on duty. Employees on either side do not shy away from going to the other employees' offices or sitting together to discuss the service provided or a current problem. For example:

> *We don't have a significant issue in terms of stress or tension. Everybody will sit down and say, 'Look, we think we need to do this and it could be one of those major things, yeah, happy days. Let's have a cup of tea'. We all agree or it may be we can't do this because if you do this, this and this will happen (Business manager 5).*

The example above shows that discussion at work is desirable and open in order to reach an agreement on a specific topic or issue. Staff come out of the discussions having reached a consensus, whether they agree on a particular solution or change the current decision. The above example also leads to another point: the size of an issue or a subject does not cause any pressure. The business and IT staff will discuss it and feel fully relaxed in seeking a solution regardless of how large or small the issue. In speaking of issues and solutions, ESB Networks manages the work between the IT and Business Departments by implementing a specific process for raising technical issues faced by the business staff. For example:

> *We all work basically for a common cause. IT support departments have an SLA with us, they have to hit the SLA … if we have problems, we can go talk to them. We have dealt*

with these people pretty well for a number of years, there is a good relationship and that's really important. The fact that we are all ultimately ESB is probably, I think personally, it's a positive thing. So, this can create tensions, it's not all a 'happy marriage'. There are fights (Business manager 5).

The above example refers to the unity of purpose and operations between the Business and IT Departments. There is agreement on the processes between the Business and IT Departments when there is a specific problem in the customer services provided through technology. The above example also shows the satisfaction in the working relationship in this regard, as the business staff found that the IT Department handled matters smoothly after 'raising a ticket'. However, Business manager 5 mentions some of the impurities that hinder this relationship when he refers to "*it's not all a 'happy marriage'*". Differences occur during the performance of work. In the case of such differences, Business managers can escalate their problems through certain points of contact. The Manager of Customer Care Logistics refers to this in the following example:

I have an escalation point. If I have an issue that's affecting multiple users, I will report it through the usual medium of contacting the business service centre and raising a ticket, but I will also escalate it to one of the managers if it's very serious, depending on what the problem is (Business manager 2).

Business managers have the authority to escalate an issue to the top management of IT in the event of a failure to reach a solution to the problem. The escalation process is measured by the number of users of the customer care systems and thus the extent of the impact of a problem on customer services. A problem is a priority if a large number of users are affected, or if there is disruption to more than one system or site.

The above section considers the nature of the working relationship between the IT and business staff, particularly when there are escalations or stresses at work. In order to strengthen the relationship with the Business Department, the IT Department has a dedicated Business Relationship Manager. The Business Relationship Managers are the points of contact that oversee the business. The following section illustrates how this function has a positive impact on the facilities

at ESB Networks in order to achieve customer service. The following section discusses the function and knowledge orientation inside ESB Networks.

6.3.2 Functional Orientation

ESB Networks aims to establish a process-oriented approach between its IT and Business Departments. There is evidence during the data collection of the presence of two functions that lead to connecting the technology and business. These two functions are the Business Relationship Managers and the Business Architects, as shown in the following figure.

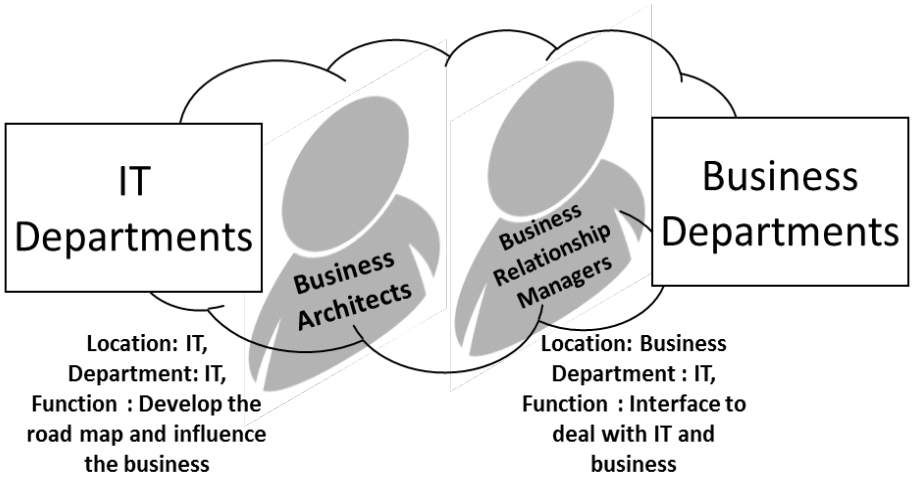


Figure 6.3: Restructuring the interface functions within IT and Business

The IT management has appointed an official function to represent IT within the Business Departments. This function operates under the name of the Business Relationship Manager. The daily work of an employee in this function is on the business side and not in IT. Structurally, the function follows IT management but in practice is located in the Business Department. The Business Relationship Manager describes his function as follows:

> *I am the Business Relationship Manager for the Networks business but I work within IT. I'm employed by IT, on behalf of the Networks business. I understand the business needs and what the business is looking for and I am IT, that is, trying to deliver on those needs (IT manager 2).*

Closer inspection of the data suggests that IT management have Business Relationship Managers, who are the front face of IT. These managers are the ones who liaise with the business side directly, gaining ideas in the early stages and then

starting to turn them into a piece of work that could eventually become a project. In addition, the Business Relationship Managers also have a close alignment with what happens in IT. They know the IT strategy, how the IT strategy aligns to the business strategy, and how everything is going to shape development together.

The IT management has also set up a new role called a Business Architect. A Business Architect is different from a Solution Architect. The employee in this function is not a specialist in a system or technology. However, he or she has a lot of technical confidence and a lot of good stakeholder management. The role of a Business Architect is to: 1) start consultations with the Business managers and ask them about the challenges that they have in the future and the requirements that they have; and 2) to develop a road map, lead the IT and business plans and influence the business towards adopting the best technical solutions. For example:

> *I suppose from an IT perspective; we are working very hard at having Business Architects. It's a new role, where we have an architect working with ESB Networks to plan one, two, five or 10 years' time, what will the customer need in five years' time, with smart metering, smart reads, or smart homes? So we are working now to be ahead of the curve in terms of what the customer will need (IT manager 4).*

The above example links the role of Business Architect in the transfer of services to smart services and the fulfilment of customer needs. Smart solutions, such as meter reading, are one of the examples referred to in the above example and also discussed in the section on digital transformation (4.3.5) in the answers to RQ1. Smart solutions are also one of the important trends for the expansion of ESB Networks with the support of IT when discussing the automation of business processes in the answer to RQ2 (see section 5.3.3). The IT Department continues to work to facilitate services so that customers can perform services themselves. In addition to functional orientation, there is another type: the knowledge orientation discussed in the next section.

6.3.3 Knowledge Orientation

Knowledge orientation is the sharing of knowledge among some employees in relation to the tasks and plans of the others. Some of the interviewees call this knowledge 'healthy knowledge' or 'practical knowledge', as shown in the following

example:

> *Healthy knowledge is good. It is important to understand the different roles and responsibilities. Like the knowledge that you may know how things operate but are not expecting to be the one that manages this (IT manager 3).*

This knowledge develops the understanding and perception of all the personnel in relation to each other's roles and responsibilities and helps in proper understanding. Knowing this, IT manager 3 is also cautious because such knowledge may lead to business employees trying to control and manage the other parties.

ESB Networks conducts a programme called the Market Opening project, employees from the IT and Business Departments attend in order to get to know each other and present their work and plans. This programme allows business employees to learn how systems have been configured and IT employees to know the business logic and rules followed in the organisation. One of the outputs of this programme has been the process of rotation for some staff between the IT and Business Departments. This programme enables some of the business staff to rotate their work to IT functions.

It is evident that there is a rotation process for the business staff towards the IT Department. The structure of the organisation has facilitated the process of rotation, whereby employees can move from one department to another. This is referenced by more than one participant during the interviews, for example:

> *IT people, because of the way the organisation would rotate people around, a lot of the IT people have come from customer backgrounds anyway. They would be appreciating, the senior people especially, would be appreciative of the customer needs and the fact that this has to serve the customer (Business manager 3).*

Business manager 3 supports the idea behind this change and the rotation because it is in favour of the customers and the services provided to them. Staff who move to IT Department have a good customer knowledge background. They are familiar with all aspects of customer services. Therefore, such prior understanding of the customers helps in serving them properly.

Although the functional orientation and mobility of staff between the two departments has help in the understanding of customer needs, as discussed, there

are some arguments that relate to flexibility when applying solutions to customer needs. The next section deals with the agile methodologies followed by ESB Networks.

6.3.4 Conducting Agile Methodologies

The previous section discussed the functional orientation of the IT and business staff at ESB Networks and the common mobility between the two departments. Some obstacles present the inflexibility to change and speed of response between the Business and IT Departments. Business employees demand more flexibility, while IT staff respond that they are asking for a lot of work to be implemented in a short space of time. These views emerged in several of the responses during data collection:

Table 6.5: Views on flexibility in completing work

Business manager 4	*It's quite complex. I think the downside from the customer service side is that it's not. It* ***can't flex quickly****, it's slow to make changes to it.* ***You need more flexibility****.*
IT manager 4	*The only time that there is contention is in the business always wanting* ***more work than we can do****, and everybody thinks their project* ***is the most important project****.*

The table above demonstrates that the business management is facing a problem in the delays and complexity of changes within the organisation, while there are rapid changes occurring in the market and on the customer side. Business manager 4 believes that there is an urgent need to change methodologies within the organisation to become more flexible, particularly those offered by IT. Delays in the implementation of customer-related services may be the cause of customers' anger and dissatisfaction. Meanwhile, IT manager 4 asserts that the business side is not the only one in the arena and that there are other priorities from other departments. She asks them to give IT enough time to implement requirements, rather than requesting solutions to a tight deadline.

On the business side, there is another mode of thinking among the business staff that the IT staff are far from the reality of the business environment.

> *IT people tend to be kind a locked into a little box … they have to work with the people who are using the system as well, with the business (Business manager 2).*

Business manager 2 wants IT staff to be more open to the users of the IT systems.

She wants the management of the IT Department to be conscious and free of their isolation from users and to show some flexibility and ease in their dealing with the business side of the organisation. The appeal for change emerged from the IT side as well. In the following example, one of the IT managers comments that the IT Department needed to renew its methodologies in order to cope with the plans and aspirations of the business:

> *I suppose we need to work with ESB Networks to have five-year road maps, of what we are working with them on and make sure we keep everything refreshed, and we understand the five-year road map (IT manager 4).*

However, analysis of the data reveals that there is some understanding from IT and business management on the importance of flexibility and speed of response to market demands and customer requests. For example, the IT Department is working on new technology called 'SAP HANA' to make the strategic system (SAP) more effective. This new technology helps business employees with regard to their speed in responding to customer requirements and market changes and, at the same time, it is directed to supporting business management towards greater flexibility in the services provided through technology systems:

> *SAP HANA will be a new way to run our enterprise systems, again to enable ESB Networks to be more agile and help more with customer responsiveness (IT manager 4).*

With SAP HANA, ESB Networks aims to convert the SAP database to cloud based data storage, this will promote the storage and retrieval of the data required by business applications and it also carries out advanced data analytics. Facilitating the process of data access and analysis for business employees and customers is the kind of agility referred to by the IT manager in the previous example. Furthermore, it should be noted that closer inspection of the data suggests that the Business Architects - discussed in section 6.3.2- have a role in supporting business management in the development of strategic plans for this technology. This gives the impression that there is some cooperation between the two management levels of the IT and Business Departments.

This section considers flexibility and agility in handling the processes between IT and business management. It is mentioned that there has been some progress in agility

through new technology in helping to speed up customer service, as well as discussion of a tug-of-war practice between the two departments in order to change some of the current methodologies. To complement the exploration of the push and pull processes between the two departments, the next section discusses which is able to lead the other within the organisation.

6.3.5 Leadership and Partnership

The helm of ESB Networks is mostly confined to the business management within the organisation in terms of the customers and their services. The Business Departments typically lead the services provided to customers, as they own the decisions regarding changes to the services and features offered to ESB Networks' customers.

> *I think it would be down to the business to drive the customer service. I don't think the IT Department would see their role in driving customer service (Business manager 4).*

The example above shows that IT Department does not have a prominent share in the decisions made concerning customers and their services. IT Department waits for decisions to be taken by the business management and then provides or modifies the required technologies based on these decisions. By the same token, IT management does not intervene in determining the priorities of the services provided to customers. The Business Departments identify the priorities and send information regarding these to the IT Department for their application services can be postponed even if they are ready or the business management asks IT to stop the implementation of a particular property because of changing priorities or the surrounding circumstances. Therefore, the business management leads and determines the classification of priorities related to customer service, as shown in the following example:

> *The business sets the priority, not the IT. The priority comes from business, then we would help the business when they want something done (IT manager 4).*

In all of the above-mentioned points, there have been achievements by IT in being able to find a role for the IT Department in sharing in the decisions that affect customers. Several examples emerged from the data analysis that suggest that the IT Department has gained a role in the leadership of the business in some of these

decisions. There have been initiatives and solutions provided by technology to facilitate interaction with customers or increase the speed of customer service, as discussed in the answers to RQ2 (section 5.3). These initiatives include the PowerCheck mobile application and the integration of GIS and OMS with the tablets used by the network technicians. The following table lists some examples that demonstrate views in this regard.

Table 6.6: Views regarding the IT Department sharing in customer-related decisions

IT Manager 2	*We have changed and we have started looking further down the line. I think the business is still driving IT, but **it's getting very close to half way, where IT is starting to drive the business** and we are nearly in the situation where we can tell exactly what's going to happen.*
Business manager 3	*I do think that there are cases where the technology drives. It's even a bit like **these time clocks**. **You might never see them but you know when to check in.***
IT Manager 3	*If we look at **the Business Architects**, that is where **IT is driving the business.** But at the end of the day, the business are the experts and they know their business.*
Business manager 4	*I think together **we should be looking more at how we can deliver customer service using IT,** rather than me going and looking at what I need to do and bring it to IT.*

Perhaps the aspect agreed upon among the responses in the above table is that the Business Department is still the area that controls and leads the organisation in customer services. However, in that IT Department has gained a place in leading this. IT manager 2 and Business manager 3 express their belief that the situation has changed and that the time has come for the IT employees to state their opinion with regard to customer service. There are some points in the customer journey at which both IT manager 2 and Business manager 3 find that IT management has led a decision or initiative towards customer service solutions. This message is clear in some of the expressions used in their responses, such as *"getting very close to half way"* and *"these time clocks".* In addition, IT Manager 3 mentions the Business Architects as a vivid example of the employees in the IT Department leading business in planning their strategies towards a customer focus. As discussed in the section above, the Business Architects have become the eyes of the IT and Business Departments in enabling them to see their way, as the technical and business expertise contained in this function work to the benefit of the organisation and the

customers by taking into account the capabilities and revolutions in IT. Business manager 4 proposes that the IT Department should participate in the decisions and plans of the business regarding customer service, as she prefers to have the IT Department side by side with her instead of staying at the back.

6.3.6 Summary

This section provides a different picture of the perception among some in the organisation that see IT as being in the last row with regard to decisions relating to customer service. This section gives practical and real-life examples which have demonstrated that the IT Department is in the front row with the rest of the Business and Strategic Departments in the organisation as part of an integrated planning process to meet all customers' needs. The relationship between the IT and Business Departments is governed by agreed processes, which help strengthen business relationships and accelerate customer service delivery. This healthy relationship is almost a prevailing culture between the two parties at ESB Networks. However, this situation does not prevent the occasional tension resulting from different views between the management of business and IT.

6.4 Conclusion

In the STC case, the answer to the third research question demonstrates that business looks to IT as a strategic partner in completing its objectives and tasks. In practice, the tracking system governs the working relationships between the staff in the IT and Business Departments. There are signs of the keenness of STC staff to understand the knowledge of the other party, knowledge exchange between business and IT sections may be a factor in the ease of the rotation process between the managers of the two departments. Structurally, IT and business allocated departments that act as an interface for them to deal with each other as a single point of contact. Thus, there is some agility in providing services to customers quickly and within a short period of time.

In the ANB case, the answer to the third research question demonstrates that there is a difference in the strengths and weaknesses between the Business and IT Departments in every relationship. There is also a difference in the influence of the

two departments on the success or failure of every relationship. By exploring the relationship, it is clear that the mutual trust between the business and IT staff is characterised by an open-door policy. IT has allocated a specific department relating to business relationship management as the single point of contact with the Business Departments. This department is the business face of the IT. However, the relationship can be regarded as similar to that between Tom and Jerry, whereby each is trying to beat the other but neither can live without the other. Furthermore, business is the decision-maker within ANB. Business holds in its hands all the decisions and actions pertaining to ANB's customers and services.

Research question three demonstrates that there is a healthy relationship between the IT and Business Departments at ESB Networks and a desire to help in order to complete the work is required to the full. The working relationships between the IT and Business staff are characterised by teamwork. They look to this relationship as a kind of partnership between the two parties. Therefore, the IT management has appointed the Business Relationship Manager and the Business Architect to represent IT within the Business Departments to influence the business towards adopting the best technical solutions. Thus, there is a rotation process for the business staff towards the IT Department. In addition, the Business Departments are leading the services provided to customers, as they decide the services that are the best and most suitable to continue or changes to the services and features offered to ESB Networks' customers. Nevertheless, The IT Department has gained a role in the leadership of the business in some of these decisions. There have been initiatives and solutions provided by technology to facilitate interaction with customers or increase the speed of customer service.

Across all three cases, business managers consider IT as a strategic partner in the continued success of the services provided to customers and thus the success of the organisation as a whole. However, the ANB data show a lack of a clear definition of responsibilities, as those of IT are non-specific or unknown; this helps other departments to intervene in a number of areas of IT responsibility. This intervention could be from participating with IT in the selection of technical solutions. This type of work generates an unstable relationship that affects the proper continuation and

consensus of work. Whereas, the IT and business staff at STC and ESB Networks are incorporated within the reality of what is happening in the business environment and the events that affect the customer. There is a steadiness and convergence in the working relationship in these two case studies. However, IT in STC and ANB may be exposed to some violations by the business or senior management of an organisation. For example, when a technical requirement collides with a business decision, there is a tendency to move towards the business side. This indicates some of the power possessed by the business departments in STC, particularly in the case of beating the competition or where there is customer pressure.

The data analysis utilised to answer research question three leads to the conclusion that business and IT staff are operating on the basis of shared responsibility and mutual trust in order to meet customer requirements as soon as possible. Therefore, strategic decisions are taken in order to improve the services provided to customers. These strategic decisions are characterised by a participatory process between the business and IT departments. Thus, business management is looking to IT as a strategic partner in completing various customer services. IT has appeared in many cases that concern customers to be the leader, particularly those aspects that are based on technology in the first place, such as electronic services through mobile applications or the organisation's website. However, business management is still the area that drives and leads the organisation in customer services.

There are also customer-oriented functions between business and IT departments that focus on customers and their service. These departments perform specific and dedicated tasks aimed at customers to supervise and ensure the continuity of customer service to the full. This functional orientation is accompanied by the knowledge orientation of business and IT staff towards the customer. Employees of these departments have sufficient knowledge and understanding of the needs and aspirations of the organisation's customers. Employees exchange this knowledge in order to reach the best solutions and provide services of the highest quality possible to customers. This knowledge of customers is supported by an agile processing methodology between the two departments, particularly in terms of customer

requirements, with the added presence of a competitive external environment and the influence of service regulators.

The next step is to analyse the data across the three case studies, capitalise on the similarities and differences, and use the knowledge that emerges to answer research question four. The next chapter discusses the multi-site analysis used in the research study.

CHAPTER SEVEN MULTI-SITE ANALYSIS

7.0 Introduction

This chapter provides an analysis of the data across the three case studies.

Section 7.1 provides a comparison of the initiatives aimed at helping customers. These initiatives demonstrate the evolution in dealing and interacting with customers, as customers now have the power to have their rights and requirements recognised and require ease in obtaining services and information. These initiatives are a good proxy for customer focus. The self-service initiative aims to activate online services and the delivery of physical products through self-service machines that reduce the time and effort expended by the customer. There are tangible examples of improvement in customer experience and satisfaction following initiatives to make services easier for customers and interact with them proactively. In addition, highly customer-focused organisations employ methods that increase the customer role inside the organisation and balance the relationship between the customer and the organisation.

Section 7.2 provides a comparison of the evolution of the roles of ITC in delivering a customer-focused strategy. These roles show the differences in the levels and characteristics of the tasks involved. The role of ITC as an implementer shows the ability to maintain the stability and continuity of services used by customers. The IT as an enabler role shows the ability to discuss and develop technical solutions to comply with the technology scope. The autonomous role reflects the ability to be autonomous and take responsibility for making technical decisions. The role of the initiator shows the ability of IT to provide initiatives and suggestions to improve the business and customer services. The role of ITC as revenue generator reflects the ability to provide services under the implementation and operation of IT to earn revenue from external customers.

Section 7.3 presents the emergence of digital solutions in supporting customer-focused strategies. Digital solutions have capabilities in enabling the provisioning of customer services, interaction with customers and the transmission of information to the customer. Digital solutions have the ability to offer the largest possible number

of services, provide accurate and timely information, and facilitate easy interaction and communication between customers and services. Thus, digital solutions are an effective option for customers and direct the organisation towards a customer focus.

Digital solutions are effective and efficient at automating customer-facing processes and performing services in the best possible manner to meet the demands and expectations of both the business and the customer in a timely fashion. These initiatives are discussed in detail in the next sections.

7.1 Initiatives Aimed at Customers

Customer-focused strategies enabled by ITC have a positive effect on customers. There is an association between CFS and characteristics of ITC support in the creation of initiatives for customers. Both CFS and ITC add initiatives that drive changes for the benefit of customers. These initiatives facilitate and enhance the organisations' dealings with customers and enable customers to achieve their rights and requirements.

Data from the multi-site analysis suggest four major types of initiatives for customers: 1) self-service, 2) customer usability, 3) proactive interaction, and 4) customer control. The next sections discuss these initiatives in turn.

7.1.1 Self-service

The trend towards self-service is prevalent in all three cases. The three cases highlight focus and progress in the provision of a self-service environment for customers. Figure 7.1 shows the number and percentage of the references made by the participants in each case study in this regard.

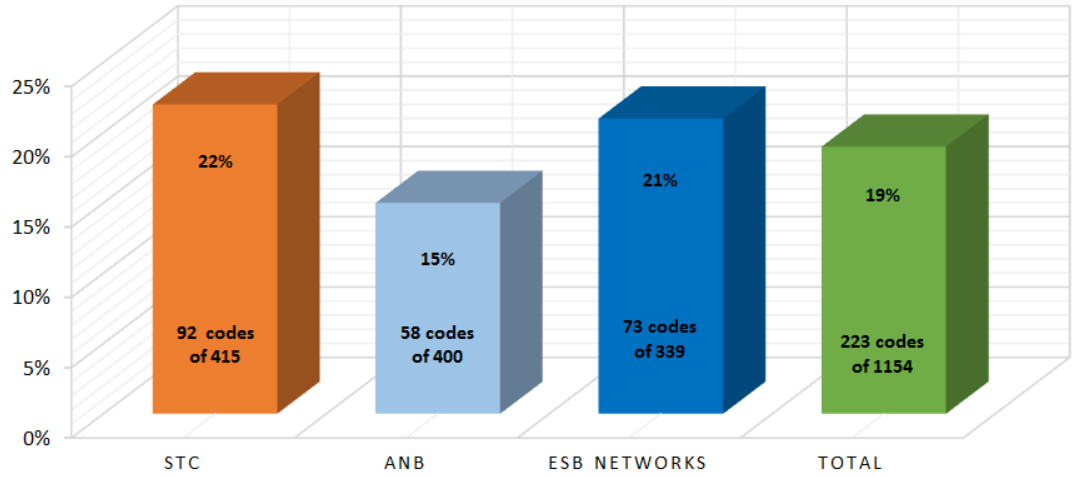


Figure 7.1: Instances of customer self-service by interviewees

Figure 7.1 shows a comparison of the instances of codes[5] that are selected and relate to self-service (see section 3.6.2). The total number of instances of codes related to self-service are 223 out of 1,145, which is almost 20% of the total. As shown in the above figure, about one-fifth of the codes mentioned by the interviewees focus on self-service. The percentages are relatively high for all three cases, although lower in the case of ANB, perhaps due to the sensitivity surrounding dealing with customer information in a bank and the need to protect the privacy of customers' banking information, as discussed in chapter five (see section 5.2.6). However, this high percentage gives an indication of the organisations' trend towards a self-service environment. This trend could be due to STC, ANB and ESB Networks having found that self-service has a positive effect on reducing the load on managers and their staff in addition to reducing delays in customer service, as discussed in sections 4.3.3, 5.2.3, and 5.3.3. This has led to a reduction in the number of customer complaints, as well as a lowering of costs associated with staff mobilisation and associated overheads.

Such a customer-focused strategy empowers customers to be more in charge of their accounts and services. The association of ITC in the automation of business processes and CFS in digital transformation leads to self-service initiatives. This digital transformation strategy revealed in the analysis for RQ1, in addition to the capability of IT to automate business processes reported in RQ2, supports this added initiative

[5] The coding query in the NVivo program was used to calculate the instances of customer self-service.

for the customer. The multi-site analysis reveals that all three case studies have IT capable of making traditional services available on customers' mobile phones or computers, or through self-service machines, in a stable and consistent manner. The three case studies also indicate a digital transformation strategy which functions to support self-service and online provision for customers.

There are indications of the migration of all services to an online format available on the company website or through the mobile application of each organisation. For example, STC data indicate that 100% of their virtual services are accessible on the STC website and the MySTC application, as discussed in section 4.1.5; the data from ANB indicate that all the regular transactions are accessible on the bank's website and through mobile banking, as discussed in section 4.2.5. The data collected from ESB Networks include mention of a strategic project to transform services on the website of the organisation and the PowerCheck application, the first phase of which has been completed and work is in progress on the second phase of the project, as discussed in section 4.3.5.

There is also the conversion of another type of self-service, in addition to online services: the transfer of a delivery and receipt service for physical products. The services that require human intervention to accomplish – for example, the delivery of SIM cards for mobile phones in the case of STC, meter readings in the case of ESB Networks, or sending financial approvals in the case of ANB – operate through self-service. Customers of STC are now able to receive mobile SIM cards or print bills for services through self-service machines (see section 4.1.5). For ANB's customers, renewing an insurance policy is now possible through the customer's mobile, whereby paper has been replaced by another electronic link (see section 4.2.4). To some extent, ESB Networks is now able to receive meter readings through smart meter readings and smart homes, which interact with the organisation's systems and its suppliers directly (see section 4.3.5).

Time and effort are the main dependencies involved in self-service as an initiative to help customers. The data analysis highlights the inverse relationship between time and effort and self-service. The more self-service is available, the less effort and time spent by the customer. These elements are a focus of attention in all three case

studies. Customers are now time poor and do not expect to have to wait a long time for a service or employee. Before the availability of self-service, the customer was required to expend physical effort to go to offices or branches; he or she spent a lot of time waiting in queues. Self-service reduces the effort and time needed to implement or acquire a service, such as the remote access used by employees to solve problems with the settings on a customer's mobile in STC without the need to make the customer expend time and effort on attending one of the service centres in person. The order and determination of the time taken to repair faults by technicians at ESB Networks have also reduced the waiting time spent by customers, in addition to the existence of information in electronic form so that customers are no longer required to call or go to the offices. In the case of ANB, services through self-service delivery channels support customers in accessing products and services for themselves. These apps and channels make it more manageable for customers to address problems or obtain services themselves, rather than simply joining a queue to log a problem or receive a service.

Self-service and minimising the time and effort spent by the customer lead to another initiative of customer-oriented service design. The three case studies focus on the ease of use of customer services as much as possible for maintaining the customer experience and retention. The next section discusses the customer usability initiative.

7.1.2 Customer Usability

Facilitating the services provided to customers or the requirements that accompany the services is the goal of both the organisations and their employees. There is an apparent willingness among employees in these organisations to make the journey taken by the customer with the organisation frictionless. Some key managers in all three organisations who are decision makers believe that facilitating customer services, or the requirements related to them, is the goal of their organisation. Table 7.1 shows the proportion of participants who focus on facilitating services and procedures to make services easier for the customer.

Table 7.1: Participants who focus on making services easier to obtain

	STC	ANB	ESB Networks	Total
Business managers	5	3	3	11
IT managers	5	3	4	12
Number of participants	10 of 17	6 of 9	7 of 9	23 of 35
Percentage	58.8%	66.7%	77.8%	65.7%

As shown in Table 7.1, about two-thirds of the participants agree upon the goal of making customer services easy and talk of ease of service usage as a priority. The number of IT and business managers supporting the trend to make services easier for customers is also significant. This may reflect a consensus of views between the two departments regarding the facilitation of services which have advantages for the customer and the organisation.

IT also has the capability to integrate multiple business systems and applications to create an integrated service for the customer. The integration characteristic makes it easier for the customer to deal with multiple services and functions. There is evidence of services and procedures to facilitate customer services in the three case studies. For example, the service bundle offered by STC is a collection of fixed-line, mobile, and data services as a package for a single customer. There are numerous business systems and applications in STC. IT maintains connections between around 270 service offices, around 205 self-service machines, and 12,000 employees in the front and back offices in order to serve numerous customers, as discussed in section 5.1.5. Customer-friendly applications offered by ANB make interfaces with services more approachable and smoother to use. IT is responsible for the integration and smooth running of the system's services for around 203 branches, 1,200 ATMs, and 11,000 points-of-sale, as discussed in section 5.2.5. Such integration offers the possibility of on-line monitoring of the supply of electricity in the case of ESB Networks. IT links the customer with what is happening, such as failures and changes to the services used. This integration is the direct cause of the success of the business in delivering the right information to the customer as required without the inconvenience of the customer searching or making enquiries, as mentioned in section 3.4.3.3. ESB Networks has completed integration between its GIS and key IT and business systems. About 1,000 employees at ESB Networks and its affiliated

suppliers benefit from this solution in being able to serve customers easily (see section 5.3.5).

In practice, the analysis of the data for the three cases shows similarity in the mechanisms to establish ease of use and avoid issues that might cause difficulties for the customer in using the services easily and smoothly. Table 7.2 lists these mechanisms and their characteristics.

Table 7.2: Usability mechanism by case study

	STC	**ANB**	**ESB Networks**
Mechanism	Soft launch	Soft launch	Customer usability testing
A dedicated goal	To assess the value and experience for the customer	To gain individual experience of services	To develop and improve services
Led by	Customer Experience Department	Focus groups from IT and business	Owner of the service
Done by	Employees of relevant departments	Employees of relevant departments	Employees or former employees

It is worth noting that all the above mechanisms are discussed as part of the strategy of 'knowing the customer' (RQ1). Interestingly, all three organisations are consistent in their approach. IT and business employees work together to test a service before its launch to assess its suitability and usability for the customer. In the case of the success of the service tests in technical and functional terms, the service is released. In the case of a service faltering due to functional or technical problems, it is redesigned or the problem is corrected. The goal is to provide an easy and smooth service to correspond with customer expectations.

In addition to the former common goal of avoiding issues that might cause difficulties for the customer, there are specific goals behind each separate mechanism. For example, in the soft-launch mechanism at STC led by the Customer Experience Department, the focus is on assessing the impact on customers in terms of value and experience. The mechanism at ESB Networks is under the supervision of the owner of the service, so the specific goal is to determine the validity of the services for the customers because the service owner has an interest in developing and improving his or her own services. The mechanism in the case of ANB is led by focus groups run by

the Business and IT Departments in general, so these involve brainstorming depending on the individual experience of the members to learn about the customer experience. In addition, there are some differences among the staff who are assigned to implement these mechanisms. In the cases of ANB and STC, employees from the relevant departments are assigned to test suitability and usability for customers. The case is different in ESB Networks, in which the tests are more for the staff of the relevant departments and former employees to participate in the testing of suitability and usability for the customer. The leadership of the Customer Experience Department at STC indicates that specialists in customer experience can add value because they have a holistic vision, look deeper into services and use well-known criteria for evaluating services. The participation of former employees of ESB Networks who are not currently employed on a service may add value to evaluating services more broadly because these former employees may see things differently and find undiscovered aspects as they are nearer to being real customers.

A key finding across the three case studies is the link between making services easier for the customer and a positive customer experience. The easier it is to deal with the customer, the more opportunities there are to acquire a good experience for the customer and thus increase the customer's desire to stay with the organisation and extend the journey; a virtuous circle of sorts. Making services easier in order to improve the customer experience and retain customers is presented in some of the following examples. Interestingly, this is evident from the IT managers, while there is no clear evidence of this relationship from the business managers. Table 7.3 shows this relationship.

Table 7.3: Ease of use and customer experience

STC	*There is a difference when it's actually working and when it is a **good experience**… when I give service to a customer, an adult, a youth, and a business owner and they get the impression that it is **hard to understand, it has to be friendly** (IT manager 4).*
ANB	*You need to enhance your **customer experience**. If the **registration is difficult, then make it easy** (IT manager 4).*
ESB Networks	*We want people to go to our website **to find out how easy** it is to change things and **easy to move** meters and it's not a big problem and it's all more efficient, and that's the **kind of experience** we want to give **to our customers** (IT manager 2).*

The ease of use for the customer helps to improve the customer experience. In turn, enabling the customer to receive a service easily has a role in improving the customer's thoughts about the organisation. The managers identify that enhancing the customer experience can be done through ease of service. A service may be working well, but might not be easy for the customer to use or understand. The difficulty or ease of use or understanding of the services offered reflects the effectiveness of the service for the customer. The service provided to the customer may, for example, be designed to have professional and powerful functions but exceeds the customer's ability, so the effectiveness of the service is reduced. Thus, if a customer receives difficult and inappropriate treatment, his or her experience of the organisation turns negative and then leads to bad thoughts about the company. The accumulation of bad experiences with a perceived continuation of poor service leads to the customer's decision to leave and change organisations. Thus, the expected result is that the customer's journey with the organisation ends and the customer lifetime becomes shorter, as discussed in sections 5.1.5 and 5.3.5.

This section discussed the mechanisms and methods for dealing with customers to change the customer experience for the better. This section also discussed the reasons behind the interest of the three cases in providing easier services to avoid confusion during or after dealing with customers. There is another aspect of such initiatives that focuses on dealing with the customer early to avoid confusing and alienating him or her. The next section discusses this type of proactive interaction with the customer.

7.1.3 Proactive Interaction

Approaches to the interaction between the organisation and the customer have been addressed in detail through the study of the literature in section 2.5. This kind of approach touches upon the dual interaction between the customer and the organisation as one of the roles of managing the customer experience. Analysis of the data reveals the evolution in the nature of the interaction between the customer and the organisation. This process has not only become a dual interaction, but has evolved into a proactively dual interaction, with organisations interested in making

customers aware of what is happening in the services and functions that belong to them as early in the relationship as possible.

A customer will suffer under the impact of a failure if the fix comes after discovering the customer has a problem and has complained about it. In contrast, the proactive approach is based on working to solve the customer's problem early and before the customer even knows about it, or the customer is informed of a problem before it actually occurs. Reactive work tends to be a temporary and quick fix because of time pressure. This might allow the repetition of the same problem, which annoys customers. Proactive work, on the other hand, always focuses on knowing the cause and providing an integrated solution. The data shows that improving proactive interaction with the customer is becoming more of a priority in all three organisations. The three organisations have made significant improvements in changing a reactive approach to one that is more proactive. Figure 7.2 shows the number of occurrences[6] of customer interaction approaches across the three cases.

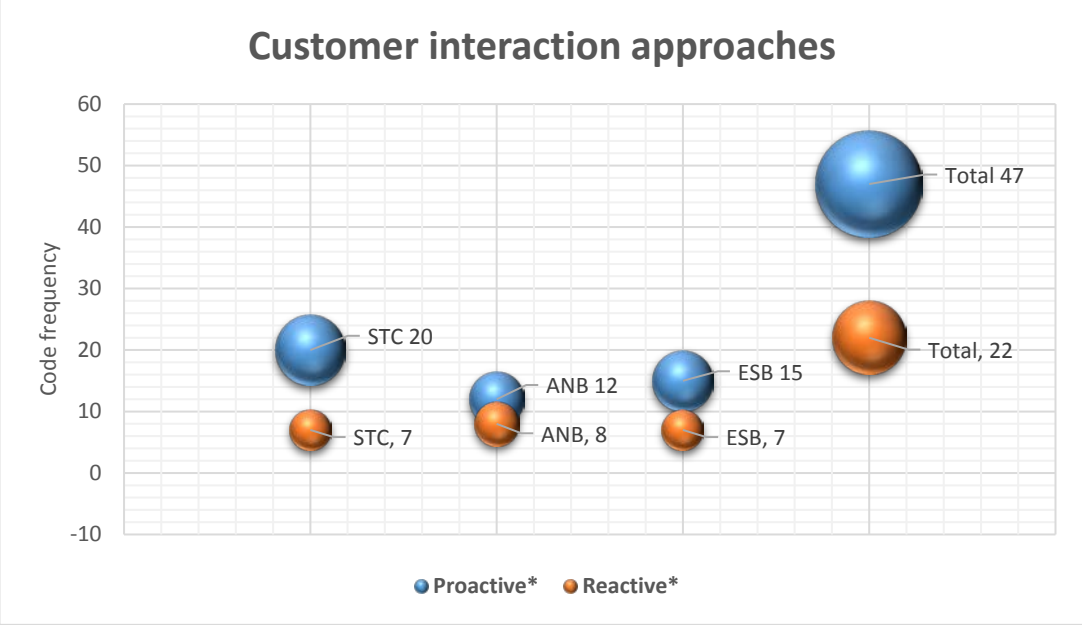


Figure 7.2: Number of occurrences of customer interaction approaches

Figure 7.2 shows that a proactive approach is referred to more than double the number of times a reactive approach is mentioned. For example, interview participants from STC express a focus on proactive interaction about 20 times, while

[6] The references query in the NVivo program was used to calculate the occurrences of the different interaction approaches.

they express a focus on reactive interaction only seven times during the interviews conducted. The increased focus on being proactive may be a result of inefficiencies and negative feedback from customers regarding a reactive approach compared with a proactive approach.

A proactive interaction approach depends on the availability of the right information at the right time. As much as it is important to have early interaction with a customer, it is just as important that the information to be conveyed to the customer is correct and accurate. In this regard, the strategy of expanding customer interaction channels allows fluidity of communication between the customer and the organisation and, at the same time, IT capability enables prompt availability of up to date and pertinent information. Association of this characteristic of ITC and CFS regarding interaction channels helps in the success of the proactive interaction approach. Business departments can interact with the customer when they receive notifications from the systems, as well as the customer being able to obtain information early due to the availability and simultaneity of the information in all interaction channels.

The data analysis for each case study reveals discrepancies between proactive and reactive interactions. There are types of work that are considered proactive in offering new services based on customer needs even before the customer makes a request; other types are considered proactive in relation to current services, such as the notification of an expected failure or a troubleshooting failure, before the customer knows about it. There are also types of work that reflect a reactive approach in the interaction with the customer, such as problem-solving that relies on customers' complaints or providing a new service based on customers' requests. The inability in the cases of ANB and ESB Networks to predict new services that customers would need is noted, as well as failure to provide information proactively regarding faults and interruptions on the part of STC and ANB. Figure 7.3 positions the three cases to better understand their proactive interaction approaches to the customer.

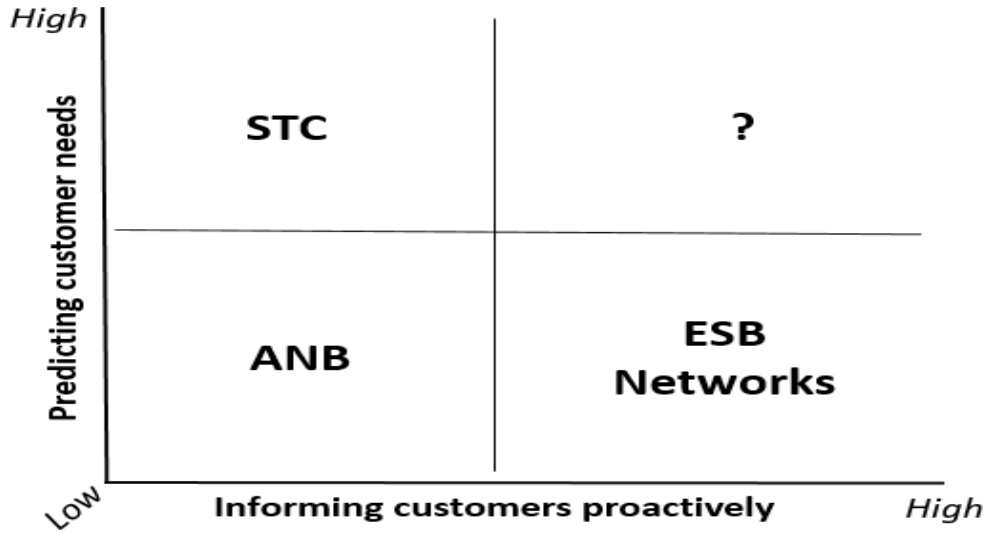


Figure 7.3: Proactive interaction approach vs. customer services

Figure 7.3 helps to understand the relationship between customer services and proactive interaction approach. The proactive interaction approach, either to provide a new service or to notify customers of an expected malfunction or interruption, helps to raise customer satisfaction. According to the data analysis, two sub-types of high customer satisfaction that accompany the proactive approach: 1) customer satisfaction with *comfort*, and 2) customer satisfaction with *discomfort*. The first type is due to anticipating what the customer needs before the customer requests it. This type represents innovation for the sake of customer expectations. STC has offered a new package called 'Jood Net' when there was a growing demand for the internet, which met with customer satisfaction. This proactive interaction gives the customer comfort because the customer believes that the organisation is considering its customers and can understand its customers and their needs. The second type is due to the interest of the organisation in informing the customer proactively what is happening with the current service provided and whether these events are interruptions to or the stopping of a service. This type of proactive interaction generates satisfaction for the customer because the organisation has enabled the customer to take all necessary precautions. However, the customer is in a state of discomfort because a service interruption is going to happen. The customer is uncomfortable about this situation but, at the same time, feels satisfied because the organisation did not keep him or her in isolation from the event or let failures or downtime come as a surprise. The organisation follows the principle of transparency

and puts the customer in the eye of the event when informing him or her proactively. From examples given in the previous chapters, ESB Networks is able to inform customers of defects or blackouts, especially during storms, in an efficient manner, as well as power outages, whether planned or unplanned. ESB Networks takes care to inform customers before the latter are compelled to communicate with the organisation. Therefore, it would be better for organisations to satisfy their customers by following a proactive interaction approach because this involves strengthening the bonds of the relationship between the customer and the organisation. The best practice would be if the organisation could inform customers proactively and predict new customers' needs in order to gain customer satisfaction. The organisation can then position itself in the space in the top-right-hand corner of Figure 7.3 above.

There is another type of initiative in customer care to make the customer aware of events within the organisation. The customer has control over the services received and can improve the work of the organisation. The next section discusses the initiative of customer control.

7.1.4 Customer Control

The importance of the role of the customer is noticeable among the three organisations. There are multiple responses from the participants about giving the title of 'king' to the customer, as a metaphor for this effective and important role. Programmes and measures are also mentioned, such as considering the 'voice of the customer', and the market research conducted by the three case organisations. These programmes seek to give the customer a footprint within the organisation. Awareness that the customer has a role in the success or failure of the company has caused these organisations to change their working style. The style, which had been based on unilateralism without including the customer, has changed to one that puts the customer as one of the command and control sources. A degree of influence and customer control emerged in the three case studies; however, the approaches for dealing with customers varied from one case study to another. Table 7.4 lists these methods and their characteristics.

Table 7.4: Customer control methods by case study

	STC	ANB	ESB Networks
Method	Customer code confirmation	Satisfaction survey	A quality targets report
Done by	Automatic control	An internal party	An external party
Owned by	Business Departments	After-Sales Department	A broker (REDC)
Customer segment	All	A random segment	A specific segment
Period of time	All times/During the service	Unspecified/After the service	Quarterly/After the service
Impact	High	Normal	Medium
Relationship	Many-to-one	One-to-one	Many-to-many
Power to the customer	Full	Low	Medium
Fair to the customer	Yes	Yes	Yes
Participation of the customer	Full	Partial	Partial

Table 7.4 presents a comparison between the three methods that have helped in giving the reins to the customer. It is worth remarking that, in Table 7.4, the three methods are shown to give a level of power and impact to the customer, even if there are differences in this level. For example, the Customer Code Confirmation (the Treble C) is the most effective way of giving power because the customers themselves can close the service request submitted to them and no one else, during the service but not after it. Furthermore, the Treble C is computer-based and is not a human action, which enables all customers to participate fully in service control. In the ESB Networks case, the quality targets report is marked by qualitative data, which may touch on the ethics and behavioural aspects of the staff for the purpose of implementing improvements based on feedback from customers. The satisfaction survey in ANB and the Treble C in STC are based only on service information for the purpose of service completion to the customer. In addition, a quality targets report is characterised by relying on a third and external party that does not belong to the organisation or the customer. This provides a form of fairness between the customer and ESB Networks, as there should be no interference from any interested party in the services referred to in the report. However, the Treble C is completely under the control of the customer, and the satisfaction survey bows to the whims of the staff. In addition, the satisfaction survey is characterised by the relationship being one-to-

one; there is no system or broker in the middle. This may give the satisfaction survey a kind of direct relationship between ANB and its customers, reducing the time needed to communicate and thus increasing the level of credibility and transparency.

The data analysis in the three case studies indicates that the strategies of empowering the customer experience and customer care and the ITC characteristics in the fulfilment of business requirements have a link to customer control. All three case organisations are working hard to continue to get closer to customers and improve their experience, either through the methods mentioned above or in other ways. Thus, ITC helps directly and indirectly in supporting this work. For example, the initiative of customer experience management in STC towards the Treble C, as stated in section 4.1.1, has the support of IT and helps in the development of a control system for the company's services that has a function of letting the customer have control. The role of ITC in the remaining case organisations is to provide electronic versions of reports or surveys to all the managers in the Business departments. Therefore, the satisfaction survey for ANB's services identifies key areas for development and proposes areas for improvement or corrective action plans, either by strengthening the system and enhancing procedures or by the transfer of knowledge. Thus, the aim is to ensure the continuity of the quality of service provided to the customer, as stated in section 4.2.1. In addition, the desire of ESB Networks to have feedback from customers and enhance the customer experience through quality targets reports helps to find a label for the customer within the organisation. The quality targets reports help to avoid current mistakes and improve customer service, as stated in section 4.3.1. It is interesting to note there is a transfer of customer control through the transfer of knowledge between employees and the parties involved in the implementation of these methods. In this case, empowering customers means transferring control. Feedback from customers about services or complaints to improve a service represents the transfer of knowledge from the customer to the organisation.

The above sections discuss the initiatives emphasised by CFS and ITC through the three case studies. There is an association between CFS and characteristics of ITC support in the creation of initiatives for customers. Thus, IT plays multiple roles in the

delivery of a customer-focused strategy to be considered through the three case studies. The next section discusses these roles in detail.

7.2 The Roles of ITC in Delivering a Customer-focused Strategy

The routine role of ITC, which was previously confined to the purely technical field, has changed. Traditionally, other departments perceived that IT staff lacked non-technical knowledge. The data collected from the three case studies suggest the existence of such a perception but that this understanding of ITC is rare, and there has been evolution in the role of ITC. The role of ITC has become a key and active one, not only in the technical field, but also in non-technical fields, such as servicing customers. The three case studies reveal the increasing importance of ITC in the fulfilment, continuity, automation, integration and availability of customer services. These characteristics of ITC are discussed in responses to RQ2 that provide evidence of the ITC role in supporting business strategies to focus on the customer. The characteristics of the relationship between the IT and Business Departments are also discussed in the responses to RQ3.

Accordingly, this section considers the multiple roles pursued by ITC. The roles of ITC can be identified on the basis of 11 characteristics: 1) follows requests, 2) reactive action, 3) proactive action, 4) impacts on business, 5) creates and innovates, 6) being close to the customer, 7) business knowledge, 8) autonomy in decisions, 9) discusses and negotiates, 10) trains and educates, and 11) driven by business. These characteristics are repeated in some roles and differ in others, as well as some characteristics being unique to specific roles. Therefore, ITC roles show differences in their levels and influence: some roles support the creation of a professional and sophisticated business environment and others only involve completion of the main tasks. The data from the multi-site analysis suggest five major ITC roles: 1) implementer, 2) enabler, 3) autonomous, 4) initiator, and 5) generator of revenue. The next sections discuss these roles and their characteristics in turn.

7.2.1 Implementer

The function of the role of ITC implementer is to follow the direction of the business and implement its requests in the form of systems and programs. After making sure

a request is possible in terms of technology and resource capacity, the role of implementer performs this request literally without a change, or without any attempt to discuss the request with the Business Departments and offer opinions and advice. IT staff in the role of implementer are isolated from the reality of what is happening in the business and customer environments. Perhaps the power and authority of the Business Departments keep IT away from these environments, as mentioned in section 5.2.1. From this perspective, the work of the role of implementer turns into a day-by-day effort; the work pattern is set only in response to what is requested by the Business Departments. Thus, the implementer lacks knowledge of the business objectives behind the requests and, in some cases, IT loses knowledge of the retroactive effect and feedback regarding the service it has provided because IT in the role of implementer is rarely motivated to measure outcomes.

The role of implementer is not empowered to inform business direction. The initiatives of this role remain at the level of the IT Department through internal improvements and developments in the functions of IT. It is possible that the culture and thinking inside some organisations are that IT employees are just technical people and do not have knowledge of business and management, thus downplaying the role of ITC in initiatives at the corporate level. Furthermore, the exclusion of IT staff from current events, as mentioned in the previous paragraph, could cause their initiatives to lack realism and acceptance within the organisation.

Sometimes, the lack of a clear definition of responsibilities within an organisation contributes to the creation of the role of implementer, as the responsibilities of IT are non-specific or unknown; this helps other departments to intervene in many areas of IT responsibility. This intervention could be from participating with IT in the selection of technical solutions, to using an external third party to undertake technical services, to bringing technical staff to work on implementing services through the effort of the Business Departments. This type of work generates an unstable relationship that affects the proper continuing and consensus of work. It may lead to unintegrated or incompatible systems and functions and, therefore, to services and processes lacking characteristics of integration and support.

The ANB data show the power of Business Departments and their employees, as well as the prevailing culture that IT does not need to have a role in regard to the customer, as discussed in sections 5.2.1 and 6.2.5. Perhaps these conditions have curbed the roles of the IT Department at ANB. The IT Department at ANB acts only as an implementer for the requirements of the Business Departments by receiving business requests and implementing the technical aspects. Furthermore, RQ3 reveals that there is ambiguity and uncertainty in the relationship between IT Departments and business analysis, as discussed in section 6.2.4. However, the IT Department at ANB performs technical tasks well and has multiple IT capabilities to do its work, as addressed during analysis of the answers to the second research question (see section 5.2). Referring to the characteristics which have formed the basis on which to compare the roles of ITC, Table 7.5 summarises the aspects that characterise the implementer role.

Table 7.5: The implementer and characteristics of ITC roles

Characteristic	Follows requests	Reactive action	Proactive action	Impact on business	Creative and innovate	Close to the customer	Business knowledge	Autonomy in decisions	Discusses and negotiates	Trains and educates	Driven by business
Implementer	***X***	***X***		***X***			***X***				***X***

In organisations in which ITC plays a role as implementer, the business staff believe that IT is essential to maintaining the stability and continuity of the services used in the technical systems. IT is needed to maintain the stability of services and provide regular technical programmes. However, there is a contradiction in the responsibilities and thinking regarding IT. Therefore, the role of implementer is a low priority for the Business Departments and has the most limited impact on customer service of all the ITC roles defined in this study. The next role has a different importance and priority from the role of implementer. The next section discusses the role of ITC as enabler.

7.2.2 Enabler

The role of enabler is to develop and implement comprehensive technical solutions that suit the business and customer services environments. The role of enabler overrides the implementing of business requests by a full understanding of requests and the business objectives behind them. The role of enabler involves receiving details of business initiatives, studying them, and developing integrated technology solutions that are technically and functionally compatible with the organisation's strategies. These requests take the form of initiatives, rather than individual requests, which contain a number of themes, such as objectives, the target customers and services, and strengths and weaknesses. Therefore, the role of enabler has the ability to discuss and change these initiatives to have them conform to the scope of the technology. This discussion is held on an equal footing with business employees, whereby IT and business personnel reach a common perception and agreement on how to address the requirement. Often, standardised and programmed processes between the IT Department and the Business Departments help in the creation of the role of enabler. There is sometimes a computerised system, such as a requirements management system, which is based on the processes followed and dedicated to the task of monitoring the progress of the requests and initiatives between the two departments.

Both the business staff and the IT staff in the role of enabler are incorporated within the reality of what is happening in the business environment and the events that affect the customer. There is a steadiness and convergence in the relationship between the business and IT staff. Furthermore, this relationship helps to create effective IT solutions which are a result of the collaboration between the two departments. These IT solutions play an active role in changing the level of satisfaction and acceptance of customers regarding the organisation and the services provided. Sometimes, IT staff guide business staff in these solutions and educate them on the advantages of new functions in specific services.

An IT Department that pursues the role of enabler has the same power and control as the Business Departments. This power is derived from the importance of technology to the Business Departments in general and the desires of the customer

in particular. The reason for this power is the shift in the reliance by customers on technology in their daily business. Thus, the widespread use of technology among the public is a positive influence which means that a business cannot afford to dispense with the role of ITC as an enabler of customer services. Therefore, business managers consider IT as a strategic partner in the continued success of the services provided to customers and thus the success of the organisation as a whole. IT and business managers reconcile the strategies and plans of the two departments as much as possible. Thus, there is a dependency between these strategies: enabling the technology strategies at the corporate level means, in turn, enabling the business strategies.

There is evidence of the capabilities of IT personnel at STC and ESB Networks to discuss customer requirements with business colleagues to enable the design of high-quality services. This assists in meeting the expectations of customers, as mentioned in sections 6.1.5 and 6.3.5. The IT Departments at the two companies are capable of finding appropriate technical solutions that help both business staff and customers (see sections 5.1 and 5.3). The staff in the Business Departments and the customers of STC and ESB Networks rely on technology through an array of IT systems provided by the IT Departments.

In organisations in which ITC plays the role of enabler, there is collective agreement among the business staff regarding the impact and priority of IT. There is also an awareness of this influence on customer services because of the impact of the time that the fulfilment of business requirements takes to reach customers. However, the data collected indicate that the responsibilities of IT in the role of enabler may be exposed to some violations by the business or senior management of an organisation. Structurally, IT management often falls under senior management's remit for financial investments, so ideas for increasing financial income find acceptance among the top management level. Therefore, there may be a bias towards business issues when they collide with technical issues; specifically, with the marketing and financial goals of the organisation. Therefore, priority may be given to decisions related to the launch of a service because of competition or customer pressure, even though there is a lack of readiness in the technology. Referring to the characteristics that have

formed the basis of the comparison of the roles of ITC, Table 7.6 summarises the characteristics of the enabler role.

Table 7.6: The enabler and characteristics of ITC roles

Characteristic	Follows requests	Reactive action	Proactive action	Impact on business	Creative and innovate	Close to the customer	Business knowledge	Autonomy in decisions	Discusses and negotiates	Trains and educates	Driven by business
Enabler	***X***	***X***		***X***			***X***		***X***	***X***	***X***

In contrast to the enabler role, which is sometimes under the control of business decisions, the next role has a degree of autonomy in decision making and responsibilities. The next section discusses the role of being autonomous.

7.2.3 Autonomous

All the characteristics of the role of enabler apply to the role of being autonomous. An IT Department that holds an autonomous role is a strategic partner to the Business Departments in the continued success of customer services. In addition, this role has the ability to accept or reject the needs of the Business Departments that do not comply with the technology scope. An autonomous role is also a priority for the Business Departments and has an impact on the services provided to the customer, just as with the role of enabler. However, an autonomous role is distinct from the role of enabler in terms of having distinct autonomy in decisions and responsibilities. The decisions of an IT Department that is considered autonomous are not subject to the influence of the business or senior management. IT personnel are independent in their decision making and bear responsibility for these decisions.

There are factors that have helped in the creation of the role of being autonomous and the ability to take technical decisions autonomously. One of these factors is the spread of a culture among the staff of the organisation that believes in the principle of specialisation at work. The belief of employees in non-technical departments is that IT staff are knowledgeable about technology, which causes them to respect the borders of IT. This culture allows the staff and managers of an IT Department that has

autonomy to move away from internal pressure from the Business Departments or external pressure by the market and the customer to change technical decisions which may affect the technology utilised by the organisation. Thus, the responsibilities in such organisations are known and codified.

The Business Architects possessed by the IT Department are one of the distinctive characteristics of having an autonomous role. Business Architects are qualified personnel, both technically and practically, so can assist in strategic decision making. They have the technical expertise as well as the strategic vision to present the organisation and the customer with the best cases. However, the data collected show that these experts are semi-isolated from participation in the decision making related to customers but assist in decision making in regard to customers.

In addition, the data collected show that the management of an IT Department which has an autonomous role reports directly to the head of the organisation. IT also has an organisational structure that is completely separate from the Business and Investment Departments. This means that the IT Department is on the same level as the rest of the departments in the organisational structure, which gives it a kind of balance between the technical and Business departments.

However, the IT Department in STC is still under the control of the business as decisions on the launch of a service are made by the Business Departments alone, as discussed in section 6.1.5. Therefore, the IT Department at STC has not been included within the role of being autonomous. The IT Department at ESB Networks plays an autonomous role, as shown in the data analysis in chapter six. The data analysis for ESB Networks presents its IT Department as a unit structurally and functionally independent from the business and service units. Therefore, the IT capability at ESB Networks is independent in terms of technical decisions and does not have to bow to any outside or internal influences, making it unique in terms of being a technical decision maker and the only independent source of technical solutions in the organisation. Referring to the characteristics that have been used to compare the roles of ITC, Table 7.7 summarises the characteristics of the autonomous role.

Table 7.7: Being autonomous and characteristics of ITC roles

Characteristic	Follows requests	Reactive action	Proactive action	Impact on business	Creative and innovate	Close to the customer	Business knowledge	Autonomy in decisions	Discusses and negotiates	Trains and educates	Driven by business
Autonomous	*X*	*X*		*X*			*X*	*X*	*X*	*X*	*X*

IT has another role: to support the business and the organisation in strategic decisions and in understanding the business environment. IT shares another function with the departments of business: that of providing initiatives concerning business and customers. The next section discusses the role of the initiator in IT.

7.2.4 Initiator

The role of initiator is based on the initiatives proposed by the IT Department for practical ideas and solutions that could contribute to the improvement of the business environment and customer services. These IT initiatives are characterised by creativity and innovation. During the analysis of the data from the three case studies, there were distinct initiatives from IT to Business Departments and customers. These initiatives meet with success and acceptance in the work environment.

In a normal case, as mentioned in the previous sections, the Business Departments submit initiatives to the IT Department, and IT personnel study these initiatives and turn them into technical solutions. In the initiating role, IT staff provide initiatives to the Business Departments. The Business Departments then study the initiatives and identify their suitability for customers and the organisation. Thus, the IT and Business Departments share in making these initiatives a reality that benefits customers. In addition, the data analysis points to several methods used by IT staff to connect these initiatives to other parties in the organisation. Perhaps the most well-known method is to use email or telephone conversations. Moreover, IT staff market these initiatives through internal workshops and demonstrations to enable the staff in other departments to adopt these initiatives correctly and make them more applicable.

The data analysis shows that the IT staff who have this role predominantly have a good level of knowledge of the business and are close to the customers and their needs. Therefore, they are adept at presenting useful and effective initiatives. In addition, there are probably some shortcomings of the business staff in certain areas of knowledge or awareness of technical capability, and, therefore, IT staff take the lead in such cases. However, the business knowledge possessed by the IT staff is the common denominator for the creation of the role of initiator in IT.

The IT Departments at STC and ESB Networks handle the role of initiator exceptionally well. They provide initiatives and proposals for the Business Departments that are intended to improve the work of the organisation and act for the benefit of the customer. For example, one of the IT initiatives at STC is the 900 unifying number, which has become the number for all the call centres in the company, as discussed in section 4.1.2. In addition, section 6.3.4 presents the IT initiative at ESB Networks of cloud solutions (SAP HANA), which helps the staff in the call centres and customer care to respond quickly to customer inquiries and requests. Referring to the characteristics that have been used as a basis for comparing the roles of ITC, Table 7.8 summarises what characterises the initiator role.

Table 7.8: The initiator and characteristics of ITC roles

Characteristic	Follows requests	Reactive action	Proactive action	Impacts on business	Creative and innovate	Close to the customer	Business knowledge	Autonomy in decisions	Discusses and negotiates	Trains and educates	Driven by business
Initiator			***X***		***X***	***X***	***X***		***X***	***X***	***X***

The above ITC roles reflect IT as a support unit to the other departments in the organisation, as well are there being some indications of a strategic partnership or an increase in priority and impact, as stated in the previous section on having autonomy in tasks and responsibilities. However, IT remains a prisoner to technical work with a background in business to share opinions and advice only, or with providing initiatives in implementing solutions to the customer. A closer inspection of the data suggests

a different ITC role. This role involves providing solutions that may go beyond the known boundaries of IT. The next section outlines the role of generator of revenue and discusses some of the characteristics provided by the data collected with regard to this role.

7.2.5 Revenue Generator

The role of revenue generator gives an IT Department a function that is different from the rest of the ITC roles. This function is to bring money into the organisation from its external customers. An IT Department that has the role of generator of revenue provides and operates services that offer financial returns for the organisation. Although these services are predominantly technical in nature, they are treated like the rest of the services provided to customers. They are listed with the rest of the services, together with their prices. However, these services are offered on the basis that they are additional to and not the main services the organisation offers. Such services assist or are complementary to the main services of the organisation.

The mystery surrounding the profession in this role involves its technical knowledge and the mastery of technological solutions to be able to delve into their secrets. In addition to knowledge of the market and customers, technical employees know the capabilities of the IT systems and the functions they have. Technical employees have become part of the change prevailing in the concept of an IT Department and its staff and the notion that there should be a financial return on IT services.

From the case organisations, this role appears significantly in the case of STC, in which a number of technical services provided to customers have generated financial income for the company. Perhaps the nature of this company, which relies on technology in the provision of services, has had an effect on the growth of this role. Therefore, the IT Department at STC is singled out as performing the role of revenue generator. There is evidence that services are provided to customers through the operation and implementation of the IT Department, such as Internet Protocol TV (IPTV) and the ring back tone services mentioned in section 5.1.1. Referring to the characteristics that have been used as a basis for comparing the roles of ITC, Table 7.9 summarises what characterises the revenue generator role.

Table 7.9: The revenue generator and characteristics of ITC roles

Characteristic	Follows requests	Reactive action	Proactive action	Impact on business	Creative and innovate	Close to the customer	Business knowledge	Autonomy in decisions	Discusses and negotiates	Trains and educates	Driven by business
Revenue generator			***X***		***X***	***X***	***X***				***X***

However, analysis of the data collected shows that the role of initiator and the role of revenue generator do not have that much impact on an organisation. An organisation can continue to work and succeed without the need for these two roles. In contrast, the roles of enabler, being autonomous and an implementer have a direct and powerful impact on the success and survival of an organisation, even though this impact is only small in the case of an implementer. Perhaps the fact that the technical services that are part of the role of revenue generator are secondary services and not primary ones contributes to the weakness of the impact of this role on an organisation. In the case of the role of initiator, perhaps the ability of the Business Departments to create initiatives themselves weakens the impact of this role on the functioning of an organisation. It might be the case that these roles are new and some organisations are not accustomed to coping with them and taking their influence into account. Overall, there is evidence from the data that initiator and revenue generator are non-stereotypical ITC roles. These two roles have been added to the roles of ITC, in addition to its other roles. To conclude, the next section is a discussion of the various roles of ITC in terms of the eleven key characteristics that have been discussed in the previous sections.

7.2.6 Characterisation of ITC Roles

The ITC roles referred to above have some characteristics in common, and some roles are different in certain characteristics. Table 7.10 provides a characterisation of ITC roles.

Table 7.10: Characteristics of ITC roles

	Implementer	Enabler	Autonomous	Initiator	Revenue generator
Follows requests	X	X	X		
Reactive action	X	X	X		
Proactive action				X	X
Impacts on business	X	X	X		
Creative and innovate				X	X
Close to the customer				X	X
Business knowledge	X	X	X	X	X
Autonomy in decisions			X		
Discusses and negotiates		X	X	X	
Trains and educates		X	X	X	
Driven by business	X	X	X	X	X

Table 7.10 shows that all the above-mentioned roles are still driven by the Business Departments. The Business Departments lead the services provided to customers, as they decide the services that are the best and most suitable to continue or changes to the services and features offered to customers. In the same way, The Business Departments identify the priorities and send information regarding these services to the IT Department. The IT Department is still waiting for business decisions in the implementation of services related to customers. Although most ITC roles involve business knowledge, IT does not have to participate in making such decisions and, furthermore, does not have any participation in the strategic decisions regarding the customer.

Table 7.10 also adds the characteristics of discussion and negotiation to the roles of enabler, being autonomous, and initiator, as such aspects have given some support to the benefits of IT. IT Departments have the authority to discuss and negotiate the acceptance or rejection of solutions, especially those that have a technical impact on the systems and applications used. The impact on systems and applications increases the importance of IT. The absence or inability of IT to perform its work could lead to the inability of systems and applications to perform their tasks. The roles of being autonomous and an enabler have a clear and effective influence on the conduct of business and the services provided to customers. The reason for this impact is the shift in the reliance by customers on technology in their daily business. The rest of the ITC roles have limited impact, either because there is a third technical party that provides services or because of poor services provided by IT to customers. Customers

carry on their services through manual means, such as in the role of implementer. Another reason is that such services are secondary and not major ones in the organisation. Thus, the impact is not as great for the customer and the business as it is for the roles of initiator and generator of revenue.

However, generator of revenue and initiator are the only roles that are close to the customer, as they have the ability to know the customer's need for services, especially those of a technical nature that are added to the major services. The role of generator of revenue participates with the role of initiator in other characteristics: innovation and creativity with regard to new services and ideas in business. This characteristic stands out in the event of the evolution in knowledge of IT employees. Therefore, the IT Department takes initiatives to provide new and creative services or ideas in cooperation with Business Departments. In addition, the characteristics of innovation and creativity are a positive factor in finding solutions and services for customers proactively as a kind of advanced understanding of the future needs of customers, and are not based on requests from business or customers, as in the remaining three roles. Thus, the roles of implementer, enabler and being autonomous depend on the implementation of the requests they receive from the Business Departments. These roles appear after customers' needs have been identified by the Business Departments, so their work lacks the role of leading and becomes a reactive activity.

7.2.7 Understanding ITC Roles by Case Study

The roles of ITC coincide and differ among the three case organisations; there are points in common as well as differences between the three IT Departments considered in the case studies. There are IT Departments that are able to influence the work of their organisation and others that carry out the usual IT work. In some case studies, ITC carries out more than the role of delivering a customer-focused strategy. Table 7.11 lists the organisations and the roles that pertain to each.

Table 7.11: ITC roles by case study

	Implementer	Enabler	Autonomous	Initiator	Revenue generator
STC		X		X	X
ANB	X				
ESB Networks		X	X	X	

As shown in Table 7.11, the three case organisations participate in some roles and differ in others. There is convergence between the roles of the IT Departments in the cases of STC and ESB Networks, such as enabler and initiator. There has been technical and knowledge evolution, in addition to these departments having similar power and control within their organisations. The IT Department at ANB is singled out in featuring the role of implementer, due to sometimes increasing the control of the Business Departments within the organisation. The STC case is alone in having the role of revenue generator, and this gives an indication of changes that may be positive in the role of ITC. Such changes could open the door for IT Departments to be freed from the traditional role and for the emergence of other roles that highlight that IT and IT staff are at the centre of innovation. ESB Networks is singled out for having an autonomous role for its IT, which shows independence in technical decisions and the clarity of the processes between the IT and Business Departments.

The three IT Departments examined in the study perform one role but sometimes play more than one. The IT Department is the implementer of the requirements and needs of the Business Departments in the case of ANB. This role helps the Business Departments to ensure business continuity and make services better for the customer, as discussed in section 4.2. The role of enabler is distinguished from the role of implementer for its ability to discuss and negotiate and this has the characteristic of providing training courses and workshops on new functions of technical solutions offered by IT. The IT Department at STC plays the role of enabler because of its ability to exchange views and knowledge. This role helps to convert strategic initiatives into actions and makes them available to the business and the customer, as discussed in section 4.1. The IT Department at ESB Networks can enable the requirements and needs of the Business Departments and exchange views and knowledge. Furthermore, this department has the full ability to make independent technical decisions, is free from external control and, therefore, plays the role of

being autonomous. This role helps to take advantage of the best technology to provide the most appropriate service to customers, as discussed in section 5.3.

In addition, the IT Department may play multiple roles at once in order to serve the needs of the organisation at any particular time. The roles of initiator and revenue generator used to appear from time to time in some of the activities and involvements of the IT Departments. Therefore, IT Departments play an additional role in some cases. For example, the IT Department at STC embodies the role of enabler as well as other roles, such as that of initiator and revenue generator. The IT Department at ESB Networks embodies the role of being autonomous and plays another role as initiator. This intersection between the roles adds value to an IT Department. Such additional roles offer new understanding of the roles of ITC and change the stereotype painted of IT simply as an achiever of technical solutions. This understanding may open the door for other roles to be effective in other areas.

Sections 7.1 and 7.2 presented a discussion of the association between technology and business in order to serve customers. These initiatives for the customer and the roles of ITC work together to support the focus on customer strategies. IT and business are also represented in digital solutions and contribute to transforming organisations and customers through the digitalisation of processes. The next section discusses digital solutions capabilities.

7.3 Capabilities of Digital Solutions

Use of the term ‘digital’ was observed during the data collection and analysis of the three case studies. ‘Digital’ is perceived as a “registered trademark” that accompanies the channels, projects and strategies of organisations. STC’s data, as outlined in chapter four, show superiority in the multiple digital systems and channels used for the functions of the business and customer services. Chapter five provides an account of ANB’s focus on digital services, which aim to improve customer service and facilitate the services offered to customers. ESB Networks also manages a corporate digital strategy project, which aims to transform its customers to using digital services. This project is one of the pillars of the discussion and analysis in chapter six. These instances of digital solutions are active examples of the capability

of digital solutions to meet the demands and expectations of both business and customer. Therefore, the advantages of digital solutions capabilities may be one of the factors that encourage the three organisations to place digital transformation as one of their strategic achievements in fulfilling customers' desires (RQ1). In accordance with the data analysis, the researcher defines digital solutions capability as:

> *The organisation's ability to create, provision, and transform the services provided to its customers in the form of personalised digital solutions in order to improve the efficacy of the customer facing process and satisfy customer requirements for interactivity, engagement and mobility.*

The data analysis demonstrates the particular specification and structure of digital solutions. One specification of digital solutions is the confluence of technical and business knowledge in the IT and Business Departments, in order to bring these digital solutions in the best possible form and as required. Sections 6.1.3, 6.2.3 and 6.3.3 discuss the understanding of the business staff of the services provided to customers, in addition to the technical capability of IT staff in terms of the technology and systems (see section 2.8.2). These help in the design and launch of digital solutions to the organisations and their customers: STC's MySTC application referred to in section 4.1.5, ANB's mobile banking application in section 4.2.5, and the application of PowerCheck by ESB Networks in sections 4.3.2 and 4.3.5. In addition to the joint collaboration between the IT and Business Departments in designing these applications, the IT Departments are also responsible for the development and transfer of the customer services available on these applications. Sections 5.1.3, 5.2.3 and 5.3.3 discuss the characteristics of ITC in converting customer and business services to electronic and automated services by the development of such applications. The characteristics of ITC have a role in these digital solutions through the implementation of systems and applications and providing a platform and infrastructure for the launch of such interfaces to customers.

Digital solutions play a crucial role in improving an organisation's services. These capabilities help fulfil the aspirations of customers and organisations in terms of capacity, proliferation and information dissemination. Thus, digital solutions are one

of the favoured choices for customers and organisations. Closer inspection of the data suggests that digital solutions construct three capabilities in performing their functions: 1) services provision capability, 2) interactivity capability, and 3) information access capability, as shown in Figure 7.4.

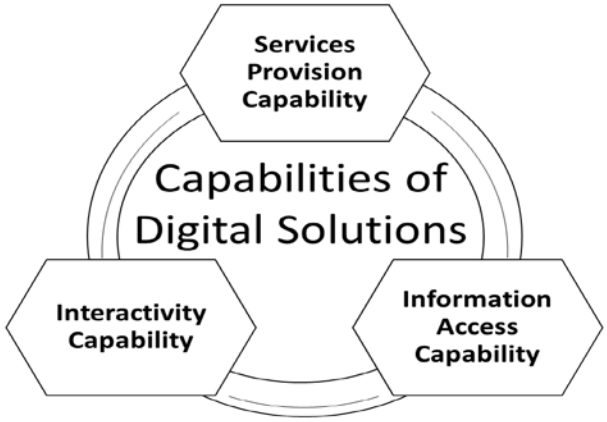


Figure 7.4: Capabilities of Digital Solutions

These three capabilities are discussed in the following sections.

7.3.1 Services Provision Capability

Digital solutions have the ability to provide the customer with the largest possible number of services provided in an organisation's offices and branches. The customer can then use digital solutions to access all the organisation's services. This shift is an echo of the digital transformation strategy pursued by the organisations considered, as referred to in sections 4.1.5, 4.2.5 and 4.3.5. Moreover, the ability of the organisation to perform in the digital world has become one of the evaluation criteria considered by customers, as discussed in the previous chapters. Customers check the availability of digital services on an organisation's application and website. According to the STC case data, digital transactions are used by customers around three times more often than physical transactions. In the case of ANB, 45% of customers have reduced their visits to branches and now run their financial transactions on digital channels. In ESB Networks, 58% of customers use the PowerCheck application and Twitter to learn about and report on power supply instead of, for example, contacting a call centre during a storm. Therefore, organisations that have digital services are the preferred choice among customers.

Digital solutions can offer other services and functions that extend the capabilities of the main service. There are other additions that enable digital solutions to behave like an integrated services office, but in a digital world. The customer can complain and assess the service provided to him or her using the functions available in digital solutions. In the case of customer complaints or praise for a particular service, there are now buttons for this purpose, whereas, in the past, customers completed a paper form to evaluate services. Therefore, it has become important for customer feedback to be in real time. The mobile applications and websites of the three organisations include support icons, such as a live chat feature for communicating with employees in call centres or working in technical support. Section 4.1.5 states that the application of MySTC in the STC case has a feature for evaluating the experiences of customers on the application itself and the services provided by it. Section 4.2.2 provides a model of the complaints management process within ANB, for which banking services via the internet are one of its inputs. Section 4.3.2 references the appointment of a dedicated manager to update the Twitter account at ESB Networks and deal with customer inquiries and complaints received through the social networking service. This provides an indication of customers' actual use of digital channels for the provision of services, which requires less effort from customers.

In addition, there is evidence from the three organisations of the contribution of technology to enabling the remote control of services, which means customers are now able to access an organisation's services and employees can serve the customer in his or her own location. Place and time are no longer obstacles facing the customer in receiving a service or the staff of the organisation in providing a service. Digital solutions make it easier for customers and employees to access services from anywhere and at any time. Section 5.1.3 discusses the over-the-air (OTA) system that allows STC employees to access a customer's mobile phone remotely to perform modernisation, run programs or reform settings. In addition, section 4.2.5 discusses the possibilities of paying bills, using credit cards, making money transfers, or topping-up mobile phones inside and outside the Kingdom through ANB's website or mobile banking application, in addition to remote access to the bank's network

systems. Section 5.3.3 discusses how employees at ESB Networks can control and monitor the operation of a power station by remote systems in their offices.

7.3.2 Interactivity Capability

Digital solutions provide an organisation with the capability to interact with the customer intelligently and effectively. A digital interaction channel supports customers in direct communication with their own services without the presence of intermediaries. The relationship here is a dual one between the customer and the service. The human element, such as reception or customer support staff with whom customers are accustomed to dealing, may see their role reduced, as mentioned in sections 5.1.3 and 4.3.5. The capability of digital solutions to offer two-way interaction is one of the points raised in the discussion on expanding customer interaction channel strategies in sections 4.1.2, 4.2.2 and 4.3.2. The same sections also touch on the dominance of digital channels and the growth in the number of customers using them compared with the rest of the channels. The speed, accuracy and reach of customer interaction is attributed to the interactive capabilities that are made possible through electronic and mobile applications.

In addition, it is possible that ease of interaction supports the interactive capability of digital solutions. The ease-of-use initiative that resulted from the association of CFS and ITC is addressed in section 7.1.2, where it is shown to be one of the directions taken by the participants in the interviews conducted and the path their organisation is taking in focusing on the customer. Digital solutions are appropriate for all customers regardless of their age, culture, or knowledge and whether they have a technical background. The STC case presents the suitability of providing mobile applications for younger people because they are accustomed to dealing with these technologies and can use them quickly and easily. In the case of ANB, customers are able to use applications that are very customer friendly and simple screens allow the customer to perform transactions easily. In the case of ESB Networks, there is a trend to facilitate as many services for the customer as possible, such as completing an application form or providing registration information through an online service. The

ability of digital solutions to meet the aspirations of different generations helps retain customers or may even attract new ones.

The capability of digital solutions to interact in several languages is also an important feature. Interacting using the language preferred by the customer is in addition to the capabilities of digital solutions to interact with customers in the easiest and fastest way possible. Such capabilities may be difficult through the normal channels in terms of providing a translator at all subscription offices or sales points. The three case studies present multilingual digital solutions. For example, the digital solutions at ANB and ESB Networks contain both English and the native language of their countries: Arabic, in ANB's mobile applications and websites, and Gaelic as well as English are used on the social networking service provided by ESB Networks. The mobile application for STC also contains both English and the native Arabic language. In addition, STC provides a website containing six languages to allow non-Arabic and English speakers to interact with the company's services with ease and satisfaction. It is interesting that, in addition to the ability of multilingual interaction to enable easy interaction for customers that vary in culture or language, digital solutions have the ability to localise the interaction by adapting to the language and culture of the customer. Furthermore, digital solutions allow customers using different languages to interact via icons. For example, Likes (using a 'Thumbs-up' icon) can be thought of as a multilingual interaction method.

7.3.3 Information Access Capability

The ability to provide information helps both the customer and the organisation to understand each other better. Digital solutions have become an essential source of information. Digital solutions have the capability to manage information exchange between a customer and an organisation's systems, and offer the customer instant access to correct and timely information. For example, delivering the right information to the customer through the integration between the PowerCheck application, OMS, from one side, and between OMS and the operation systems in the field from the other side to link the customer with information about the current failures and changes to the power supply (see section 5.3.5). The integration and

smooth running of data transmission, such as payments, activations or cancellations, between the MySTC application, the STC website, and CRM rely primarily on having the correct information about customers and services in order to serve the customer, as referred to in section 5.1.5. Ease of financial transactions in internet banking between the customer systems helps speed the service provided to the customer at ANB, as discussed in section 4.2.2.

Digital solutions have turned the collection and analysis of customer feedback by survey and paper questionnaires or MS Excel spreadsheets to becoming more dependent on advanced systems and methods. The three case studies show a trend towards data analytics for customers on social media and digital channels. VOC is a major project at STC to capture customer feedback, whether text or voice and whether structured or non-structured data, electronically from digital channels with Arabic-language capability, as discussed in section 4.1.3. Big data and prediction systems are an added advantage for STC in the treatment of customer data on digital channels in terms of the ability to process large amounts of data and work on precise predictions for the directions of customers, as referred to in sections 5.1.3 and 5.1.6. ANB follows the know your customer (KYC) rule and depends on one database to operate a cross-checking method to analyse the digital marketing channel, which comes under digital signs and includes social media, as mentioned in sections 4.2.2 and 5.2.3. ESB Networks uses Rep-track analytics mechanisms to track customer feedback on social media, as discussed in section 4.3.3. These types of analysis of digital channels and the content of the information give the impression of a shift to a growing interest in working on pieces of information through digital channels.

The strategy of ensuring the availability of timely and correct information highlights the technical capability to deliver solutions that enable access to information and the control of data. The customer and the business employee can gain knowledge of personal data and records of services belonging to the customer because there are technical solutions to support this. In addition, the customer can log onto a company's website or mobile applications with a user name and password or request text messages to review his or her data and correct them if necessary. This information is classified in a manner that is understandable and readable to

customers and is not prone to error or editing by humans. By the same token, sections 5.1.6, 5.2.6 and 5.3.6 discuss the capabilities of technical solutions to produce electronic reports in different formats for the services, customers and the organisation, such as the Business Department in STC being able to conduct analytics and insight tasks. This ability has enabled the customer and the employee to control and manage the data content, such as the web content management system in the case of ESB Networks.

7.3.4 Understanding Digital Solutions by Case Study

Digital solutions coincide and differ among the three organisations. There are common factors as well as differences in some of the techniques and mechanisms employed by the three cases. There is a focus and preference for some solutions over others, which varied by customer preference or the nature of the services provided to the customer. Table 7.12 lists the case studies and the digital solutions characteristics that pertain to each case study.

Table 7.12: Digital solutions by case study

	STC	**ANB**	**ESB Networks**
Focus on	1. Mobile application 2. Internet website 3. Social media	1. Internet website 2. Mobile application 3. Social media	1. Internet website 2. Mobile application 3. Social media
Digital channel	≈ 75% of service functions	≈ 45% of financial transactions	≈ 58% of PowerCheck
Inquiries and complaints	Evaluating the customer experience	Complaints management process	Dedicated manager to update the Twitter account
Remote control	Modernisation and settings	The business systems	The operation of a power station
Localisation and globalisation	• Arabic • English • Six languages	• Arabic • English	• Gaelic • English
Real time and connectedness	Information transmission	Financial situation	Faults notification
Data analytics process	VOC solution • Text or voice • Structured or non-structured • Arabic-language capability	KYC rule • One database • Cross-checking method • Digital marketing	Rep-track analytics mechanisms • Customer feedback • Organisation reputation

Table 7.12 provides a summary of the digital solutions followed by the three case studies. The use of digital channels and services gives an indication that customers and organisations are focused more towards digitalisation. Thus, these organisations mainly operate based on digital solutions. However, ways to implement these solutions vary from one organisation to another. The first choice for STC is a mobile application, while the first choice of ANB and ESB Networks is a website. This may be because one of the main services provided by STC is the sale of mobile devices. There is also the completion of the website and mobile application in STC, whereby the customer has more options. It is understood that customers prefer comfortable and convenient digital solutions that are within their reach, particularly with the proliferation of mobile devices. It can also be seen that social media is in third place due to a lack of reliability in determining the identity of the customer. However, social media is an important source for all three cases in pushing the stream of information to multiple segments of customers.

The capability of digital solutions to adapt to the functions of organisations is also noted. The nature of STC depends on the activation and cancellation of services, so digital solutions support customers in achieving their desires in cases where they want a quick service. Whereas, ESB Networks is based on maintaining the continuity of electric power, so the company is interested in informing customers in advance of interruptions. The digital solutions provided by ESB Networks have the technology to alert customers to issues in real time, opening up a direct channel between the customer and the organisation. The customer can find the organisation's services from a single source.

There is also a direction among the organisations towards the analysis of digital information, as they have advanced systems for the analysis and follow-up of feedback from customers over digital channels. Digital information has become a source of development plans for organisations towards their customers. For example, KYC helps make it possible for ANB to offer financial options and facilities for customers according to their needs. STC and ESB Networks hire specific analytical systems just to know what is going on in the minds of customer in relation to the company. Therefore, there is attention on digital information in light of the digital

revolution. Digital information is not simply a matter of numbers or statistics, but has also become a means of qualitative analysis of the vocabulary and even the slang used by local customers.

Digital solutions are no longer an option that can be overlooked. They are the first choice for organisations that want to satisfy their customers, and for customers who use mobile phones or the internet all day to secure all the necessities of life. Thus, the relationship between customer and organisation has become more inspiring and promising with digital solutions.

7.4 Conclusion

This chapter presents the findings of the multi-site analysis of three organisations: STC, ESB Networks and ANB. The customer is the crux of the matter and the focus of the initiatives presented in section 7.1. CFS and ITC add initiatives that enable changes for the benefit of customers. This section discusses four major initiatives for customers: 1) self-service, 2) customer usability, 3) proactive interaction, and 4) customer control. This provides understanding of the initiatives for customers that followed and applied across the three cases. There are indications of the conversion of all services to an online format available on the company website or through the mobile application of each organisation. The three organisations focus on the ease of use of customer services as much as possible for maintaining the customer experience and retention. In addition, the three organisations are interested in making customers aware of what is happening in the services and functions that belong to them as early in the process as possible. The importance of the role of the customer is noticeable among the three organisations. The customer becomes as one of the command and control sources.

Section 7.2 suggests five major ITC roles: 1) implementer, 2) enabler, 3) autonomous, 4) initiator, and 5) generator of revenue. This provides classification for understanding the role of IT capability in supporting organisational strategies towards customers. These roles have been classified on the basis of 11 characteristics. These ITC roles have some characteristics in common, and some roles are different in certain characteristics. IT departments are also in the three case studies varied in

terms of roles and characteristics of roles. Some of these departments play more than one role, while others play only one role.

Section 7.3 presents a complete picture of sections 7.1 and 7.2. The collaboration between IT and Business Departments in participating in knowledge, strategies and capability arises at the corporate level. Therefore, the organisations under study are serious in their aims to make digital solutions an integrated approach in all aspects and fields, helped by the capability of digital solutions in the provision of services, in interaction and in access to information, as discussed in section 7.3. These capabilities of digital solutions have also become the focus of attention for customers, and one of their means of evaluating whether to move to or to stay with an organisation. Today, digital services are the default choice of customers who are accustomed to dealing with services through digital channels.

CHAPTER EIGHT CONCLUSIONS

8.0 Introduction

This chapter presents the overall conclusions of this research study. The research objective and the research questions are revisitied in section 8.1. The theoretical contribution of this research and the implications of the findings for practice are discussed in sections 8.2 and 8.3. The chapter concludes by considering the limitations of this study and opportunities for future research in sections 8.4 and 8.5, respectively.

8.1 The Research Objective and Questions

This research seeks to address the research gap in the threads that bind the capabilities of information technology with a customer-focused strategy (Lu and Ramamurthy, 2011; Granados and Gupta, 2013). In light of the research gap identified, this study sets out to ***explore the relationship between IT capability (ITC) and customer-focused strategies (CFS) in an organisation.***

This research objective is achieved by answering the following four research questions:

Research Question One: What are the customer-focused strategies of the organisation?

Research Question Two: What are the characteristics of the IT capability in the organisation?

Research Question Three: How do IT and business work together in delivering a customer-focused strategy?

Research Question Four: How can the characteristics of IT capability drive customer-focused strategies in organisations?

In this study, the researcher examines, articulates and synthesises existing relevant literature. The research background helps in the creation and definition of research questions that support the achievement of the research objective. This combination of research background and research questions helps in selecting the techniques and tools to undertake the research. Using a multiple case study approach, the researcher undertakes an investigation of the characteristics of IT capabilities (ITC) and the

relationship between business and IT in achieving a customer-focused strategy. This analysis provides convincing evidence of the phenomenon under study. The findings from RQ1, RQ2 and RQ3 are used to conduct a comparative analysis to answer RQ4 in chapter 7. Table 8.1 illustrates that research questions underpin each other particularly RQ 4 in achieving the research objective.

Table 8.1: Research questions in achieving the research objective

Background Research	RQs	Technique and Tool	Research Outcome
The activities of a customer focus: • Organizational implications for the customer, • Commitment to engaging with customers, and • Customer interaction approach.	RQ1	• Within-case analysis based on open coding, axial coding, and selective coding. • Identifying and classifying coding by QSR NVivo 11 software for Windows.	**The customer-focused strategies (CFS):** • Empowering the customer experience and care, • Expanding the customer interaction channels, • Knowing the customer, • Improving the fulfilment time for customers, and • Transforming customer services to digital.
The capabilities of information technology: • IT personnel capability, • IT management capability, and • IT infrastructure capability.	RQ2	• Within-case analysis based on open coding, axial coding, and selective coding. • Identifying and classifying coding by QSR NVivo 11 software for Windows.	**The characteristics of IT capability (ITC):** • The fulfilment of business requirements on time, • The automation of business processes, • Supporting business continuity, • The integration of multiple business systems and applications, and • Availability of timely and correct information.
Unexplored characteristics of the relationship between IT and Business in delivering a customer-focused strategy	RQ3	• Within-case analysis based on open coding, axial coding, and selective coding. • Identifying and classifying coding by QSR NVivo11 software for Windows.	**The characteristics of the relationship:** • The nature of the working relationships, • Functional orientation, • Knowledge orientation, • Conducting an agile methodology, and • The leadership and control.
Unexplored support provided by IT capability in enabling customer-focused strategy	RQ4	• Comparative analysis between case studies used in generating themes by QSR NVivo 11 software for Windows. • Data displays by Microsoft Excel 2016.	***The* initiatives aimed at customers:** • Self-service, • Proactive Interaction, • Customer Usability • Customer Control. ***ITC roles:*** • Implementer, • Autonomous, • Generator • Enabler, • Initiator, of revenue. ***The capabilities of* digital solutions:** • Services provision capability, • Interactivity capability, • Information capability.

As illustrated in Table 8.1, understanding the customer-focused strategies in the answer to RQ1 and the characteristics of IT capability in the answers to RQ2 are the basis for answering RQ3. Subsequently, RQ3 explores the characteristics of the relationship between a customer-focused strategy and the characteristics of IT capabilities. In addition, RQ1, RQ2 and RQ3 have a role in answering RQ4, exploring the support provided by IT capability in enabling a customer-focused strategy.

The following sections provide conclusions regarding each of the four research questions.

8.1.1 Research Question One: What are the customer-focused strategies of the organisation?

This research question is derived from the study of existing literature which is concerned with the activities driving organisational customer focus. These activities help in the formation of the first research question. Data for RQ1 are analysed using coding techniques within each case study. The answer to the research question relies on five common strategies to focus on the customer, as shown in Table 8.2.

Table 8.2: Index table for customer-focused strategy

Background Research	**The activities of a customer focus:** • Organisational implications of a heightened customer focus • Level of commitment to engaging with customers • Customer interaction approach
Technique and Tool	• Open coding, axial coding, and selective coding. • QSR NVivo software for Windows.
RQ1 Outcome	**The customer-focused strategies (CFS):** 1. Empowering the customer experience and customer care, 2. Expanding the customer interaction channels, 3. Knowing the customer, 4. Improving the fulfilment time for customers, and 5. Transforming customer services to digital.

These five customer-focused strategies have been identified and explored. The research data from the three case studies on customer-focused strategies lead to the conclusion that these strategies have a positive impact on the customer and the organisation. Organisations can ensure that they provide a coherent customer experience, from the first response to a customer's request to the implementation and after care of the service delivered. There is a priority for the organisation to provide customer services through sustainable access channels. However, there has been a shift from traditional to more modern and digital interaction channels. "Acting as a customer" and using advanced systems to track and predict customers' needs are approaches commonly used by organisations to know their customers. These organisations have a strategy of fulfilling service to the customer simply and smoothly and, in parallel, decreasing the time spent delivering the service to the customer. The transformation of customer services to digital is highlighted by the availability of core

and critical services in a digital format, through digital channels and in a self-service environment.

8.1.2 Research Question Two: What are the characteristics of the IT capability in the organisation?

This research question is derived from the study of existing literature which is concerned with the capabilities of IT. These capabilities help in the formation of the second research question. Data for RQ2 are analysed using coding techniques within each case study. The answer to this research question relies on five characteristics of IT capability, as shown in Table 8.3.

Table 8.3: Index table for characteristics of IT capability

Background Research	**The capabilities of information technology:** • IT personnel capability, • IT management capability, and • IT infrastructure capability
Technique and Tool	• Open coding, axial coding, and selective coding. • QSR NVivo software for Windows.
RQ2 Outcome	**The characteristics of IT capability (ITC):** 1. The fulfilment of business requirements on time, 2. The automation of business processes, 3. Supporting business continuity, 4. The integration of multiple business systems and applications, and 5. Availability of timely and correct information.

Five common characteristics of ITC in the organisation have been identified and explored. The importance of the IT capability in the three case studies is evident. IT resources and the capacity to fulfil business requirements in a timely manner have an impact on the time taken for a service to reach customers. The role of IT in automation appears clearly in transforming services from being manual to online over mobile applications and the organisation's website. The ability of IT in terms of the business continuity of customer services is due to the stability of the IT infrastructure and the functioning of the IT systems. IT represents the role of systems and applications integrator in supporting the quick and easy movement of data and information for integrated services to be provided to the customer. The capability of IT to provide real-time information helps organisations to know their current

situation to take appropriate decisions towards the customer. This also helps in setting expansion plans to exploit opportunities.

8.1.3 Research Question Three: How do IT and business work together in delivering a customer-focused strategy?

Understanding customer-focused strategies in the analysis of the data for RQ1 and the characteristics of IT capability in the analysis of the data for RQ2 helps to understand RQ3. This process supports exploration of the characteristics of the relationship and the bond between the staff and the management of the IT and business departments in leveraging the capabilities of IT and achieving customer-focused strategies. Data for RQ3 are analysed using data coding techniques within each case study. The answer to research question three relies on five common characteristics of the relationship between IT and Business Departments, as shown in Table 8.4.

Table 8.4: Index table for the characteristics of the relationship

Background Research	**Unexplored characteristics of the relationship between IT and Business in delivering a customer-focused strategy**
Technique and Tool	• Open coding, axial coding, and selective coding. • QSR NVivo software for Windows.
RQ3 Outcome	**The characteristics of the relationship:** 1. The nature of the working relationships, 2. Functional orientation, 3. Knowledge orientation, 4. Conducting an agile methodology, and 5. The leadership and control.

Five common characteristics of the relationship between ITC and CFS have been identified and explored. The importance of the five characteristics of ITC in delivering CFS is evident from the three case studies conducted for this study. The research data lead to the conclusion that mutual trust and shared responsibility between IT and business need to be present in order for customer requirements to be met. This helps in allocating customer-oriented functions based on the segmentation of the customers and is concerned with the supervision of the progress of customer services between IT and Business Departments, as well as some IT and business employees possessing knowledge in relation to the tasks and plans of the others. This assists

personnel in their understanding of customer needs and the value of the service provided to customers. Agile methodologies in the dealings between IT and business enhance the quality of the response to urgent or unplanned service requests. The Business Department is still the area that drives and leads the organisation in customer services. However, business looks to IT as a strategic partner in completing these customer services.

8.1.4 Research Question Four: How can characteristics of IT capability drive customer-focused strategies in organisations?

Understanding the support provided by IT capability in enabling customer-focused strategy is derived from the answers to the first three research questions.

The data across the cases lead to the conclusion that the various initiatives drive the facilitation and promotion of the organisations' ability to deal with customers. These initiatives seek, one way or another, to optimally serve the customer.

Providing a *self-service initiative* saves the customer time and reduces the effort required to obtain services. The more self-service is available, the less effort and time spent by the customer. Furthermore, the *customer usability initiative* is important in improving the customer experience and making such experiences more positive. The easier it is to deal with the customer, the more opportunities there are to provide a good experience for the customer and thus increase his or her wish to stay with the organisation and extend the journey. In contrast, excellent service does not mean the customer's experience of that service is necessarily good. The service provided to the customer needs to be compatible with his or her experience and abilities, so that the service is not difficult to understand or implement. Otherwise, the positive experience of a customer becomes a negative one that has an adverse impact on the organisation.

Proactive interaction also has a direct relationship with customer services. There are types of work that are considered proactive in predicting new services based on customer needs even before the customer makes a request; other types are considered proactive in relation to current services, such as informing customers of an expected or troubleshooting failure before they know about it. Being proactive in

predicting customer service represents innovation for the sake of fulfilling customer expectations. Informing customers proactively is due to the interest of the organisation in notifying customers with updates regarding a current service. The organisation can inform customers proactively and predict new customers' needs in order to position itself in the space in the top-right-hand corner of Figure 8.1, suggesting a desirable level of pro-activity and prediction. The positions of the three cases in terms of their proactive interaction approaches to the customer are illustrated in Figure 8.2.

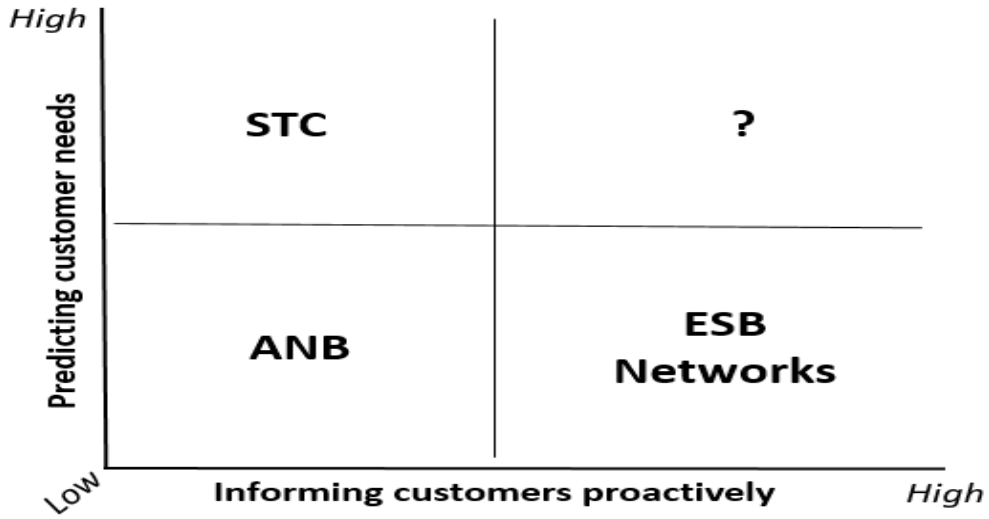


Figure 8.1: Proactive interaction approach vs. customer services

There have also been changes in the cultures and activities within these organisations, accompanied by the development of new approaches used in addressing and dealing with their customers. These new approaches support customers in having their needs fulfilled. Customers gain sufficient power to have a direct impact on the improvement and development of the services provided. For instance, *Customer Code Confirmation* (the Treble C) is a computer-based mechanism STC uses for giving control to customers. The customers themselves can close the service request submitted to them and no one else as illustrated in Figure 8.2.

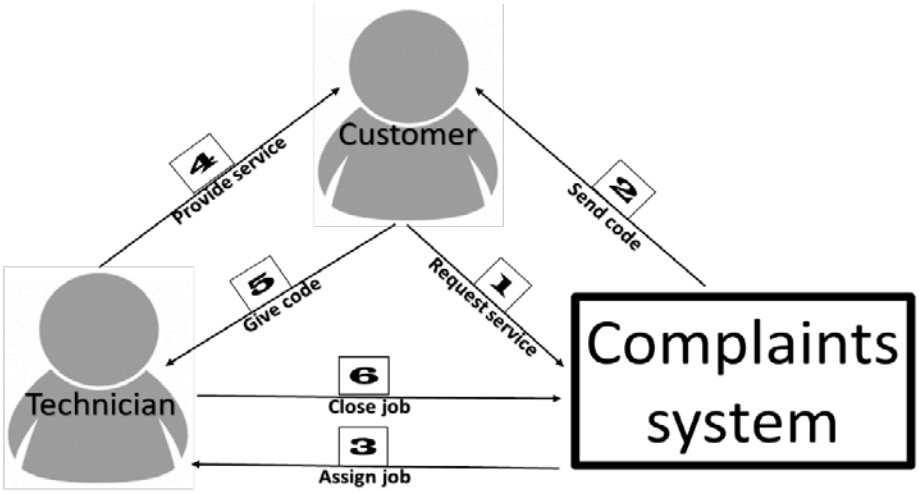


Figure 8.2: Adapted scenario of customer code confirmation (Treble C)

In addition, the answer to this question presents five different roles for ITC based on 11 characteristics. The characteristics classification of ITC roles in support of a strategy focused on the customer is derived from the support provided by IT capabilities to both the businesses departments and their customers as shown in Table 8.5.

Table 8.5: Characteristics of ITC roles

Characteristic	Follows requests	Reactive action	Proactive action	Impact on business	Creative and innovate	Close to the customer	Business knowledge	Autonomy in decisions	Discusses and negotiates	Trains and educates	Driven by business
Implementer	X	X		X			X				X
Enabler	X	X		X			X		X	X	X
Autonomous	X	X		X			X	X	X	X	X
Initiator			X		X	X	X		X	X	X
Revenue generator			X		X	X	X				X

The first role is that of implementer, the function of which is to follow the direction of the business and implement requests in the form of systems and programs. The work of the implementer becomes a short-term goal (a day-by-day effort). The second role is that of enabler, which means to develop and implement comprehensive technical solutions that suit the business and customer services environment. The role of enabler involves receiving details of business initiatives,

studying them, and developing integrated technology solutions. An IT Department which pursues the role of enabler has the same value and control as the Business Departments in the continued success of the services provided to customers. The third role is that of being autonomous, decisions of an autonomous IT Department are not subject to the influence of the business or senior management. The fourth role is that of initiator. IT staff provide initiatives to the Business Departments, and the Business Departments study the initiatives and identify their suitability for the customers and the organisation. The IT staff who have the role of initiator predominantly have a good level of knowledge of the business and are close to the customers and their needs. Unlike all the aforementioned ITC roles, the fifth is a little different, as the role of generator of revenue involves providing solutions that may go beyond the known boundaries of IT. An IT Department that has the role of generator of revenue provides and operates services that offer financial returns for the organisation. In this role, technical employees have knowledge of the market and the customers, and are fully aware of the capabilities of the IT systems and the functions they have.

Digital solutions are the mouthpiece for the initiatives aimed at customers and the roles of ITC. The collaboration of the four initiatives and the five ITC roles that have been discussed contribute directly or indirectly to the formation of the capabilities of digital solutions. Digital solutions play a crucial role in improving an organisation's services. This role is the result of the capabilities possessed by IT and the focus on the customer by the business. These capabilities support the fulfilment of services to customers and the organisations in terms of provision, interactivity and information. Table 8.6 summarises the digital solution capabilities that make digital solutions one of the choices preferred by customers.

Table 8.6: The digital solution capabilities

Services provision capability	• Largest possible number of services. • Online complaints and assessment of a service provided. • Ability to perform services from anywhere and at any time.
Interactivity capability	• Interacting with the customer intelligently and effectively. • Appropriate for all customers, regardless of age, culture or knowledge. • Interaction using the language preferred by the customer.

Information access capability	• Availability of timely and correct information. • Instant access of customer information. • Analytics data demonstration of customer information.

In addition to the above research objective and research questions, this study provides theoretical and practical contributions. The next two sections discuss these contributions.

8.2 Contribution to Theory

This study illustrates a theoretical model of customer focus digitalisation. This model transforms the focus on customer offerings and interactions between organisations and customers to a digital form supported by the roles and characteristics of IT. This model could be considered as one of the building blocks in supporting the processes managed between technology and business. This model is of particular interest to researchers who are looking to understand more about the relationship between technology and business strategies in order to focus on customer and digital solutions.

The customer focus digitalisation model moves beyond existing frameworks, such as the Dynamic Capabilities and Strategic Management model (Teece et al., 1997) and the Strategic Alignment Model (Henderson and Venkatraman, 1993). It requires a customer-focused strategy and IT capabilities to be in place as prerequisites for an evolution into digital solutions designed for customers, thus offering a dedicated customer-focused view. The model provides a deep understanding of the methods applied by organisations to provide digital solutions for their customers, as well as highlighting that these digital solutions are a collaboration between business and information technology.

The customer focus digitalisation model is divided into two main parts: 1) the IT-enabled customer focus conceptual framework, as concluded in chapter two (see Figure 2.13); and 2) the themes that emerged from this study, as synthesised in chapter seven. *The first part of the model* presents insights into a synthesis of the literature regarding customer-focused strategy and IT capabilities. The framework of CFS and ITC contributes to knowledge by exploring the following:

- *Customer-focused strategies* that can shape future thinking in terms of the focus of an organisation. These strategies support approaches in thinking about the customer proactively, such as 'knowing your customer' and 'acting as a customer'.
- Identifying *characteristics of ITC* using an integrated view that combines all three IT capabilities: IT management capability (ITMC), IT personnel capability (ITPC), and IT infrastructure capability (ITIC). This places IT in the foreground and at the same level as business in planning and providing services to customers and having a role in the success of the relationship between an organisation and its customers.
- *Characterising the relationship between ITC and strategies that focus on the customer*. This characterisation draws a new relationship between IT and business, such as knowledge orientation and conducting an agile methodology. This changes the understanding of 'time to market' to 'time to customer'.

The IT-enabled customer focus conceptual framework (see Figure 2.13) provides the backdrop and basic requirement for the emerging themes developed in answer to RQ4 in *the second part of the model*. Multi-site analysis demonstrates that *initiatives for customers* are developed through the combination of IT capabilities and customer-focused strategies, referred to in RQ1 and RQ2. Furthermore, *ITC roles* are developed from RQ2 and RQ3. Finally, it is suggested that a *digital solutions capability* is developed from the association of answers to RQ1, RQ2 and RQ3. The ensuing theoretical model of customer focus digitalisation is illustrated in Figure 8.3.

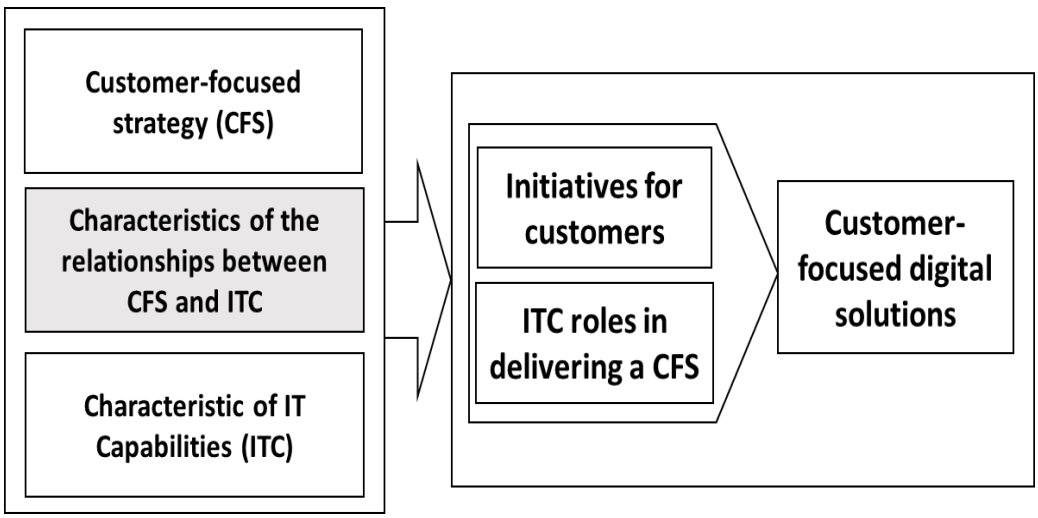


Figure 8.3: Customer focus digitalisation model

Thus, the foundation of ITC and CFS characteristics and the relationship between them underpins the theoretical model of customer focus digitalisation. This presents the creation of business initiatives for customers, as well as the identification and codification of ITC roles in delivering a customer-focused strategy, which, working together, transform organisational effort into digital solutions for customers.

Therefore, this representation of the emergence of digital solutions theorises the direction of evolution of businesses and their customers towards a more digitally interactive world. This trend is a necessary to compete and survive because of customer demand in the first instance, and then the need to reduce the costs in the second. In addition, the capabilities of digital solutions enable the customer and the organisation to stay in constant contact, even if there is physical distance between them. This type of ongoing communication strengthens the relationship between the two parties (organisation and customer) and increases the "stickiness" and loyalty of the customer with respect to the organisation.

In addition to the theoretical contribution, this study also contributes to IS literature. The next section highlights this contribution.

8.2.1 Contribution to IS Literature

Prior research studies focus on the evolution of the dual interaction between organisations and customers (Verhoef et al., 2009; Rose et al., 2012). This study takes a step forward in terms of research into interaction with customers. This study highlights that it is more valuable for organisations to focus not only on a dual interaction, but also on a proactively dual interaction. This means making customers aware of what is happening in the services and functions they consume as early in the relationship as possible. In addition, this study positively supports existing research on the importance of intangible assets, such as the emotional and value aspects of service, response times and accompanying facilities to customers and organisations (Kaplan and Norton, 2004; Mascarenhas et al., 2006; Alter, 2012).

Prior studies have focused on the role of a cultural change in an organisation towards a more conscious culture of focusing on customers (Kaplan and Norton, 2004; Berry et al., 2006; Kamaladevi, 2010; Chakravorti, 2011). These studies highlight the role of

leaders in educating and directing employees and changing their culture towards the customer. This study supports this type of cultural change, but shows that it occurs at all levels of the organisation. Such change programmes seek to give the customer a footprint within the organisation. This research helps to clarify the key concepts and actions required to change the culture of an organisation towards a more customer-focused configuration.

This study suggests that an additional IT capability could be added to the three existing attributes considered in this research: IT personnel capability (ITPC), IT management capability (ITMC), and IT infrastructure capability (ITIC), as discussed in the literature review (see section 2.5). This new capability is the capability of IT application (ITAC). Use of the term 'IT application' was observed during the data collection in the three case studies. IT application was separate from other terms, such as IT infrastructure and IT staff skills. It is evidenced by the availability of IT application as an integrated and independent entity that works in parallel with the rest of the IT capabilities. This study presents the role of IT in converting customer and business services to electronic and automated provision by the development of technology applications such as mobile apps. This capability of IT application depends on IT infrastructure capabilities for its performance and is implemented and developed by IT professionals under the supervision of business professionals.

In previous research, some IS studies list the design and development of IT applications within the structuring of IT personnel capabilities (ITPC) or IT infrastructure capability (ITIC). For example, IT applications have been positioned as part of IT infrastructure capabilities (Byrd and Turner, 2000; Chung et al., 2005). IT applications have been considered as the beneficiary of ITIC (Ray et al., 2005; Fink, 2011; Lu and Ramamurthy, 2011). There are other studies that link the deployment and distribution of IT applications with the planning and support capabilities of IT management (ITMC). For example, Kim et al. (2011) and Wang et al. (2013) opine that the capability of IT management can be classified in terms of the planning and delivery of IT applications.

It is the view of some researchers that little is known about effective digital solutions and that large organisations are not fully leveraging digital technologies to enhance customer service performance (Ray et al., 2005; Tallon, 2010). This study is, however, in line with former studies on the digital technology revolution that posit that large organisations leverage digital technologies to transform customer relationships from traditional services and channels to digital interaction through digital channels and services (Bhatt et al., 2010; Bi et al., 2011; Setia et al., 2013; Wang et al., 2013). This study demonstrates that IT capability has a significant role in the creation and transformation of customer services (Rai et al., 2012; Yoo et al., 2012; Bharadwaj et al., 2013; Sandberg et al., 2014; Matt et al., 2015; Leonhardt et al., 2017). In addition, prior research studies have largely focused on the relationship between IT capability and organisational performance (Bharadwaj, 2000; Santhanam and Hartono, 2003; Zhang et al., 2008; Kim et al., 2011; Chen et al., 2014; Chae et al., 2014; Sandberg et al., 2014). This study extends this literature by exploring the relationships between IT capabilities and customer-focused strategy and demonstrates the major role of digital solutions in enhancing customer services. Thus, this study provides a theoretical model of customer focus digitalisation as an integrated approach in delivering a customer-focused strategy, as discussed in the previous theoretical model.

This study is not only directed to making a theoretical contribution, it is also intended to be used as a practical contribution to the organisations in the field. The next section discusses the practical contribution.

8.3 Contribution to Practice

This study provides organisations with classifications for understanding and characterising the role of IT capability in supporting organisational strategies towards customers. The list of roles for ITC can provide a standard measure for business environments to define the role of their IT department and may persuade some organisations to develop the IT department so that it comes to play a more advanced and influential role. Those organisations whose IT departments already have an advanced and influential IT role can take lessons from the knowledge of the

characteristics of these roles mentioned in section 8.1.4. Such organisations could work on training programmes or their employees' awareness of some of the characteristics of the roles of IT. This would contribute to bridging shortcomings in existing IT roles. At the same time, the organisations that have been the source of the data collected in the case studies could benefit from this feedback to improve the role of their IT departments. Examples of the feedback gained from these organisations can be found in *Appendix* F. IT plays a number of important roles in implementing customer strategies. The creation of services, the provision of information and participation in innovation and creativity with business are some of the multiple facets of the role of IT.

This research highlights progress in activating and strengthening the role of departments responsible for the customer experience. It could provide typical models for other work, such as that undertaken by government departments, in order to improve citizens' experiences and change the public perception of government. For example, these models could help to change assessment that is currently based on whether someone is "satisfied" or "dissatisfied" to more sophisticated models of a citizen's satisfaction with a service or employee. This might include more analytical and digital-based approaches to analyse countless aspects of data, such as those relating to *reaction* and *behaviour*. The strategy of 'know your customer' could be employed by government agencies to 'know their citizens', not only in terms of their regulatory aspects, but in other areas such as emotional and social perspectives with respect to citizen privacy. Thus, obtaining knowledge of citizen sentiment without infringing on their privacy is likely to be supportive in improving the compliance aspects of data usage within these departments.

The next section discusses the study limitations.

8.4 Study Limitations

The researcher seeks to ensure that each of the individual cases has been treated fairly and that the data analysis has not been biased towards one or more of the cases. However, using qualitative methods to report the findings of case studies imply subjective assessments of data that are open to equivocal evidence or biased views

(Yin, 2009). Furthermore, similar to the issues encountered by Lu and Ramamurthy (2011), case studies present a lack of generalisability, as the sample size limits the ability to generalise the results to a different context or new contexts outside the actual study context (Bhattacherjee, 2012).

One of the limitations of this study is that external customers were not invited to participate during the data collection. This limitation is a result of a research design intended to enable internal validation (Yin, 2009; Bhattacherjee, 2012), and to motivate an investigation of the internal relationship between ITC and CFS, before the introduction of the external customer.

This study did not aim to analyse the resources required and financial costs of implementing IT enabled customer-focused strategies. The research goal of exploring relationships was intended as an exercise in organisational theory building, independent of the associated implementation cost. The introduction of financial or resource conditions might have hampered or constrained the achievement of this goal. Thus, the focus of the researcher is on exploring "what is", not "why it is" (Miles and Huberman, 1994; Creswell, 2003; Gregor, 2006). The focus of the researcher has been on exploring relationships between capabilities and strategies, not their instantiation in organisational change projects. From this standpoint, the researcher suggests that there is potential for a study to be conducted to determine the cost and resource implications of implementing specific customer-focused digital transformation projects, leveraging new ITC roles and initiatives. Further opportunities for future research are presented in the next section.

8.5 Future Research Opportunities

With regard to opportunities for future research, there is a need to engage with external customers in order to verify the viability of the selected CFS and ITC characteristics and to utilise deductive research to determine the order of preference of these characteristics in terms of their effectiveness and support. Another avenue of future study is to use a quantitative approach to understand the extent of the success of the strategies and IT capabilities in organisations, such as the critical success factors for the relationship between CFS and ITC. The possible involvement

of managers and customers would enable evaluation of the success and impact of these strategies.

This study contributes to knowledge by exploring and classifying the categories and themes of IT capabilities and customer-focused strategies. This contribution to knowledge could be presented as a new set of hypotheses to be tested in order to find a way of explaining causality or attempting predictive generalisations (Gregor, 2006). For example, the theoretical model of digital solutions could be developed to undergo testing and confirmation by other researchers. Initiatives, roles and capabilities in this view could be treated as testable propositions and assessed in a different context or new contexts outside the actual study environment.

The literature review discusses the relationships between IT capabilities. These interrelationships are presented during the data analysis to support IT and business relationships in delivering a customer-focused strategy. For example, the IT management capability to distribute strategic systems across the IT infrastructure helps provide appropriate business applications for customer service in a timely and proper manner. These associations can be the subject of future studies to determine the role of these interrelationships in the improvement of IT capability and strategies that focus on the customer. These interrelationships may also be used for future research in other areas, such as studying their role in changing the culture and behaviour of organisations towards their customers.

The researcher is working on a checklist of the role of ITC to test the roles of IT departments in achieving digital solutions for customers. This checklist is currently in the form of an electronic Excel file but the next stage is to design this list as a Web-based form. The purpose is to make this checklist available to managers in organisations to help them to identify their perception of the role of IT with respect to organisational goals, and thus to develop a vision of the type of IT capabilities that they need. The researcher is interested in producing the final output of this list in digital and electronic forms, thus transferring the academic study to a program or application for mobiles and the internet. This might be one opportunity to take and

extend this checklist to allow for more confidence in the generalisability of these results beyond the organisational scenarios considered in this study.

8.6 Conclusion

This chapter started with a summary of the research objective and questions. The summary included a brief outline of the process that accompanied each research question, beginning with a review of the relevant literature, moving to the research methodology used and ending with the outputs from the research question. The second part of this chapter describes the research contributions. This study contributes to knowledge by providing a theoretical model of customer focus digitalisation. There is corresponding contribution to practice in the creation of a classification for characterising the role of IT capability in supporting organisational strategies that reach out to customers. The latter part of this chapter lists the limitations of the study. The chapter ends by suggesting the participation of external customers in validation tests of the themes explored as an opportunity for future research.

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APPENDIX A: THE INTERVIEW GUIDE

The following list provides the main questions and prompts to be followed during the interviews. The list is adapted according to the review of the literature. However, the four research questions might have seemed to be quite academic, which may have been difficult for people from the business environment to understand. Thus, in accordance with recommendations from the research supervisors, the following questions are converted from academic to more business-oriented language in order to ensure participants' full understanding and collect useful answers, as follows.

Q1: To what extent would you describe your organisation as customer-centric?

Q2: How does your organisation interact with customers?

Q3: How does your organisation determine and manage customer feedback?

Q4: How does your organisation customise its products/services or any related activities according to customer feedback?

Q5: How do you build relationships with customers to keep them on your side?

Q6: What is the role of IT in supporting business in the strategy towards customers?

Q7: What are the aspects of cooperation between IT management and business management to achieve the organisational goals of a customer-focused strategy?

Q8: Are these goals communicated and circulated to IT and business employees?

Q9: What is the ability of the employees from IT and business to communicate and work together to achieve the expectations of the customers?

Q10: How does IT infrastructure support business employees to serve customers at an acceptable level?

Q11: How do you think IT and business could do better in achieving the goals of a customer-focused strategy?

APPENDIX B: DEVELOPING THE INTERVIEW INSTRUMENT

As is known, the main components of the research study have been constructed from the literature review undertaken in the first stage of this study. These items are identified as the main triggers for the proposed list of questions to serve the interview process (Shanks et al., 2009; Lu and Ramamurthy, 2011). Once the first draft of the interview questions had been generated, both the researcher and his supervisors followed an iterative process to refine the list of questions and to examine the content validity of the research instrument (Fink, 2011; Kim et al., 2011). The interview technique is able to ensure that none of the factors of the subjects under study have been omitted. This is a discussion and negotiation session aimed at consolidating related points that have the same meaning without affecting the body of knowledge. This simulation practice assisted in gauging the effectiveness of the list of questions in capturing the phenomenon under study and its ability to explore the relationship between IT capability and customer-focused strategy as anticipated (Cheng et al., 2011).

The following steps have been conducted to improve the quality and accuracy of the research interview and questions:

I. The following step in the preparation is carried out by showing the list of questions to an academic colleague who has significant expertise in the study of co-production with customers in IS/IT service projects. She acted as a judge in evaluating the clarity of the interview questions. The aim is to assess the understanding and the order of the interview questions (Lee et al., 2003; Kim et al., 2011). The sharing of the research instrument with others is important in order to determine the extent of absorption by potential participants of the interview questions and to clarify any ambiguity in the wording of the questions (Barriball and While, 1994). This process resulted in refinement of some of the questions for better understanding.

II. The next step is to consult an expert who has experience in academic matters and fieldwork to critique the external validity of the holistic research model. Thus, on Monday 20th April 2015, both the researcher and his supervisors

attended a meeting with Breda O'Dwyer, the Manager of CEED (the Centre for Entrepreneurship and Enterprise Development), part of the Institute of Technology in Tralee.

Breda has designed and implemented multiple entrepreneurship programmes for different cohorts, including postgraduates and post-doctoral students. She has worked in both the private and public sectors with business start-ups (Linkedin website, 2015). The aim of involving Breda is to utilise the advantage of her role as a consultant to have her view of how the research model and methodology – mainly from the business point of view – had been managed and constructed (Lee et al., 2003). Breda offered her view of a number of advantages and observations, including the following:

- The importance of knowing the industry parameters, such as the face-to-face/non-face-to-face organisations, and the nature of the trade and conflict between business development and IT.
- The importance of understanding the customer-focused approach inside an organisation, such as its understanding of customer experience management, when it starts thinking about the customer experience, how it measures customer satisfaction and experience, and the way it responds to customer needs.
- The importance of identifying customers and the customer cycle and engagement, such as the acquisition and retention of customers, and the need to know what is in customers' minds and how to foster collaboration and thinking processes.
- The importance of defining what the researcher wants to know of the IT role and why, and how the IT role will be named and classified under the umbrella of its impact on customers.
- The importance of using a qualitative method that is in line with the research exploration to interpret how given interviewees or contexts can make sense of a particular phenomenon. In this research study, this

relates to the importance of understanding the dual relationships between IT and business to achieve a customer-focused strategy.

Further to the meeting with Breda O'Dwyer, the researcher and his supervisors held a meeting to review the main points. The conclusion is that it is important for the researcher to consider the following in the next stage of his research: to focus on the correct selection of cases, demonstrate that potential organisations can be defined in terms of their suitability for the research study, and ensure the knowledge and experience capability of the interviewees.

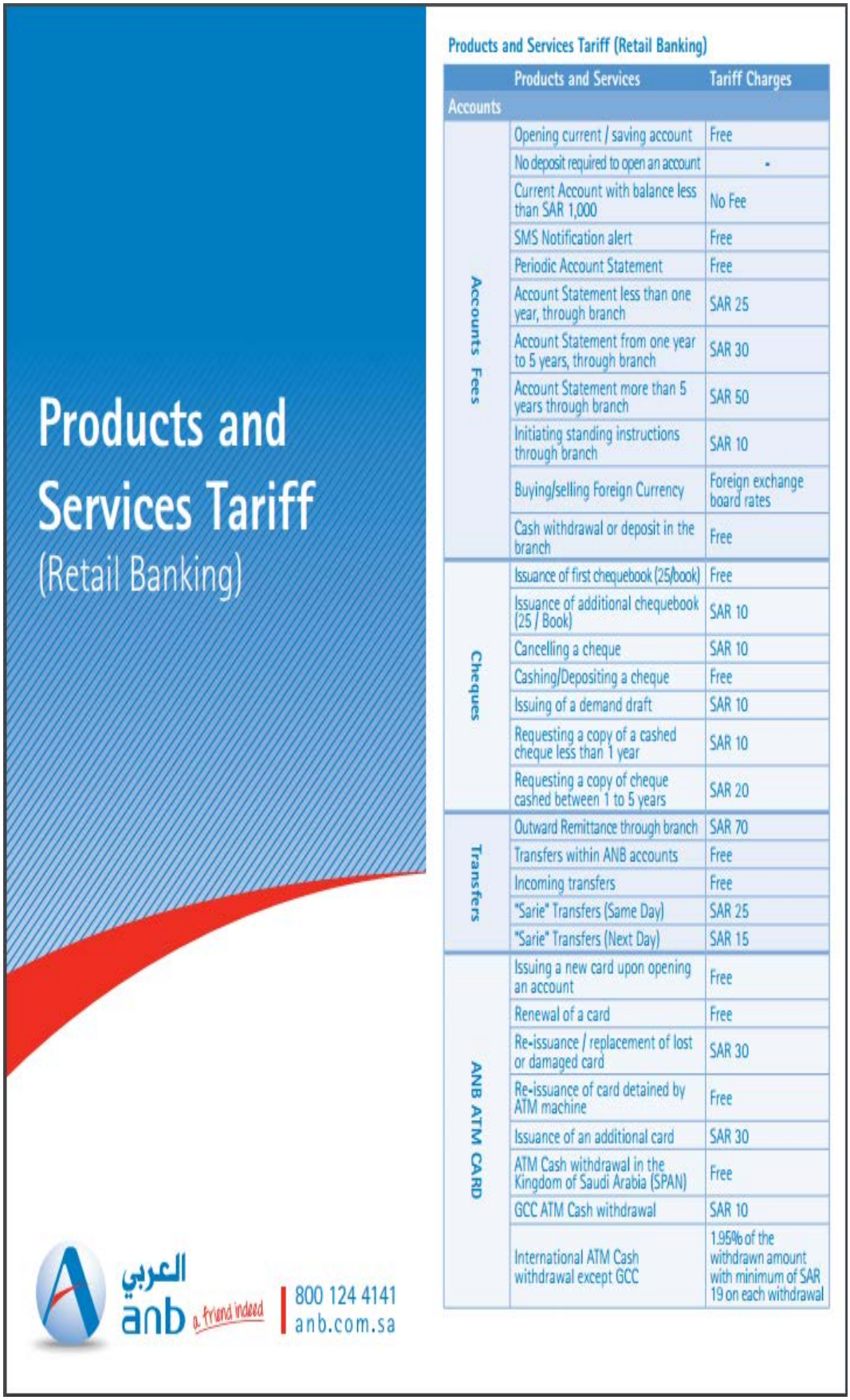
III. The last step of the preparation for conducting the interviews is the pilot study. The aim of the pilot study is to assess the synthesis and completeness of the interview schedule and contents in relation to the research objective and to identify any potential gap between the output of the study and the reality in the field (Byrd and Turner, 2000; Shanks et al., 2009). The researcher aimed to double-check whether the interviewees would be able to understand and answer the questions properly and whether the interview schedule time and procedure would be realistic for the content of the interviews and would elicit the true views of the interviewees (Barriball and While, 1994; Yin, 2009). Therefore, on Thursday 11th June 2015, the researcher pre-tested the interview instrument by conducting a semi-official interview with Richard Barrett, the Director of Managed Network Services and Business Development at eircom Wholesale.

Richard has around 24 years of experience in the field and is interested in customer experience improvement models. He has been managing and supporting business customers, enabling eircom Wholesale to be the leading provider of solutions. The researcher started the meeting with a brief introduction to the purpose of the study, then asked Richard to evaluate the questions for comprehensibility, relevance, and completeness (Fink and Neumann, 2007). The researcher then started asking questions in accordance with the interview guide.

After going through and discussing the interview questions, Richard provided two valid recommendations. The first recommendation is to start asking the more generic questions first, such as those concerning the relationship between IT and business in achieving a customer-focused strategy or the current interaction activities of the organisation towards the customer, and postpone more specific questions to the end of the interview. This point could be very useful because an interviewee may provide answers to more specific questions while answering the generic ones. The second recommendation is to make sure that any abbreviations or internal terms are understood or explained by the interviewee. This point could help the researcher to avoid personal interpretations in attempting to find explanations of these terms.

The meeting provided positive feedback on the research study because the anticipated indicators for conducting the pilot study are achieved. The validity of the interview technique is also strengthened. The advantages taken from the meeting are that the scheduled time is appropriate for conducting the interviews and the content of the questions is sufficient and can lead to useful and valid results.

APPENDIX C: PRODUCT AND SERVICE TARIFFS



Products and Services Tariff
(Retail Banking)

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Products and Services Tariff (Retail Banking)

	Products and Services	Tariff Charges
Accounts		
Accounts Fees	Opening current / saving account	Free
	No deposit required to open an account	-
	Current Account with balance less than SAR 1,000	No Fee
	SMS Notification alert	Free
	Periodic Account Statement	Free
	Account Statement less than one year, through branch	SAR 25
	Account Statement from one year to 5 years, through branch	SAR 30
	Account Statement more than 5 years through branch	SAR 50
	Initiating standing instructions through branch	SAR 10
	Buying/selling Foreign Currency	Foreign exchange board rates
	Cash withdrawal or deposit in the branch	Free
Cheques	Issuance of first chequebook (25/book)	Free
	Issuance of additional chequebook (25 / Book)	SAR 10
	Cancelling a cheque	SAR 10
	Cashing/Depositing a cheque	Free
	Issuing of a demand draft	SAR 10
	Requesting a copy of a cashed cheque less than 1 year	SAR 10
	Requesting a copy of cheque cashed between 1 to 5 years	SAR 20
Transfers	Outward Remittance through branch	SAR 70
	Transfers within ANB accounts	Free
	Incoming transfers	Free
	"Sarie" Transfers (Same Day)	SAR 25
	"Sarie" Transfers (Next Day)	SAR 15
ANB ATM CARD	Issuing a new card upon opening an account	Free
	Renewal of a card	Free
	Re-issuance / replacement of lost or damaged card	SAR 30
	Re-issuance of card detained by ATM machine	Free
	Issuance of an additional card	SAR 30
	ATM Cash withdrawal in the Kingdom of Saudi Arabia (SPAN)	Free
	GCC ATM Cash withdrawal	SAR 10
	International ATM Cash withdrawal except GCC	1.95% of the withdrawn amount with minimum of SAR 19 on each withdrawal

APPENDIX D: CUSTOMER SERVICE IMPROVEMENT PLAN 2013-2016

CUSTOMER SERVICE IMPROVEMENT PLAN 2013-2016

Our past success has created a firm foundation on which we can build for the future.

We have developed this Customer Service Improvement Plan for 2013-2016. It is based on feedback from you, our customers, and input from ESB Networks' staff at all levels of the organisation. These are the areas where we intend to introduce improvements which will deliver an even better service to you in the future. We aim to ensure that a culture of customer service excellence exists at all levels of staff in our organisation.

The 10 areas on which we are focusing are as follows:

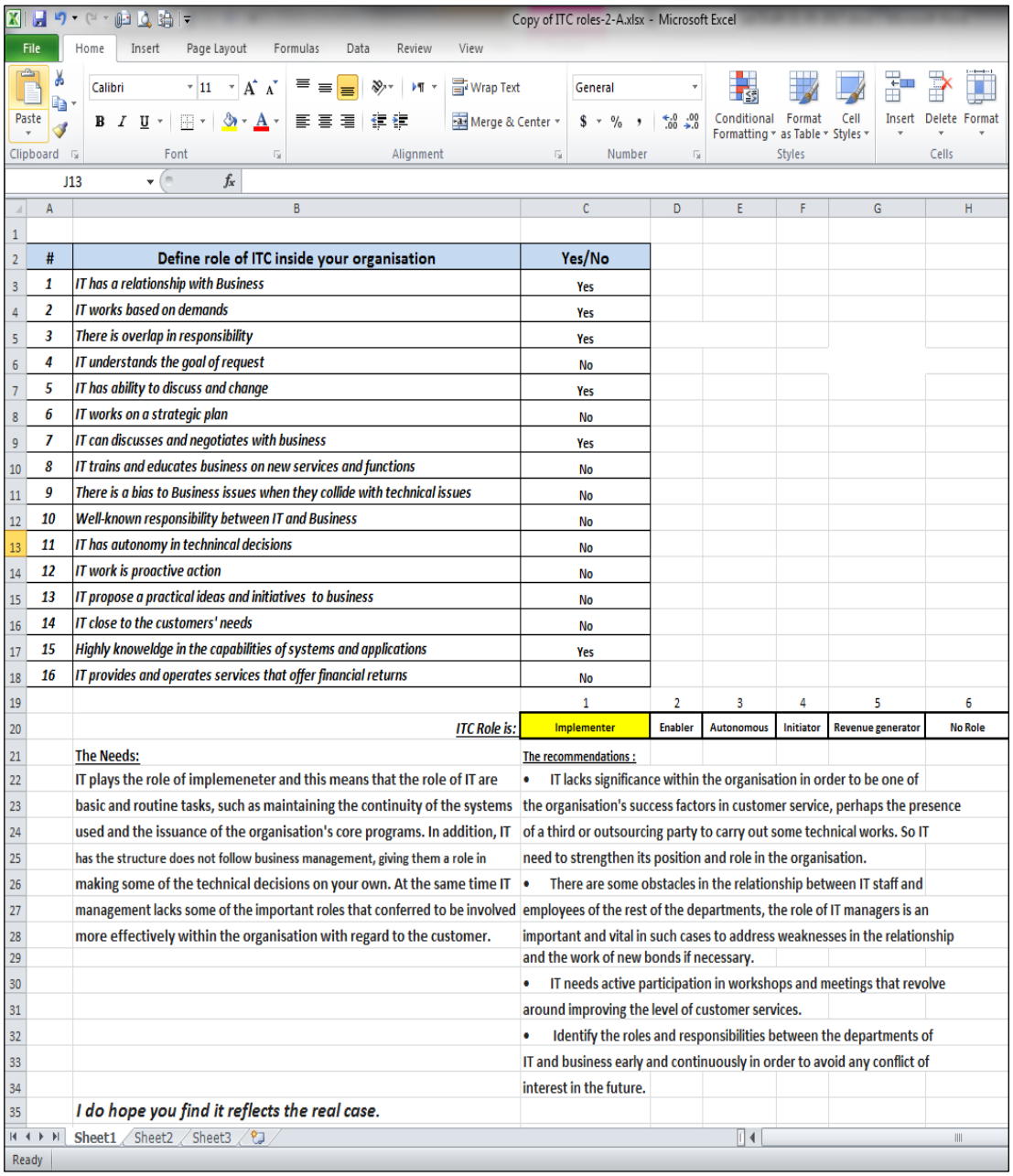
1. **Being Easy to Deal With**
   We have a wide range of options for contacting us and for us to contact you. We commit to making every interaction you have with us as positive as possible.
2. **Delivering Value for Money**
   We know that value for money is something we all look for in the services we buy. We commit to continually strive to attain further efficiencies in the services we provide.
3. **Putting Safety and Reliability First**
   ESB Networks has a superb safety record. We commit to making sure it stays that way, as your safety is our priority.
4. **Leveraging the Best Available Technologies**
   We commit to always seeking to use the most up to date technology available.
5. **Empowering Our Staff to Serve You**
   We commit to training and developing our staff to the highest possible standards.
6. **Playing a Leading Role in Ireland's Energy Future**
   We commit to playing a key role in developing the Energy Industry for the future.
7. **Striving to Become World Class**
   We commit to developing our position as a leading international energy utility.
8. **Working Closely with the Electricity Industry on Your Behalf**
   We commit to building a relationship with electricity suppliers and other stakeholders, so that we can represent your interests effectively.
9. **Taking Care of the Environment**
   We commit to playing an active role in being a caretaker of the environment.
10. **Building Our Business on the Principles of Honesty, Integrity and Fairness**
    We commit to carrying out all our business transactions with honesty, integrity and fairness.





The aim of this Customer Service Improvement Plan is to ensure that a culture of customer service excellence exists at all levels of staff in our organisation.

APPENDIX F: EXAMPLE OF THE FEEDBACK ON ITC ROLES COLLECTED FROM PARTICIPANTS



Copy of ITC roles-2-A.xlsx - Microsoft Excel

#	Define role of ITC inside your organisation	Yes/No
1	*IT has a relationship with Business*	Yes
2	*IT works based on demands*	Yes
3	*There is overlap in responsibility*	Yes
4	*IT understands the goal of request*	No
5	*IT has ability to discuss and change*	Yes
6	*IT works on a strategic plan*	No
7	*IT can discusses and negotiates with business*	Yes
8	*IT trains and educates business on new services and functions*	No
9	*There is a bias to Business issues when they collide with technical issues*	No
10	*Well-known responsibility between IT and Business*	No
11	*IT has autonomy in technincal decisions*	No
12	*IT work is proactive action*	No
13	*IT propose a practical ideas and initiatives to business*	No
14	*IT close to the customers' needs*	No
15	*Highly knoweldge in the capabilities of systems and applications*	Yes
16	*IT provides and operates services that offer financial returns*	No

	1	2	3	4	5	6
ITC Role is:	Implementer	Enabler	Autonomous	Initiator	Revenue generator	No Role

The Needs:

IT plays the role of implemeneter and this means that the role of IT are basic and routine tasks, such as maintaining the continuity of the systems used and the issuance of the organisation's core programs. In addition, IT has the structure does not follow business management, giving them a role in making some of the technical decisions on your own. At the same time IT management lacks some of the important roles that conferred to be involved more effectively within the organisation with regard to the customer.

The recommendations :

- IT lacks significance within the organisation in order to be one of the organisation's success factors in customer service, perhaps the presence of a third or outsourcing party to carry out some technical works. So IT need to strengthen its position and role in the organisation.
- There are some obstacles in the relationship between IT staff and employees of the rest of the departments, the role of IT managers is an important and vital in such cases to address weaknesses in the relationship and the work of new bonds if necessary.
- IT needs active participation in workshops and meetings that revolve around improving the level of customer services.
- Identify the roles and responsibilities between the departments of IT and business early and continuously in order to avoid any conflict of interest in the future.

I do hope you find it reflects the real case.