

An investigation into the factors that influence the implementation of ICT Shared Services

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Dublin in partial fulfilment of the requirements
for the degree of M.Sc. in Management of
Information Systems

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Declaration

I declare that the work described in this dissertation is, except where otherwise stated, entirely my own work and has not been submitted as an exercise for a degree at this or any other university. I further declare that this research has been carried out in full compliance with the ethical research requirements of the School of Computer Science and Statistics.

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Abstract

This study examined the factors that influence implementation of ICT shared services in multinational organisations with a particular focus on the different strategies employed by centralised and decentralised organisations.

In addition, perceived barriers encountered by organisations in the adoption of ICT shared services and the associated challenges and benefits following implementation were further investigated.

Moreover, the research sought to examine whether implementation of ICT shared services would have strategic benefits, for local business units and ICT functions alike, by enabling local resources to focus on core business functions and consequently help drive their organisation's competitive advantage.

A qualitative research approach underpinned by an interpretivism philosophy was undertaken to explore the factors that influence the implementation of ICT shared services in multinational organisations. An interpretivist philosophy was considered the most suitable for addressing the research question and a multiple case study approach to the research was taken.

Comprising a multiple case study approach, structured interviews were undertaken with 15 centralised and decentralised organisation participants from a range of positions including Technical Consultants, Senior Managers and IT Directors within the ICT function.

The findings indicated that the implementation of ICT shared services presents challenges for local business units in multinational organisations. However a shared services implementation can create a range of significant benefits including decreased costs, improvement in service quality, reduced effort of duplication across the organisation as well as assisting the organisation in achieving a competitive advantage.

Irrespective of the many potentially adaptive outcomes, possible barriers and challenges, including data protection, poor communications, loss of local control, threat to job losses, loss of flexibility and lack of local business knowledge must all be considered prior to implementation of IT functions through a shared services delivery model.

The findings also demonstrated that an organisations' operating model can play a significant role in adopting ICT shared services. In accordance, organisations operating a centralised model had a much higher successful implementation rate in comparison to organisations operating a decentralised model.

This study therefore provides an insight into the factors that influence the implementation of ICT shared services concluding with an innovative approach to assist organisations in selecting an IT function to be delivered as a shared service by using the Murtagh shared service suitability assessment tool.

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Abbreviations

APAC	Asia Pacific
APAC	Asia Pacific
BPR	Business Process Reengineering
CAPEX	Capital Expenditures
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIO	Chief Information Officer
CRM	Customer Relationship Management
EMEA	Europe, Middle East and Africa
ERP	Enterprise Resource Planning
ERP	Enterprise Resource Planning
EU	European Union
GBS	Global Business Services
IaaS	Infrastructure as a Service
ICT	Information and Communication Technology
IP	Intellectual Property
IT	Information Technology
KPI	Key Performance Indicators
RCA	Root Cause Analysis
ROI	Return on Investment
SaaS	Software as a Service
SLA	Service Level Agreement
SOX	Sarbanes-Oxley
TSSC	Technology Shared Service Centre
USA	United States of America

1 Introduction

1.1 Background and Context

This research comprises an investigation into the role of Information and Communication Technology (ICT) shared services within multinational organisations. ICT shared services is the practice of offering IT services via a shared services model. This model represents an attractive option for multinational organisations, owing to the many apparent benefits arising from centralisation and/or consolidation of similar activities across the organisation. For the business, a shared services model is valuable as it frees up resources by transferring responsibility for a noncore activity to another organisational body. (Gartner, 2008, Ulbrich, 2006)

ICT shared services is the consolidation of IT administrative or support functions from several of the enterprises business units into a single, stand-alone organisational entity whose only mission is to provide services as efficiently and effectively as possible. Shared services models have been utilised in large organisations predating the widespread use of IT, e.g. the use of typing pools 50 years ago was a form of shared services. It is now estimated that over 80 percent of Fortune 500 companies are now utilising some form of shared services in their US operations. (Accenture, 2005, Bondarouk, 2014)

ICT shared services is an increasingly popular technique used by multinational organisations. A growing number of Chief Information Officers (CIOs) consider this service model to be effective in reducing costs, standardising processes and improving service levels across the business. However, while many multinationals are implementing Shared Service Centres (SSCs) it is clear that not all of them are receiving the expected benefits. (Accenture, 2005)

The need for reduced complexity, standardised processes, increased speed and efficiency of services, in addition to cost pressures, has resulted in many multinational organisations electing to move IT service delivery to an IT shared service model. The creation of a shared service organisation is a symptom of high enterprise complexity, not just with Information Technology, but also with Marketing, Finance, Human Resources and any other back office functions that support the business. The success or failure of ICT Shared Services however, can be difficult to judge for several years. (Forrester, 2010, Gartner, 2014)

ICT shared services is a service delivery model. As a delivery model, shared service is most often confused with a centralised IT operating model. The Centralised IT operating model determines the degree to which IT is centralised or decentralised and often reflects certain enterprise beliefs about the value of IT and the role the IT organisation should play. (Bergeron, 2002, IBM, 2011b)

A fully centralised IT organisation is one in which, the multinational organisation has one sanctioned IT organisation within the enterprise. In turn, Enterprise leaders expect IT leaders to manage IT as a cost centre, optimising efficiency and reducing costs through economies of scale.

In contrast, a fully decentralised IT organisation means every major operating arm of the enterprise has its own, fully redundant IT organisation. It is most often adopted in multinational organisations that lack synergy across operating units, or in highly innovative, change-adaptive enterprises where there is an implicit belief that centralised services impede innovation and entrepreneurship. In this instance the role of IT is generally to enable competitive advantage. (Gartner, 2011b)

Moving to ICT shared services means committing to transformation, and while the benefits appear to be attractive, the changes can be catastrophic for those affected. Moreover, discrepancies exist regarding adoption rate for ICT shared services, with organisations operating a decentralised organisational structure demonstrating a decreased likelihood of uptake relative to centralised organisations. (Gartner, 2008, Ulbrich, 2006, Bergeron, 2002)

Anecdotal evidence to date suggests that:

- Certain functions are suitable for a shared services model and can deliver significant benefits to organisations
- Certain functions are not suitable for a shared services model and can cause significant negative impacts to organisations
- Organisations have made serious errors in implementing shared services models.

This research seeks to examine the role of ICT shared services within multinational organisations and develop a greater understanding of the different adoption strategies implemented by centralised and decentralised organisations.

This study will also explore the barriers and challenges that management must overcome in adopting IT shared services. In addition, the benefits and drivers that influence organisations in utilising ICT shared services will be investigated.

1.2 Research Question

The primary question that this research seeks to address is:

What are the factors that influence the implementation of ICT shared services in multinational organisations?

The research question presented by this study focuses on three key elements:

- Is a multinational organisations operating model a key factor in the success of the implementation and delivery of ICT shared services?
- What are the barriers and challenges faced by multinational organisations in the implementation of ICT Shared Services?
- What are the benefits achieved from the implementation of ICT shared services such as Email, Telephony, Private Cloud, Software Development and Financial Systems in multinational organisations?

1.3 Importance of this Research

The purpose of this research is to examine the current ICT shared service models adopted by multinational organisations in order to investigate the different adoption strategies between centralised and decentralised organisations, the barriers that organisations encountered, the challenges faced post implementation, and the benefits derived from a shared service model once implemented. It is envisioned that the findings from this research would prove useful in assisting multinational organisations choose an approach most suitable to their organisation's needs in deriving value from the use of ICT shared services. In addition, the research will provide a greater insight into how multinational organisations can use ICT shared services to reduce costs, standardise processes and improve service quality.

Comprising fifteen semi-structured interviews undertaken with participants from centralised and decentralised multinational organisations in the EMEA region, the present study therefore attempts to identify the following:

- Organisational drivers for implementing shared services.
- Benefits derived from utilising shared service functions.

- Barriers encountered in adopting shared service functions.
- Challenges faced after utilisation of shared services.

Upon consideration of these findings, this research paper will make recommendations on the adoption of shared services based on the findings.

1.4 Research Beneficiaries

The present research will be of interest to any organisation that may be considering implementing ICT shared services within their organisation. In addition it is hoped that the research findings will prove valuable for organisations in their ICT shared service adoption strategy for ICT functions such as Financial Systems, Software Development, Private Cloud, Email and Telephony. The research is also aimed at multinational organisations that would like to gain greater understanding of the benefits and barriers associated with the development and implementation of ICT shared services. Moreover, Shared Service Centres (SSCs) will likely find the research useful as it provides a greater insight into the barriers that organisations encounter in adopting ICT shared service functions.

Furthermore reoccurring challenges are usually common from one organisation to the next and it is therefore of central importance that organisations that engage in ICT shared services initiatives are aware of these issues. Hence, this research seeks to investigate common challenges and benefits underpinning adoption of ICT shared services.

1.5 The Scope of the Study

The research focuses on multinational organisations encompassing those operating in key business sectors. These include Financial Services (9 organisations), Consumer Products (4 organisations) and Manufacturing (2 organisations). A multinational organisation is defined as a corporation that has its facilities and other assets in at least one country other than its home country. Such companies have offices and/or factories in different countries and usually have a centralised head office where they coordinate global management. This research will look at multinationals that operate centralised and decentralised business models. (Investopedia, 2015)

Participants were based in a variety of locations across the EMEA region including Ireland, Sweden, Switzerland, Greece, France, Denmark, Portugal and Italy. While the implementation of an ICT shared service model will invariably require inputs from stakeholders from business resources, the research was limited to the IT function of these organisations. Fifteen interviews were conducted in line with the aims of this research, with

participants comprising a range of positions such as IT Directors, Senior Managers and Technical Consultants. In addition, a senior executive from a Shared Service Centre was also interviewed.

1.6 Chapter Structure

The following is an outline of the contents of this dissertation:

Chapter 1

This introduction chapter provides a summary on the context and relevance of the research question.

Chapter 2

The literature review chapter will provide a review of the literature relating to ICT shared services in the private sector focusing on multinational organisations. This section will explore the IT operating models of organisations and the shared service adoption strategies. The factors that influence organisations in implementing shared services will be outlined as well as the barriers and challenges encountered pre and post implementation.

Chapter 3

The research methodology chapter describes the methodological approach adopted for the study and describes how the research was conducted and will describe the research methodology chosen, why this method was chosen, and will also provide a summary of the advantages and disadvantages of choosing such an approach. The techniques used for data collection in this study and the interview process will also be discussed. It will also provide a summary of the advantages and disadvantages of choosing such an approach. The techniques used for data collection in this study and the interview process will also be discussed. An outline of the design of the study, participants, materials and procedures used for data collection will also be discussed.

Chapter 4

Constitutes the findings and analysis chapter which will describe the analysis of the interview transcripts. The findings are considered in respect to possible factors influencing multinational organisations in implementing ICT shared services and the subsequent barriers and challenges encountered.

Chapter 5

Concludes the dissertation by discussing the findings of the study and how the research fulfils the predetermined objectives. In addition, recommendations for implementing ICT shared service functions will be outlined.

2 Literature Review

2.1 Introduction

This chapter examines the literature concerning the factors that influence the implementation of ICT shared services in multinational organisations. The purpose of the literature review is to analyse both the academic and industry literature sources relating to ICT shared services concerning multinational organisations.

It will provide an overview of the definition of ICT shared services, and discuss in brief the evolution of shared services. In addition the role of Shared Service Centres and the importance of strong governance systems will be discussed. The merits of differing service delivery models that include shared service delivery models, outsourcing models, insourcing models and hybrid delivery models are debated. An evaluation of differing operating models within organisations and comparisons between decentralised and centralised structures will also be completed.

The analysis will focus on both the drivers that influence organisations to move to shared services and the benefits derived from implementing ICT shared services. The research will also focus on the barriers and challenges encountered by local business units following implementation and utilisation of ICT shared services.

2.1.1 What are ICT Shared Services?

ICT shared services are an increasingly popular service delivery model that is principally adopted by multinational organisations in order to reduce costs, improve services and standardise processes.

ICT shared services were best described by Consultancy firm Accenture (2005) as the consolidation of IT administrative or support functions from several of the enterprises business units into a single, stand-alone organisational entity whose only mission is to provide services as efficiently and effectively as possible. Their research indicated that a

major benefit of implementing ICT shared services is the release of internal IT resources from administrative tasks to focus on more strategic initiatives. (Gartner, 2008)

Ulbrich and Schulz (2014) define ICT shared services as a service model that follows industry best practice and focuses on consolidating common services to share these services rather than internally duplicating them.

Gartner (2008) outlines that the most commonly consolidated services within an ICT shared services organisational construct include one or more services relating to Financial Systems, IT Help Desk, Networking, IT Security, Communications or Software Development, that are provided centrally by either an internal or outsourced resource. A shared service unit is sometimes structured as a separate subsidiary of a multinational organisation, with its own financial flows, and may provide services to the subsidiaries of one enterprise or to multiple enterprises. (Bergeron, 2002)

The consensus amongst the literature was that ICT shared services is more than just IT centralisation. Research has specified that ICT shared services implies a separate and distinct organisation where IT support functions are the main focus and as a result are treated with primary importance. Unlike IT Centralised models, ICT shared services organisations are typically responsible for providing services to an agreed service level and reporting on service effectiveness, which has positive implications both for benchmarking and for determining the value of money spent on providing the services. (Barnett, 2006, Davis, 2005)

2.1.2 Brief History of Shared Services

The original representation of shared services can be dated back to the early typing pools where the typists were amalgamated and the typing work was streamlined to increase efficiencies and deliver economies of scale. (Bondarouk, 2014)

Research studies into the adoption of ICT shared services indicated that large enterprises have been implementing ICT shared services since the mid 1980's. Gartner (2014) observed that this is because organisations continue to recognise the strategic value of implementing ICT shared services in order to reduce costs, implement controls through standardisation and improve service levels. Gartner gives an example of companies such as General Electric and Baxter Healthcare who first adopted the shared services concept in the US in the mid 1980's. It is now estimated that over 80 percent of Fortune 500 companies are utilising some form of shared services in their US operations. Deloitte

(2011a) noted that although Ford adopted the shared services concept in the early 1980s it was not until the early to mid-1990s that early adopters in Europe, such as Intel and Allergen applied this concept. The research indicates that since the mid-1990s, a number of multinational organisations operating shared service centres (SSCs) in the US and Europe decided to apply the concept into South America and Asia. Organisations including Pfizer, Procter & Gamble, and Oracle who adopted the shared service concept proved that a shared service operating model is both possible, efficient and can reduce costs and improve services. In addition, as shared service operations mature they continue to focus on reducing costs whilst maintaining or improving service levels.

Deloitte (2011a) and Gartner (2014) indicated that the majority of large enterprises operate in a competitive and ever changing market. In order for organisations to gain a competitive advantage, it is critical for an organisation to evaluate how it can best provide its services through its service delivery model. The challenge for organisations is to select the most suitable service delivery model for their organisation. Regardless of the service delivery strategy, the key focus areas remain the same:

- Standardisation
- Consolidation
- Reengineering and Automation

Research by Ulbrich (2006) indicated that in the late 1990s, organisations started to integrate their back-office functions by aligning functional activities enabling them to reduce headcounts and manage each function under one functional manager. Around this time off-shore competencies emerged offering alternative sourcing options enabling cost reductions. Ulbrich specified that since the late-1990s, the ICT shared service model has been adopted and implemented in multinational organisations across the world.

ICT shared services have continuously evolved over the last ten years. Historically, organisations adopted ICT shared services to standardise processes and consolidate non-core business functions. The primary objective was to reduce costs and this is still the case today however the focus has shifted to improving IT services and enabling the local IT teams to concentrate on driving strategic growth for their organisation. (Deloitte, 2011b)

2.1.3 Role of Shared Service Centres

Previous studies have reported that Shared Services Centres (SSCs) are planned, designed and implemented in multinational organisations in order to achieve reduced costs and increased quality of service, and to improve the performance of personnel at the

organisations local business units. The research indicated that large enterprises such as IBM, Hewlett Packard, Johnson & Johnson and General Electric have successfully implemented SSCs as an alternative to outsourcing, reengineering or organisational restructuring. (IMA, 2011) (IBM, 2011b)

The literature indicated that the essential element of an ICT Shared Service Centre is the provision of commonly used ICT services such as Email, Telephony, Financial systems, Software Development or Private Cloud, in a single organisational entity for two or more business units. The providing entity is commonly known as a Shared Services Centre (SSC) or in some instances as a Technology Shared Service Centre (TSSC). (IMA, 2011, Deloitte, 2011b, Gartner, 2008)

There is a consensus amongst the literature that the main objective of a TSSC is to improve both the effectiveness and productivity of the ICT non-core functions within a large enterprise. It is indicated that a well implemented and managed TSSC can achieve significant benefits for the adopting local business units. (Accenture, 2005, IMA, 2011) (Gartner, 2008)

Research by Ulbrich (2006) identified the challenges encountered by multinational organisations in deciding where to locate their Shared Service Centres. It is particularly common amongst large enterprises who have business units globally. The author indicated that organisations need to decide to implement a single SSC or multiple centre strategy. Furthermore, they need to choose a single or multifunction centre. A multi-function SSC will include other support functions that would include Human Resources, Finance and Legal functions. Additionally, Ulrich indicated that the organisation needs to decide whether the SSC will be managed locally, regionally or globally.

Recent evidence in a survey by Deloitte (2015) suggests that multinational organisations are avoiding the single-function model and implementing multi-function Shared Service Centres from the start. The results of Deloitte's survey of large enterprises specified that there is an increase in SSCs with more than three functions. Furthermore this has created a requirement for SSCs to be situated in countries that can support multi-functional activities such as Information Technology, Human Resources, Finance and Legal support functions. Deloitte outlined that the present trend is to build SSCs in low cost regions and the survey results revealed that 38 percent of multinational organisations identified Asia Pacific (APAC) as a potential future location for their SSC.

A number of studies reported that organisations with a mature shared service delivery model are now encountering challenges to reduce costs further and take their TSSCs or SSCs to the next level by consolidating SSCs or relocating to low cost regions. Many researchers have argued that an evaluation should be performed on the decision to relocate an SSC or TSSC to a low cost region in order to reduce expenditures as the financial benefits are often outweighed by unanticipated challenges. (Goodwin, 2013, Gartner, 2011a)

The research also indicated that few large enterprise SSCs have delivered the expected financial return projected by the Chief Financial Officers (CFOs) and Finance leaders within the organisations. This is not to imply that SSCs have not proved a success. The shared service provider can deliver significant benefits for large enterprises by improving the ability to manage compliance and IT security concerns and consequently improve quality and therefore reduce external risk. The authors specified that it is challenging to try to place an economic figure on the benefits of risk reduction for an organisation, as the costs consequently avoided are difficult to quantify, but it is a key benefit in a Shared Services assessment. (Ulbrich, 2006, IMA, 2011) (Deloitte, 2015, Accenture, 2005)

It has been shown conclusively that a significant number of multinational organisations have reviewed the shared services model and decided it is not appropriate for their organisation because they have already implemented the individual components of shared services. The literature indicated that organisations have specified that they have re-engineered, restructured and implemented new Technology solutions. Therefore, they believe the shared services concept cannot deliver any further benefit. However research has shown that SSC adoption can provide a further 30 percent optimisation opportunity for these multinational organisations. The research stated that as a result of disjointed efforts about 30 percent of capabilities are unexploited as the integration of IT systems, dependencies, workflows, cross organisation comparability benefits, and process standardisation are not embarked upon. (IBM, 2011a, IMA, 2011, Barnett, 2006)

2.1.4 Shared Service Governance

Previous studies by Accenture (2005) and Gartner (2010) indicated that strong governance is the key to a successful shared services delivery. The authors specified that it will not only assist in managing the implementation strategy but it will also resolve problems within local business units and help establish responsibility when the business units encounter challenges.

Accenture and Gartner specified that governance within shared services has a strong focus on IT architecture, design and making the correct investments in new technologies. These

investments help to drive continuous improvement and standardise IT solutions and processes. Several studies have specified that SLAs are a critical element of the shared service governance model because they eliminate ambiguity about performance measures, service expectations, the responsibilities of the shared service operation and the chargeback model. (Accenture, 2005, Gartner, 2012, Ulbrich, 2006)

A study by Pastore (2008) indicated that the impact of an insufficient shared services governance model can result in higher costs, duplication of work across business units and the failure of local business units to follow the organisations standards and procedures as outlined in the governance structure. Furthermore, the author outlined that as a result of a poor shared services governance structure, local business units may become frustrated by the service levels, the higher than expected costs and the difficulty in supporting local IT solutions that do not comply with the governance model.

To conclude, there is a consensus amongst the research that a well-designed governance structure is a key component to a successful SSC design and implementation. The shared services governance structure is responsible for creating policies and procedures for the SSCs customers to follow, managing confrontations over price models and service level disagreements and setting KPIs. (Ulbrich, 2006, PriceWaterhouseCoopers, 2012, Barnett, 2006)

2.2 Service Delivery Models

There are multiple ways in which ICT services can be delivered to the business. A service delivery model defines how services will be delivered. Previous research by Gartner (2012) indicated that this is a method in which a service provider's people, processes, technology, structures, governance and pricing are composed to meet specific business value expectations. Gartner specified that centralisation is one of several available operating models, but it is not a service delivery model. Bergeron (2002) and Gartner both indicated that an operating model is the combination of processes, roles, structures, skills and technologies that allows the organisation to deliver services.

Bergeron (2002) indicated that the service delivery model should include Service Level Agreements, escalation protocols, reporting mechanisms, communication plans, change control process, governance models, and continuous improvement processes.

Research by Bergeron (2002) and Gartner (2010) indicated that an essential concept in developing an effective shared service transformation is knowledge of the delivery model maturation path. Since each model optimises something different and results in different

organisational architectures, it is important that IT managers understand where they are in relation to where they want to be. Changing service delivery models represents a significant organisational transformation. Depending on the organisation's objectives in relation to present maturity, several transformations may be involved. Each transformation drives important change around pricing structures, personnel roles, standardising processes and managing resources.

2.2.1 Shared Service Model

Research from Bergeron (2002) and IBM (2011b) indicated that ICT shared services is a service delivery model where non-core business functions are consolidated and managed by the shared service operation. The shared services operation's mission is to deliver administrative services and drive continuous improvement. The shared service unit is semi-autonomous within a wide range of possible architectures and the reporting structure differs from the traditional multinational hierarchy. The authors specified the ICT shared service operation is run with a customer mind-set and is based on current best practices to provide IT services that derive benefit from economies of scale. Previous research by Accenture (2005) and Gartner (2010) stated that although centralised and shared services operating models share similar characteristics, there are significant differences between these delivery models. Accenture outlined that centralised models do not offer the customer focused mind-set that has been instilled into shared service models and Gartner indicates that there is a significant difference between how a Shared Service Centre (SSC) operates in comparison to a centralised head office of a multinational organisation.

Several studies have revealed that the shared service delivery model used varies immensely based on the following factors;

- Level of integration with the business units
- Geographical location
- Whether delivered by a single SSC versus multiple SSCs
- The provision of services from one business unit to another business unit
- Governance arrangements.

It is stated however that all SSCs share the same core drivers. (Barnett, 2006, Siew Kien et al., 2010)

Previous research specified that an SSC function is an internal customer service operation. Ulbrich and Schulz (2014) indicated that the SSC usually charges the local business units for the services it delivers and uses Service Level Agreements (SLA) for contractual

purposes. The SLA specifies costs and performance measures. The authors outlined that the services are usually provided at a reduced cost compared to delivering the services locally and therefore enable the local business units to focus on strategic initiatives.

Consultancy firm Accenture (2005) highlights the need to establish the shared services organisation as a separate entity as a key success factor: The author indicated that this separates the SSC from any negative associations with existing operating units or an organisation's head office. Ulbrich and Schulz (2014) also specified that the separation of the SSC from the rest of the organisation will remove any potential conflicts of interest and will provide clear guidelines between the business units and the shared service provider. Both authors specified that this will alleviate concerns about service levels that are often communicated when a peer organisation takes over services. Operating as a separate entity will also enable the shared service operation greater scope during the design and implementation of the shared service.

Gartner (2014) concluded that shared services, when implemented correctly deliver greater benefits to an organisation in comparison to a traditional internal service delivery model. Gartner outlined that organisations that utilise shared service functions can achieve economies of scale, improve integration with other business units, and accomplish benefits from cross business unit process synchronisation. In order to successfully implement this delivery model organisations will need to change culture, structures and operations to make this transition.

2.2.2 Outsourcing Model

Previous research by IBM (2011b) and Deloitte (2011a) indicated that in the early 1990s, the concept of shared services was a unique operating model and existed long before the concept of outsourcing to external providers. IBM specified that IT outsourcing providers have matured significantly in recent years. There is a substantial difference between shared services and outsourcing as services are delivered by an external provider in an outsourcing delivery model.

A study by Bergeron (2002) posited that the outsourcing model transfers the support of non-core business functions to an external provider and the third party vendor delivers services to multiple clients. The author highlighted that one of the key drivers for outsourcing is reduction of costs. In theory outsourcing should free up the internal personnel to focus on more strategic core competency initiatives. Outsourcing can be a suitable model when the IT function to be managed requires a high skill level and the organisation cannot insource personnel with a particular skillset. Previous research by Ernst and Young (2011) indicated

that some CIOs might see the introduction of an outsourcing model as a threat to their ability to control the ICT environment however the author also highlighted that others will see it as an opportunity to play more strategic roles within the organisation..

2.2.3 IT Insourcing

Research by Forrester (2010) indicated that organisations should insource for competitive differentiation. Forrester specified that large multinationals must always strive for balance between global standards and local desires for innovation and agility. There is a consensus among Information Technology research and advisory firms that many multinational organisations are terminating outsourcing contracts to bring certain IT functions back in-house.

Previous research by Overby (2011) and Deloitte (2015) indicate poor service quality, failure to meet business objectives, and the desire for more control over the future direction of the ICT functions as some of the reasons why large enterprises are transferring the ownership of certain IT functions back to an insourcing delivery model. The authors specified that in order for organisations to keep up with fast paced IT demands, for example mobility, it is critical to utilise an operating model that enables organisations to leverage multiple sources including in-house development teams. Overby also highlighted that some organisations were aligned with outsourcing providers that provided services outside of their core competencies resulting in a poor quality of service.

2.2.4 Hybrid Service Delivery Model

A recent study by Deloitte (2015) reported that many large enterprises are now implementing a hybrid IT model to support the implementation and delivery of business strategy. A Hybrid IT model is a technique in which an enterprise uses both internal and external services. Research by Ernst and Young (2011) indicated that the hybrid approach offers the enterprise the best of both worlds. The author highlighted that the hybrid delivery model offers a combination of cost optimisation and speed of delivery. Previous studies have reported that by managing services internally and externally, the organisation can manage sensitive data and take full control of project development. The ideal combination of insourced and outsourced efforts will prevent communication barriers and culture and time zone challenges that can surface with outsourcing. It has been suggested that the hybrid service delivery model is desired when a particular project is complex and may be expected to continue for a long period of time (Ernst and Young, 2011, Sako, 2010, Bergeron, 2002)

Alternative research indicated that nine out of every ten multinational organisations use shared services in some capacity and 97 percent manage outsourcing relationships. However, the authors reported that not too many have benefitted from combining shared services and outsourcing into one integrated service framework. (Fersht et al., 2011)

2.3 IT Operating Models

Research by Gartner (2011b) suggested that CIO's should not think in terms of an organisational structure but in terms of an IT operating model. Gartner indicated that an IT operating model defines IT service delivery ownership and is a business framework, not a service delivery model.

Previous research has highlighted that there is no perfect operating model. One that works for one organisation might be a poor fit for another. A study by Pastore (2008) revealed that most large enterprises use a centralised model. The author indicated that in a centralised model the global CIO and senior leadership team are responsible for IT strategy, shared services, system selection and project prioritisation. In comparison, in a decentralised model every local business unit has its own dedicated IT team and key decisions can be made at a local level.

A study by IBM (2011b) outlined the way in which ICT is managed is constantly evolving, driven by advances in technology, business environment and organisational changes. The author specified that market leaders have identified that in order to prosper they must re-evaluate their existing operational models to align with their strategic direction. This report specified that market leaders are now looking to an operating model that assists in creating an organisation that can connect, interact and respond to clients, suppliers and resources globally. This will result in the organisation improving innovation and globalisation while gaining a competitive advantage.

Pastore concluded by stating that organisations should centralise for efficiency and decentralise for effectiveness.

2.3.1 Decentralised Organisational Structure

Research has shown that during the early 1990s, many large enterprises had decentralised IT services in an attempt to improve agility and flexibility. According to Gartner (1997) this created an improved business focused use of IT, that increased innovation within organisations and increased speed to market to gain a competitive advantage. However, the author went on to highlight that some organisations encountered numerous problems and are now recentralising portions of the IT functions in order to standardise processes

and achieve greater economies of scale resulting in the creation of a hybrid organisational structure. (IBM, 2011b, Siew Kien et al., 2010)

Multinational organisations who operate a decentralised model are independently operated and the key IT decisions are generally made by the local CIO. Bergeron (2002) outlined that the advantage of a decentralised model is the ability to make changes without going through rigorous global change control processes thus promoting innovation at a local level enabling agility and flexibility for the local business unit. However, the author went on to highlight that a major disadvantage of this model is that supporting non-core functions detracts from the core competencies of the organisation.

Research by Gartner (2010), indicated that large enterprises with a fully decentralised IT organisation are most often adopted in large enterprises where collaboration between business units is not a priority or the local business unit is highly innovative. The author outlined that centralised services can sometimes inhibit innovation. In multinationals that operate a decentralised structure the role of IT is often to enable some kind of local or competitive advantage. (Gartner, 2010)

(Siew Kien et al., 2010) indicated that although there are a significant number of multinational organisations operating a decentralised organisational structure, some are now recentralising. The centralisation/decentralisation organisational structure is a key factor in the adoption of utilising a shared service delivery model. From a global perspective, managing dispersed IT resources is challenging and there is often tension between the global and local teams as they simultaneously try to achieve strategic objectives.

2.3.2 Centralised Organisational Structure

A fully centralised IT organisation means there is one authorised IT organisation in the company. It is most often adopted in multinationals that regard IT as a service provider.

The centralised model offers a high level of head office control. It achieves greater economies of scale in comparison to the decentralised model however this comes at the expense of an inflexible rigid structure and a lack of customer focus. According to PriceWaterhouseCoopers (2012), a centralised structure is inflexible, rigid, bureaucratic and detached from the business.

By achieving economies of scale, the centralised model can afford to maintain the latest technology and provide reliable results. From an Information Technology perspective centralisation involves systems integration and consolidating applications, software,

hardware, Telephony and servers. The main objective of a centralised model is to increase efficiency and add value by installing new IT infrastructure and restructuring IT solutions. (Bergeron, 2002)

IT Centralisation achieves economies of scale through asset consolidation. If centralised and shared service delivery models are combined they will offer the organisation appealing synergies. Gartner highlighted that centralising without proactive consideration to the delivery model will be counterproductive and diminish the IT organisational performance and credibility, rather than improve it. The literature recommended that multinational organisations contemplating centralisation strategies should decide on the appropriate IT delivery model and build those transformational activities into their change road maps. (Gartner, 2010)

2.4 Key Benefits to an ICT shared service delivery model

To address the research question, an analysis of previous literature was examined to identify the benefits that multinational organisations can achieve through the adoption of ICT shared services.

It was widely commented on throughout the literature that the most common drivers for implementing ICT shared services are outlined below.

2.4.1 Reduced Costs

Research has indicated that the underlying concept supporting the migration to ICT shared services is that best practice management concepts and cutting edge technologies can be combined to provide the highest value services at the lowest cost to internal customers. It is extensively publicised throughout the literature that the shared service model promises improved economies of scale. This is achieved by greater buying power as the shared service is now purchasing on behalf of all its customers. (IMA, 2011) (Forrester, 2010)

A report by consultancy firm Accenture (2005) indicated that the potential benefits from ICT shared services are significant. They specified that in the private sector, it is not unusual for large corporations to make savings in excess of 20 percent. In addition, the research has also indicated that costs are reduced through the decommissioning of complex and expensive IT solutions after they are transferred to the shared service operation. Barnett stated that ICT shared service operations have a unique opportunity to deliver direct cost savings to the corporation and improve profitability. In particular the removal of non-value-

adding activities assists in reducing costs and provides an immediate return on investment. ((Barnett, 2006)

Gartner (2008) specified that ICT shared services enable organisations to leverage economies of scale by consolidating resources and streamlining processes through effective use of technology and a simple service delivery.

In a study by Fersht et al. (2011) the authors revealed that over 95 percent of surveyed shared service clients viewed their engagements as effective for reducing their operating costs. The results of the survey also stated that 50 percent were satisfied with their cost reduction progress and the other 50 percent viewed their progress as “somewhat effective”.

To conclude, Forrester (2010) indicated that multinational organisations are developing collective capabilities that span across all business units in the organisation. There are several significant drivers for implementing ICT shared services, but reduction in costs is generally the primary goal.

2.4.2 Improved Quality of Service

Previous research demonstrates a positive relationship between shared service delivery and process quality. It has been outlined that it is common practice for organisations to review and compare their previous and post-ICT shared service situation. (Bergeron, 2002, Fersht et al., 2011)

Research has highlighted that transitioning to a shared services model can produce a wealth of operational enhancements and an improved quality of service. However, it has also highlighted that measuring improved service quality is not as easy to quantify in comparison to other shared service benefits, such as reduced costs. Several studies have specified that this is due to the difficulty in reaching consensus on factors that constitute quality measures. To overcome these difficulties most SSCs use Service Level Agreements (SLAs) and Key Performance Indicators (KPIs). The benefit of using SLAs is that the SSC develops customer orientated mind-set and professionalises the service delivery and the KPI provides a tangible measure on which the company can track its performance against stated objectives.

Alternative quality performance measurements can be derived from the number of complaints from other departments within the local business unit. Barnett (2006) and IMA (2011) outlined that quality could also be defined by the satisfaction levels of the shared services operations customers.

There is consensus in the literature that quality and reduced costs mostly advance hand in hand in ICT shared service initiatives. The research also specified that an optimised process will improve quality as well as productivity, resulting in improved quality of service and customer satisfaction. Furthermore, it was outlined that higher quality provided by the shared services operation will reduce the volume of errors and troubleshooting activities. (IMA, 2011, Davis, 2005)

While ICT shared service quality based on improved services in can be more difficult to quantify, it can eventually result in gaining a tactical advantage that increases the top line of the organisation and hence enhanced revenue growth has a greater impact on profits than cost reduction. (IMA, 2011, Cameron, 2011)

2.4.3 Standardised Processes

Several studies have revealed that having central control of key IT functions makes it easier to execute and update standard processes across a multinational organisation. In addition, this enables organisations to adopt best practices. Bergeron and Ulbrich specified that organisations will achieve increased efficiencies through the standardisation of systems and processes which can result in improved quality of services at reduced costs. (Bergeron, 2002, Ulbrich, 2006)

2.4.4 Concentration on Core Operation

There have been several studies in the literature reporting that implementing ICT shared services releases resources at the local business units to focus on their organisation's core functions and external customers. The organisation can rely on the shared services operation to focus on non-core activities. The research highlighted that as organisations seek out new ways to refocus their personnel into value-creating activities and reducing non value-added efforts and costs, the drive for innovative shared services based solutions will grow. Furthermore, it was highlighted that local business units can focus on improving performance in their core business areas and non-core services such as Email, Telephony, Firewall management and many more non-value functions are eliminated as a distraction for the local business. It has been suggested that large enterprises following best practices have found that consistent service delivery and improved value focus within local business units has easily offset the cost and effort of implementing shared services. (Forrester, 2010, IMA, 2011)

2.4.5 Established Performance and Control through Service Level Agreements

Previous studies have reported that service levels improve when services are delivered through a shared service operation. A significant factor is the increased demands of customers in an ICT shared services environment compared to an individual IT department within a local business unit. The objective of a shared service operation is to satisfy its customer requirements. Furthermore, the literature revealed that the majority of IT departments prior to shared services did not follow Service Level Agreements (SLAs) that are a standard component of the Shared services model. (Gartner, 2014, Davis, 2005, Goodwin, 2013)

Many researchers have argued that a high customer satisfaction level is critical for the ICT shared service operation because of its role as a professional service organisation. It has to prove that it can deliver the same quality of service as the local business unit previously delivered if not an enhanced service. Moreover, it was highlighted that failing to reach these service levels can threaten the shared service operations existence. (Accenture, 2005, IBM, 2011b, Gartner, 2012)

Bergeron (2002) indicated that the SLAs keep the shared service model on track and furthermore these agreements must be in line with corporate, regional and local laws.

There have been several studies in the literature reporting that when shared service operations exist the local business units they support actually increase their expectation levels. It was highlighted that due to the availability of SLAs and KPIs and other measurements, customers contemplate their satisfaction and expectations increase as they anticipate future enhancements. In most instances these measurements did not exist previously and the service levels were not measurable. (IMA, 2011, Gartner, 2012)

2.4.6 Spin off Potential

Research by Mclvor (2010) stated that an additional benefit to shared services is the spin-off potential. Mclvor explained that multinational organisations shared service operations could be used to generate income by offering the service to clients. This would enable the organisation to exploit its expertise in the service. In addition, the author outlined how business units benefit from continuous improvement of the shared service operation. He revealed that specialisation allows the operator of the shared service centre to drive improvements in both efficiency and service levels. Moreover, the author specified that through transferring many non-core functions into a SSC the resources at the local business units can then take on a more strategic role and focus on more value adding initiatives. (Mclvor, 2010)

2.4.7 Complexity Reduction using a single platform

Previous studies have reported that having a single platform for financial processing will enable common processing across the organisation. It was highlighted that organisations utilising a single Enterprise Resource Planning (ERP) solution enable the local business units to work collaboratively by following a standardised approach. In addition, this will produce process efficiencies, as all business units within the organisation will be following the same standards and best practices. Furthermore, it was highlighted that a common approach will enable reporting at a global level and will remove the need to manually adjust data before comparing the performance of one region against another. (IMA, 2011)

2.5 Key Success Factors to implementing shared services

Accenture outlined internal business unit employees need to comprehend the vision and strategy and appreciate the new customer orientated mind-set of the shared services entity. The report also specified that the employees require reassurance about their new roles and their value. A communication strategy is essential for managing employee morale concerns and overcoming uncertainty about the future. (Accenture, 2005)

There must also be strong leadership with the persistence, vision and passion to drive the shared service initiative to completion. Gartner outlined the leadership team must engage continually with all stakeholders over an extended period to build trust and credibility. The leadership team needs the political skillsets to question established formal procedures and decisions. Gartner also outlined a strategy of starting small and using the results to demonstrate the benefits of moving to the next stage and larger scale. (Gartner, 2011a)

McIvor (2010) specified that contract negotiations require significant attention. He highlighted that determining Key Performance Indicators (KPIs) and Service Level Agreements (SLAs) is an intricate process and requires personnel with specialist skills. The author recommends that local business units obtain external legal advice and specialists in performance measurements to assist in addressing contractual challenges.

A report by consultancy firm Gartner (2010) stated that attaining “buy-in” from senior executives in the organisation is crucial to creating the momentum required for the organisational transformation into shared services. Strong leadership is instrumental in overcoming uncertainty and territorialism and in creating consensus among a broad group of stakeholders with widely differing views, including management, technical personnel and the end users at the local business units. The sponsorship from senior executives needs to be constant through planning, implementation and delivery. The team leading a shared

services journey need to be equipped to deal with negativity and stubbornness from the local business units.

A successful ICT shared services implementation requires a clear focus from the beginning and a vision that looks beyond the initial shared service delivery and this vision is shared among key stakeholders. Once the vision is created, a detailed strategy is critical. This strategy should outline what ICT functions will be migrated to shared services and what ICT functions will remain within the local business units. The strategy should also specify how the roles and responsibilities will be distributed between the shared service entity and the local business units. (Accenture, 2005)

It was widely commented on throughout the literature that competition to the shared service model is key. External providers should offer genuine competition for the business provided by the shared service organisation thus maintaining pressure on the shared services to be competitive, reduce costs, follow best practices and motivating the personnel to keep on top of customer service. If there is no competition the shared service model will eventually transfer into a centralised model. (Ernst and Young, 2011, Mclvor, 2010, IBM, 2011b)

2.6 Barriers and Challenges to an ICT shared service delivery model

ICT shared services arrangements pose significant challenges to the local business units. The business units have to move from non-core support roles to one of value-adding. A recent study by Ulbrich and Schulz (2014) indicated that the challenges encountered are due to the impact on people, processes and the organisational structure through the implementation of ICT shared services. The authors highlighted there is a fear of change within the local business units. Furthermore, many large enterprises have reported communication barriers between the ICT shared service entity and their local business units. The study revealed in many instances there is a lack of leadership and commitment from senior management.

It has also been suggested by Mclvor (2010) that many multinationals are struggling to deal with challenges such as system standardisation, globalisation, integration and consolidation of acquisitions and changes in expectations within the business. In addition, it highlighted disparate and fragmented systems throughout the organisations business units as a challenge. The author indicated that implementing enterprise systems through a shared service delivery model has been seen as a way of combatting these challenges.

It was widely commented on throughout the literature that the most common barriers and challenges for implementing ICT shared services include:

2.6.1 Data Protection Concerns

Several studies have revealed that data protection laws have negatively impacted organisations from implementing certain ICT shared services. The authors outlined that important legal issues in ICT shared service arrangements include data privacy and security, the protection of intellectual property (IP) and procedures for dealing with dispute resolution. In addition, they indicated that data privacy laws differ considerably from country to country. They highlighted that in the European Union (EU), the Data Protection Directive has placed strict privacy standards on organisations exporting data on EU citizens outside their region. (Mclvor, 2010) (Rao, 2004) (Bergeron, 2002)

2.6.2 Complex ICT Systems and Migration Costs

Previous research has shown that costly challenges have been encountered by many organisations implementing ICT shared services. The literature indicated that many large enterprises have failed to achieve the benefits of ICT shared services as poor implementation has led to expensive failures. The research also indicated that when local business units choose to highly customise IT systems to meet local requirements, development costs increase and the organisations fail to achieve the benefits of process and system standardisation. (Ulbrich and Schulz, 2014, Bergeron, 2002)

Mclvor (2010) and Ulbrich and Schulz (2014) discussed the significant challenges organisations encounter with the replacement of legacy systems. It was reported that in many instances the resources at the shared service operation do not fully understand the local business system dependencies. Organisations often do not fully understand the difficulties of transferring responsibility for an internal IT function to an ICT shared services delivery model. There are complex, and often misunderstood, interdependencies between systems and functions. In addition, even when a system is considered to be a non-core function, there can be unknown interdependencies with other systems that are considered to be core functions to the organisation.

2.6.3 Change Resistance and Internal Conflict

In a survey conducted by Accenture (2005) the results stated that personnel pressure was the top professed challenge. Accenture went on to outline that making ICT shared service mandatory at the top levels of multinational organisations will resolve the majority of internal political and workforce disputes and it makes many arguments irrelevant. In addition, it was stated that strong political leadership can bring its own set of challenges. Undertaking unpopular decisions can result in the shared services operation having to endure resentment from local business units and will result in increased time and effort in earning the support required.

Many researchers have described system and process standardisation as a long term benefit however the initial move to standardise and improve process performance presents significant challenges including a reluctance of local business units to hand over controls to ICT systems. Ulbrich and Schulz (2014) indicated that in many instances the local business units IT teams do not want the ICT shared service operation to take over. They concluded that in order to support a successful implementation of ICT shared services it is important to have strong commitment from senior management. (Ulbrich and Schulz, 2014) (Bergeron, 2002, Accenture, 2005)

2.6.4 Threat of job losses

Research by Mclvor (2010) indicated that multinational organisations often fail to take responsibility for the personnel issues associated with the implementation of ICT shared services. The primary focus of many shared service strategies is the reduction of costs regardless of the damage that it may cause to the resources that remain in the local business units. The introduction of ICT shared services adversely impacts the local IT team's sense of job security. Internal fears and resistance can lead to tactics being employed to ensure the ICT shared service initiatives fails.

Several studies have described the significant impact that ICT shared services can pose to the affected business units' internal IT team. The literature indicates that the retained personnel need to move from a support intensive role to a more strategic position that brings additional value to the organisation. Furthermore, the research highlighted that if the retained workforce fail to take on a more strategic role then they might be in danger of becoming the target for further shared services initiatives. (Deloitte, 2011a, Gartner, 2008, Accenture, 2005, Mclvor, 2010)

2.6.5 Lack of trust in the shared service

Several studies have revealed that within many large enterprises there is a concern over the ability of the shared service entity to deliver services. The literature questions the capacity to deliver first class solutions and meet Service Level Agreements (SLAs) and Key Performance Indicators (KPIs). The local business units are the shared service operations customers and it is important there is trust between both the shared service provider and the local business units. From the local business units perspective the shared service provider needs to prove it can deliver on its promise in order to gain trust from its customers. Ulbrich and Schulz (2014) stipulate that the local business units need to be informed of successful engagements in order to build trust in the provider. They specify that successful service deliveries by the shared service provider and positive feedback from other business

units will be a key success factor in getting other business units on board. (Bergeron, 2002, McIvor, 2010)

2.6.6 Cultural Differences, Language Barriers and Poor Communications

A considerable amount of literature has been published on the impact of cultural and language barriers and poor communications with regard to shared services. In a study by Krishna et al. (2004) the authors indicated that communication difficulties can arise as a result of the accent of foreign speakers and their lack of fluency. Previous studies in the USA, Western Europe and Japan have highlighted the challenges of managing cultural issues in global software development projects. Indian support staff have had to communicate with the internal customers in the USA and Japan in different ways, where the USA customers preferred a formal Email-based communication approach and The Japanese preferred verbal discussion. (Krishna et al., 2004) (McIvor, 2010, Ulbrich and Schulz, 2014)

Research by Ernst and Young (2014) indicated that failure to accomplish “cultural alignment” may result in an underachieving shared service provider due to low morale, decreased productivity and poor employee retention.

Several studies outlined that incomplete understanding of client requirements especially in software development is a major challenge experienced by shared service customers. McIvor highlighted that this is especially difficult when the end user requires a highly customised development and there are complex interdependencies with other processes. Furthermore, the author revealed that reduced face-to-face contact and informal communications between the client and the shared service provider can lead to misunderstandings of requirements. Language misinterpretations can occur due to cultural differences. (McIvor, 2010, Krishna et al., 2004)

2.6.7 Poor Implementation, high start-up costs and risk

There have been several studies in the literature reporting that transferring IT functions to a new service delivery model involves significant risk to the organisation. The literature indicated that implementation of a shared services structure is susceptible to issues as with any other major change effort. Bergeron (2002) indicated that some of the common reasons that shared service implementations fail are owing to the organisation neglecting to establish and outline Key Performance Indicators (KPIs) and Service Level Agreements (SLAs), resulting in the inability for the organisation to achieve the perceived value from the shared service structure. (Bergeron, 2002, McIvor, 2010, Ulbrich and Schulz, 2014)

Furthermore the literature indicated that without a rigorous implementation strategy, the introduction of shared services can be counterproductive and increase inefficiencies and costs. Research by IMA (2011) and Bergeron (2002) specified that its crucial is to remove the bureaucracy and structure that blocks the creation of a responsive customer-driven process.

2.6.8 Lack of local business knowledge

Research indicated that the employees at the shared services operation do not always have an appropriate understanding of the local business units they support, which can cause project delays, poor service and system outages due to lack of understanding of system dependencies and workflows. Understanding the workflow and operations of the local business units is an important factor in effective software development. (Mclvor, 2010) (Bergeron, 2002) (Siew Kien et al., 2010)

2.7 Conclusion

The previous sections in this chapter have served to analyse existing literature to determine the factors that influence the implementation of ICT shared services in multinational organisations.

The literature has also examined the historical background on the development and implementation of shared services and illustrated how this service delivery model has evolved over the past two decades. The literature has demonstrated the different service delivery models adopted by multinational organisations and the merits and demerits of each model. As seen from the literature there are multiple ways that ICT services can be delivered to the business and the delivery model determines how the services will be delivered. The literature has compared and contrasted delivery models that include Shared Services, Hybrid, Outsourcing and Insourcing. Each model optimises different elements and the transformation to an alternative model drives important change around pricing structures, personnel roles, standardising processes and managing resources. Regardless of the service delivery model implemented, in order to deliver an efficient reliable service the model should include Service Level Agreements and Key Performance indicators to maintain a continuous improvement process.

The literature review outlines the importance of a strong governance structure for a successful ICT shared service model. The consensus amongst the literature was that a well-defined governance structure is a key component to a successful shared services implementation. The governance body is responsible for resolving disputes between the shared services operation and its customers.

The literature also examined the centralised and decentralised operating models adopted by multinational organisations. The advantages and disadvantages of each model were discussed and the literature specified that organisations should centralise for efficiency and decentralise for effectiveness. It was evident from the literature that the operating model adopted by organisations played a key role in their shared services strategy.

The literature has also revealed the different strategies undertaken by multinational organisations when planning and designing a Shared Service Centre. It highlighted the different criteria that organisations evaluate in determining their SSC strategy and include decisions on single site versus multi-site centres, single function versus multifunction centres and the geographical location. It was also indicated that several SSCs are relocating existing SSCs to lower cost and highly educated regions.

The benefits in the adoption of ICT shared services are significant and wide ranging in terms of IT security, data protection, resourcing, organisational structures, financial, technical and innovation. The literature in the research has outlined that many organisations who have adopted an ICT shared service model are achieving significant results in terms of reduced costs, service improvements, speed and quality of service and strategic benefits. Research has shown that despite the successes and obvious advantages and opportunities in ICT shared services, there are also barriers and challenges in implementing them. The challenges range from complex IT systems, costly migrations, change resistance, loss of agility and flexibility, loss of local control, increased bureaucracy, long project timelines, unclear service accountability and rigorous change management processes. Dealing with the compromise of reducing costs versus limited localised service delivery support is also a significant challenge to address in the evaluation of any ICT shared service delivery model. The literature revealed that ICT shared service operations in foreign locations includes a number of additional challenges such as language barriers, culture differences, service quality, time zone issues, and data protection concerns.

There is a wealth of industry literature focusing on shared services within the private sector however the academic literature predominantly focuses on the public sector. A significant amount of this research is broad and focuses predominantly on the support functions in Finance and Human Resources and only provides limited literature on ICT and does not explore the ICT functions in any great depth. It has also been mentioned by Ulbrich (2006) who noted the lack of shared services research from an academic perspective.

In summary, ICT shared service initiatives have been adopted by multinational organisations, and have a collection of benefits and challenges that need to be managed. The literature review indicated that ICT shared services should be looked at from a business perspective with attention to reducing costs as well as improving service levels in delivering IT functions.

3 Methodology and Fieldwork

3.1 Introduction

This chapter outlines the research methodology adopted for the research. It provides an overview of the different research methodological approaches considered and specifies the rationale for the selection of the approach taken for this research. It is followed by a description of the research strategy, which entails the method of data collection and analysis, lessons learnt and ethical considerations.

3.2 Purpose of the Research

The purpose of the research study is to understand the factors that influence the implementation of ICT shared services in multinational organisations. An ICT shared services delivery model brings with it significant benefits for the multinational organisation as a whole, but also new challenges for the local business units in the manner IT services are provided. A shared service model is attractive to multinational organisations, as it promises benefits due to centralisation and/or consolidation of similar activities across the organisation. For the business, a shared services model is attractive because it frees up resources by transferring responsibility for a non-core activity to another organisational body. As discussed in the previous chapter there is limited research in the literature exploring the benefits and challenges of the various ICT functions utilised in ICT shared services. It is hoped the research could contribute to the research base and may serve to assist multinational organisations in choosing an appropriate ICT service delivery model to meet their enterprise's requirements.

3.3 Research Philosophies and Approaches

This chapter uses the research process demonstrated by Saunders et al to select a research philosophy that is appropriate to the research study undertaken. The manner in which data is collected, analysed and interpreted within a research study underpins a research philosophy. (Yin, 2014)

The research 'onion' is a much cited diagrammatic representation of a research process that was developed by Saunders et al. (2012) in which the research process is divided into six layers that include philosophies, approaches, strategies, choices, time horizons and techniques and procedures shown below in figure 3.1.

There are several philosophies that can be adopted in business and management research and the choice of which to use is important as it forms the basis of the research strategy and methods selected as part of the strategy. These are identified by Saunders et al as Positivism, Interpretivism, Realism and Pragmatism. The most important factor in choosing a research methodology is how well we can defend our particular choice in relation to the alternatives that could have been adopted as different philosophies are more suited to achieving different things. (Saunders et al., 2012)

Gill and Johnson (2010) outlines that positivism is an approach commonly used in scientific research and the positivist researcher will usually use a highly structured methodology with a predominantly quantitative approach in order to allow for replication of results that can be statistically analysed. Positivism assumes the world is objective rather than subjective and that only observable phenomena will lead to production of credible knowledge. Positivist researchers are concerned with generating research strategy to collect data to develop a hypothesis that can be tested and analysed to be either verified or disproven with subsequent further development of an existing theory. It has been suggested in previous research by Saunders et al. (2012) and Guest et al. (2012) that Positivism may not be suitable for social science especially as there is a requirement to deduce deeper meaning in dialogue that may be represented in a collection of witnessed behaviours and activities. (Guest et al., 2012)

Realism is a research philosophy that is often used in scientific enquiry and shares similarities with positivism in that it assumes a scientific approach to the development of knowledge that also underpins the collection of data and analysis of that data. It proposes that objects have an existence independent of human consciousness but accepts that knowledge is also socially created. (Saunders et al., 2012)

There are two types of realism; Direct and Critical. Direct realism states that what you see is what you get and that our experiences through our senses portrays the world precisely. Critical realists assert that we experience sensations or images of things in the real world and not the things directly. They assume that there are two steps to experiencing the world-

first is the thing itself and the implied sensations. Second involves the mental processing that transpires after the sensation meets our senses and that our resultant knowledge of reality is a result of social conditioning. In terms of business research the critical realist identifies the importance of multilevel study; at the level of the individual, the group and the organisation. The researchers understanding of what is being studied is affected by each of these levels. The assertion of the critical realist that the social world is constantly evolving is more suitable for business and management research. (Saunders et al., 2012)

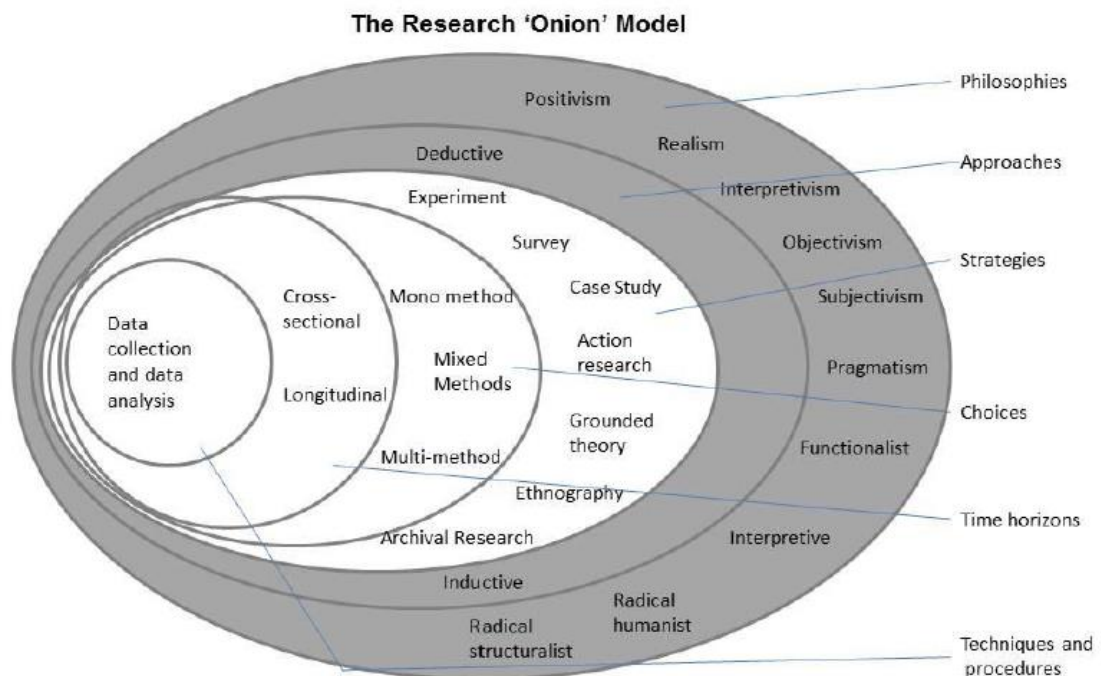
Interpretivism is a research philosophy that differs in its approach to positivism in the collection, analysis and interpretation of data. It is argued that valuable insights into the complex social world of business and management are too intricate to be interpreted by objective quantitative methods. It recommends that the researcher understands variances between humans in their social roles. It emphasises the differences between conducting research on people in comparison to objects. It is critical to the interpretivist philosophy that the researcher assumes an empathetic approach to the research subjects. The key is to understand the world from the point of view of the research subject by penetrating their social world. It is suggested that this philosophy is highly suited to complex description and analysis in business and management research as business situations are composed of complex and unique circumstances and individuals merging at a specific time. (Saunders et al., 2012)

Pragmatism is a research approach that involves using the research method that appears best suited to addressing the research problem. Pragmatic researchers recognise that there are many different ways of interpreting the world and undertaking research and use a variety of methods and techniques that include both qualitative and quantitative methods. Their view is that if the research question does not unequivocally suggest that a particular philosophy should be embraced then it is reasonable to use different philosophical positions and multiple methods within one study to answer the question. (Saunders et al., 2012)

The research question in this study was predominantly a qualitative one and it was considered appropriate by the researcher to adopt a qualitative approach to explore the factors that influence the implementation of ICT shared services in multinational organisations. An interpretivist philosophy was considered the most suitable for addressing the research question. A pragmatist approach was not chosen due to limited time constraints. A positivist philosophy was not considered suitable for this piece of research as a quantitative approach was not suitable and the author was not setting out to generate a

hypothesis to be proven/disproven using statistical methods, and as realism may have shared similarities with positivism this was also disqualified as considered unsuitable.

In terms of research approach it was considered that an inductive approach was the most suitable for this qualitative piece of research to explore the factors that would influence implementation of ICT shared services. Inductive reasoning is a commonly used approach in social sciences and is considered an essential constituent of qualitative research due to the exploratory and inductive questioning approach observed in qualitative research methods. (Guest et al., 2012)



Source: Saunders, Lewis and Thornhill 2009.

Figure 3.1: The Research Onion Model

3.4 Research Strategy and Methodological Approaches Adopted

Research strategies commonly used in business management research include case study, grounded theory, archival review, survey, action research, ethnography and in terms of Time Horizons can be cross sectional studies or longitudinal studies. After consideration of the various strategies case study was chosen as the most appropriate strategy for this research and will be justified in the subsequent sections. (Saunders et al., 2012)

3.4.1 Case study as a research Strategy

Case study research is concerned with studying a research topic or phenomenon within its real life context to gain an understanding of how the phenomenon occurs within a given situation. Case study can achieve many of the same objectives as other research strategies. For example, the case study can be exploratory, constructive, or confirmatory and can also employ either a primary or secondary approach. (UKEssays, 2015)

Case study research is ideal for looking at research questions that are closely connected to their context or situation. Research questions can be explored from perspectives that could be industry-specific, based on geographical location or the size/type of business. Different functions can be investigated. In this research the factors that influence the implementation of ICT shared services was explored in multinational organisations in multiple geographical locations in differing business units within organisations and across different business sectors in both centralised and decentralised organisations. Different IT functions including telephony, email, private cloud services, security, financial systems and software development needed to be assessed.

A case study strategy can also incorporate multiple cases and use of this strategy may be chosen to demonstrate replication of results. It is important to note that a longitudinal study was not carried out in this situation due to constraints of time.

The main limitations of case study research are that the small sample size makes it difficult to establish the reliability of research findings. It relies on qualitative data and is not a suitable study to support or reject a scientific hypothesis. (Saunders et al., 2012)

3.4.2 Semi-Structured Interviews

It is appropriate to use interviews as a research method when the researcher's aim is to gain an understanding of the participant's experiences and interpretations on a specific topic. Easterby-Smith et al. (2012) indicated that Semi-structured interviews are commonly used in qualitative research and are favoured over a structured interview as it provides flexibility to the researcher to ask a set of predetermined questions and themes associated with structured interviews but will retain the ability to allow the interviewee to elaborate on any subject that the researcher feels is pertinent during the interview. It was considered that a semi-structure interview would be an appropriate method to use for this research and would enable the interviewer to collaborate at a deeper level with the interviewee's, with uninterrupted conversation to achieve a deeper perspective of the factors that influence the implementation of ICT shared services within multinationals. (Easterby-Smith et al., 2012)

3.5 Sample Selection and Data Collection

Two different sampling techniques are used in research sample selection. In probability sampling each unit of the population has a known non-zero chance of being selected for the sample. Non probability sampling is where the samples are gathered in a process that does not give equal chance to all individuals from the population. In this research a non-probability sampling technique called convenience sampling was chosen. Convenience sampling involves selecting subjects because of their convenient accessibility and proximity to the researcher who would not have been able to access the target population using other techniques within the specified time frame of the study. (Saunders et al., 2012)

3.5.1 Description of study sample

The target subjects for this study were multinational organisations. Participants in the research sample were employed in fifteen distinct business units across seven different multinational organisations in a variety of industry sectors incorporating Financial Services, Manufacturing and Consumer Products within the EMEA region. Eight participants were based in centralised organisations and seven participants were from decentralised organisational structures.

3.5.2 Sample Selection process

The subjects were identified based on work contacts through the researcher's current workplace, previous employers and friends working in the IT industry. A small group of potential subjects who met the participant criteria for research were invited to be interviewed. Participants were required to be employed as IT professionals in senior management, technical consultants or IT directors and had some influence in decision making or had been affected by decisions made on their behalf.

Each participant was sent an introductory email containing a participant information sheet and a consent form outlining the purpose of the research and requesting permission to be interviewed on behalf of their organisation. Each participant was required to send an email confirming their consent to participate. After receipt of consent the researcher contacted each participant to set up a suitable appointment to conduct the interview.

3.5.3 Data Collection

Data was collected using semi-structured interviews. Each interview was approximately fifty minutes in length and each participant was interviewed once. The questionnaire was sent

to the participants in advance and the outline was followed during the interview process. A copy of the semi-structured interview questions are included in Appendix 7.3. Audio recordings were taken during each interview and notes from the interview were inserted alongside text for future analysis.

There are a number of biases associated with use of a semi-structured interviews to collect data. These may include but are not limited to insufficient time and lack of trust between the researcher and interviewee. Furthermore the employment grade of the participants within an organisation may influence their ability to answer certain interview questions. Confidentiality issues may impair a participant's ability to disclose certain information. A participant's ability to recall certain facts may also impair the interview process. A bias of the convenience sampling method is that the sample may not be representative enough. In addition as several of the informants were known to the researcher it may have led to answers that were influenced by the relationship between the interviewer and interviewee.

The researcher attempted to overcome bias in this study by interviewing people at differing management levels within the differing organisations. In an attempt to overcome recall bias participants were questioned on recent developments within their organisations. To try to overcome confidentiality bias all participants were informed of their rights to privacy and their right to withdraw from the research study at any stage and the procedures to safeguard data to ensure confidentiality. To overcome familiarity bias interviews were also conducted with informants that were not personally known to the interviewer.

3.5.4 Data Coding and Analysis

The transcripts from each interview were organised and coded thematically with regard to the various ICT functions such as telephony, email, private cloud, security, software development and financial systems.

3.6 Methodology Limitations

This case study was a cross sectional study and it only observed the factors that had influenced the implementation of ICT shared service at that specific point in time when the interviews were conducted. Although cross-sectional studies are valuable for identifying trends, a longitudinal case study over 12-24 months may have provided increased data for more thorough analysis.

A larger sample size of participants may have been beneficial for data analysis as it would have been more representative of multinational organisations. This would increase the validity of the research findings. Due to time constraints this was not possible and a more comprehensive study would rectify these limitations.

All interview participants were members of the ICT sector of the organisation being researched. It would have been beneficial to interview other interested stakeholders from other parts of the company to gain a broader perspective on the research topic.

3.7 Data Validity and Reliability

To improve data validity and reliability and reduce the risk of errors in data collection and interpretation, audio recordings were utilised and interview findings were transcribed into an excel spreadsheet to insure that all information obtained was accurate.

3.8 Ethics Approval

Ethical approval for this piece of research was sought and granted by the Research Ethics committee of the School of Computer Science and Statistics, Trinity College, Dublin, prior to commencement of the study. There were no ethical issues identified. The informed consent process informed the participants about the purpose of the research study. The participants were informed that participation was voluntary and they could terminate their participation at any point during the study. The participants were assured of the anonymity and confidentiality of the study findings. The Ethics Approval form is attached in Appendix 7.1.

3.9 Lessons Learnt

Several test case interviews with impartial participants were conducted prior to the start of research which proved helpful in honing the structure of the interview and the order in which the questions were asked. It also helped to improve the structure of some of the questions and reduce any ambiguities that arose.

A mixed method approach, incorporating case study and surveys can increase the validity of the case study findings by examining the same phenomenon in different ways to minimise the weaknesses in any single approach. A mixed- method approach could promote more complex interpretation of the research findings and allow for statistical analysis. (Yin, 2014)

4 Findings and Analysis

4.1 Introduction

This chapter will commence with an overview of the results from the semi-structured interviews conducted with IT Professionals employed as Technical Consultants, Senior

Managers and IT directors in multinational organisations from a variety of industry sectors within the EMEA region including Financial Services, Manufacturing and Consumer Products. A discussion of these findings will follow, with quotes selected from interviews to further illustrate key concepts. This chapter outlines the findings and analysis that were extracted from the interviews.

The results of the interviews identified several factors that influence the implementation of ICT shared services. The research also highlighted the differing utilisation strategies employed by organisations that operate a centralised organisational structure versus a decentralised organisational structure. In addition the research explores the barriers encountered by organisations in the adoption of ICT shared services and the challenges and benefits derived following implementation.

4.2 Participant and Organisation Descriptive

4.2.1 Organisational Demographics

Participant organisation profile characteristics were obtained from interviewees from a series of questions regarding the size of their organisation on a global scale, the size of their business unit, the number of full time employees in their local IT department, the business sector in which the organisation operated and the organisational structure.

Participants were based in a variety of locations across the EMEA region including Ireland, Sweden, Switzerland, Greece, France, Denmark, Portugal and Italy.

Of the fifteen participants interviewed, eight were from centralised organisational structures and seven represented decentralised organisation structures. For brevity, these participants will be referred to as 'centralised' and 'decentralised', for the remainder of the research.

The organisations operated in various business sectors comprising Financial Services (n = 4), Consumer Products (n = 4) and Manufacturing (n = 2).

The global presence of the participants' organisation is presented in Table 4.1. The majority of participant organisations have a presence in over one hundred countries. The participants also specified the size of their local business unit as outlined in table 4.2.

Table 4.1

Global presence of Participant organisations

Participants	Global Presence
11	100+
2	51-100
1	21-50
1	2-10

Table 4.2

Total number of employees at the participant's business unit

Number of Participants	Total Number Employees
1	2000+
6	1001-2000
4	501-1000
4	101-500

4.2.2 Participants Roles

Participants outlined their role within their organisation which encompassed a range of positions including Technical Consultant, IT Senior Manager and IT Director from multinational organisations. The breakdown of participant roles is shown in figure 4.1.

Participant Roles

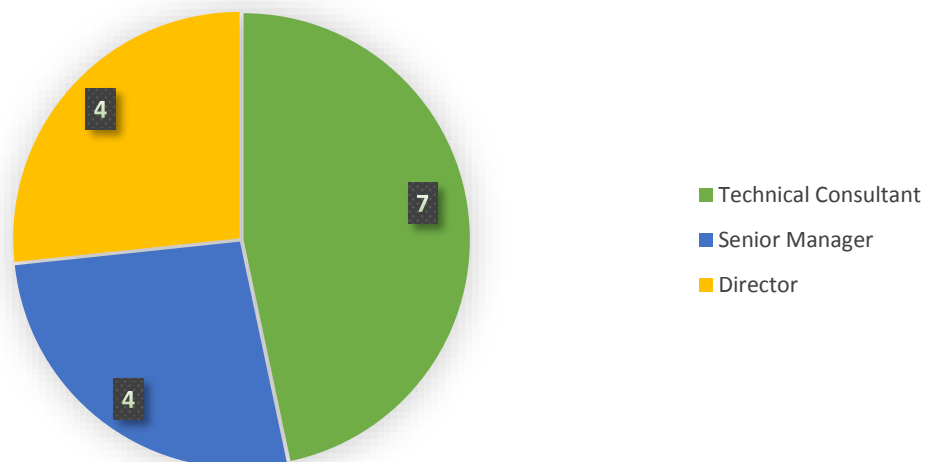


Figure 4.1 – Participant Roles in their organisations

4.2.3 Provision of Shared Services

The results from the interviews indicate that ICT shared services are widely utilised among multinational organisations. However, the provision varies within organisational structures. Gartner (2008) defines a Shared Services Centre (SSC) as a dedicated business unit that includes people, processes and technology. The SSC is organised as a central point of service dedicated to providing services to business units within the organisation. Shared services are usually delivered from numerous different regions. Implementation and delivery may be by internal employees or external providers or a combination of both.

The term "shared services" can also apply to services provided between separate business units within the multinational organisation.

Seven centralised organisations specified that the utilisation of ICT shared services is mandatory. Several of the participants felt that this was generally a good model however certain services worked better when provided by the local team. All seven participants stated that the key decision maker for ICT initiatives was the global CIO.

In contrast, all participants from the decentralised organisations indicated that utilising ICT shared services was currently on a voluntary basis. The majority of participants felt this situation was likely to change in the next three to five years. Six of the decentralised organisations stated they are currently expanding their use of ICT shared services and one is currently evaluating the implementation of ICT shared services. Analysis of interview data revealed higher use of shared services in centralised organisations in comparison to decentralised organisations. It was evident that the decentralised organisations were 5-10 years behind the centralised on their shared service journey. The majority of the centralised organisations however, operate a mature shared service model and are currently focusing on consolidating their Shared Service Centres to low cost reasons to reduce costs further.

As outlined in figure 4.2 six centralised and three decentralised participants specified that their multinational organisation had implemented one or more Shared Service Centres.

In contrast, one decentralised participant revealed that their organisation did not currently have a Shared Service Centre further indicating that ICT shared services were currently delivered by another business unit within that organisation.

In addition, one centralised participant specified that their organisation did not deliver any functions as a shared service. Instead all IT services in this organisations were outsourced

to an external provider. The participant stated that the Global CIO made the decision to fully outsource IT and that they had no immediate plans to move to a shared service model. “A decision was made to reduce the headcount of the local IT team and fully outsource IT. There are only two IT staff members in the team and our role now is to manage the vendors”.

Four participants stated that their organisation utilised shared services from other business units within their organisation and a Shared Service Centre. Three of these organisations were decentralised and stated that due to limited resources at a local level they implemented services from other business units within the organisation along with other services provided by the Shared Service Centre.

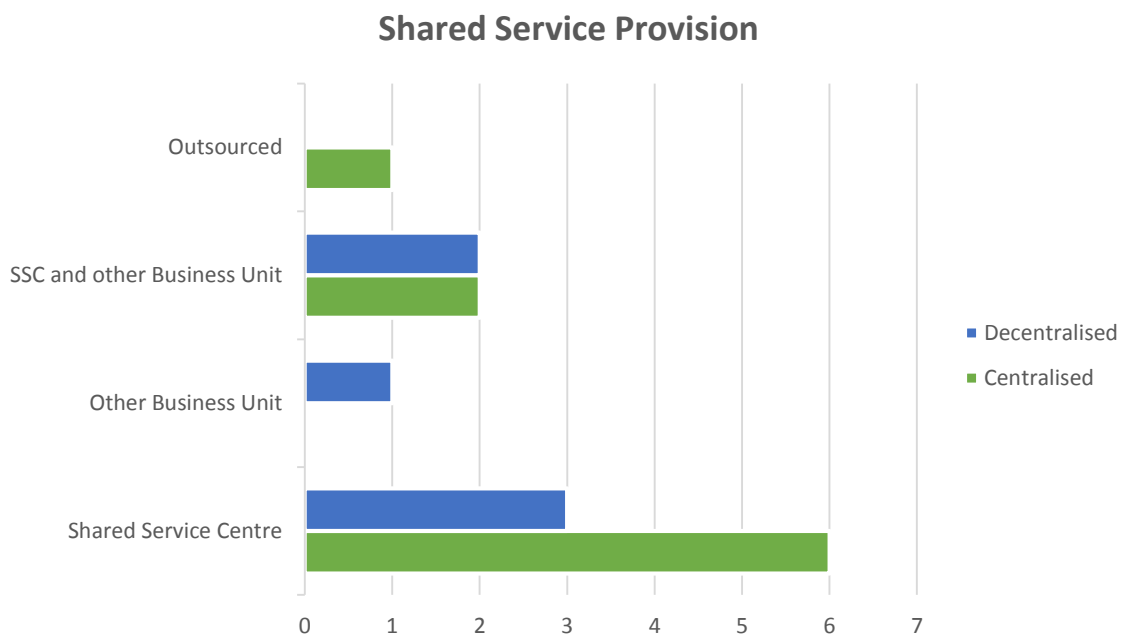


Figure 4.2 - Number of participants using each service provision.

4.2.4 Utilised ICT Shared Services – Common Themes

As part of the semi-structured interview participants were asked to outline the functions that were delivered as shared services in their organisations under the headings Security, Private Cloud, Communications, Financial systems, Software development, Project Management, Helpdesk management, Network and Server Management and Application Management.

A number of common functions and observations emerged following an analysis of the interview data. While some functions were universal across all organisations other functions were specific to the organisational structure and the shared service operating model

adopted. Six main areas that elicited detailed discussion were Email, Telephony, Security, Private Cloud, Financial Systems and Software Development.

4.3 Response and Analysis - Email Function as Shared Service

It emerged from the interviews that Email was the highest utilised shared service by the participant organisations. All but one of the eight centralised participants specified that their organisation implemented Email as a shared service. The remaining participant indicated that Email was outsourced to an external vendor as a managed service.

In relation to the seven decentralised participants, six individuals revealed that their organisations had implemented Email as a shared service. In contrast only one decentralised participant specified having Email managed internally by the local IT team, which was attributed to the fact that their shared service operation does not currently offer this function as a shared service.

The interviewees were subsequently asked a series of questions to assist in identifying the benefits, drivers, challenges and barriers that have been encountered from utilising Email as a shared service from a business, financial and technical perspective.

4.3.1 Benefits and Drivers for utilising Email as a Shared Service

Participants were asked to define the benefits their organisation had achieved from the implementation of Email as a shared service. The most common benefits and drivers that emerged were as follows:

Reduced Costs

Although none of the participants were able to confirm that cost savings were a direct consequence of utilising Email as a shared service, the majority of participants were in agreement that this service assisted in reducing costs for their organisation by achieving economies of scale from enterprise agreements. In addition, centralised and decentralised participants indicated that dedicated specialists were required to manage and administer Email in-house further stating that shared services reduced the costs and headcount associated with this function.

Improved Quality of Service Driven by Service Level Agreements

The majority of participants agreed that Service Level Agreements are key in maintaining high levels of performance between the shared service provider and their business units as it ensures consistent and satisfactory levels of service. Participants whose organisations had utilised this service stated that service quality had improved as SLAs obliged the SSC

to develop a customer oriented mind set and professionalise the service delivery of the Email function.

Optimised Labour Pool, Professionalism and Expertise

The majority of participants specified that their local business unit would not be able to achieve the same level of service if this function was managed in-house due to a lack of local resources and limited technical expertise at a local level. In addition, all of the participants felt that the shared service team that managed the Email environment were able to specialise in this functional area, which enabled them to provide superior service. Standardising services therefore facilitates the shared service operation to deliver the Email service at an agreed performance level, with an emphasis on customer service.

From a resourcing perspective, the majority of participants that utilised this service revealed that having transferred the Email function to a shared service, it was now managed and supported by a large pool of specialist resources. Several participants also spoke about how they could not afford dedicated resources to manage and support this function at a local level.

One participant from a centralised structure highlighted the benefits of utilising Email as a shared service as it provides an economy of scale that is unachievable by a single business unit, however the real business value was identified as the level of expertise available and resources that can be leveraged. This participant stated that not only do shared services enable business units to utilise subject matter experts that are not available in their own business unit, but they also provide access to software tools that business units cannot justify purchasing on their own. As a result, business units have access to superior talent that can lead to a strategic business advantage over the competition.

Greater Focus on Core Functions

All participants that utilised Email as a shared service specified that Email is seen as a non-core function in their organisation and having this delivered as a shared service has enabled the in-house team to focus on the businesses' core functions. None of the interviewee's felt that their business units lost any flexibility or agility having this service delivered as a shared service. Many of the interviewee's stated that by transferring the administrative tasks of managing the Email environment into the shared service operation this enabled the local IT team to take on more strategic roles and focus on innovative and strategic initiatives thus, adding business value. This was identified by some participants as a positive outcome for their team members that were displaced because many were redeployed into higher value

added roles, because of this function moving to a shared service. However other participants, mainly from a centralised structure, disagreed with these views indicating that very few team members moved into more strategic roles.

4.3.2 Barriers and challenges utilising Email as a Shared Service

The analysis of the interview data further revealed that Email delivered as a shared service was seen as a mature service and, as outlined earlier, the majority of the participant's organisations had already adopted this service. In turn, the most common challenges that the participant organisations encountered with this service were identified as follows:

Language Barriers and Time Zone Coverage

It emerged from the interviews that several participants felt that too much emphasis is put on reducing costs whilst insufficient importance was placed on factors such as language, time zones and culture. The interviewees revealed that these factors represent significant challenges for the shared service to deliver services effectively. In accordance, the majority of participants felt that cultural and geographic differences between their business unit and the shared service function impedes communication and consequently, it is difficult to develop trust and relationships with the shared service operation.

The majority of participants felt that language differences can act as a barrier to effective communication between business units and the Shared Service Centre. One interviewee for whom English was not their native tongue highlighted this as a major concern owing to the challenges arising from dealing with another person whose primary language was also not English. Several participants also indicated that the support team working at their shared service centre was hard to understand as communication was often hindered by a strong accent. In line with these findings, McIvor (2010) revealed that several large enterprises have had to relocate shared service customer support from India back to the USA, as a result of communication problems.

Time zone coverage was another common challenge identified by seven centralised and four decentralised participants, which emerged from the interviews. The majority of these participants indicated that although their shared service centres provided adequate cover they had encountered serious issues with Email services in the past and the appropriate people at the shared service operation were not always available. One participant from a centralised structure stated that when dealing with the US on critical issues there is a short 3-5 hour window due to time zone constraints to resolve issues. The teams in the other

regions do not have the skillsets or expertise to resolve some of the complex problems that we encounter”.

Loss of local Control

The general consensus among the Technical Consultant interviewees was that the loss of local control impacted resolution times when critical issues are encountered with the Email function. These participants also revealed that the loss of local control resulted in loss of accountability when issues arose. However, the majority of the Senior Manager and Director participants did not view loss of local control for this service as a challenge.

Redeployment Difficulties

Another finding that emerged from the interviews was the perception that after this function was moved to a shared service from local in-house team provision it proved difficult to redeploy displaced team members to new roles within the organisation due to their prior specialisation and limited broader skill sets. From a financial viewpoint, it was felt that displaced team members should be redeployed into more strategic value add activities. The technical consultant participants in centralised organisations disagreed with this statement however, as they felt their roles were demoted after functions such as Email were migrated to shared services. Consistent with these results, Mclvor (2010) found that only 63.4 %t of employees displaced by shared services in the USA between 1979 and 1999 were reemployed

4.3.3 Recommendations based on findings - Email as a Shared Service

From the participant’s perspective, the benefits of utilising Email as a shared service, outweigh the barriers and challenges encountered. In accordance the majority of participants specified that this operation has increased efficiency, improved levels of service and reduced costs.

Moreover, all participants agreed that even though an Email service has to perform to a high level it is unlikely to be a source of competitive advantage and consequently it is a good candidate to be delivered as a shared service. In support of this position Mclvor (2010) outlined that processes that have a marginal or insignificant impact upon competitive advantage are necessary for serving the needs of customers, they are not a means through which competitive advantage is created, and therefore represent potential candidates to be delivered as a shared service.

This service fits into the Murtagh shared services suitability assessment tool, which will be explained in further detail in the next chapter.

4.4 Response and Analysis – IT Security Shared Service Function

Analysis of the interview data revealed that the security services commonly implemented as a shared service by the participant organisations were Intrusion and Event Detection, Managed Firewall, Patch Management, Web Filtering and Anti-Virus. On the basis of participants' responses it was evident that centralised organisations utilised significantly more Security shared services in comparison to decentralised organisations.

Seven of the eight centralised participants indicated that their organisation had implemented Intrusion and Event Detection, Managed Firewall, Patch Management, Web Filtering and Anti-Virus as a shared service. The other centralised participant specified that all security services were outsourced to an external vendor.

In comparison, five of the decentralised organisation participants revealed that Intrusion and Event Detection had been implemented as a shared service. In addition, one decentralised organisation stated that this service had been outsourced to a third party while another decentralised organisation indicated that this service was not currently implemented.

Furthermore none of the decentralised organisations utilised Managed Firewall or Web Filtering as a shared service and for the most part it was not currently available as a shared service function within their organisation. However, the majority of the decentralised interviewee's specified that this was something they were planning on implementing in the future.

It also emerged that only one decentralised organisation had implemented Patch Management and Anti-Virus as a shared service but the rest of the decentralised participants once again spoke about how they are currently investigating utilising this as a shared service.

4.4.1 Benefits and Drivers for utilising IT Security functions as a Shared Service

The interviewees were also asked a series of questions to assist in identifying the benefits, drivers, challenges and barriers that have been encountered from utilising security functions as a shared service from a business, financial and technical perspective. The most common benefits and drivers for utilising IT Security functions as a shared service that emerged from the participant interviews were as follows:

Cost Savings

The majority of participants, both centralised and decentralised, felt that IT security functions delivered as a shared service enabled their organisation to reduce costs through standardising security processes and economies of scale. The interviewee's that utilise security functions as a shared service indicated that the standardisation of security processes has reduced duplication across their organisation. Most of the centralised participants specified that their organisation reduced cost through economies of scale by combining services that had previously been carried out independently. It was further highlighted by centralised participants that their organisations reduced headcount at a local level because they no longer required network and security specialists.

Improved Service

It was also evident that the majority of participants felt that the shared service operation was competent in specialist security areas such as Firewall Management, Intrusion Detection, Patch Management and Anti-Virus. The feeling among the participants was that Security is likely to improve through shared services because there are fewer endpoints for attack, increased implementation of standardised security processes, and the shared service operation allows for capital investment for continuous improvements in critical security infrastructure.

Several interviewee's from small business units revealed that they could not afford to have dedicated resource personnel skilled up in specialised areas. They felt that availability of specialist resources at the shared service operation to manage security services resulted in superior service levels to the organisation as more time could be dedicated to their specialised areas to drive efficiency and continuous improvement rather than supporting security functions in-house. Centralised participants talked about how the standardisation of specific security services, through utilising the shared service operation across the organisation, enabled them to deliver services at an agreed performance level with a focus on customer service. Indeed, most of the centralised participants stated that there is a focus on customer service from their shared service operations and the specialist shared service resources are tasked to monitor key performance indicators (KPIs) and meet Service Level Agreements (SLAs).

Participants further highlighted that centralising security functions leverages the skills of the Security Shared Service team. This was discussed specifically by participants from smaller business units operating in less developed regions of the world where skills to perform these Security functions are more difficult to recruit.

Protecting the Organisations Brand

The findings indicate that there was a drive from a global level to improve security standards in the organisations operating a decentralised structure, in particular, with regard to protecting their organisations brand against cyber-attacks.

24/7 Monitoring

The majority of participants also felt that the shared service centre could offer 24/7 monitoring that would not be possible if managed at a local level. It was further highlighted that the Security Shared Service operations provided 24/7 managed network coverage for inbound and outbound Internet connections.

Reduce Distractions from core competency activities

The interviews also revealed that the IT Security function is a non-core activity for the participant organisations. In accordance, most participants stated that IT Security is the backbone of the organisation, which should be managed by dedicated specialist resources. As previously outlined, the majority of the decentralised organisations managed IT Security function internally. Most of the decentralised participants felt that their in-house teams invested a significant amount of resources, time, and effort managing Security functions however it would be more beneficial to the business to invest this time in more strategic, value-add tasks.

4.4.2 Barriers and Challenges outlined for utilising Security Shared Services

It emerged from the interviews that Security functions delivered as a shared service were adopted significantly more by the centralised participants. In contrast, the decentralised participants had only initiated certain functions however they were currently investigating implementing additional functions. The most common challenges the participant organisations encountered with this service were identified as follows:

Loss of Agility and Flexibility

Several Technical Consultant participants revealed that the requirements of their business units to continually evolve and get a competitive advantage over their competitors sometimes require Security changes to the network. Having this managed by the Security Shared Service however involves extensive lead times and a rigorous change control approval process resulting in the loss of agility.

Poor Communications

Another common challenge that emerged was poor communications from the Security Shared Service. Five centralised and six decentralised participants indicated that communication can be ineffective with regard to upgrades and Root Cause Analysis (RCA) updates on outages. One centralised participant stated that certain associates in the Security Shared Service centre seem detached from the business further indicating that they provide services to the business unit remotely and consequently lack an understanding of what is happening in the business. An IT Director from a decentralised structure indicated that “maintaining high levels of high quality customer service is one of the biggest challenges with our security shared services centre”. Several participants also highlighted that there is a lack of clarity in the respective roles within the Shared Service team and personnel structures are not communicated to the business units, therefore it is unclear whom to contact when assistance is needed.

Threat to job losses

An interesting finding from the interviews was the prospect of job losses. Several Technical Consultants participants highlighted this as a challenge, particularly those from a centralised structure, indicating that they were unsure about future prospects in their current roles. One centralised participant who had specialised in IT Security and Network management revealed that he was made redundant and was subsequently taken back on as a contractor as local presence was still required. He commented that “as we centralise everything to shared services local issues will be outsourced to a third party based on a Service Level Agreement and local IT will no longer exist”.

Participants were also asked whether they envisaged the implementation of shared services as a threat to their team’s jobs and whether their department had encountered a headcount reduction since utilising Security shared services. Mixed responses were received. Seven interviewee’s felt that their jobs were threatened by shared services, two respondents felt their jobs were not currently under threat as headcount reductions had already taken place, while the remainder did not feel their jobs were under threat.

4.4.3 Recommendations based on findings – IT Security as a Shared Service

The findings from the interviews demonstrate that IT Security functions represent a good fit to be implemented as a shared service. The primary advantages of this function, as outlined by participants, were that transforming this backend operation into a shared service will lower costs through economies of scale and reduced headcount. It will also reduce risk for the organisation by introducing best practises and standardising processes. In addition, it will be managed by a pool of specialised dedicated resources and monitored 24/7. The

participants also stated that while IT Security functions are non-core functions for their organisations, they do require specialist resources to prevent potential cyber-attacks and protect the organisations and its brand.

The benefits and drivers of implementing Security functions as a shared service outlined during the interviews definitely outweigh the barriers and challenges encountered. In accordance, the majority of participants specified that this operation has increased efficiency, improved levels of service and reduced costs.

This service fits into the Murtagh shared services suitability assessment tool, which will be explained in further detail in the next chapter.

4.5 Response and Analysis - Private Cloud Function

Some discordant views emerged from the interviews with regard to utilising a Private Cloud as a Shared Service. The interviewees felt that the shared service organisation was in direct competition with public cloud offerings and debated the benefits and challenges of delivering this function internally by shared services, or by a public cloud provider.

The findings indicated that only four of eight centralised participants had implemented Private Cloud as a shared service. These participants specified that their organisations are providing Infrastructure as a Service (IaaS), to their organisations business units. In addition, three centralised respondents did not utilise and one had outsourced this function.

In contrast, none of the decentralised participants had this function available as a shared service however, most respondents felt that they would utilise it once it became available. In addition, the majority of participants revealed that private cloud initiatives would be high priorities over the next year.

One interviewee stated that “this is a relatively new service provided as a shared service. Our business unit would not have been in a position to invest in IT infrastructure to create a private cloud so from a cost perspective this made a lot of sense to the business”. Three of the centralised organisations also reported that they should have a Private Cloud as a shared service offering in the next three years.

Historically, most of the participant organisations were responsible for its own IT infrastructure. It was highlighted that with the advancement of IT, and the need to reduce infrastructure costs, the individual business units who had not utilised any Cloud services

were starting to come under pressure to investigate consolidating IT infrastructure using a private cloud model.

The four participants that had adopted this service indicated that their Shared Service centre was determined to hold their place in the market and to adapt Cloud Services by offering more scalable and elastic services through building private cloud infrastructures or reselling services that are provided by external Cloud services.

4.5.1 Benefits and Drivers for utilising a Private Cloud as a Shared Service

The participants were asked a series of questions to assist in identifying the benefits, drivers, challenges and barriers associated with a shared service Private Cloud offering. The most common benefits and drivers outlined during the interviews for utilising a Private Cloud as a shared service were as follows:

Cost Savings

It emerged from the interviews that a key driver in implementing this service was cost savings through utility based pricing. This allows the business unit to pay for only the IT resources they use rather than the full load capacity that the majority of participant organisations are currently using. The low upfront costs for the Private Cloud as a Shared Service offering was also outlined as a driver as this will enable cost saving economies of scale.

Scalability

Another benefit outlined by the majority of participants was the rapid scalability to match variations in business demand that offers opportunities for rolling out new services rapidly to the business. Several interviewee's reported that they could not predict their business unit demands and it was difficult to forecast infrastructure requirement internally. All participants stated that the Private Cloud offering will enable them to instantly scale up and scale down environments as required.

Drive Business Value through Innovation

The participants felt that their organisations could achieve greater innovation through the ability to deliver new and evolving technologies, creating a more flexible and agile organisation.

Security

It emerged that when the participant's organisations were considering which services to adopt from their shared service operation or through an external cloud provider, it was

critical to assess the security required. Several interviewee's stated that when security is not vital, the public cloud is a more cost effective option. In addition, they felt that when the required service contains confidential data and high levels of security are compulsory, utilising the service through the shared service operation is the preferred option. It was also highlighted by participants that in some instances organisations do not allow services to run outside of the internal network thus, the public cloud is not an option.

Expert Resources at the Shared Service Centre

The majority of participants felt that their business units would not have the specialist resources required to design, implement and manage an enterprise private cloud and would opt for a shared service option.

4.5.2 Barriers and Challenges outlined for utilising a Private Cloud as a Shared Service

The participants felt that acquiring services from a private cloud managed as a shared service had significant benefits as outlined above, however it was not without challenges. The main concern for most of the participants was security. They were all accustomed to managing IT services securely in their own premises' Data Centre.

The most common barriers and challenges outlined during the interviews for utilising a Private Cloud as a shared service were as follows:

Public Cloud Offering Better Value

Several participants felt that the benefit of shared services was to reduce investment requirements and were convinced that lower costs could be achieved through external cloud providers versus private cloud as a shared service. The participants also specified that external providers can not only provide this function at a reduced cost but in some instances there were added value and benefits that exceeded that of the shared service operation. It was also highlighted that some public cloud providers could offer a higher level of service through its innovative characteristics all at a lower cost than that is achievable from the shared services alternative.

The interviewee's also felt that with the Infrastructure as a Service (IaaS) market constantly evolving and the wealth of competition, added value is needed to separate the shared service offering from its external competitors. Several participants indicated that given the significant benefits that cloud offers, it is unlikely that the Private Cloud offering by shared services can compete with an alternative of using an external cloud provider.

Data Protection

It was outlined by several participants that their organisations could not utilise services that hosted certain data sets on servers outside their own country regardless of whether the server was running in a public or private cloud. It was additionally highlighted by one interviewee that the cloud provider must comply in full with the data protection laws applicable in their country.

Data Encryption

Several participants raised data encryption as a concern in migrating critical services to the Private Cloud. Respondents from the financial sector indicated that they held sensitive data and had to comply with a certain regulatory requirements such as Sarbanes-Oxley Act (SOX).

4.5.3 Recommendations based on Findings – Private Cloud as a Shared Service

The case for a Private Cloud Shared Service offering is complicated by the increasing availability of cloud offerings from external vendors. The findings suggest that in most circumstances organisations are seeing the benefits of Cloud Services offerings over Shared Services, especially where pressures to constantly reduce costs are a major concern, which was evident from the majority of interviewees. Most participants felt that this was putting a Private Cloud as a Shared Service and Cloud offerings from external providers on a challenging and competitive journey. It was interesting however, to hear that most participants felt that the external Cloud providers would prevail in this instance.

This service fits into the Murtagh shared services suitability assessment tool, which will be explained in further detail in the next chapter.

4.6 Response and Analysis - Telephony Function

All participants agreed that the Telephony function is seen as a non-core function in their organisation and having this delivered as a shared service should enable their in-house teams, which support this function, to focus on the businesses core functions. It was also highlighted by several interviewee's that although this is a non-core function the advances in the Telephony function provided by their shared service operation has enhanced collaboration methods.

The interviews revealed that four centralised and two decentralised participants had adopted Telephony as a shared service. The four centralised participants stated that adoption was mandatory for their business units whereas the two decentralised respondents specified that it was a voluntary decision to utilise this service.

In addition, two centralised and two decentralised participants specified that their organisations outsourced Telephony services whilst the rest of the interviewee's outlined that Telephony services are currently managed by their organisations in-house team. The participants whose organisations managed this function internally indicated that the decision not to provide Telephony as a shared services model was based on an assessment of their business units' existing Telephony infrastructure and operating environment.

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4.6.1 Benefits and Drivers outlined for utilising Telephony as a Shared Service

The most common benefits and drivers for utilising Telephony functions as a shared service that were outlined by participants during the interviews were as follows:

Reduced Costs and Resource Savings

The participants that implemented Telephony as a shared service indicated that their organisations had reduced costs through economies of scale and no longer needed significant capital infrastructure investment. They also stated that their organisations reduced their expenditure among geographically dispersed business units without long distance charges. In addition, the participants discussed how integrated audio, video, and web conferencing has assisted their organisation in reducing travel costs as well as the cost of third-party conferencing solutions.

Improved Levels of Service

The majority of participants that implemented this function as a shared service felt that the performance and reliability had improved. The findings highlighted that the resources that managed this function at the shared services were experts in this field that delivered a well-managed, internationally deployed solution to their organisations' business units, regardless of location.

4.6.2 Barriers and Challenges outlined for utilising Telephony as a Shared Service

The most common challenges that were encountered with this service were as follows:

Outsourcing Model more Cost Efficient

Two of the interviewee's whose organisations had outsourced this function stated that they were satisfied with the level of service provided by the external vendor indicating that it provided greater cost savings in comparison to shared services. However, the other two participants who also outsourced this function specified that the cost of transitioning to an outsourced model for this service was significantly more than what they had factored into their decision.

Threat of job losses

The threat of job losses was also highlighted during the interviews with regard to implementing Telephony as a shared service. Several participants that managed their Telecoms internally indicated that they had dedicated resources that managed this function and if their organisations utilised this function as a shared service, the resources would either be made redundant or best case scenario would be that they get reskilled in another area.

Current Investment in local Infrastructure

Several participants specified that their business units had made a significant investment in infrastructure to support the Telephony function. They stated that this investment was made before their organisations' shared service centre provided Telephony as a shared service. In addition, these participants revealed that they would not investigate utilising this function as a shared service until the infrastructure was close to End of Life.

Overreliance on the Shared Service Centre for Communications

A number of decentralised participants indicated that their organisations already had Email provided as a shared service and they did not want to have all communication tools hosted in the same location in order to reduce risk.

4.6.3 Recommendations based on Findings – Telephony as a Shared Service

The findings demonstrated that delivering Telephony through a Shared Service model can produce a wealth of improvements, improve the quality of service, economies of scale and standardise processes across the multinational organisation. It was also highlighted during the interviews that this is a non-core function and the resources that support this function in-house could be better served by focusing on more value add initiatives. In addition, delivering this service by an Outsourcing model should also be investigated as several participants felt that this offered greater savings in comparison to shared services.

Shared Service Opportunity Assessment Tool

Telephony delivered as a shared service fits into the Murtagh shared services opportunity assessment tool. This tool was developed by the researcher to review all potential ICT shared services and the potential cost and performance improvements they would offer delivered as a shared service. Included in this assessment is a broad range of strategic, operational, and economic questions.

The essential ingredient in any successful implementation of a new shared service offering such as Telephony, Private Cloud etc. is determining the scope of effort, potential savings and its suitability. This tool was designed to assist organisations identifying new services to be implemented as a shared service. While the decision in selecting what services should be shared will vary from company to company, the Murtagh shared services opportunity assessment tool will assist organisations in choosing the best candidates to be delivered as a shared service. This will be explained in further detail in the next chapter.

4.7 Response and Analysis - Financial Systems as a Shared Service

The findings from the interviews revealed that the majority of participants from decentralised organisational structures are struggling to deal with complex financial systems. Those managing their financial systems internally reported that they are facing challenges integrating and consolidating acquisitions and standardising processes. Some of the decentralised participants also highlighted that they are investigating implementing enterprise financial systems as a way of addressing these challenges. Only one of the decentralised participants reported that their Financial Systems were provided as a shared service indicating that “financial systems are hosted and managed by another business unit within our organisation and provided as a shared service. We were both on a similar platform so a decision was made to migrate to their solution. They are a larger business unit and this has improved the quality of service.”

In contrast, six of the centralised organisations revealed that their financial systems were provided as a shared service and have been provided as a shared service for at least five years. All of these participants revealed that from a global and cross organisation comparability perspective this has worked well as a shared service. One participant from a centralised structure also indicated that this was a service they were currently evaluating to provide as a shared service. The interviewee stated that due to architecture complexities and non-standard financial systems across the organisation it was proving difficult to select a platform. The other participant from the centralised structure stated that their Financial Systems are outsourced as a managed service.

Six of the centralised organisations outlined that their Financial System was provided as a shared service. All six outlined that Financial Systems have been provided as a shared service for at least five years and from a global and cross organisation comparability perspective this has worked well as a shared service. One participant from a centralised structure identified this as a service they were currently evaluating to provide as a shared service. The interviewee stated that due to architecture complexities and non-standard financial systems across the organisation it was proving difficult to select a platform. The other participant from the centralised structure stated that their financial systems are outsourced as a managed service.

4.7.1 Benefits and Drivers for utilising Financial Systems as a Shared Service

The most common benefits and barriers for implementing financial systems as a shared service during the interviews were as follows:

Reduce Redundant, Obsolete and Complex Systems

It emerged from the interviews that a significant number of decentralised participants currently supported and managed bespoke financial systems that operated complex workflows. The majority of these participants felt that implementing an enterprise system would enable their business unit to eliminate complex and fragmented systems, and replace them with a fully integrated Enterprise Resource Planning (ERP) solution that followed standard processes and was managed by the shared service operation. However, one issue that some of the participant organisations appear to be encountering is that their multinational organisation have yet to standardise an ERP solution owing to the varied solutions implemented at local business units. The interviewee's specified that as a result some business units within their organisation are using SAP, Oracle, and PeopleSoft while others have implemented bespoke solutions.

Reduced Operating Costs

The participants from the decentralised structure believed that their business units could potentially reduce operating costs at a significant levels by implementing an enterprise financial solution. It was felt by these individuals that this solution would free up resources and achieve economies of scale from an enterprise agreement. In addition, several interviewee's specified that an enterprise solution would assist in reducing costs by improving productivity through automation and integrated workflows, and enhance decision making by providing real time enterprise wide information.

Standardising Processes

The findings indicated that the majority of the decentralised participants felt that the implementation of an ERP service managed and supported by the shared service operation could replace complex financial systems with a standardised, cross functional fully integrated solution.

Enhancement of the strategic roles on local Resources

Some participants felt that transferring administrative tasks to the shared service operation such as Invoicing, Payments, Payroll, Enterprise Resource Planning (ERP), and billing, would enable the local Development teams that currently administrate these systems to take on more strategic roles and focus on more value adding tasks. Several participants, mainly from decentralised structures, reported that their local development teams spend a significant amount of time on administrative tasks on back office financial systems. They felt that their teams could focus on more strategic initiatives whilst the more administrative tasks on back office financial systems could be carried out by the shared service operation.

Increase Service Quality and Performance Monitoring

The agreement among the majority of participants was that the implementation of an enterprise financial solution would provide senior executives with a snapshot of how the different functions of the business are performing, which will therefore enable the business to identify areas for improvement.

4.7.2 Barriers and challenges for utilising Financial Systems as a Shared Service

The findings from the interviews indicated that implementing enterprise financial systems as a shared service has proven mostly difficult for the decentralised participants due to the variety of enterprise solutions already implemented at local business units. Some participants specified that the complex workflows between their financial systems would be challenging to migrate to an enterprise solution.

The most common barriers and challenges outlined for implementing financial systems as a shared service during the interviews were as follows:

Complex ICT Systems

Several participants specified complex legacy systems as a barrier in migrating certain financial systems to a shared service, with the most commonly reported being complex finance systems. One participant also revealed that the potential risk and cost associated with migrating from their existing platform was the primary reason for not utilising the shared service.

Cost involved in Migrating Systems

The findings revealed that the cost involved in migrating the participant organisations finance systems to an enterprise solution was considered as overly expensive in addition to it being difficult to get project sponsors from senior executives. As a result the majority of interviewee's had implemented bespoke solutions at their business units.

Loss of Agility and Flexibility

It was highlighted during the interviews that it was necessary for the local business units to continually evolve and gain competitive advantage over their competitors, thus making standardisation difficult. Participants revealed that standardisation would be of great assistance however, over-standardisation of enterprise financial solutions could potentially impact innovation at a local level. Moreover, when local business units require highly customisable financial solutions to meet their local requirements, the software development costs increase and they do not benefit from standardisation.

Change Resistance and Internal Conflict

It emerged from the interviews that change resistance from a business and technical perspective was a significant barrier for the decentralised participants in implementing an enterprise financial solution. Several of the Senior Manager participants specified that the proposal to employ an enterprise solution had caused conflict throughout the business unit, not only in the IT function but also among those that could potentially be affected by it. Some of the participants argued that there was a mismatch between the technical specifications and the local business requirements. The majority of the interviewee's indicated that there are significant technical challenges in attempting to migrate legacy financial systems while trying to understand local business processes.

The decentralised participants also highlighted that they would face challenges in changing working practices, training the employees of the local business unit, people related issues and securing top management support.

Lack of trust in the shared service

The research findings revealed that lack of trust in the shared service was another barrier in implementing an ERP shared service solution. Several decentralised participants identified concerns that the shared service was not capable of delivering the same level of service as the existing financial solutions currently managed by the in house team.

In addition, several centralised participants revealed that they did not trust the shared service future strategy although they were currently utilising enterprise financial services. They spoke about how operations were continuously moving to low cost regions and raised concerns that service levels were being impacted.

Data Protection Concerns

Certain organisations could not outsource financial functions to a shared service because of data protection concerns. Several participants stated that they could not migrate certain operations to a shared service due to local data protection regulations. One participant from a decentralised structure indicated that the different data laws between Europe and the US prevented his organisation from migrating financial systems to a shared service, as the organisations clients did not allow data to be hosted in the USA.

Unclear Service Accountability

Five participants from both centralised and decentralised organisations specified unclear service accountability as a challenge in utilising an enterprise financial solution explaining that the shared service associates did not fully understand the local business units or the system dependencies and workflows. The centralised participants felt that when issues were encountered there was unclear accountability between the local IT team and the shared service operation.

Long Project Timelines

Long project timelines were also identified by five centralised participants as a challenge for developing any customisation for the local business unit on enterprise systems. Three decentralised participants also stated that long project timelines could be a potential barrier for migrating existing in-house managed financial services to an enterprise shared service solution.

One Size Fits all Offering

A director from a decentralised structure outlined that “an enterprise financial solution delivered as a shared services cannot be a one size fits all offering. Each business unit needs to carefully evaluate its shared services strategy within the context of its own environment. How much change is acceptable within the business unit culture? What are the foundations of business value in moving away from the existing financial systems?”

Six centralised and six decentralised participants outlined that a ‘one size fits all’ enterprise solution does not work as local business units require customisation to meet local

requirements in gaining competitive advantage. The majority of participants felt that different local cultures, compliance and data protection laws make it challenging to implement a 'one size fits all' enterprise financial solution.

4.7.3 Recommendations based on Findings – Financial Systems as a shared service

The findings from the interviews suggest that Financial Systems delivered as a shared service represents a good fit to be implemented as a shared service only for certain organisations and needs to be assessed on a case by case basis. The findings indicated that the majority of the decentralised participant organisations implemented complex, bespoke solutions and migrating to an enterprise shared service solution would be costly.

The primary advantages outlined by the centralised participants for implementing this function were to reduce complex, obsolete systems, reduced high operating costs, standardise processes for cross organisational comparability and increase service quality through a fully integrated ERP solution. The decentralised participants agreed that their organisations would seek all the benefits listed above however the complex and costly migration from their existing was seen as a risk by several participants.

In contrast the common barriers outlined during the interviews were complex ICT bespoke solutions, high migration costs, loss of flexibility, lack of trust in the shared service, data protection concerns and unclear service accountability when issues arise.

To conclude, it was evident from the findings that implementing enterprise financial systems as a shared service is complicated for many organisations that have implemented bespoke, highly customised solutions.

Shared Service Opportunity Assessment Tool

Financial Systems delivered as a shared service fits into the Murtagh shared services opportunity assessment tool. This will be explained in further detail in the next chapter.

4.8 Response and Analysis - Software Development as a Shared Service

It emerged from the interviews that Software is developed and provisioned by a variety of methods from in-house development teams, outsourcing to third party vendors and shared services. The findings indicated that all participants were in agreement that in most cases (critical) business critical operations should be developed and supported internally. The general consensus was that if their organisations had people internally who know the software development lifecycle, then they can make the solutions work for the business.

The table in figure 4.3 outlines how Software is developed in the participant organisations. Four out of the fifteen organisations stated that software is developed by shared services whilst several participants indicated that their organisations outsource software development to external providers. The reasons specified in the interviews for utilising external providers over shared services were primarily cost, and in some instances the external provider had a local presence.

Table 4.3

Software Development Sourcing in participant organisations

Number Participants	Organisational Structure	Software Development Delivery
4	Centralised	Shared Services
1	Centralised	Outsourced (External Provider)
2	Centralised	In-House and Shared Services
1	Centralised	In-House
2	Decentralised	Outsourced (External Provider)
1	Decentralised	In-House and Shared Services
3	Decentralised	In-House and Outsourcing
1	Decentralised	In-House

Several participants stated that Software Development was still performed by the programmers and systems analysts from the local team. Most decentralised participants revealed that their in house development teams work closely with the business functions within their organisations to develop and deliver solutions. The participants specified that in most cases the internal business require highly customised applications. This requires recurrent and rigorous interaction between the internal business users and the local development team to develop user requirements for specific applications. Most of the participants felt that due to the interaction required between the local business and the developers this would not be an effective service to be delivered as a shared service.

The majority of participants further indicated that it depends on the project requirements, how customisable to the local business unit the requirements are, and if the requirements are bespoke. In instances where the software requirement was a well-established technology with standard processes and with no highly customisable requirement from the business user then it might be suitable to be developed by the shared service function. Other participants felt that software requirements that could potentially gain a competitive edge for the business in which requirements were bespoke, were more suitable to be developed by the in-house sourcing team if available. It was specified by some of the

participants that their shared service function did not have the skillsets to develop bespoke applications so the only option they had was to outsource this to an external vendor as it could not be developed by the in house team.

One participant from a centralised organisation in the financial sector outlined that for successful development of innovative and new technologies it is key that the business users and developers are not separated through geographical and time differences.

4.8.1 Benefits for Utilising Software Development as a Shared Service

The common benefits for utilising Software Development as a shared service were as follows:

Reduced Costs

All participants specified cost was the main reason for utilising software development as a shared service. This was particularly highlighted by participants that were located in high cost regions where on site development come at a premium.

The findings also revealed that Software Developers and Systems Analysts outside of the local business unit's country are compensated less than their counterparts in developed countries. Some participants indicated however, that their organisations shared service developers were located in India and that as salaries in this region are rising for specialist developers, the cost benefit of utilising shared service resources in India might not be as favourable in the future.

Speed to implement

Another key benefit for utilising this function, as outlined by several participants, was that certain projects require specialist skillsets that the participant organisations do not have, which could aid the project in meeting expected delivery dates. As a result utilising the responses at the shared service operation can be quicker and more cost effective than hiring additional resources at the local business unit.

Specialist Resources

Several participants specified that the shared service centre can provide their local business unit with resources with specialist skillsets that the local business unit do not have.

Strategic Roles for the in-house Developers

It also emerged from the interviews that the majority of decentralised participants felt that in some instances, development tasks are offshored to the shared service provider, which

enables the in-house development team to focus on gathering requirements from the business, design and management. This was perceived to work well when the developer does not require communication with the business users.

The majority of participants highlighted that their internal software development resources time is valuable and non-critical development requirements should be handled by the shared services enabling the internal resources to focus on essential business requirements.

4.8.2 Barriers and challenges utilising Software Development as a Shared Service

The most common barriers and challenges outlined during the interviews were as follows:

Requirements Communications Difficulties

Participants felt that the lack of face to face contact with the business users and informal communications between business users and the developer leads to misinterpretations of system requirements. It also emerged that the requirements for software project constantly change and this is one of the reasons why software projects delivered by the shared service provider fail. Participants that utilise this function highlighted that you need a manager at the local business unit to be in constant communication with the developers at the shared service centre. They also revealed that the manager at the local business unit needs to understand the requirements and ensure that the developers also understand the requirements. The majority of centralised participants highlighted this as a key challenge for their organisations as they currently had limited local IT resources.

Language Barriers

Most participants indicated that language misunderstandings occur due to cultural differences. The interviewee's felt that it takes significantly more time and patience to communicate during development projects with their shared service operations.

Inadequate User Involvement

It emerged from the interviews that participants felt that business users need to be involved throughout the project lifecycle. It was clear that some participants felt that when development was taking place outside of the local business unit, the local business were not always kept, which led to quality problems and project delays.

Failure to manage end user expectations

The interviewee's stated that expectations needed to be managed to ensure that the system is consistent with the business users expectations. It was felt that this is challenging in a

shared service context as the business users will not be in direct contact with the software developers and systems analysts.

Lack of local business knowledge

It was also highlighted during the interviews that the participants felt that the shared service development team did not have adequate understanding of the local business units environment, system dependencies and the potential impact that changes to certain systems could have. This lack of knowledge about the local environment can cause project delays and quality issues. Therefore, Understanding the system dependencies and workflows of the local business units environment is a critical factor in successful and effective software development.

Cultural Differences

It was also evident that participants felt that cultural differences in a team can be challenging in using shared services for software development. Different countries and business units are diverse in how they work and collaborate, which can lead to issues when attempting to communicate and collaborate across different geographical regions.

Resource based theorists argue that companies will achieve competitive advantage by implementing superior performance positions in processes that are valued by customers. Therefore, organisations should perform internally, and build capabilities in areas that deliver competitive advantage. For purposes of shared services, it has been argued previously that processes are either critical to competitive advantage or not critical to competitive advantage. (McIvor, 2010)

Time Zone Coverage

Several participants highlighted time difference between the local business unit and the shared service developers as a challenge. Some participants specified that there is usually about a half day difference between their business unit and the shared service developers, which makes communication difficult and can increase project timelines.

Low Team Morale

The findings also highlighted that several participants felt that utilising software development as a shared service instead of developing in-house could impact morale within the local development team and local developers could feel their jobs are threatened.

Shared Service more expensive than Outsourcing

Several participants specified that this function is more expensive in comparison to outsourcing to an external provider. The participants from organisations that did not require mandatory use of shared services highlighted that in several instances it was cheaper to utilise this function from an external outsourcing provider.

4.8.3 Recommendations based on Findings – Software Development as a Shared Service

From the participant's perspective, the barriers and challenges of utilising Software Development as a shared service, outweigh the benefits. The more common and generic the demand on a service, the more likely it is to be a good candidate to be delivered as a shared service. In accordance the majority of participants specified that due to the unique or bespoke software development requirements in their local business unit meant that this function was not seen by the participants as a good shared service candidate.

The majority of participants stated that a hybrid delivery model would be most suitable to their organisation. The findings indicated that in-house development was the preferred method for bespoke development and highly customisable requirements. Several participants outlined that relationship driven development requirements, for instance, were not good candidates for shared services because they were usually unique to a local business units.

Shared Service Opportunity Assessment Tool

Software Development delivered as a shared service fits into the Murtagh shared services opportunity assessment tool. This tool was developed by the researcher to review all potential ICT shared services and the potential cost and performance improvements they would offer delivered as a shared service. Included in this assessment is a broad range of strategic, operational, and economic questions. This will be explained in further detail in the next chapter.

5 Conclusions and Future Work

This chapter aims to provide a summary of the key findings from the present research and discuss their significance in relation to factors that influence the implementation of ICT shared services in multinational organisations. The strengths and limitations of the research will then be discussed followed by the recommendations of the research for assisting organisations in making decisions regarding their potential implementation of shared services. Finally avenues for future research in this field of study will be identified.

This chapter summarises the research findings and conclusions drawn based on the aims of the research question. The aim of this research was to determine the factors that influence the implementation of ICT shared services in multinational organisations. In addition, the aim was to understand the barriers and challenges that affect the adoption of ICT services through a shared services delivery model. Furthermore, this chapter discusses the conclusions of this research along with the limitations, outlines recommendations and assesses the need for further research. The findings may assist organisations making decisions with regard to implementing ICT shared services in the future.

5.1 Answering the Research Question

The primary purpose of this study was to identify the factors that influence the implementation of ICT shared Services.

The research question that this study seeks to answer is:

What are the factors that influence the implementation of ICT shared services in multinational organisations.

Specifically the research sought to address three key objectives:

The research question presented by this study focuses on three key elements:

1. What are the barriers and challenges faced by multinational organisations in the implementation of Shared ICT Services?
2. What are the benefits achieved from the implementation of ICT shared services such as Email, Telephony, Private Cloud, Software Development and Financial Systems in multinational organisations?
3. Is a multinational organisations operating model a key factor in the success of the implementation and delivery of ICT shared services?

Consistent with the reviewed literature, the present findings indicated that implementation of ICT shared services in multinational organisations can reduce costs, improve the quality of service and free up resources at local business units to focus on more strategic initiatives in order to gain a competitive advantage.

Irrespective of these benefits many barriers and challenges were also identified pertaining to implementation of the various IT functions including email, Telephony, Software Development, Financial Systems and Private Cloud. These included language barriers,

loss of flexibility, poor communications, data protection concerns, lack of local business knowledge, threat to job losses, complex IT systems and more competitive outsourcing solutions.

The potential benefits from adopting an ICT shared services model for multinational organisations has been widely publicised throughout this research such as reduced costs, improved quality of service, greater focus on core functions, standardised processes, improved IT security, brand protection and optimised labour pool of specialist resources. However the present research indicates the beneficial outcomes may differ depending on the structure of the organisation. More specifically, the results demonstrate that the utilisation of ICT shared services in organisations operating a decentralised structure have been minimal in comparison to organisations operating a centralised structure. Moreover the present research identified a voluntary participation model and limited portfolio of shared services as the primary reasons why the adoption rates are lower in decentralised structures, relative to centralised organisations.

5.1.1 Organisations Operating Model

The organisational operating model adopted by the participant companies was significant with regard to the implementation and utilisation of ICT shared services. The interviews highlighted that centralised organisations were more likely to adopt ICT shared services owing to mandatory participation. The findings also revealed that participation in shared services was often voluntary in the organisations operating a decentralised organisational structure. In addition, it emerged from the interviews that the centralised organisations had fully integrated with shared services whereas the decentralised organisations in most instances, operated a hybrid service delivery model consisting of insourcing, shared services and outsourcing.

Due to the mandatory implementation of ICT shared services in centralised organisations the majority of companies operated a “mature” shared service delivery model meaning that it was in existence for at least five years. The interviews revealed that the organisations operating a mature shared service models are currently concentrating on consolidating shared service centres and moving operations to regions where labour is more cost effective.

In contrast, the majority of decentralised participants described their shared service model as relatively new. As a result they were either slowly expanding their utilisation of ICT shared services or were still evaluating the benefits and challenges in adopting a particular service.

The findings further highlighted that decentralised organisations encountered different barriers and challenges in implementing ICT shared services owing to the fact that participation was on a voluntary basis. In accordance, a senior executive from the shared service organisation in a decentralised structure, interviewed as part of the present study revealed that it is difficult to get business units to commit to services when participation is voluntary.

In addition, the interview findings indicate that political struggles exist between global and local teams. Several decentralised participants voiced a fear about losing their flexibility and agility if they transferred ICT services to a shared service delivery model. This was particularly evident when discussing the Financial Systems and Software Development functions.

Another barrier identified from the research analysis was the lack of trust that a number of participants from the decentralised structure had in certain shared service offerings. Indeed, one participant from the Financial Services sector stated that “until the shared service is up to the same standard as the service provided locally we will not be implementing this service”. Several participants also stated that moving to a shared service for certain services would impact the quality of service to the business and the ICT team would be held accountable.

According to a report by Forrester (2010), decentralised organisations sometimes encounter issues as they grow into significant sized corporations as a consequence of trying to achieve cost and quality objectives. In turn, to accomplish these objectives, they form enterprise strategies to reduce costs and improve the quality of service, making the business more cost-effective.

Significant factors supporting both the lack of utilisation of shared services by decentralised organisations in addition to factors influencing the implementation of ICT shared services were also identified in the present research.

Additionally, the research revealed that decentralised organisations are coming under growing pressure to implement certain shared service functions and standardise processes.

In accordance, the majority of decentralised participants indicated that there is now a new drive within their organisation from a global level for local units to participate in implementing shared services.

An additional interview was undertaken with a senior executive who managed a division at a Technology Shared Services Centre in a decentralised organisation that had recently changed their delivery strategy. In the past the organisations SSC focused on signing up the smaller, less complex business units and left the larger, more complex business units until the end. This strategy worked out well for the smaller business units however from a cost perspective and economies of scale, it did not work out favourably for the shared service centre if the larger organisations decided not to pursue the shared service.

5.1.2 Roles of the Participants

The interviews also highlighted a significant difference in opinions towards shared services between the Technical Consultant and Senior Manager/Director participants. Six of the seven Technical Consultant participants viewed shared services as potential threat to their jobs. In addition, there was an element of concern with regard to what impact it would have on their roles in the future. In contrast, the majority of senior management participants viewed shared services more favourably and were unlikely to perceive shared services as a threat to their jobs.

5.1.3 Service Delivery Model

The findings highlighted multiple ways in which ICT services can be delivered to the business and specified the importance of Service Level Agreements, escalation protocols, reporting mechanisms, communication plans, change control process, governance models, and continuous improvement processes. The research indicated that changing service delivery models represents a major organisational transformation and each transformation drives important change around pricing models, roles and responsibilities, standardising processes and managing resources. The research discussed the four service delivery models including, shared services, outsourcing, hybrid and insourcing.

It emerged from the interviews that when ICT shared services are implemented correctly they can deliver greater benefits to an organisation in comparison to a traditional internal service delivery model including economies of scale, improve service quality, and cross business unit process synchronisation. It also identified that In order to successfully implement this delivery model organisations will need to change culture, structures and operations to make this transition.

The findings highlighted the Hybrid IT model as an increasing popular method for specific functions such as Software Development. The Hybrid model is a technique in which an enterprise uses both internal and external services. This model offers a combination of cost optimisation and speed of delivery. It was revealed that this is an ideal combination of insourced and outsourced efforts that can prevent communication barriers and culture and time zone challenges.

5.1.4 Governance Structure

The findings indicated that a strong governance is the backbone to a successful shared services delivery. The research specified the importance of Service Level Agreements to help drive governance by eliminating uncertainty about performance measures and service expectations for the local business units. The agreement, amongst the literature and interviewing findings was that the shared services governance structure is responsible for developing processes and procedures for the shared service provider's customers to comply with and to manage any disagreements between the Shared Service Centre and the local business units.

5.2 Recommendations

While there are many ways that multinational organisations can derive value from the implementation of ICT shared services, the suitability of certain IT functions to implement as a shared service should be evaluated on a case by case basis by local business units. Following on from the research findings in chapter 4, this section outlines a series of recommendations that will assist large enterprises in deciding upon the ICT functions to implement through a shared service delivery model. These guidelines are based on the 'Murtagh ICT shared services suitability assessment tool' which was developed on the basis of the findings arising from the current research

This is a questionnaire based tool containing eleven questions that are designed to assist organisations in evaluating the suitability of new and existing functions to be delivered as a shared service for their organisation. The scoring mechanism is outlined in Table 5.1. Once the questionnaire is submitted it plots the function onto the Murtagh shared service suitability quadrant which is outlined below.

In order to determine which functions or activities to migrate to shared services, the criteria of the function should be analysed, as outlined illustrated in table 5.1.

Table 5.1

Murtagh ICT shared services suitability assessment tool

Question	Return on Investment	Ease of Implementation	Acceptable Answers	Scoring
Is this service a non-core Function?		Select Yes or No	Yes/No	Yes 5; No -5
Is the Service Generic?		Select Yes or No	Yes/No	Yes 5; No -5
Can this service be standardised?		Select Yes or No	Yes/No	Yes 3; No -3
Does the service require specialist knowledge?		Select High, Med, Low or None	High/Med/Lo w/None	High 3; Med 2; Low 1; None 0
Does the shared service operation require in depth knowledge about the local environment to support this service?		Select Yes or No	Yes/No	Yes 2; No -2
Will the organisation require the service to be customised to meet local needs?		Select H, M, L or None	High/Med/Lo w/None	High -2; Med -1; Low 0; None 2
Will the service improve from moving to shared services?		Select Yes or No	Yes/No	Yes 2; No -2
What levels of economies of scale will be achieved?	Select High, Med, Low or None		High/Med/Lo w/None	High 5; Med 3; Low 1; None -5
Will the organisation achieve headcount reduction?	Select Yes or No		Yes/No	Yes 4; No -4
Will delivering this service as a shared service reduce distractions from core competency activities and enable local to focus on more strategic tasks?	Select Yes or No		Yes/No	Yes 4; No -4
Level of costs associated with migrating to the shared service?	Select High, Med, Low or None		High/Med/Lo w/None	High -5; Med -3; Low -1; None 5

Quadrant One

As shown in Figure 5.1, if an IT function is plotted on quadrant one this indicates that it is suitable to be delivered as a shared service. A function that is plotted on this quadrant should be easy to implement and has an expected high Return on Investment (ROI). IT Functions that are plotted on this quadrant are usually non-core functions, generic services that are standardised with minimal requirements for local customisation. The services in quadrant one generally achieve high levels of economies of scale and have the potential to reduce costs through headcount reduction.

Quadrant Two

If a function is plotted on Quadrant two, as depicted in Figure 5.1 it may be suitable for shared services. In other words it is easy to implement however expected Return on Investment is low. Functions that are plotted on this quadrant are non-core functions, generic services that are standardised with minimal requirements for local customisation. Thus, services in this quadrant achieve low levels of economies of scale and do not contribute to reduced headcount.

Quadrant Three

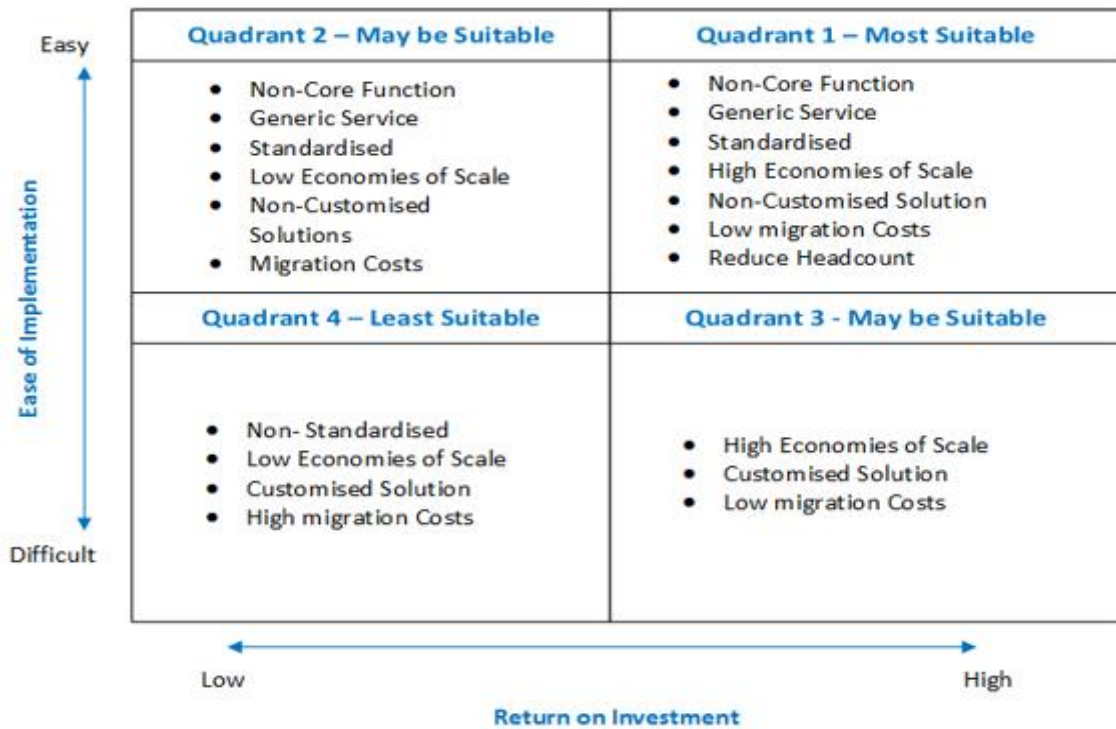
As shown in figure 5.1, a function that is plotted on Quadrant three may be suitable for shared services. Although Services in this quadrant are difficult to implement. Return on Investment is high. Functions that are plotted on this quadrant are core functions, non-generic services, with local customisation. The services in this quadrant therefore achieve high levels of economies of scale.

Quadrant Four

As shown in Figure 5.1 a function that is plotted on Quadrant four is the least suitable for shared services. In accordance, services in this quadrant are difficult to implement with a low Return on Investment. In addition, functions that are plotted on this quadrant are core functions, non-generic services, with local customisation. The services in this quadrant therefore achieve low levels of economies of scale and encounter high migration costs.

Figure 5.1

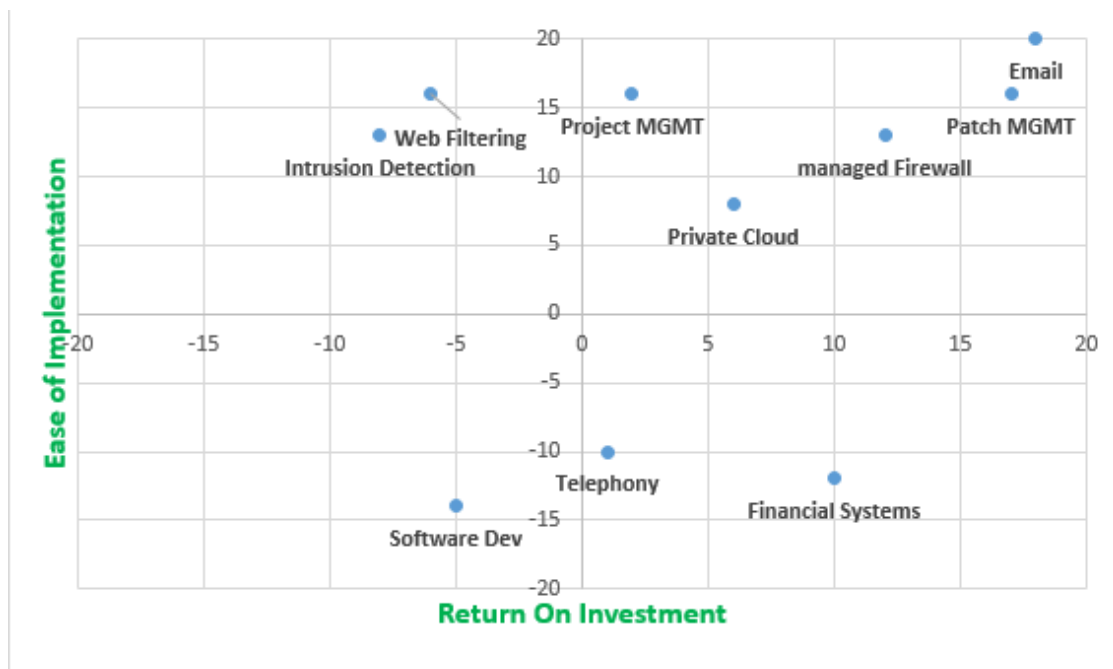
Murtagh Shared Service Suitability Quadrant



The Murtagh shared service suitability quadrant in figure 5.2 outlines the suitability of the common IT functions that were identified discussed during the present research. The results were derived by inputting the research findings into the assessment tool.

Figure 5.2

Murtagh Shared Service Suitability Quadrant



5.2.1 Recommendations for Email as a Shared Service

Based on the research findings the email function was the most frequently implemented shared service by both centralised and decentralised participants. The analysis indicated that this service is a non-core function, standardised generic service that requires minimal local customisation. This function also has the potential to achieve a high Return on Investment through economies of scale. In addition, the findings revealed that specialist skilled local resources are required to manage this function in-house. By transferring this function to a shared services provider it will subsequently reduce headcount or free up resources to concentrate on more strategic core business initiatives.

Shared Services Suitability Assessment for the Email function

As outlined in figure 5.2, the Email function is plotted on quadrant one indicating that this function is most suitable to be delivered as a shared service.

5.2.2 Recommendations for IT Security as a Shared Service

All seven centralised participants whose organisations utilise Security as a Shared Service felt that this was the most critical service provided. These participants utilised Intrusion and Event Detection, Managed Firewall, Patch Management and Web Filtering. The findings also revealed that five decentralised participants utilised Intrusion and Event Detection. In turn, only one decentralised participant specified their organisation implemented Patch Management and Web Filtering. The results also indicated that there was currently a drive in the majority of the decentralised organisations to implement security shared services. The benefits and drivers outlined by all participants for utilising this function were cost savings, improved service, continuous improvement, protecting the organisations brand from attacks and 24/7 monitoring provided by the shared service. Some of the barriers that were outlined included the loss of agility due to rigorous change control processes, poor communications from the security shared services operation and the threat to job losses for displaced security specialists at the local business units.

Shared Services Suitability Assessment for the Security function

The Security function includes the following four services: Patch Management, Managed Firewall, Event Detection and Web Filtering.

Patch Management Recommendation and Managed Firewall Recommendation

As outlined in figure 5.2, the Patch Management service and Managed Firewall service are plotted on quadrant one indicating that these services are most suitable to be delivered as a shared service. The results indicated that these services are relatively easy to implement, as they comprise generic standardised non-core functions that require minimal

customisation at a local level. In addition, the findings indicated that specialist skilled local resources were needed to manage these functions in-house. Transfer of these functions to a shared services provider would therefore reduce headcount or free up resources to concentrate on more strategic core business initiatives.

Event Detection Recommendation and Web Filtering Recommendation

As outlined in figure 5.2, the Event Detection service and Web Filtering service are plotted on quadrant two outlining that these services may be suitable to be delivered as a shared service. The results indicated that these services are generic standardised non-core functions that require minimal local customisation. The findings indicated that migration costs are high. The findings also indicate that the shared services provider can monitor the environment 24/7, which would not be achievable at a local level.

5.2.3 Recommendations for Private Cloud as a Shared Service

The results indicated that the private cloud function was a relatively new service. In accordance only four of the eight centralised participants had implemented Private Cloud as a shared service. In contrast, none of the decentralised participants had this function available as a shared service.

In addition, it emerged that several of the participant Shared Services Centres did not currently offer Private Cloud as a shared service. However, most respondents felt that they would utilise this function as a shared service once it becomes available. The majority of participants also revealed that private cloud initiatives would be high priorities over the next year.

The findings further indicated that the shared service providers were in direct competition with public cloud services. As previously mentioned, the merits and demerits of delivering this function as a shared service versus a public cloud provider were debated during the interviews.

Private Cloud Recommendation

As outlined in figure 5.2, Private Cloud as a shared service is plotted on quadrant one indicating that this service is most suitable to be delivered as a shared service.

5.2.4 Recommendations for Telephony as a Shared Service

Telephony emerged as a non-core function that can be standardised across the organisation. Four centralised and two decentralised participants revealed that they had

adopted Telephony as a shared service. The four centralised participants stated that adoption was mandatory for their business units whereas the two decentralised respondents specified that it was a voluntary decision to utilise this service. In addition, two centralised and two decentralised participants specified that their organisations outsourced this function.

Telephony Recommendation

As outlined in figure 5.2, Telephony as a shared service is plotted on quadrant three specifying that this service may be suitable to be delivered as a shared service. Functions plotted on quadrant three indicate a high Return on Investment however they are difficult to implement. The findings indicated that although this is a non-core business function it is a critical communication service for all organisations. The research results also identified the following:

1. Telephony should be evaluated as a shared service versus outsourcing to an external vendor. In accordance with the research findings this has been found in several instances to be more cost effective than shared services.
2. Implementation of a Hybrid Delivery model should be investigated for communications services. The findings indicated that organisations that already had Email provided as a shared service did not want to have all communication tools hosted in the same location in order to reduce risk.

5.2.5 Recommendations for Financial Systems as a Shared Service

Enterprise resource planning (ERP) applications implemented as shared service can deliver significant benefits for a large enterprises business units. Participants indicated that ERP applications can resolve issues with a disjointed legacy systems environment, not surprisingly however, it was also highlighted that they can introduce new risks of their own. Indeed, this function was emphasised as one of the most critical IT functions by the majority of participants and transferring from an in-house solution to a shared services solution was identified as one of the biggest projects the organisation can undertake from a technical and financial perspective.

Significant differences also emerged between centralised and decentralised organisations in adopting Financial Systems as a shared service. Commonly identified barriers and challenges to explain the low adoption rate for this function included existing bespoke solutions, legacy systems, and complex environments. Furthermore, in several instances it was reported that the Shared Services Centre did not offer this function as a shared service. In addition, the high migration costs of transferring to an Enterprise Resource Planning

solution was highlighted as a barrier to organisations adopting this function as a shared service. The results indicated that the Shared Service Centre did not fully understand the workflows and dependencies of the financial systems at the local business units.

The research findings also identified a number of common benefits for transferring to an ERP shared services offering including streamlined workflows, reduced costs, standardised processes, improved service quality and removal of existing legacy systems.

Financial Systems Recommendation

On the basis of the current research findings it is recommended that:

1. Organisations should conduct an audit of all financial systems, processes, dependencies and workflows before evaluating an ERP shared services offering.
2. The findings recommended creating an evaluation team composed of key decision makers and stakeholders from all departments in the business that will be impacted.
3. Outsourcing this function to a third party and conducting a cost analysis between an outsourced versus a shared services solution should be considered.
4. A plan to decommission legacy applications be executed. The findings indicated that if business units do not have a plan to aggressively decommission legacy solutions they will end up with an enterprise financial solution with the legacy systems running in parallel, which will result in high maintenance costs.

As outlined in figure 5.2, Financial Systems as a shared service is plotted on quadrant three specifying that this service may be suitable to be delivered as a shared service. Functions plotted on quadrant three indicate a high Return on Investment however incur difficulties in implementation.

5.2.6 Recommendations for Software Development as a Shared Service

The current research findings suggest that a Hybrid service delivery model is the most appropriate for delivering Software Development. Consequently this function should only be utilised as a shared service on a case by case basis. The research also indicated that in-house development is essential. It emerged that development requirements that involve face to face communication with end users should be managed by the local in-house team or outsourced to an external provider who has local presence in the local business unit's country. In line with this finding, one centralised participant from the financial sector specified that their organisation had recently moved all software development back in-house from its shared service function. As a result Software Development was now regarded as a core function in this organisation.

Moreover, the interviews revealed that the common benefits identified were reduced costs, improved implementation speed, and access to specialist resources that are not available to the local business unit. In turn, the barriers and challenges highlighted during the interviews were communication difficulties, language barriers, and inadequate user involvement during the software development process.

Software Development Recommendation

On the basis of the research findings it emerged that the following four key questions should be addressed when deciding on a service delivery model for Software Development.

1. Is it more cost effective to utilise the Shared Service Centre (SSC) or a third party provider?
2. Speed to market. Will the SSC or external provider get it done faster?
3. Service Quality – Do the SSC or external provider have the specialist skillsets to delivery an improved quality of service?
4. Do the requirements need to be highly customised for the local business unit?

As outlined in figure 5.2, Software Development as a shared service is plotted on quadrant four specifying that this service is least suitable to be delivered as a shared service. Functions plotted on quadrant four indicate a low Return on Investment and are considered difficult to implement. Based on the findings a Hybrid Service Delivery model would be the recommended approach for this function.

5.2.7 Additional Recommendations

- Sometimes it may be suitable to utilise existing business units that excel in specific functions as a shared services provider
- Evaluate the merits of transferring each IT function to a SSC on a separate basis. The findings indicated that the centralised organisations who have transferred all IT functions to the shared services provider have now lost their ability to be innovative at a local level. This is especially evident with Software Development
- When moving Shared Service Centres to lower cost regions it is essential that the location has a highly educated workforce. Several of the participant organisations revealed that the Shared Service Centres that have relocated to low cost regions without the appropriate expertise available has had a negative impact on the organisation.
- Enforce mandatory participation of certain functions in decentralised organisations such as Managed firewall, patch management, web filtering and Anti-virus as this will result in protecting the organisations brand through standardised security processes and will also reduce duplication of effort.

- Organisations should actively compare costs and service levels between shared service offerings versus outsourcing services. This will keep the Shared Services Centre competitive.
- Develop metrics and Return on Investment variables to measure the success of functions delivered as a shared service.

5.3 Limitations of the Research

Although the interviews provided a great deal of information, the study was not without its limitations

The research findings reflect the views of Technical Consultants, Senior Managers and IT Directors from multinational organisations and as such it would have been beneficial to expand the scope of this study to include business users in order to gain alternative perspectives. Thus, while the semi-structured interviews assisted in gaining a perspective on the benefits, barriers and challenges encountered in adopting ICT shared services by the local business units obtaining an additional perspective from the Shared Service Centre would have further advanced the current research. Owing to a limited timeframe however this was not possible. It is recommended that future research elicit perspective and opinions from these key stakeholders.

Notwithstanding these limitations however, the current research comprised interviews with a number of Technical Consultants, Senior Managers and IT Directors providing a greater insight into factors influencing the adoption of shared services and subsequently on the basis of these finding a new method of assisting organisations in evaluating shared services was developed...

Moreover, while the interviews were restricted to the IT function it is plausible to suggest that these findings could be generalised to other contexts such as Finance, Human Resources and other support functions.

There is a wealth of industry literature focusing on shared services within the private sector however the academic literature predominantly focuses on the public sector. Moreover, a significant amount of this research is general in nature focusing predominantly on the support functions in Finance and Human Resources and providing only a limited literature on ICT which fails to address the ICT functions in any great depth.

As outlined in chapter 3, the research method selected was a multiple case study approach using semi-structured interviews. The scope of the research was restricted to Technical

Consultants, Senior Managers and IT Directors in multinational organisations working in the ICT sector however this research could be applied to other support functions such as Finance and Human Resources.

5.4 Future Research Opportunities

The concept of ICT shared services has been in existence for over 20 years however it is constantly evolving. As outlined in the previous chapter, although this delivery model can be classified as mature the literature is still too broad and primarily focuses on the public sector.

Further opportunities of research would be to continue the case study investigation looking at the further ICT functions and evaluating their suitability as a Shared service Function using the “Murtagh Shared service suitability assessment tool, or adapting and expanding this tool to look at services in other support function such as Finance or Human Resources.

Furthermore to look at the effects on resource personnel whose roles have been directly impacted by the transition to ICT Shared Services and explore whether the new role has proved to be more strategically beneficial in terms of gaining competitive advantage.

To monitor progress of the ICT shared service following introduction of new shared service function comparing outcomes of service delivery and performance pre and post implementation of the transformation.

It would be interesting to compare and contrast the views of the other concerned stakeholders by conducting an employee survey asking similar questions, with the findings from the semi- structured interviews conducted in this research to evaluate whether they felt that there was an improvement in the functions delivered as a shared service.

To investigate the barriers and challenges encountered from the Shared Service Centre perspective in the adoption of their services by their customers.

6 References

- ACCENTURE 2005. Driving High Performance in Government: Maximising the value of Public Sector Shared Services.
- BARNETT, R. 2006. IT Shared Services: Managing and Aligning Costs for Better Performance. *Business Performance Management*, 4, 23-27.
- BERGERON, B. 2002. Essentials of Shared Services.
- BONDAROUK, T. 2014. Shared Services as a New Organizational Form.
- CAMERON, B. 2011. Global Business Services — Not Shared Functions. *Global Business Services — Not Shared Functions*.
- DAVIS, T. R. V. 2005. Integrating shared services with the strategy and operations of MNEs. *Journal of General Management*, 31, 1-17.
- DELOITTE 2011a. Case Studies in reducing process complexity in General and Administrative Complexity.
- DELOITTE 2011b. Shared Services Handbook - Hit the Road.
- DELOITTE 2015. 2015 Global Shared Services Survey.
- EASTERBY-SMITH, M., THORPE, R. & JACKSON, P. R. 2012. Management Research 4th Edition.
- ERNST & YOUNG 2011. Creating an effective hybrid IT model
- ERNST & YOUNG 2014. The new case for shared services
- FERSHT, P., FILIPPONE, T., CHARLSES, A. & SAPPENFIELD, D. 2011. The Evolution of Global Business Services *ENHANCING THE BENEFITS OF SHARED SERVICES AND OUTSOURCING (HFS Research)*.
- FORRESTER, B. C. 2010. The CIO's Enterprise Versus Local Balancing Act.
- GARTNER 1997. European Organizations Considering IT Decentralization.
- GARTNER 2008. Achieving Success With Shared Services.
- GARTNER 2010. Understand Shared-Service Fundamentals and Avoid Perennial Traps.
- GARTNER 2011a. Case Study: Establishing and Operating a Shared IT Service for an International Consortium.
- GARTNER 2011b. Establishing and Operating a Shared IT Service for an International Consortium.
- GARTNER 2012. Successful IT Performance Management for IT Shared Services: Relevant Key Performance Indicators.
- GARTNER 2014. Shared Services Key Initiatives Overview
- GILL, J. & JOHNSON, P. 2010. Research Methods for Managers 4th Edition.
- GOODWIN, B. 2013. Embracing shared services can halve outgoings. *Computer Weekly*, 22-25.
- GUEST, G., NAMEY, E. E. & MITCHELL, M. L. 2012. Collecting Qualitative Data: A Field Manual for Applied Research.
- IBM 2011a. Finance Shared Services and Outsourcing
- IBM 2011b. Today's shared services operating models: The engine behind enterprise transformation.
- IMA 2011. Implementing Shared Services Centers. *Institute of Management Accountants*.
- INVESTOPEDIA 2015. DEFINITION of 'Multinational Corporation - MNC'.
<http://www.investopedia.com/terms/m/multinationalcorporation.asp>.
- KRISHNA, S., SAHAY, S. & WALSHAM, G. 2004. Managing Cross-Cultural issues in global Software outsourcing.
- MCIVOR, R. 2010. Global Services Outsourcing
- OVERBY, S. 2011. Goodbye Outsourcing, Hello Insourcing: A Trend Rises.
<http://www.cio.com/article/2411036/outsourcing/goodbye-outsourcing--hello-insourcing--a-trend-rises.html>.
- PASTORE, R. 2008. Models for Global IT Governance.
<http://www.cio.com/article/2437034/it-organization/models-for-global-it-governance.html>.

- PRICEWATERHOUSECOOPERS 2012. Shared Service Center Best Practices.
- RAO, M. T. 2004. Key Issues For Global IT Sourcing: Country and Individual Factors. *Information Systems Management*, 10580530, Summer 2004, Vol. 21, Issue 3.
- SAKO, M. 2010. Technology strategy and Management: outsourcing Versus shared services. *Communications of the ACM*, 53, 27.
- SAUNDERS, M., LEWIS, P. & THORNHILL, A. 2012. Research Methods for Business Students.
- SIEW KIEN, S. I. A., SOH, C. & WEIL, P. 2010. Global IT Management: Structuring for Scale, Responsiveness, and Innovation. *Communications of the ACM*, 53, 59-64.
- UKESSAYS 2015. The Advantages and Disadvantages of Case Study Research. <http://www.ukessays.com/essays/psychology/the-advantages-and-disadvantages-of-case-study-research-psychology-essay.php#ixzz3kJwM9EU7>.
- ULBRICH, F. 2006. Improving shared service implementation: adopting lessons from the BPR movement. *Business Process Management Journal*, 12, 191-205.
- ULBRICH, F. & SCHULZ, V. 2014. Seven challenges management must overcome when implementing IT-shared services. *Strategic Outsourcing (17538297)*, 7, 94.
- YIN, R. K. 2014. Case study research : design and methods.

7 Appendices

7.1 Appendix 1: Ethics Application Form

School of Computer Science & Statistics Research Ethics Application
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CHECKLIST

The following documents are required with each application:

1.	<ul style="list-style-type: none">• SCSS Ethical Application Form	Yes
2.	<ul style="list-style-type: none">• Participant's Information Sheet must include the following: a) Declarations from Part A of the application form; b) Details provided to participants about how they were selected to participate; c) Declaration of all conflicts of interest.	Yes
3.	<ul style="list-style-type: none">• Participant's Consent Form must include the following: a) Declarations from Part A of the application form; b) Researchers contact details provided for counter-signature (your participant will keep one copy of the signed consent form and return a copy to you).	Yes
4.	<ul style="list-style-type: none">• Research Project Proposal must include the following: a) You must inform the Ethics Committee who your intended participants are i.e. are they your work colleagues, class mates etc. b) How will you recruit the participants i.e. how do you intend asking people to take part in your research? For example, will you stand on Pearse Street asking passers-by? c) If your participants are under the age of 18, you must seek both parental/guardian AND child consent.	Yes
5.	<ul style="list-style-type: none">• Intended questionnaire/survey/interview protocol/screen shots/representative materials (as appropriate)	Yes
6.	<ul style="list-style-type: none">• URL to intended on-line survey (as appropriate)	NA

Notes on Conflict of Interest

1. If your intended participants are work colleagues, you must declare a potential conflict of interest: you are taking advantage of your existing relationships in order

to make progress in your research. It is best to acknowledge this in your invitation to participants.

2. If your research is also intended to direct commercial or other exploitation, this must be declared. For example, *“Please be advised that this research is being conducted by an employee of the company that supplies the product or service which form an object of study within the research.”*

Notes for questionnaires and interviews

1. If your questionnaire is **paper based**, you must have the following **opt-out** clause on the top of each page of the questionnaire: *“Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to.”*
2. If your questionnaire is **on-line**, the first page of your questionnaire must repeat the content of the information sheet. This must be followed by the consent form. If the participant does not agree to the consent, they must automatically be exited from the questionnaire.
3. Each question must be **optional**.
4. The participant must have the option to **„not submit, exit without submitting’** at the final submission point on your questionnaire.
5. If you have open-ended questions on your questionnaire you must warn the participant against naming **third parties**: *“Please do not name third parties in any open text field of the questionnaire. Any such replies will be anonymised.”*
6. You must inform your participants regarding **illicit activity**: *“In the extremely unlikely event that illicit activity is reported I will be obliged to report it to appropriate authorities.”*

UNIVERSITY OF DUBLIN, TRINITY COLLEGE
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Statistics

RESEARCH ETHICS PROTOCOL

When is Ethical Approval Needed?

Ethical approval is required before any studies involving human participants can commence. This requirement applies to studies to be undertaken by staff, postgraduate and undergraduate students. In the case of collaborative projects involving researchers from outside the School, ethical approval obtained from an external research ethics body may suffice – evidence of same must be submitted to the SCSS Research Ethics Committee prior to the commencement of the study (see procedures below). In the absence of such external approval, approval must be obtained as per this document. Additional ethical approval may be required if the project involves or is funded by an external body, for example, studies under FP7 automatically require such approval.

For the purpose of this document a “study” may be understood to involve a potentially staged series of different experiments to be conducted over a period of time. If substantive changes are made to a study following receipt of ethical approval, this will constitute a new study for which further ethical approval must be obtained.

Procedure

Completed application forms together with supporting documentation should be submitted electronically to research-ethics@scss.tcd.ie To submit, if the proposal is from an undergraduate or postgraduate students, the **completed** application package must be presented to the academic supervisor who will sign after verifying completeness. These signed originals may be scanned and emailed. Please use TCD e-mail addresses only. When your application has been reviewed and approved by the Ethics committee hardcopies of the application form with original signatures should be submitted to the School of Computer Science & Statistics, Room F37, O’Reilly Institute, Trinity College, Dublin 2.

The Committee will consider each application and normally provide a response within two weeks but not more than one month later. Applications that are considered not to

have significant ethical implications may be evaluated by the Committee Chair without reference to the full Committee. Applications will otherwise be considered at a meeting of the SCSS Research Ethics Committee. When approval has been obtained from an external research ethics committee, and School approval is not required, a copy of the external ethical approval must be submitted to the School's Research Unit, prior to commencement of study, for noting by the SCSS Research Ethics Committee.

Please note that in signing the approval form one is making a commitment to review the provisions of the Data Protection Act, like legislation and College Policy on Good Research Practice. Please ensure that your study conforms to the standards of anonymity preservation and data retention set in those documents. Those provisions suggest a default proscription against making digital or photographic recordings of participants. A study which requires such records must include in the research ethics approval application a justification and documentation of the methods by which the statutory provisions and research practise guidelines will be met.

Note: These procedures may be amended from time-to-time following recommendation by the SCSS Research Ethics Committee and with the approval of the SCSS Research Committee.

Composition of the SCSS Research Ethics Committee

The Committee will consist of a Chairperson/Convenor appointed by the Director of Research and two other experts – a member of the School's academic staff and external advisors. The internal and external members will be selected from a panel approved by the Director of Research from time to time. Members will be selected on a case by case basis by the Chairperson subject to their availability. Researchers will be precluded from the Committee considering ethical approval for their study.

**School of Computer Science and
Statistics Research Ethical
Application Form**

Part A

Project Title: The factors that influence the implementation of ICT shared services in a multinational organisations

Name of Lead Researcher (student in case of project work): Peter Murtagh

Name of Supervisor: Noel Faughnan

TCD E-mail: murtagpe@tcd.ie **Contact Tel No:** 087-8879259

Course Name and Code (if applicable): M.Sc. Management of Information Systems

Estimated start date of survey/research: 30th May 2015

I confirm that I will (where relevant):

- Familiarize myself with the Data Protection Act and the College Good Research Practice guidelines http://www.tcd.ie/info_compliance/dp/legislation.php;
- Tell participants that any recordings, e.g. audio/video/photographs, will not be identifiable unless prior written permission has been given. I will obtain permission for specific reuse (in papers, talks, etc.)
- Provide participants with an information sheet (or web-page for web-based experiments) that describes the main procedures (a copy of the information sheet must be included with this application)
- Obtain informed consent for participation (a copy of the informed consent form must be included with this application)
- Should the research be observational, ask participants for their consent to be observed
- Tell participants that their participation is voluntary
- Tell participants that they may withdraw at any time and for any reason without penalty
- Give participants the option of omitting questions they do not wish to answer if a questionnaire is used
- On request, debrief participants at the end of their participation (i.e. give them a brief explanation of the study) Verify that participants are 18 years or older and competent to supply consent.
- If the study involves participants viewing video displays then I will verify that they understand that if they or anyone in their family has a history of epilepsy then the participant is proceeding at their own risk. Declare any potential conflict of interest to participants.

- Inform participants that in the extremely unlikely event that illicit activity is reported to me during the study I will be obliged to report it to appropriate authorities.
- Act in accordance with the information provided (i.e. if I tell participants I will not do something, then I will not do it).

Signed: _____

Date: 21/05/2015

Lead Researcher/student in case of project work

Part B

<i>Please answer the following questions.</i>		Yes/No
Has this research application or any application of a similar nature connected to this research project been refused ethical approval by another review committee of the College (or at the institutions of any collaborators)?		No
Will your project involve photographing participants or electronic audio or video recordings?		Yes
Will your project deliberately involve misleading participants in any way?		No
Is there a risk of participants experiencing either physical or psychological distress or discomfort? If yes, give details on a separate sheet and state what you will tell them to do if they should experience any such problems (e.g. who they can contact for help).		No
Does your study involve any of the following?	Children (under 18 years of age)	No
	People with intellectual or communication difficulties	No
	Patients	No

**School of Computer Science and
Statistics Research Ethical
Application Form**

Details of the Research Project Proposal must be submitted as a separate document to include the following information:

1. Title of project
2. Purpose of project including academic rationale
3. Brief description of methods and measurements to be used
4. Participants - recruitment methods, number, age, gender, exclusion/inclusion criteria, including statistical justification for numbers of participants
5. Debriefing arrangements

6. A clear concise statement of the ethical considerations raised by the project and how you intend to deal with them
7. Cite any relevant legislation relevant to the project with the method of compliance e.g. Data Protection Act etc.

Part C

I confirm that the materials I have submitted provided a complete and accurate account of the research I propose to conduct in this context, including my assessment of the ethical ramifications.

Signed:

Date: 21st May

2015

Lead Researcher/student in case of project work

There is an obligation on the lead researcher to bring to the attention of the SCSS Research Ethics Committee any issues with ethical implications not clearly covered above.


Part D

If external ethical approval has been received, please complete below.

External ethical approval has been received and no further ethical approval is required from the School's Research Ethical Committee. I have attached a copy of the external ethical approval for the School's Research Unit.
Signed: Date:
.....
Lead Researcher/student in case of project work

Part E

If the research is proposed by an undergraduate or postgraduate student, please have the below section completed.

I confirm, as an academic supervisor of this proposed research that the documents at hand are complete (i.e. each item on the submission checklist is accounted for) and are in a form that is adequate for review by the SCSS Research Ethics Committee
 Signed: 23 rd April, 2015.
Supervisor

Completed application forms together with supporting documentation should be submitted electronically to research-ethics@scss.tcd.ie Please use TCD e-mail addresses only. When your application has been reviewed and approved by the Ethics committee hardcopies with original signatures should be submitted to the School of Computer Science & Statistics, Room F37, O'Reilly Institute, Trinity College, Dublin 2.

7.2 Appendix 2: Informed Consent Form

TRINITY COLLEGE DUBLIN
School of Computer Science and Statistics
INFORMED CONSENT FORM

Title of Project	The factors that influence the implementation of ICT shared services in multinational organisations
LEAD RESEARCHER	Peter Murtagh
School/discipline	School of Computer Science and Statistics, M.Sc. Management of Information Systems
Academic Supervisor	Noel Faughnan

I am currently undertaking MSc in Management Information Systems at Trinity College Dublin. As part of the postgraduate programme I am required to complete a research study. I am conducting a research study exploring factors that influence the implementation of ICT shared services in multinational organisations.

The study has received ethical approval from the Ethics Committee at Trinity College. Participation involves completing an interview, which will take approximately 30-40 minutes. The participants for that research have been selected as they are currently working within ICT teams in multinational organisations.

All information obtained will be treated confidentially and no individuals or name of organisations will be named throughout the process and will be kept confidential. The data gathered will not be linked with any participant or organisation. The data will be securely stored and will not be shared without your permission. Participants have the right to withdraw from the study at any stage throughout the process without penalty.

I have been advised that several participants in this research study are past and present work colleagues of the principal investigator and I am aware that the principal investigator is taking advantage of his previous and existing professional working relationships in order to make progress in this research study.

An audio recording will be made during the interview. The audio recording will be used to verify that all information obtained is accurate. You can request to stop the recording at any stage of the interview or request to erase parts of your recording if required. The audio recordings will only be made available to the principal investigator and academic supervisor. No recordings will be replayed in any public forum or research presentation.

Publication:

The data gathered during this research will be used in the completion of a dissertation as part of a MSc in Management of Information Systems at Trinity College Dublin. The audio recordings will be kept on a securely password protected device that will be only accessible to the principal investigator. Audio recordings will be stored for the duration of this study in accordance with Irish Data Protection Requirements. Once the research is published, the data collected will be encrypted and stored on a DVD which will be held in Trinity College in the School of Computer Science and Statistics for a minimum of 10 years.

If you require additional information or have any further questions relating to the research, please contact the primary investigator at murtagpe@tcd.ie. If you would like to participate in this research, please sign the attached consent form and return a signed copy to murtagpe@tcd.ie.

DECLARATION:

- I am 18 years or older and am competent to provide consent.
- I have read, or had read to me, a document providing information about this research and this consent form. I have had the opportunity to ask questions and all my questions have been answered to my satisfaction and understand the description of the research that is being provided to me.
- I agree that my data is used for scientific purposes and I have no objection that my data is published in scientific publications in a way that does not reveal my identity.
- I understand that if I make illicit activities known, these will be reported to appropriate authorities.
- I freely and voluntarily agree to be part of this research study, though without prejudice to my legal and ethical rights.
- I understand that I may refuse to answer any question and that I may withdraw at any time without penalty.
- I understand that my participation is fully anonymous and that no personal details about me will be recorded.
- I have received a copy of this agreement.

PARTICIPANT'S NAME: _____

PARTICIPANT'S SIGNATURE: _____

Date: _____

Statement of investigator's responsibility: I have explained the nature and purpose of this research study, the procedures to be undertaken and any risks that may be involved. I have offered to answer any questions and fully answered such questions. I believe that the participant understands my explanation and has freely given informed consent.

RESEARCHERS CONTACT DETAILS: murtagpe@tcd.ie

INVESTIGATOR'S SIGNATURE: _____

Date:

7.3 Intended Interview Questions for Approval

TRINITY COLLEGE DUBLIN

School of Computer Science and Statistics

Intended Semi-Structured Interview Questions

Title of Project	The factors that influence the implementation of ICT shared services in multinational organisations
Principal Investigator	Peter Murtagh
School/discipline	School of Computer Science and Statistics, M.Sc. Management of Information Systems
Academic Supervisor	Noel Faughnan

Section 1: Organisational Profile

This section will build the profile of the respondent's organisation and identify the characteristics that influence the adoption of ICT Shared services within the respondent's organisation. Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to.

1.1 What is your job title?

CIO	IT Director	IT Manager	IT Consultant	Other

1.2 What is the size of your total organisation in full time employees?

Less Than 1,000	1,001 - 10,000	10,001 - 25,000	25,001 - 100,000	100,000+

1.3 What is the size of your business unit/member firm in full time employees?

Less Than 100	101-500	501-1000	1001-2000	2000+

1.4 How many staff in total are in your local ICT Department at present?

1-20	21 – 50	51-99	100-250	250+

1.5 What is your organisation’s business sector?

Financial Services	IT/Technology	Manufacturing	Consumer Products	Legal	Other

1.6 In how many countries does your organisation operate?

1	2-10	11-20	21-50	51-100	100+

1.7 What is the organisational structure/framework of your company?

Centralised	Decentralised	Other

1.8 Who are the key stakeholders for making ICT decisions in your organisation?

Global CIO	Local CIO	IT Director	IT Manager	Other

Section 2: ICT Shared Services in your Organisation

This section will explore the adoption of ICT Shared Services within the respondent’s organisation. Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to.

2.1 What is the current situation with regard to ICT Shared Services in your organisation?

Expanding our use of ICT Shared Services	Evaluating ICT Shared Services	Not pursuing the idea of ICT Shared Services

2.2 What ICT services are delivered via a Shared Service model in your organisation?

If your organisation currently has no ICT services delivered as a Shared Service, please skip to Section 5

Service Delivered	Please Select all that are currently Delivered as a shared service
IT Security	
Intrusion and Event Detection	
Managed Firewall	
Patch Management	
Web Filtering	
Anti-Virus	
Network & Server Management	
Application & Network Monitoring	
Private Cloud Offering	
Server Management	
Communication & Collaboration	
Email	
Telephony – Example Microsoft Lync hosting	
Telecommunications – Example Conferencing services	
Service Desk	
Project Management	
Document Management/SharePoint Solutions	
Application Management	
Finance Systems	
Enterprise Resource Planning System	
Software Development	

2.3 Who provides your organisation with ICT Shared Services?

Shared Service Centre	Other Business unit/Segment	Other

2.4 Does your organisation provide ICT shared services to any other business units within your organisation?

Yes	No

2.5 In areas where your organisation is currently using ICT Shared Services, has this improved the quality of services provided to the business?

Service Delivered	Please Select all that are currently Delivered as a shared service
IT Security	
Intrusion and Event Detection	
Managed Firewall	
Patch Management	
Web Filtering	
Anti-Virus	
Network & Server Management	
Application & Network Monitoring	
Private Cloud Offering	
Server Management	
Communication & Collaboration	
Email	
Telephony – Example Microsoft Lync hosting	
Telecommunications – Example Conferencing services	
Service Desk	
Project Management	
Document Management/SharePoint Solutions	
Application Management	
Finance Systems	
Enterprise Resource Planning System	
Software Development	

2.6 Does your organisation leverage Service Level Agreements to drive governance with your Shared Service provider(s)?

Yes	No	Don't Know

2.7 If yes, does your Service Level Agreements help drive continuous improvement?

Yes	No	Don't Know

2.8 Does your organisation require participation in ICT shared services or does it use a voluntary participation model?

Mandatory	Voluntary	Don't Know

Section 3: Barriers and Challenges

This section will explore the barriers and challenges faced by the respondent's organisation in implementing ICT Shared Services. Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to.

3.1 Which of the following have been the main barriers to date in the adoption of ICT shared services in your organisation?

Main Barriers	Please select all that apply
Management	
Poor Governance Structure	
Leadership and engagement of staff	
Poor Project Management	
Culture Change	
Change Resistance	
Lack of trust in Shared Service solutions	
Financial	
Unclear costs	
Expensive in comparison other solutions	
Higher Costs	
Technical	
Loss of local control	
Data protection issues	
Loss of local technical skills and knowledge	
Lack of service responsiveness	
Business	
Lack of feasibility studies & business case development	
Organisational structure	
Loss of agility	
Poor quality of service	
Lack of Flexibility	

3.2 Do you or your team see the implementation of shared services solutions as a threat to job losses?

Yes	No	Don't Know

3.3 Has there been a headcount reduction in your IT team since moving ICT services to Shared Services?

Yes	No	Don't Know

3.4 Do you feel a “one size fits all” solution offered by your organisations ICT Shared Services works regardless of the size of your business unit/member firm?

Yes	No	Don't Know

3.5 Are you ever left frustrated by services provided by ICT Shared Services in your organisation? If so, does that affect decisions regarding further adoption of ICT Shared Services?

Yes	No	Don't Know	Other

3.6 What concerns do you have with your ICT Shared Service provider(s)?

Concerns	Please select all that apply
Language barriers	
Time zone coverage	
Regulatory requirements	
Technical skills	
Support	
Poor Communications	
Other	

3.7 When adopting an ICT Shared Service are you concerned about the inability to get out?

Yes	No	Don't Know	Other

3.8 Do you have an exit strategy?

Yes	No

3.9 Have you any concerns about moving business critical ICT services to Shared Services?

Yes	No	Don't Know	Other

3.10 How have you typically addressed the organisation and talent changes needed at the local level when shifting services to ICT Shared Services?

Local Talent changes	Please select all that apply
Provided new organisation chart and job descriptions	
Headcount reductions to target level	
Issued communication to team regarding changes	
Shifted redundant employees of the IT team to other roles within the organisation	
Restructuring of management positions	
Required associates to reapply for remaining positions	
Other	

3.11 Has the implementation of any ICT shared services resulted in any of the following for your organisation?

ICT Shared Service Implementation Results	Please select all that apply
Over-standardisation of systems and processes	
Lack of operational flexibility	
Increased system complexity	
Unclear service accountability	
Dampened employee morale	
Ineffective communication between the shared service provider and the local ICT team	
Unexpected implementation cost escalation	
Long project timelines	

3.12 What drawbacks has ICT shared services introduced to the business?

Drawbacks to the business	Please select all that apply
Poor Governance Structure	
Unclear costs	
Data protection issues	
Poor System availability	
Ineffective Communication	
Long Project Timelines	
Loss of accountability when issues arise	
Other	

3.13 What drawbacks has ICT shared services created for the local ICT team?

Drawbacks to the local ICT Team	Please select all that apply
Loss of local control	
Loss of local technical skills and knowledge	
Long Project Timelines	
Loss of jobs	
Low morale	
Other	

3.14 Are there Data Privacy or security reasons that determine ICT services in your organisation from moving to a Shared Service?

Yes	No	Don't Know

3.15 When considering ICT shared services, have you specific concerns over Security?

Yes	No	Don't Know enough about it

Section 4: Benefits of ICT Shared Services in your organisation

This section will explore the benefits achieved from the implementation of ICT shared services in the respondent's organisation. Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to.

4.1 Where has ICT Shared Services had a positive impact in your organisation?

Options	Positive Impact	Somewhat Positive Impact	None
Reduced Costs			
Improved Quality of Service			
Support of growth/scalability			
Cross organisation Comparability			
Service Level Agreements			
Removal of distractions from core business			
Better Management			

4.2 What benefits has ICT shared services brought to the business?

ICT Shared Service Business Benefits	Please select all that apply
Lower Costs	
Optimised Labour Pool	
Common approach to continuous improvement	
Agility to deliver cost effective back office services as the business changes	

4.3 What opportunities can ICT Shared Services bring to your IT team?

Opportunities to local IT Team	Please select all that apply
Provide ICT team members the opportunity to work on more strategic projects	
Enable local resources to work as part of a global team	
Promote local resources to management roles	
Provide opportunities for local resources to join the shared service team	
Other	

4.4 What factors are most important to your organisation when making decisions regarding your ICT shared service strategy and related investments?

Drivers	Please select all that apply
Financial Drivers	
Reduce Costs	
Reduce Headcount	
Economies of scale	
Business Drivers	
Increase Service Quality	
Accommodate Growth	
Improve Service Levels	
Streamline Business Processes	
Driving Business Value	
Internal Political pressure	
Technical Drivers	
Reduce Risk	
Expertise provided by the shared service	
Management Drivers	
Improve agility in delivering IT solutions to the business	
Reduce distractions from core competency activities	

4.5 Do any of the following external drivers make ICT shared services more attractive to your business?

External Drivers	Please select all that apply
Rising Labour Costs	
New Technologies	
Compliance	
Need to centralise/standardise processes	
Legislative changes	

Section 5: ICT Shared Service Plans for the Future

This section will look at future ICT shared services plans in the respondent's organisation. Each question is optional. Feel free to omit a response to any question; however the researcher would be grateful if all questions are responded to.

5.1 What services would you consider being hosted in a shared service environment in the next 3 years that are not currently delivered as a shared service?

Service Delivered	Please tick any Services that you would consider being hosted in a shared service environment in the next three years that are not currently in a shared service	Please tick any Services that you would consider outsourcing in the next three years that are not currently outsourced
IT Security		
Intrusion and Event Detection		
Managed Firewall		
Patch Management		
Web Filtering		
Anti-Virus		
Network & Server Management		
Application & Network Monitoring		
Private Cloud Offering		
Server Management		
Communication & Collaboration		
Email		
Telephony – Example Microsoft Lync hosting		
Telecommunications – Example Conferencing services		
Project Management		
Document Management/SharePoint Solutions		
Application Management		
Finance Systems		
Enterprise Resource Planning System		
Software Development		

5.2 Does your company consider Shared Services before Outsourcing?

Yes	No	Don't Know

5.3 Does your organisation plan to move any operations that are currently shared services to outsourcing in the next 3-5 years? (Example - Move Email to Office 365)

Yes	No	Don't Know

5.4 How do you expect your organisation to change its use of Shared Services and Outsourcing in the next 3-5 years?

7.4 Participant Information Sheet

TRINITY COLLEGE DUBLIN
School of Computer Science and Statistics
Participant Information Sheet

Title of Project	The factors that influence the implementation of ICT shared services in multinational organisations
LEAD RESEARCHER	Peter Murtagh
School/discipline	School of Computer Science and Statistics, M.Sc. Management of Information Systems
Academic Supervisor	Noel Faughnan

Before participating in this research study, please read this information sheet carefully.

Study: The factors that influence the implementation of ICT shared services in multinational organisations.

Dear Sir/Madam,

I am currently undertaking MSc in Management Information Systems at Trinity College Dublin. As part of the postgraduate programme I am required to complete a research study. I am conducting a research study exploring factors that influence the implementation of ICT shared services in multinational organisations.

The study has received ethical approval from the Ethics Committee at Trinity College. Participation involves completing an interview, which will take approximately 30-40 minutes. The participants for that research have been selected as they are currently working within ICT teams in multinational organisations.

All information obtained will be treated confidentially and no individuals or name of organisations will be named throughout the process and will be kept confidential. The data gathered will not be linked with any participant or organisation. The data will be securely stored and will not be shared without your permission. Participation is voluntary and participants have the right to withdraw from the study at any stage throughout the process without penalty. The participants for this research have been selected as they are currently working within ICT teams in multinational organisations. The participants of this research are past and present work colleagues of the primary investigator and I'm obliged to disclose that there is a conflict of interest.

An audio recording will be made during the interview. The audio recording will be used to verify that all information obtained is accurate. You can request to stop the recording at any stage of the interview or request to erase parts of your recording if required. In the extremely unlikely event that illicit activity is reported I will be obliged to report it to appropriate authorities. The audio recordings will only be made available to the principal investigator and academic supervisor. No recordings will be replayed in any public forum or research presentation. The recordings will be kept on a securely password protected device that will be only accessible to the principal investigator. Audio recordings will be stored for the duration of this study in accordance with Irish Data Protection Requirements. Audio recordings will be destroyed after 3 years after the close of the study.

If you require additional information or have any further questions relating to the research, please contact the primary investigator at murtagpe@tcd.ie. If you would like to participate in this research, please sign the attached consent form and return a signed copy to murtagpe@tcd.ie.