Service optimisation: an exploration of contemporary servicing and sourcing strategies and associated information technology solutions

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Service Optimisation

An exploration of
Contemporary Servicing and Sourcing Strategies
and associated
Information Technology Solutions

A research thesis submitted to Southern Cross University
in partial fulfilment of the requirements for the degree of
Doctor of Business Administration.

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July 2004


Certification & confidentiality

I certify that the substance of this thesis is my own work and has not previously been submitted for examination for any other degree. To the best of my knowledge, the intellectual capital and work of others is acknowledged in the thesis.

Although the names of the organisation, business units and individuals examined have been removed from this thesis, the contents could be used by competitors and are considered confidential. I formally request that the contents and substance of his thesis are retained in confidence and not made available beyond the examiners and relevant administrative and academic staff within Southern Cross University. I also request that this confidentiality is maintained for a period of at least 2 years from the date of submission (submission date – 12 July 2004).

Shane Thatcher
July 2004
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There are many people who have supported and encouraged me throughout this effort and I would like to recognise them by extending my gratitude here.

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Abstract

Global financial and other organisations have and continue to establish call center and back office servicing capacities in Asia to complement their existing ‘domestic’ (US, UK, Australia, Canada etc) operations and supplement their in house deficiencies. They use both third party and proprietary suppliers for the provision of these services, enabling levels of capital investment and risk to be strategically managed. Through these strategic sourcing approaches, organisations have been able to yield significant performance benefits, while realising operational savings of 30% or more. However, there is little information in the extant literature about the technology and telecommunications solutions supporting these efforts and, as such, the following research problem was identified and examined:

“Why do global financial organisations leverage Asian based suppliers for the provision of front office and back office services and how effective are the technologies solutions supporting these?”

Following an extensive review of the contemporary extant literature relating to call center and back office servicing, core versus non core business and sourcing strategies, coupled with existing and emerging technology and telecommunications systems and solutions, a theoretical framework was developed. In particular, the following five key research issues were identified and subsequently explored in this research:

1. What is a service optimisation initiative and why do organisations pursue these in Asia?
2. Which Asian markets are leveraged and what factors influence the decisions to utilise third party versus proprietary service providers?
3. What influences the technology solutions employed and why?
4. How do the existing technologies solutions perform and are they optimal?
5. How should the technologies solutions perform and what factors should influence the design?
Based on the information available in the extant literature and with particular regard to the technology and telecommunications solutions supporting the development of call center and back office servicing capacities in Asia, it was clear that these areas were under-researched or pre-paradigmatic. As a result, a theory building approach leveraging a qualitative research methodology was developed for this research. Specifically, a holistic multi case approach focused on one organisation, three strategic business units and ten instances (cases) of developing ‘off shore’ (non US, UK, Australian or Canadian) servicing capacities was used.

Data was collected from the ten cases of developing off shore servicing capacities through convergent and in-depth interviews. Five interviews per case were undertaken with purposefully selected ‘information-rich’ participants, including senior sponsors or champions at Vice President or Director level, program directors and business and technical subject matter experts. The data collected through these interviews was transcribed and presented in matrices and tables allowing cross case and cross cluster analyses to be undertaken.

The research findings were subsequently compared and contrasted with information present in the extant literature and specific contributions to the ‘body of knowledge’ identified. Firstly, a clear definition of ‘service optimisation’ was derived, along with the utility of financial slack to enable strategic growth. Secondly, it was found that India and the Philippines are primary sourcing markets because of relevant resource abundance and financial arbitrage. In addition, geopolitical risk management and available capacities were found to underpin the selection of proprietary versus third party service providers.

Next, it was found that business stakeholders influence the technology solutions implemented during proof of concept or pilot efforts and that there is little attention applied to reengineering these once they are in place, even though they are considered suboptimal. It was also found that the ‘piece meal’ approach to establishing these capacities using isolated proof of concept technology and telecommunications resulted in significant complexity, redundancy and cost, with little opportunity to account for these ‘facilities’ on a consumption basis. Finally, it was found that contemporary publicly available technology and telecommunications
solutions procured as ‘managed services’ would enable optimisation. Moreover, the provision of these sorts of services from specialist suppliers who have economies and expertise is expected to offer improved performance and flexibility with reduced risk in a ‘user pays’ consumption model.

In addition to the contributions highlighted above, this empirically based research establishes a foundation for subsequent ‘green field’ efforts. In particular, it offers additional information around the notion of optimisation and how significances in existing models may vary or change in alternate circumstances. In this respect, this research offers empirically founded considerations for organisational strategy, with a particular focus on the development of ‘remote’ call center and back office servicing capacities.
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1 Introduction

This thesis investigates the servicing and sourcing strategies employed by a large multinational financial services organisation who is outsourcing front office (call center services) and back office (non customer contact services, such as data keying or customer account maintenance) functions to off-shore (non US) proprietary and third party providers. In addition, this research also examines the various technical solutions employed and compares and contrasts these with the perceived point of arrival solutions.

This chapter provides the background to the research, introduces the research problem and preliminary justification, establishes the context and briefly describes the methodology that is used. It then provides an outline and overview of the thesis’ structure and defines the key terms. Lastly, delimitations of the research scope and the key assumptions are discussed.
1.1 Background to the research

This section provides background information about the research problem. It introduces outsourcing in the context of business reengineering and describes its application in the migration of front office and back office functions to lower cost economies. It then establishes the research problem within a general business context and explains its role within the specific organisation context of organisation examined.

1.1.1 Outsourcing in a general business context

As the global economy continues to evolve, organisations are faced with increasing competition (Riechley 1996). In response, many organisations are striving to improve operating efficiencies by reducing waste and rework and reengineering suboptimal business processes (Keith 1996). These reengineering efforts include divesting specific activities and functions and migrating others to third party service providers, so as to allow organisations to focus on their core business and competencies (Lissak 1995; Shermach 1995; Zimmerman 2001).

These reengineering efforts are being undertaken at a time of discontinuous change (Venkatraman 1997). Government and industry deregulation and contemporary policy are also fuelling competition (Burroughs 1993; Ferguson 1999; Johnson 2001; Korzeniowski 2000; Turek 2000a). Protected markets are becoming increasingly accessible to new entrants from similar industries, other disciplines and, indeed, other geographies (Anonymous 2000a; Ferguson 1999; McLuhan 2001).

Organisations who are striving to reduce operating costs, whilst focusing on their core business and competencies, and are employing practices like outsourcing (Marwaha & Tommerdahl 1995; Thurston 1998; Troian 1995; Walker 1996; Young 1998). These practices allow organisations to redirect their attention and focus on core processes, whilst engaging third parties to provision non core processes. Whilst there is much debate about the definition of core and non core processes and functions, these are generally categorised as utility or commodity type services.
(Forth 1998; Hellenbrand 1995). Moreover, processes and functions that support or promote the core business are often referred to as non core services.

When identifying third party service providers who are candidates for the outsourcing content, organisations are looking to lower cost markets and economies. For organisations with significant operations in high cost economies, such as the US, UK or Japan, lower cost economies like India, the Philippines and Malaysia are becoming increasingly attractive (Turek 2000b). These economies are attractive for outsourcing purposes because they have large, well educated, English speaking and often multi lingual populations (Dash 2001). In addition, many of these lower cost economies are incenting foreign entrants by offering tax relief and other benefits (Turek 2000b).

When organisations are contemplating outsourcing, they must first consider whether these lower cost economies are suitable for the specific processes or functions (Dwek 1995). Moreover, consideration needs to be given to the various communication, cultural and other differences, if they are applicable (Turek 2000a; Yorgey 1998). Once this has been determined, organisations must then identify suitable service providers who are ready and able to enter into a relationship.

On face value, the identification of suitable lower cost economies seems simple, as salary and benefit, real estate, capital and other operational costs are readily available. However, when comparing and contrasting lower cost economies, the costs, benefits and ultimate feasibility are significantly more difficult to determine. Comparisons must take into consideration the legal and regulatory differences, which may include restrictions on working hours and the like. In some cases these restrictions may be gender biased and, hence, limit opportunities. However, these constraints are continually being relaxed and exemptions are becoming increasingly common, particularly in locations like India and the Philippines.

When evaluating lower cost economies and potential third party service providers, organisations often seek responses to requests for information, expressions of interest, requests for proposals or bids (Barry 2000; Franco 1998; Rokoff 1999). These responses usually constitute the foundation or platform from which the
comparisons are made (Barry 2000). This is true for the economies (identified countries and markets) and service providers collectively. However, in many emerging, immature and lower cost economies, history and precedence are absent. As a result, potential service providers often fail to recognise or comprehend the context of the instruments employed and, as such, their responses are usually incomplete and, or, inaccurate, making ‘apple to apple’ comparisons more difficult.

In consideration of outsourcing specific functions, organisations face other associated issues and must consider the generic capacities and capabilities of the countries being considered. That is, capacities of these lower cost economies to accommodate the types of processes and functions being migrated. For example, countries like Malaysia, India and the Philippines are stronger candidates for customer contact processes and functions, because they have large populations of well educated English speaking people (Dash 2001). However, countries like China, who can certainly be categorised as lower cost, do not have the base level of infrastructure, nor the volume of well educated English speaking people (De Kruif 2001; Turek 2000b). China, however, may be more attractive for non customer contact functions and manufacturing processes. These issues and considerations, nevertheless, further convolute the selection and other processes and add complexity.

1.1.2 Outsourcing within the specific organisational context

Large multinational financial organisations are outsourcing the provision of front office and back office functions to lower cost economies, including Canada, India, Malaysia, New Zealand and the Philippines (Dash 2001; Moliteus 1999). These services are high cost in many countries like the US and UK and employee attrition rates can be in excess of 30% (Hoare 1997; Turek 2000b). In fact, in specific instances, it is noted that attrition can be in excess of 50% (Bird 2000). Service providers in lower cost economies are experiencing attrition rates in the order of 7% to 15% (subjective third party reports from third party service providers located in India and the Philippines), whilst reductions in operating expenses range from 30% to 60% in Canada, India, Malaysia and the Philippines (Bird 2000; Dash 2001; Leuchter 1999).
In support of reengineering and growth strategies, the organisation examined has initiated a program to migrate specific call center functions from the US (among others) to India and the Philippines. These efforts are expected to reduce operating expenses and mitigate service delivery and operational impediments like attrition (Bird 2000; Hoare 1997; Turek 2000b). However, due to the immaturity of the service providers and the relatively poor and unreliable, but evolving, telecommunications infrastructure, there are certainly risks and vulnerabilities associated with undertaking these initiatives (Turek 2000b).

In order to reduce and, or, mitigate the risks and vulnerabilities associated with outsourcing the provision of these front office and back office services, the organisation examined has employed a ‘proof of concept’ methodology. This method focuses on migrating low risk, low volume, simple functions that do not require significant financial or technology investment. The third party service providers are required to establish or leverage an owned or leased point of presence within the US, so as to enable connectivity. Hence, the organisation examined connects to the service provider’s US point of presence. This strategy, however, mitigates the opportunities the organisation examined might otherwise have, to leverage its economies of scope and scale, quantity discounts and global contracts by procuring the necessary infrastructure (Carr 2001; Nourbakhsh 1998). Instead, the organisation examined pays the service provider a premium, which is usually a ‘pass through’ cost, but may be based on some combination of volume and the number of ‘connect minutes’.

The organisation examined has elected to establish a diversity of proof of concepts using different functions and service providers. This strategy spreads risk (between functions, service providers and geographies), enables multiple functions to be tested and establishes a foundation for aggressive ‘ramp up’ strategies. However, this strategy also poses a number of potential risks.

The installation and ongoing operations of the international telecommunications infrastructure, for example, is expensive, widely distributed, difficult to support and owned or leased by the service providers (Turek 2000b). This removes opportunities to access quantity discounts or leverage global contracts that offer the organisation
examined, as a large international telecommunications consumer, significant savings. Instead, the relatively small, ‘off-shore’ and immature service providers pay a premium for these services, which are passed onto the organisation examined (Carr 2001).

As a result of the methodology being employed, the design, development and ongoing operation of the telecommunications and other necessary infrastructure is less than optimal. This piece meal approach to engaging new service providers and mandating connectivity via their US point of presence, mitigates opportunities to access the economies of scope and scale, quantity discounts and other fiscal advantages that could be derived if an alternate approach was employed. In addition and as time progresses, this methodology will increase in complexity.

The addition of new service providers will propagate the previously mentioned opportunity costs and increase the complexities associated with managing and supporting the various infrastructures. Opportunities to consolidate telecommunications circuits and attract the volume and bandwidth discounts will be lost. In addition, a significant additional quantity of termination type hardware will also need to be supported, potentially at the organisation examined and service provider ends, and control of the telecommunications circuits and hardware will largely rest with the service provider.

1.2 Research problem

This section defines the research problem and the primary objectives of the research. It then expands on each objective in order to demonstrate how the outcomes of the investigation will enable large multinational financial organisations to make better servicing and sourcing decisions and leverage more optimal technology solutions in the provision of front office and back office services in lower cost and emerging markets.
1.2.1 Research problem defined

This research explores the servicing and sourcing strategies employed by a large multinational financial services organisation who is outsourcing front office (call center services) and back office (non customer contact services, such as data keying or customer account maintenance) functions to off-shore (non US) proprietary and third party providers located in lower cost economies. The specific research problem investigated is:

“Why do global financial organisations leverage Asian based suppliers for the provision of front office and back office services and how effective are the technologies solutions supporting these?”

The research focuses on the strategies employed by a large multinational financial services organisation. It specifically focuses on a Service Optimization (SO) program, which supports the organisation’s growth and reengineering strategies by outsourcing pertinent functions and capacities to proprietary and third party service providers in lower cost economies, who are, for the most part, considered immature with respect to the telecommunications and associated environments.

1.2.2 Research objectives

The primary purpose of this research is to influence organisation strategy and decision making with regard to servicing and sourcing decisions, as well as the technical solutions employed to facilitate outsourcing front office and back office services to proprietary and third party service providers operating in lower cost and immature markets.

A comprehensive understanding of the reasons and drivers for pursuing service optimisation efforts and the implications and opportunities of using the current and versus the emerging technology solutions will be gained. In turn, this understanding will facilitate comparative analyses between employed and potential solutions, enabling economic and strategic decision criteria to be introduced and leveraged.
An assessment of the reasons, drivers and other salient aspects will be undertaken in two lower cost economies: India and the Philippines. The findings will be compared and contrasted and considered in light of the key areas highlighted in the literature. The intention is to gain a more comprehensive view of service optimisation strategies, the technology solutions employed in facilitating the same and how the emerging technologies may contribute.

A cursory review of legal and regulatory constraints will also be undertaken to better understand the implications of pursuing opportunities in emerging and immature economies, with particular regard to the deregulation of the respective telecommunications environments. An examination of the relevant domestic and international telecommunications solutions will be undertaken, with an intention of forecasting and speculating on the likely future environments within the aforementioned markets. In addition, this foundation is expected to elucidate the salient opportunities and drive the development of strategy, particularly with regard to point of arrival technology solutions.

1.2.3 Research outcomes

This research will enable the organisation examined to develop strategy on the basis of a definitive benchmark study. It will elucidate the likely efficiency and effectiveness differentials associated with employing current versus potential technical solutions, in consideration of the emerging telecommunications environment, not to mention the risks and vulnerabilities of undertaking the same.

Informed decisions, premised on a comprehensive understanding of pertinent criteria and in consideration of the economics will be enabled, facilitating alignment with new and emerging strategy.

1.3 Justification

This section justifies the research and demonstrates its value to the organisation and the industry. It establishes the foundation for the investigation, elucidates the costs
and benefits associated with the status quo versus the potential and forecasts the expected efficiencies of employing the latter.

1.3.1 Organisation implications

Many organisations are striving to improve operational efficiencies by radically reengineering and, or, continually improving existing business processes (Keith 1996). Some organisations are engineering or architecting entirely new business processes to accommodate new opportunities. These efforts are influenced by a number of internal and external stimuli, including organisation and leadership philosophies and economic conditions and circumstances.

Opportunities for large multinational organisations increase, as deregulation of the telecommunications environments in many Asian countries continues (Burroughs 1993; Ferguson 1999; Johnson 2001; Korzeniowski 2000; Turek 2000a). Government and regulatory authorities are offering tax incentives and exemptions to working restrictions, whilst commercial authorities are offering significantly reduced lead times for critical infrastructure components to lure foreign organisations into their market (Turek 2000b). Hence, organisations who are positioned to leverage existing operations and experiences in relevant countries, where English is the first or national language, and where delimiting aspects can be mitigated by training and other means, are particularly well placed to take advantages of these opportunities. In addition, where the abundance of suitably qualified resources, or the labour supply significantly outweighs the local domestic demand, economies can be leveraged (Bendor-Samuel 2000; Carr 2001).

In pursuit of these existing and emerging opportunities, organisations expect to realise significant operational savings (Bendor-Samuel 1999). These savings primarily stem from the significant salary differentials that exist between high cost economies, such as the US and the UK, versus those in lower costs economies, such as Canada, India, Malaysia and the Philippines. Other areas where cost differentials can be leveraged stem from the continually deregulating telecommunications environments within lower cost economies (Dash 2001). In this space, local (domestic) telecommunications providers are partnering with large foreign players
who have substantial market shares and who already operate in both higher and lower cost economies (Bharti Telecommunications and SingTel, for example).

1.3.2 Environmental influences

The provision of telecommunications infrastructure and services in higher cost economies, usually comes at a significantly reduced rate, in comparison to the services available in the lower cost economies. The reason for this is that local or domestic telecommunications service providers operating in lower cost economies usually have little or no domestic or foreign (international) competition. Hence, they are monopoly providers and government regulation often prevents or restricts other providers entering the market. However, the deregulation of many lower cost economies, particularly with respect to the telecommunications environments, is certainly progressing (Burroughs 1993; Ferguson 1999; Johnson 2001; Korzeniowski 2000; Turek 2000a).

The deregulation of telecommunications environments has seen the emergence of ‘whole of country’ plans to progressively introduce additional domestic and international service providers. Many existing providers are striking partnership or joint venture deals with their multinational counterparts, due to capacity and fiscal necessities (McMahon 1998). These new relationships are likely to expedite the entry of additional providers, increasing competition and enabling diversity. This latter point is a critical step for organisations seeking to migrate or establish front office and back office capacities, as redundant routes enable lower risk operations and this is particularly true for the emerging economies where it is not uncommon for the telecommunications infrastructure to be interrupted by physical means.

1.3.3 Organisation influences

Organisations seeking to establish capacities in emerging markets, where foreign service providers are entering, are expecting to see a reduction in telecommunications infrastructure and operating costs (Dash 2001). The general economic principles of supply and demand and increasing competition are expected to return fiscal benefits to service procurers and users.
The culmination of salary and telecommunications infrastructure and operating differentials are primary motives for organisations pursuing outsourcing opportunities. These opportunities, however, may adversely impact on other organisation imperatives. For example, the ultimate reduction in employees located in higher cost economies may generate adverse perceptions from remaining employees concerned about their future (De Vries & Balazs 1997). This in turn may lead to lower morale and lower productivity and increased absenteeism. In addition, the critical mass, once owned by the organisation, has now shifted, reducing opportunities to leverage economies of scale and, or, quantity or volume discounts.

1.3.4 Associated issues

Other issues warranting some consideration include the potential loss of knowledge capital and capacity (Read 2001), perceptions and tolerance of customers and general language, communication and cultural differences (Turek 2000a; Yorgey 1998). With that said, the primary focus of this research is to investigate service and sourcing strategies, with a particular emphasis on leveraging optimal technology solutions.

1.4 Proposed methodology

This section describes the methodology used in undertaking the research and presenting the findings.

1.4.1 Case study method

The research objectives are diverse and include both qualitative and quantitative aspects. In addition, the research is exploratory in nature and, thus, lends itself to case or field study investigation, as the qualitative and quantitative attributes need to be examined in combination. Further, the research inductively builds theory about a contemporary phenomenon and for these reasons, a case study methodology was selected.
In an effort to understand the reasons and drivers for pursuing the various servicing and sourcing strategies, in concert with the technology solutions supporting these, multiple cases are explored, compared and contrasted. Moreover, cases were purposefully selected in order to generate similar findings (literal replication) or disparate findings for predictable reasons (theoretical replication) (Parkhe 1993; Yin 1994). Hence, from the various case study methodologies, this research is premised on a holistic multi case approach (Bonoma 1985; Eisenhardt 1989; Gersick 1988; Miles & Huberman 1994; Parkhe 1993; Patton 1990; Romano 1989; Yin 1994).

1.4.2 Qualitative and quantitative perspectives

Qualitative methodologies are useful when existing knowledge is inadequate and when the researcher seeks to approach the problem without preconceived theories and notions (Flick, von Kardorff, Keup, Rosenstiel & Wolf 1991). As the servicing and telecommunications environments are immature and quickly evolving within many of the lower cost economies, qualitative implements are applicable.

Similarly, much of the interest in the research is premised on an ability to identify methods of achieving lower cost service provision (service optimisation), while maintaining service quality. On the basis of the transactional type operations undertaken, the use of quantitative implements in the collection, analyses and interpretation of pertinent fiscal and transaction volume metrics, is also warranted.

1.4.3 Data collection

The organisation examined has already undertaken a number of proof of concept initiatives, where specific front office and back office functions and operations have been outsourced to proprietary and third party service providers in India and the Philippines. These proof of concept initiatives, in conjunction with those that are forthcoming, will be examined in order to determine better understand the reasons and drivers for pursuing the servicing and sourcing strategies, as well as the performance of the existing technology solutions.
The qualitative data will be collected via convergent and in depth interviews. These, in turn, will be compared and contrasted using the aforementioned holistic multi case approach. This comparative framework will assist in identifying sub-optimal strategies (and ultimately practices) by elucidating flaws (Breyfogle 1999).

1.4.4 Research context and methods

Details about the research context, including pertinent information about the existing outsourcing arrangements in India and the Philippines, will be discussed and examined in detail in chapter 2 – Literature Review and chapter 4 – Data Analysis respectively. The case study research method will be discussed in detail in chapter 3 – Methodology.

1.5 Definitions

The following several subsections define the key terms used throughout the research. These definitions contribute to the scope of the research and phenomena being studied (Perry 1998a).

1.5.1 Servicing

Front office functions. Front office functions are those that involve direct interaction with customers (Nolan 1997). These are usually facilitated via telephone service centers or call centers and involve open dialogue with customers.

Back Office. Back office functions do not involve direct customer contact (Edwards 1997). As implied in the name, back office services include data entry, customer account maintenance and other administrative functions. In some cases back office functions generate customer contacts, in which case the subsequent service is front office.
1.5.2 Sourcing

**Outsourcing.** Outsourcing is the migration of the provision or production of goods and, or, services to an external enterprise (Domberger 1998; Kakabadse & Kakabadse 2000). It is the practice of subcontracting activities, functions and operations to another organisation (Patane & Jurison 1994). Moreover, outsourcing is turning over ownership and control of a service to a third party (Bendor-Samuel 2000; Thames 1992).

The degree of outsourcing is related to the reliance on the service provider in making decisions about the service delivery (Ang & Straub 1998) or the ‘locus of governance in decision rights or control (Loh & Venkatraman 1992; Quinn & Hilmer 1994). It has also been aligned with the transferring 80% or more of the budget associated with the activities or functions to a third party (Lacity & Willcocks 1998).

The outsourcing arrangement may include transferring people, leases, facilities and other resources to the third party (Lacity & Willcocks 1998; Patane & Jurison 1994) and the provision of services may continue to be supplied from the same premises or consolidated with other similar operations run by the service provider (Muller 1993).

**Insourcing.** Insourcing is the engagement of external resources for the provision or production of goods and, or, services under the control of the organisation engaging the services (Nourbakhsh & Hughes 1998; Read 2001). Moreover, insourcing is the retention of management and control over operations (such as call center or back office service center) run from the organisation’s facilities by third party resources (Nourbakhsh & Hughes 1998). The term is used to denote restructuring where the control of operations are retained by the organisation in full (Kador 1991).

**Cosourcing.** Cosourcing is where the organisation and one or more third parties provide some percentage of the same services (Fuhrman 1999). That is, cosourcing is the provision or production of the same goods and, or, services, such as call center and back office services, from both proprietary and third party capacities (Fuhrman 1999; Shermach 1995).
**Strategic / selective sourcing.** Due to the need to contend with an imperfect supplier market, strategic sourcing is the purposeful selection and migration of non-core activities and functions that yield no strategic or competitive advantage and whose production costs differentials are not adversely impacted by the transaction costs associated with outsourcing (Ang & Straub 1998; Prahalad & Hamel 1990; Quinn & Hilmer 1994). Moreover, it is the divestiture or activities and functions that drain internal resources and efforts in lieu of concentrated effort on the development and leverage of core competencies and attainment of the organisation’s primary mission (Quinn & Hilmer 1994; Thames 1992).

**1.5.3 Other**

**Core competencies.** Core competence is defined as a central set of key or critical or fundamental corporate skills that allows an organisation to create unique value for its customers (Prahalad & Hamel 1990; Mintzberg & Quinn 1996). The concept also extends beyond this and includes knowledge sets, as opposed to products or functions, flexible and adaptable skills, unique focus on current and future customer needs and requirements, deep capabilities and a capacity to maintain market and industry leadership (Mintzberg & Quinn 1996).

**Voice Response Unit.** A voice response unit (VRU), also referred to as an interactive voice response unit (IVR) or an audio response unit (ARU), is a system that responds to caller-entered digits or speech recognition to allow the user to navigate through a service system. When integrated with customer information databases, callers may check account information and complete transactions (Johnson 2001).

**1.6 Delimitations of scope**

This section describes the delimitations of scope and key assumptions associated with the research.
1.6.1 Delimitations of scope

This research focuses on a contemporary phenomenon and inductively develops theory about practice by comparing and contrasting the extant literature with empirical data generated through a qualitative case study approach (see chapter 3). As such, the literature review is largely delimited to the recent past (circa 15 years), with the exception of a few papers, which have been included to solidify salient points.

The research concentrates on the servicing and sourcing strategies and technology solutions employed by a large global financial services organisation, who is migrating front office and back office functions from high cost economies like the US and the UK to lower cost economies like India and the Philippines. It considers the motives and drivers associated with pursuing these strategies and employing these solutions and established the contexts in which the findings and recommendations are relevant.

The reasons for pursuing service optimisation efforts, in concert with the costs, benefits and implications of employing specific technology solutions are examined, compared and contrasted in light of the primary motives and these form the bases of the conclusions and recommendations.

1.7 Thesis outline

This section provides an outline of the thesis, which is structured using the five chapter model (Perry 1998).

Chapter 1 provides an introduction to the thesis and outlines the research problem, scope and other salient aspects pertinent to the research and the research context. Chapter 2 identifies the main literature relevant to the research topic and problem. It introduces servicing and sourcing in the context of business reengineering and optimisation and discusses the motives and drivers for pursuing these strategies. The theoretical framework for addressing the research problem and issues is then presented at the end of chapter 2.
Chapter 3 discusses the methods and procedures in which the research problem is explored, the hypotheses tested and how the conclusions are drawn. It substantiates the research paradigms and methodologies used and addresses ethical and other pertinent considerations. Chapter 3 establishes the research ‘road map’, which is then executed in chapter 4. Data from specific cases are collected, analysed, interpreted and compared and contrasted. The research issues are tested and conclusions regarding patterns and trends are drawn.

Chapter 5 discusses the conclusions drawn from each of the issues examined and these are then discussed in culmination. Conclusions regarding the research problem are then discussed, as well as the likely implications of the conclusion on theory, policy and practice. Chapter 5 concludes with a general discussion on the limitations of the research findings and opportunities for further research.
Chapter 1 established the foundation for this research, while this chapter, depicted in figure 2.1 on page 119, summarises the salient elements of the extant literature. In particular and in consideration of the research problem, the key terms are defined and the parent and immediate disciplines explored. The research issues, which emerged throughout the review, were identified and a theoretical framework constructed (see figure 2.3 on page 55).
2.1 Scope of the literature review

This research focuses on a contemporary phenomenon and inductively develops theory about practice by comparing and contrasting the extant literature with empirical data generated through a qualitative case study approach (see chapter 3). As such, the literature review is largely delimited to the recent past (circa 15 years), with the exception of a few papers, which have been included to solidify salient points.

Source: developed for this research.
The review focuses broadly on front office (call center) and back office servicing and sourcing strategies, as well as the technology solutions enabling their delivery. Moreover, the reasons for undertaking service optimisation efforts are explored, along with the means of enabling the same. What is obvious from the literature is that there is little information about the approaches (proof of concept or piloting, for example) used from a technologies perspective and it is here that the primary contributions to the bodies of knowledge are anticipated.

2.2 Call center and back office servicing

This section provides background information on the contemporary servicing and sourcing strategies employed by organisations. The servicing element largely focuses on the provision of front office and back office services, while the sourcing element concentrates on the options available to organisations employing these types of practices. The intent is to elucidate the salient elements of these management practices and to establish the scene and context for the research. The servicing and sourcing strategies constitute the parent disciplines of this research (Perry 1998a).

2.2.1 Background

Many organisations utilise service centers to support their customers. In mature markets like the US, UK and Canada, these centers are costly to run and are complicated by significant operational and administrative challenges (Read 2001; Spiegelman 2000). While the services provided through these centers are not considered core, they are essential and enable new business opportunities through customer contacts (Anonymous 1996; Bendor-Samuel 2000).

In an effort to reduce costs and alleviate the operational and administrative challenges, organisations are employing different strategies for the provision of call center and back office services (Bendor-Samuel 1999; Turek 2000a). These strategies include, but are not limited too, the use of proprietary and third party providers from abroad (Dash 2001). Asian based markets, like India and the Philippines, are most prominent, but introduce a new set of problems (Dash 2001; Patane & Jurison 1994). Specifically, the dependence on complicated technology
and telecommunications solutions and the accompanying legal and regulatory conditions associated with the service provision (Turek 2000a; Turek 2000b; Yorgey 1998).

This sourcing strategy, however, creates a virtual organisation where the partners bring expertise to the relationship and benefits to the customer (Shermach 1995). The virtual organisation allows each partner to focus on their core business and manage trends and crises based on feedback from the call center (Shermach 1995). However, the augmented value derived from these virtual organisations is largely premised on the activities and functions sourced (Bendor-Samuel 2000). The Bank of America, for example, retained the design, strategy, policy making and compliance functions and sourced information technology, call center and other functions, from Exhult, through a strategic partnership (Zimmerman 2001).

2.2.2 Issues and opportunities

There are various reasons why organisations are considering and pursuing alternate servicing strategies. Some of the key drivers include capacities and capabilities (facilities, resources, language and the like), economics (production and transaction costs, financial slack and general arbitrage), focus on core business and competence and strategic environmental and commercial exploitation opportunities (Anonymous 1996; Bird 2000; Marwaha & Tommerdahl 1995; Quinn & Hilmer 1994) Read 2001; Spiegelman 2000; Turek 2000a).

In particular and with regard to the call center and back office arena, specific reasons include, resource availability, service integration, new business opportunities, disaster recovery and business continuity, language availability, evolving and emerging technology, attrition rates, training and recruitment costs and others (Anonymous 1996; Bird 2000; Marwaha & Tommerdahl 1995; Read 2001; Spiegelman 2000; Turek 2000a). However, the selection and employment of these strategies is further influenced by the costs, benefits, implications and vulnerabilities associated with the various sourcing strategies.
The increasing demand for call center, back office and other service sector employees, coupled with higher paid alternatives, has resulted in increased compensation and diminished worker availability (Bird 2000; Read 2001). These, coupled with the continued trend to outsource call center operations, have propagated increased employee compensation, as well as retention challenges. In late 2001, approximately 3% of the US workforce was employed in call centers and average annual turnover ranged between 26% and 33% for full time and part time employees, respectively. This in concert with average annual salaries of US$32,000, plus between US$5,000 and US$18,000 in recruiting and training costs, culminated in an expensive and highly volatile environment (Turek 2000a).

Even though the US call center environment softened with several major closures in 2001, it was reported that there was still a shortage of suitably qualified people willing to work for call center wages (Read 2001). As a result, many organisations have turned to external service providers to fill this void (Read 2001).

While outsourcing these needs can alleviate pressure and allow organisations to focus on their core competencies, it may also impact on the new business opportunities (Bendor-Samuel 1999; Turek 2000a). The skills and competencies of call center staff, for example, are progressively becoming key in the sales and marketing arenas, because customer contacts enable cross selling and up selling opportunities (Mitchell 2001; Walker 1996). Similarly, customer relationship management is also evolving and organisations need to adequately consider the implications of shifting these opportunities to third parties (McLuhan 2001).

Some US based organisations have also struggled to find sufficiently qualified people to conduct their core business activities, so many of the non core supporting functions, particularly those that are ‘24 x 7’, have become primary candidates for off shore servicing (Anonymous 2000a). In these circumstances, language and cultural barriers, which have historically prevented or diminished off shore outsourcing, are being overcome and organisations are progressively turning to service providers in other countries to access abundant capacities and resources, such as facilities, skilled labour and the like (Anonymous 1997a; Dash 2001).
Outsourcing has also enabled organisations to transition staffing responsibilities, like recruitment and training, while achieving superior service levels (Anonymous 2000b; Bird 2000; Spiegelman 2000). These strategies have delivered multiple benefits, including greater employee retention, streamlined operations and multi language capabilities (Turek 2000a). In some instances, multi lingual call center operators can leverage larger resource pools by translating customer inquires in one language to another and having the problem or issue resolved by experts who do not speak the language of the caller (Turek 2000a).

In alignment with addressing resource shortages, sourcing allows organisations to accommodate growth, without significant capital and other investments (Anonymous 1996; Bendor-Samuel 2000; Erwin 1992; Johnson 2001; Shermach 1995). Engaging third parties who have existing capacities alleviates the need to invest in facilities, equipment and the like, while shifting much of the management burden (Anonymous 2000b; Korzeniowski 2000).

These strategies also enable more scalable operations, improved business continuity and disaster recovery, around the clock service and access to new servicing skills at a fraction of the cost of establishing and maintaining additional in house capacities (Anonymous 1996; Johnson 2001; Mitchell 2001; O’Herron & Throne 2001; Walker 1996). Third party service providers also supplement in house deficiencies (McLuhan 2001) and augment existing operations by facilitating access to other economies and price flexibility (Bendor-Samuel 2000; Shermach 1995).

While some organisations have elected to outsource their call center and back office operations, others have invested in or established new in house capacities to maintain control over an emerging and growing arena that enables marketing, cross selling and up selling opportunities (Walker 1996). In these areas, routine call center contacts are being transformed into sales and revenue opportunities and deeper customer relationships developed (Clayton 1998).

Where in house capacities are retained, organisations yield performance and economic benefits through the consolidation and concentration of functions (Mitchell 2001). The consolidation of call center and back office operations, for
example, allows various servicing channels, such as email, web, fax, back office, phone, video and messaging, to be integrated, optimising overall management and support (Korzeniowski 2000; Tehrani 1996). The consolidated multi channel service centers also provides a single entry point into an organisation, although building these capacities and capabilities in house is costly and more feasible for large organisations (Mitchell 2001).

Financial services organisations, for example, are among the industry leaders of e-commerce and integrated solutions, particularly due to their fungible products, which require little or no modification (Bendor-Samuel 2000). These organisations are also heavily reliant on call center and customer relationship management solutions (Bendor-Samuel 2000). However, financial services organisations, among others, remain under pressure through increased competition, low customer loyalty and few opportunities to cross sell and up sell to customers (Bendor-Samuel 2000; Shermach 1995). Outsourcing call center and customer relationship management services in these environments allows for greater focus on customer retention, which is significantly less costly than customer acquisition (Bendor-Samuel 2000; Shermach 1995). In addition, third party service providers were reported to delivery superior integrated services at lower costs due to various leverage points (Bendor-Samuel 2000).

When turning over ownership and control of a service to a third party, organisations must determine what they want and leave it to the suppliers to manage the processes that deliver the result – if the organisation dictates the processes to be employed, much of the advantage and leverage is lost (Bendor-Samuel 2000). This is a key point in establishing the outsourcing partnership, because it stems to the viability and validity of the relationship and aligns with the notion of core competencies and core business (Bendor-Samuel 2000). Hence, the organisation should determine the performance criteria and metrics and allow the supplier to employ the processes they choose to deliver on the same – the supplier will leverage their expertise, resources and economies to accomplish the desired level of service (Bendor-Samuel 2000; Shermach 1995).
Successful organisations develop a strategic approach to insourcing and outsourcing and leverage these to balance risks and benefits (Venkatraman 1997). Sourcing decisions should enable organisations to exploit resources and services and distinguish them from their competitors (Venkatraman 1997).

2.2.3 Core business and competitive advantage

Core competence is defined as a central set of key or critical or fundamental corporate skills that allows an organisation to create unique value for its customers (Mintzberg & Quinn 1996; Prahalad & Hamel 1990). These competences include knowledge sets, as opposed to products or functions, flexible and adaptable skills, unique focus on current and future customer needs and requirements, deep capabilities and a capacity to maintain market and industry leadership (Mintzberg & Quinn 1996).

However, there still remains debate on what constitutes a core competency or core activity or function and whether these terms are interchangeable (Quinn & Hilmer 1994). For example, it is suggested that core activities are (Alexander & Young 1996):

- Traditionally performed in house and are critical to business performance
- Enable current or potential competitive advantage
- Facilitate growth, innovation or transformation

Others argue that traditional activities, historically performed in house, that do not generate strategic value, are not core (Quinn & Hilmer 1994). While these activities and functions are critical to success, they call for expertise outside of the core business - organisations managing these functions internally inevitably drain resources and corporate energy from their primary mission (Thames 1992). Core functions are consequently retained in house, other essential, but non core functions, are candidates for outsourcing (Prahalad & Hamel 1990; Mullin 1996; Quinn & Hilmer 1994; Thames 1992).
Organisations must, however, determine where best they focus their corporate resources and energy and, most importantly, where they should partner with externals in the provision or production of goods and, or, services (Spiegelman 2000). While outsourcing enables organisations to maintain focus by assigning key support functions to specialists (Bendor-Samuel 1999; Shermach 1995; Thames 1992; Turek 2000a), relevant processes and systems must be effectively integrated (Lacity & Hirschheim 1995). Moreover, sustainable performance and longevity are somewhat dependent on supply and demand economics and implicitly require organisations to leverage strategic suppliers to support their core functions (Lacity & Hirschheim 1995; Mullin 1996; Prahalad & Hamel 1990; Quinn & Hilmer 1994; Thames 1992; Tehrani 1996).

In response to the need the redirect internal resources toward the organisation’s primary mission (Thames 1992) and creating value for its customers (Prahalad & Hamel 1990), the focus moves from whether to outsource, to what to outsource (Venkatraman 1997). Rapidly developing technologies and continued globalisation increase the complexity of establishing and integrating many of these supporting functions and attention must focus on both content and the associated processes (Thames 1992).

While engaging an external service provider is costly, so is setting up a new in house capacity (Walker 1996). For organisations whose core business is anything other than call center operations, for example, handing the hundreds of thousands of calls and managing the associated technology and logistical aspects is a significant charge (Bendor-Samuel 1999; Shermach 1995; Spiegelman 2000; Turek 2000a). The ability to transition these responsibilities allows organisations to redirect their attention and focus on core competencies (Bendor-Samuel 1999; Turek 2000a; Walker 1996). However, the decision to make the right investment choices regarding where the organisation focuses its attention is critical and can mean the difference between winning and losing (Spiegelman 2000).
2.2.4 Organisational strategy

Following on from a need to focus internal resources on core business competencies (Mullin 1996; Prahalad & Hamel 1990; Quinn 1992; Quinn & Hilmer 1994; Thames 1992), organisations must determine what to outsource (Venkatraman 1997). In a perfect supplier market, organisations could outsource all non-core or peripheral activities, but the supplier market is not perfect and the benefits of outsourcing may be diminished by the associated transaction costs, to the extent that in-house operations may, in fact, prove more cost effective (Quinn & Hilmer 1994).

Most sourcing decisions are made on the basis of economics (Hellenbrand 1995; Kakabadse & Kakabadse 2000; Lacity & Hirscheim 1995; Venkatraman & Loh 1994) and more specifically, differentials in production and transaction costs and access to economies of scope and scale (Ang & Straub 1998). However, more contemporary approaches also consider the need to focus on core competencies and enhance or generate strategic and competitive advantage (Prahalad & Hamel 1990; Mintzberg & Quinn 1996; Quinn & Hilmer 1994).

Moreover, it is suggested that organisations need to determine how resources will be deployed internally against corporate objectives (presumably aligned to the organisation’s mission and core business), as opposed to outsourcing on the basis of economics alone (Domberger 1998). This focus enables the organisation to achieve pre-eminence within the industry and augmented value for customers (Quinn, Doorley & Paquette 1990). In fact, these approaches enable organisations to leverage their resources in four ways (Quinn & Hilmer 1994):

- Maximise returns from internal resources by concentrating efforts on what the organisation does best
- Develop and enhance competencies that protect the organisation’s strategic advantages and market share and provide formidable barriers against current and future competitors
• Optimal utilisation of the external suppliers’ investments, innovations and specialised professional capabilities that would be prohibitively expensive to establish internally
• In rapidly changing markets and technological situations, the joint strategy decreases risk, reduces cycle times (time to market), lowers investments (capital and other) and creates better responsiveness to customers

The concentration of internal resources on core business is expected to yield higher value returns and enhance the organisation’s position within the market or industry (Quinn & Hilmer 1994). Similarly, these same benefits are yielded when organisations strategically source the production or provision of goods or services from an external who specialises in the relevant area, while simultaneously mitigating risks and capital expenditures (Quinn & Hilmer 1994).

Hence, the imperfect supplier market (Quinn & Hilmer 1994) and the need to balance economic (Ang & Straub 1998) and core competency determinants (Prahalad & Hamel 1990; Mullin 1996; Quinn & Hilmer 1994; Thames 1992), propagates a hybrid strategic sourcing model (Quinn & Hilmer 1994).

This hybrid strategic sourcing model is premised on the purposeful selection and migration of non-core activities and functions that yield no strategic or competitive advantage and whose production costs differentials are not adversely impacted by the associated transaction costs (Alexander & Young 1996; Ang & Straub 1998; Prahalad & Hamel 1990; Quinn & Hilmer 1994; Thames 1992), coupled with the retention of activities and functions that allow strategic and competitive advantages to be enhanced or developed (Prahalad & Hamel 1990; Mintzberg & Quinn 1996; Quinn & Hilmer 1994). Moreover, it is the divestiture or activities and functions that drain internal resources and efforts in lieu of concentrated effort on the development and leverage of core competencies and attainment of the organisation’s primary mission (Quinn & Hilmer 1994; Thames 1992).

With the context of strategic sourcing established, methods for the purposeful selection of activities and functions to be outsourced must be determined and key
questions pertinent to the selection of activities and functions include (Quinn & Hilmer 1994):

- What is the potential of the activity creating or enhancing competitive advantage and what impact do the likely transaction costs have
- What is the potential vulnerability within the market if the outsourced activity fails
- What potential exists to mitigate vulnerabilities by striking arrangements or contracts that include specific controls, while maintaining reasonable flexibility

Figure 2.2, adapted from Quinn and Hilmer (1994), depicts the competitive advantage and strategic vulnerability dimensions.

**Figure 2.2 Competitive advantage versus strategic vulnerability**

<table>
<thead>
<tr>
<th>Potential competitive edge</th>
<th>Degree of strategic vulnerability</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Strategic Control</td>
</tr>
<tr>
<td>Low</td>
<td>Produce / Provide Internally</td>
</tr>
<tr>
<td></td>
<td>Moderate Control</td>
</tr>
<tr>
<td></td>
<td>Special Venture or Contract</td>
</tr>
<tr>
<td></td>
<td>Arrangements</td>
</tr>
<tr>
<td></td>
<td>Low Control</td>
</tr>
<tr>
<td></td>
<td>Buy off the shelf</td>
</tr>
</tbody>
</table>

*Source: adapted from Quinn & Hilmer 1994*

In essence, activities and functions that are high in competitive advantage and high in strategic vulnerability, or those close to these, should not be outsourced, while those that are low in competitive advantage and low in strategic vulnerability are ideal candidates. Activities and functions that fall somewhere between these two
extremes are candidates, but special contractual or other controls are recommended to mitigate risks and vulnerabilities, while maintaining flexibility (Quinn & Hilmer 1994).

An alternate model suggests that organisations outsource activities and functions to achieve strategic improvement (efficiency), strategic business impact (augmenting performance within existing lines of business) and strategic commercial exploitation (leveraging technology-related assets) (DiRomualdo & Gurbaxani 1998 cited in Kakabadse & Kakabadse 2000). Strategic improvement and strategic business impact are largely consistent with economic and core competency determinants, however, strategic commercial exploitation, which is a leverage strategy, warrants further discussion.

Environmental and commercial exploitations focus on the utilisation of resources, capacities and capabilities that are specific to, or available within, a particular industry, market or country (Chalos 1994; DiRomualdo & Gurbaxani 1998; Nee 1999; Venkatraman 1997; Willman 1999 cited in Kakabadse & Kakabadse 2000). The exploitation of resources and services enables organisations to distinguish them from their competitors (Venkatraman 1997) by leveraging third party facilities and resources, industry and service delivery experience and new methods and approaches that have been effectively tested (Erwin 1992).

2.2.5 Economics

The capabilities required to effectively manage a sourcing arrangement extend beyond these economics and include the costs associated with managing the relationships and performance, among other things (Kakabadse & Kakabadse, 1999). That is, the costs of delivering, maintaining and supporting the sourcing arrangements warrant equivalent consideration (Kakabadse & Kakabadse, 2000). Analyses of comparative economic theories, including production and transaction costs, as well as financial slack, assist in explaining the determinants of outsourcing decisions within the context of organisational strategy (Ang & Straub 1998).
Organisations are motivated by profit maximisation and sourcing decisions are premised on the comparative costs associated with internal versus external service provision (Ang & Straub 1998; Saarinen & Vepsalainen 1994; Williamson 1981). Neoclassical economics also predicts that organisations justify sourcing decisions based on production economies, that is, the acquisition of products and services is treated as an economic make or buy decision (Ang & Straub 1998). Hence, the higher the comparative production cost advantage achieved through outsourcing, the greater degree of outsourcing likely (Ford & Farmer 1986, cited in Ang & Straub 1998).

Transaction costs, which include the effort, time and other costs incurred in searching, creating, negotiating, monitoring and enforcing a service contract between buyers and sellers, can diminish production cost advantages (Mahoney 1992). When transaction costs are sufficient enough to diminish production cost advantages, organisations need to maintain the operation in house or insource the operation if it has been outsourced previously (Bakos & Brynjolfsson 1993).

With the linkage between transaction and production costs established, financial slack also warrants consideration, because excess resources contribute to the size and critical mass of an organisation and ultimately enable economies of scale to be established (Awh & Primeaux 1985). In addition, financial slack can also be deployed on problems and opportunities outside the usual remit dictated by optimisation principles and this can lead to the development of economies of scope and greater significance within the industry and marketplace (Bourgeois 1981). Moreover, slack resources are often employed to build or increase economies of scope and scale (Sutton & D’Aunno 1989).

However, in the absence of resource slack, organisations will likely resist the internalisation of service provision (Sutton & D’Aunno 1989). That is, the less financial slack, the greater the degree of outsourcing (Ang & Straub 1998). Hence, in the absence of financial slack and where production cost advantages are evident and are not significantly impacted by associated transaction costs, there is a greater likelihood of outsourcing (Ang & Straub 1998).
(operational costs) are the most salient of all determinants and are the major corporate rationale for making sourcing decisions (Walker & Webber 1987).

Short term financial solutions or benefits are often favoured over other economics (Behara, Gundersen & Capozzoli 1995; The Economist 1991). Flexible or constructive accounting and the ability to demonstrate attractive net present values, amidst cash injections and mitigation of capital expenditure, improves the balance sheet and assists rationalising the outsourcing decisions (General Accounting Office [US] 1992; Lacity & Hirschheim 1993).

While the link between financial slack and economies of scope and scale has been established, the former was not found to be a significant determinant of outsourcing decisions, although organisational size was (Ang & Straub 1998). Small organisations, for example, have more difficulty justifying internal operations, as they cannot generate the same economies of scale as large organisations (Ang & Straub 1998; Lacity & Hirschheim 1995).

Arguments suggest that external service providers have lower average costs due to mass production and labour specialisation efficiencies (Lacity & Willcocks 1998). As a result, small organisations would achieve greater economies by sourcing services from large third parties who specialise and large organisations should maintain service provision in house, as they are more likely to possess the necessary economies of scope and scale (Lacity & Willcocks 1998).

However, in an analysis of 48 sourcing decisions, where function size was determined on the basis of headcount, budget and instructions processed, it was concluded that large organisations did not achieve expected cost savings more frequently than smaller organisations when insourcing (Lacity & Willcocks 1998). In fact, using budget, 33% and 75% of large and small organisations, respectively, achieved expected costs savings and using headcount, 33% and 64% of large and small organisations, respectively, achieved expected cost savings. Hence, the findings suggest that small organisations have greater opportunities of reducing costs through insourcing than do large organisations (Lacity & Willcocks 1998).
While many sourcing decisions have been based on transaction economics (Ang & Straub 1998; Venkatraman & Loh 1994), more contemporary decisions include other determinants, such as organisation strategy, core business and competence and relationship management (Kakabadse & Kakabadse 1999; Kakabadse & Kakabadse 2000). Nevertheless, analyses of comparative economic theories, including production and transaction costs, as well as financial slack, remain primary determinants (Ang & Straub 1998).

2.2.6 Markets

The British Financial Times reported the emerging global call center environment as the ‘death of geography’ (Walker 1996). Bureau service providers in Asia were progressively being used to manage overflows, seasonal variations and out of hours calls and were found to deliver these services more efficiently and effectively than their in house counterparts (Dwek 1995). The ability to scale operations and leverage multiple language capabilities were considered significant benefits (Dash 2001).

By 2001, many large multinationals including General Electric, American Express, British Airways, FedEx, Citibank and Shutterfly were sourcing their customer service and support functions from Asian based providers (Dash 2001; De Kruif 2001). Countries like India, the Philippines and China were primary targets, because of their large well educated English speaking populations (Dash 2001). However, the use of Asian based service providers also required cultural training was required to indoctrinate foreign staff (Dash 2001). Similarly and with regard to sales and marketing, transforming call centers into profit centers is neither simple nor inexpensive and technology costs and cultural differences are among the key challenges that need to be addressed (Dash 2001; Johnson 2001).

While the technology costs are high, declining telecommunications costs and maturing internet technologies are supporting the use of off shore providers (Dash 2001). According to The Yankee Group (Boston US) telecommunications circuit costs are dropping at a rate of 60% per year (Dash 2001). Telecommunications deregulation is also fuelling the global call center arena, although with carrier
collapses, such as Concert (a former British Telecom and AT&T joint venture), consumers are still struggling to source a single trans-national carrier (Turek 2000a).

2.2.7 Technologies

The call center, for example, is a critical and costly support system for an organisation’s products and services and needs to be maintained in an optimal state (Bendor-Samuel 1999; Dash 2001). Developing and integrating rapidly evolving and emerging technologies, including advances in predictive dialling and knowledge management, is difficult for organisations that do not specialise in these areas (Clayton 1998; McLuhan 2001).

Despite the US Office of Technology Assessment (1987) and the OECD (1992) stating that information technology and systems are of strategic importance, organisations continue to source their call center operations (O’Henry 1996; Weill and Broadbent 1997). In fact, they are leveraging their technology and telecommunications providers to build their networks and staff and run their centers (De Kruif 2001; King 1995; Pappalardo 1996).

In this paradigm, telecommunications organisations like AT&T Solutions manage the whole technology lifecycle, as well as the associated activities (King 1995). They are able to mitigate the economic challenges by spreading their costs across a broad customer base (Bendor-Samuel 1999). Other telecommunications carriers, including BT and MCI, also support call center operations by providing the application development, equipment commissioning and multinational connectivity on behalf of organisations (Pappalardo 1996). This outsourcing model has further propagated the global call center environment and allowed domestic and international calls to be seamlessly routed to centralised sites (Pappalardo 1996).

The worldwide deregulation of telecommunications carriers, coupled with the lower circuit costs, the expansion of cable capacities and emergence of value added ‘infrastructure service providers’, is driving a trend toward the global expansion of virtual private networks (Burroughs 1993). FedEx, for example, plans to network its 40 overseas (non US) call centers so their representatives have the information they
need to consistently service customers around the globe (Dash 2001). These virtual private network solutions leverage multilateral arrangements between telecommunications carriers and allow seamless connectivity between participating countries (Burroughs 1993).

Continued deregulation and improved customer relationship management software are also driving a trend toward distributed international call centers (Turek 2000a). Even though US call centers were reported to be between three and five years ahead of their European and Asian counterparts, due to the large consumer pools and deregulated telecommunications, the trend toward off shore outsourcing continues (Turek 2000a).

High international calling rates, however, have delimited more extensive use of off shore service providers, although the use of voice over internet protocol (VOIP), where the voice content is transported on the same network as the data, has provided some relief (Dash 2001). According to the Telecom Applications Research Alliance in Halifax, Nova Scotia, VOIP can yield as much as a 35% saving over traditional systems (Dash 2001).

2.2.8 Sourcing options

In essence, the three primary sourcing options are insourcing, outsouring and cosourcing, although organisations strategically source using some combination of these (Harding 1993). For example, total or complete insourcing is where an organisation retains the management of more than 80% of the budget for the production or provision of goods and, or, services (Lacity & Willcocks 1998). Moreover, even where total insourcing is employed, some funds are expended with externals on raw or produced materials (such as steel or copy paper) or services (such as marketing).

Insourcing refers to the retention of management and control over external resources that provide services to and on behalf of an organisation, usually from the organisation’s facility (Kador 1991; Noubakhsh & Hughes 1998; Read 2001). Insourcing is usually associated with the engagement of a third party organisation
who provides the resources, as opposed to individual resources, who run an operation, such as a call center, on behalf of the organisation engaging the services (Nourbakhsh & Hughes 1998).

This practice frees up internal resources to focus on core business and competencies and vests the day to day operational responsibilities, such as recruitment, training and performance monitoring with the third party (Nourbakhsh & Hughes 1998). Other responsibilities vested externally include the production and provision of MIS (management information services) and support (Nourbakhsh & Hughes 1998) and the organisation usually benefits further by gaining access to better tools, automation and other services that facilitate integration of heterogeneous equipment and the like in a continually changing environment (Kador 1991).

Continuing with the call center example and in consideration of the progression toward multi channel servicing, organisations may find their internal call centers quickly at capacity (Anonymous 2000a). The increasing pressure to manage large quantities of customer interactions via email, internet and telephone may necessitate an increase in capacity that is costly and complex (Anonymous 2000a). Outsourcing is an effective means of establishing new or additional call center capacities and experienced suppliers (outsourcing partners) can build and integrate phone, internet and other channels, ensuring alignment with existing equipment (Mitchell 2001). Outsourcing to an organisation that already has the technology, human resources and facilities in place will likely accelerate time to market, reduce up front capital expenditure and mitigate much of the risk, although management control is also largely divested (Anonymous 2000a).

Some proponents suggest that outsourcing customer contact functions ensures quality service delivery and can relieve the organisation of the need to develop and maintain internal resources (Fuhrman 1999). However, others realise that customer relationship management, which is propagated through the call center, is key to long term success, as well as marketing, cross selling and up selling opportunities. Similarly, if these functions are considered part of the organisation’s mission, charter or core business, they may not be ideal candidates for outsourcing, because of the
potential loss of control and confidentiality and cosourcing may prove optimal (Fuhrman 1999; Shermach 1995).

Cosourcing arrangements allow organisations to focus on their core competencies while remaining intimately involved and in control over customer relationships (Fuhrman 1999). Other benefits reported were in staffing (including periodic and seasonal fluctuations), technology (access to emerging technology without capital investments), business continuity (assuming different sites), reduced costs of operations and the freeing up of some internal resources to focus on data analysis and market intelligence (Fuhrman 1999).

However, in a survey of US and UK sourcing practices, some combination of the various sourcing options (strategic sourcing) was found to be more successful than other specific options (Lacity and Willcocks 1998). In fact, some commentators argue that it is no longer a question of whether to insource or outsource, but what combination of the two (Bird 2000; Venkatraman 1997). When making these determinations, resource availability (people), site location, service provider (insource, cosource or outsource), technology and telecommunications infrastructures, financials (contracts, incentives and penalties), delivery of products and services, service and performance expectations and customers warrant consideration (Gibson-Sharpe 1997). If a organisation needs to establish a new call center or increase the capacity of an existing call center, for example, several key questions need to be considered and addressed prior to determining the sourcing strategy (Anonymous 2000a):

- What do you buy?
- Can you justify the cost?
- What value will you get out of your purchase?
- How soon will that value be realized?
- Will the solution chosen integrate with your current systems and databases?
- What role should the Internet play in your call center?
2.2.9 Contracts

Sourcing practices were historically premised on cost effective access to production systems and capacities and access to specialised and flexible labour capacities (McFarlan & Nolan 1995). However, more contemporary approaches include greater opportunities to focus on core business and competencies, reduce indirect costs (such as training and recruitment) and exploit environmental and commercial conditions (Chalos 1994). Inevitably, outsourcing under these forms will have a substantial impact on the theory and practice of corporate governance (Clemons, Reddi & Row 1993).

The divestiture of non core business is, in effect, a form of specialisation (Domberger 1998). However, the extrication of indirect costs (Chalos 1994) needs to be balanced with the likely increase in transaction related costs, such as performance and service level monitoring and maintenance (Lewis & Sappington 1991). These, in culmination, suggest successful sourcing outcomes may be more closely linked to managerial practices then economies of scope or scale (Lacity & Willcocks 1998). Moreover, leadership and management capabilities are necessary in effectively managing outsourcing arrangements (Kakabadse & Kakabadse 1999).

Outsourcing decisions, then, should be driven by the activities and functions to be sourced, the formal and information relationships required to deliver the services, market leverage (environmental and commercial exploitation) and the capacity to manage the contracts (Willcocks & Fitzgerald 1994). In this evolving regime, where the need focus on strategic direction and practices associated with managing outsourcing contracts is implicit, organisations are learning to negotiate more favourable deals (Lacity & Willcocks 1998). For example, it was found that contracts struck more recently have delivered expected cost savings more frequently than older contracts, regardless of the size of the function outsourced (Lacity and Willcocks 1998).

In this sense, short term contracts were found to be superior to longer term contracts and detailed fee for service contracts were superior to other fee for service contracts (Lacity & Willcocks 1998). In fact, selective sourcing using short term and detailed
contracts were found to be successful in mediating risk, motivating supplier performance and facilitating change and learning (Lacity & Willcocks 1998). Flexibly priced and performance based contracts are also expected to yield similar results (Lacity & Willcocks 1998).

The absence of clearly articulated contracts, with flexibility provisions included, leads to legal implications (Diamond 1992). Contracts should specify the work to be done, deadlines for completion and performance metrics and they should include substantial financial incentives for timely compliance (Ragowsky & Stern 1995). Moreover, organisations initiating new outsourcing arrangements have recognised that it is key to establish performance metrics (performance or service levels) and associated penalties up front - failure to do so has resulted in employee resignations and significant increases in overtime (Girard 1997).

While some argue that the key is in establishing specific service requirements (Thames 1992), others argue that these are insufficient (Diamond 1992). For example, in a review of a significant ten year outsourcing deal between a major US bank and a third party service provider, the partnership was before the courts within six months, due to unclear contractual obligations (Green, Lacity & Hirschheim 1990). In fact, the use of long term contracts renders organisations with little capacity to effectively and efficiently manage their resources, their assets and their capabilities (Lacity & Willcocks 1998).

There are various forms in which sourcing contracts are struck and these include (Lacity & Willcocks 1998):

- **Fee for service contracts** – where the customer pays a fee to the supplier in exchange for the management and delivery of specified products or services.
- **Standard contracts** – where the customer signs the supplier’s standard ‘off the shelf’ contract.
- **Detailed contracts** – where special clauses for service scope, service levels, measures of performance and penalties for non-performance are included.
• Loose contracts – where the contract does not provide comprehensive performance measures or contingencies, but specifies that the supplier performs ‘whatever the customer was doing in the baseline year’ for a specified period (eg 10 years) at a cost lower than the customer paid in the baseline year (eg 20% lower).

• Mixed contracts – where for the first few years of the contract the requirements are fully specified, as in a detailed contract, but post the initial period the requirements are loosely defined, as in a loose contract [this is in recognition of likely changes in the environment and the need for flexibility].

• Strategic alliances and partnerships – where collaborative interorganisation relationships involving significant resources are leveraged to create, add to or maximize joint value. These contracts require both ‘partners’ to provide capital, human and other resources and both share in profits and losses.

• Buy-in contracts – where a customer buys in supplier resources to supplement in house capabilities. Management responsibilities are also retained in house [this is the type of contract used in insourcing arrangements].

Outsourcing call center and IT functions is similar and sufficiently standardised (Bendor-Samuel 1999). Contractual periods should be carefully considered and one year terms, progressively updated and renewed, will likely prove more optimal than longer terms (Bendor-Samuel 1999; Lacity & Willcocks 1998). Long relationships established through a master contract and service agreements updated and restructured annually will minimise transaction costs and keep the relationship flexible (Bendor-Samuel 1999) and detailed fee for service contracts were found to be superior to other fee for service contracts (Lacity & Willcocks 1998).

2.2.10 Perceptions and implications

Proponents suggest that outsourcing is the harbinger of the transformation of traditional departments and provides a glimpse of the organisational structures of the ‘information economy’ (McFarlan & Nolan 1995). Sourcing decisions made in consideration of broad organisational and political issues, as well as financial and
technical issues, are more likely to yield expected outcomes (Lacity & Willcocks 1998).

Reports suggest, for example, that internal bids are often encouraged by the organisation’s executive to preserve morale during the sourcing determination and decision processes and that these lead to better outcomes (Lacity & Willcocks 1998). Specifically, in terms of the make or buy decisions, internal production costs are compared with those from the marketplace, so it naturally follows that the organisation should afford its in house providers the same opportunities in the potential restructuring process (Ford & Farmer 1986 cited in Ang & Straub 1998).

However, there are others who argue that outsourcing will be detrimental to long term viability (Dorn 1989; Gantz 1994; Strassman 1995). Shifting accountabilities and responsibilities, for example, are challenges executives need to consider, particularly with regard to organisational politics (Muller 1993). Similarly, the parity between accountability and responsibility must also be considered when sourcing decisions vest some part of these with contractually obligated third parties (Muller 1993).

Customers, for example, have a reasonable expectation that when they call a service center, they are talking to someone who works full time for the organisation (Walker 1996). Similarly, there is also an expectation that they will talk to a customer service representative located in the same country and not a well trained representative working for a third party in an alternate country (Shermach 1995; Walker 1996).

There are also negative perceptions associated with sourcing call center and back office operations, regardless of whether they are on or off shore (McLuhan 2001). For example, telemarketing call centers are perceived, in some instances, to be run like sweatshops, because they have historically been treated as low cost operations with key metrics associated with customer contacts (McLuhan 2001).

Perceptions are, however, changing because organisations are progressively leveraging customer contacts to cross sell and up sell their products and services (Bruening 2001; Fuhrman 1999). These new revenue opportunities, coupled with the
ability to deepen and better control customer relationships are considered core activities (Bendor-Samuel 2000; Turek 2000a). In these instances, call center staff are seen as critical resources with specific and specialist skills, supported by externals that complement in-house deficiencies (McLuhan 2001).

In contrast, other organisations found that outsourcing to providers whose core business was telephone service made sense (Anonymous 1997b). In fact, organisations that consider their call center operations a liability or cost of doing business will inevitably experience suboptimal outcomes and should consider outsourcing as a remediation strategy (Bendor-Samuel 1999).

Outsourcing entire operations, however, may render an organisation deficient in providing a high quality experience while concurrently enabling important information to be collected (Turek 2000a). Similarly, the outsourcer may be insufficiently geared to cross sell and up sell, due to their proximity, or lack thereof, to the products and operations of the organisation they are providing services too (Fuhrman 1999). Given that as much as 70% of cross sell opportunities stem from call center contacts, this may result in a significant impact to sales (Turek 2000a).

Outsourcing in the piece meal sense was also found to be suboptimal, particularly from a value perspective, because the leverage opportunities are reduced (Bendor-Samuel 2000). Third party providers, for example, invest significantly in capital generating economies of scale and their recruitment and retention strategies and operating practices and processes are efficient and effective, further contributing to the development of strategic and competitive advantages (Bendor-Samuel 2000).

For organisations leveraging multiple call centers, disparity in the service delivered by each may also be an issue (Turek 2000a). For example, in the late 1980s and early 1990s Logitech (a manufacturer of mouse pointing and other PC related products) supported between 10,000 and 12,000 calls per month in nine languages from local field offices, but the services provided were of different standard and when a site moved, new telephone numbers, manuals and other details had to be prepared, printed and distributed (Turek 2000a).
In an effort to address the ‘field office’ deficiencies, Logitech centralised its call center operations in Switzerland. Callers continued to dial local numbers, which were routed via leased telecommunications lines to the Swiss center addressing the telephone and support variation issues. However, the consolidated volumes and frequent telecommunication outages resulted in busy signals and dropped calls and specific national telecommunications monopolies were expensive. The multi lingual needs ultimately proved too big a challenge and Logitech subsequently outsourced their call center operations to Sykes in Amsterdam the Netherlands and Willhelmshaven Germany (Turek 2000a).

Outsourcing these sorts of services also poses other risks and challenges for both the organisation and the supplier (Ang and Straub 1998). These include estimating the true costs and savings of the venture, managing power relationships and dependencies and balancing the information flow with potential implications to intellectual property (Ang and Straub 1998). Public opinion of sourcing practices is also a key area of concern and driving some organisations to refer to these partnerships as strategic alliances, as opposed to outsourcing arrangements (Zimmerman 2001). For example, in a ten year contract struck between the Bank of America (the largest US bank) and Exhult (a web enabled integrated human resources services provider), these organisations communicated the arrangement as a strategic alliance, as opposed to an outsourcing deal to influence public opinion (Zimmerman 2001).

2.3 Market selection

This section discusses the trends and other influences associated with certain servicing options and the locations and potential locations of providers. Moreover, current and potential markets are explored in light of the trends and other influences that are fuelling ‘off shore’ service provision.

2.3.1 Background

In the early 1990s there was no specific trend to migrate toward large scale outsourcing, although selective sourcing was expected to increase from 11% to 17%
By the mid 1990s, however, nearly every Fortune 500 organisation had investigated or employed some sort of outsourcing (Lacity and Hirschheim 1995 cited in Hellenbrand 1995). In 1996, the outsourcing trend continued to accelerate, as opposed to tapering off (O'Henry 1996), and by 1997 it was reported to be increasing by 9% per annum (Weill and Broadbent 1997).

Between the early 1990s and the late 1990s, more than 50% of organisations had used some form of sourcing and the trend was expected to continue (Patane and Jurison 1994). While the majority of attention was focused on the ‘mega deals’, most US organisations had selectively outsourcing on a limited scale (Patane and Jurison 1994).

The outsourcing model was progressively shifting towards areas such as sales force automation and call center management (Merrill 1996) and the transformation was driven, in part, by the progressive need to integrate data mining and analysis into general call center operations (Bendor-Samuel 2000). This emerging information market was predicted to be worth US$70 billion in 2001 (Bendor-Samuel 2000).

The call center market, alone, was predicted to exceed US$58 billion in revenue in 2003, of which US$42 billion was associated with outsourced operations (Bendor-Samuel 2000). This is significant when compared to the outsourced global IT market, which the International Data Corporation predicted to be worth more than $151 billion by 2003 (Marphy, Ker, & Ross 1999).

The expansion of industries and functions has seen the call center environment become increasingly specialised with organisations splitting their operations into smaller units and distributing decision making (Kleinknecht 2001). These changes were driven, in part, by rapidly changing technologies and although the former call center does not look like it used too, the people on the ends of the phone remain the same (Kleinknecht 2001). Hence, quality customer service remains the primary challenge and the use of specialists through sourcing was believed to enhance the same, while concurrently reducing costs (Dyer & Ouchi, 1993; Kleinknecht 2001).
Advances in telecommunications and other technologies enabled geographic boundaries to be removed and fuelled sourcing strategies (Patane & Jurison 1994). Many organisations have consequently sourced some or all of their call center and back office operations from off shore service providers (Bruening 2001; Dash 2001; Read 2001). However, this is not a new phenomenon, as US organisations have been subcontracting work to low cost off shore labour markets for many years (Patane & Jurison 1994).

Global competition has been a primary driver of outsourcing (Huber 1993), which is moot to offer organisations the flexibility to enter or leave international markets, without the need to invest in infrastructure and other capital, nor support the same (Thames 1992). In fact, because of advances in technologies, work can now be sourced in locations where organisations can achieve best competitive and logistical advantages, while reducing costs significantly (Patane & Jurison 1994).

The abundance of low cost off shore English speaking professionals, whose organisations have existing and operational infrastructure and track records of delivering high quality and timely products and services, is also considered to be a key incentive for organisations contemplating sourcing (Patane & Jurison 1994). However, sourcing from abroad to manage increased global competition drives on shore unemployment higher and incumbent employees, among others, out of work (just as competition from Japanese auto manufacturers did to US auto workers in the 1970s) (Yourdon cited in Patane & Jurison 1994).

2.3.2 Markets

The global servicing arena is readily accessible because of relatively low entry costs and capital expenditures, high speed and inexpensive telecommunications and computer costs and a general trend toward free market economies and free trade (Patane & Jurison 1994). Simply put, the salaries and overheads in the US and other industrialised countries are too high and cannot compete with many emerging markets (Patane & Jurison 1994).
In late 2000, approximately 280,000, or 11% of the circa 2.5 million, call center positions in the US were estimated to be resident in outsourcing organisations, such as Convergys, Sitel, Sykes Enterprises, TeleTech, and West Telecommunications (Turek 2000a). In fact, TeleTech reported that they were scouting locations all over the world looking to match customer needs with the right people and economy (Turek 2000a).

Call centers, however, are considered primary entry points into an organisation and are progressively being used for marketing and cross selling activities (Johnson 2001; Kleinknecht 2001; Mitchell 2001). Organisations must balance these opportunities against the reduced costs and other benefits expected from sourcing these capacities domestically or abroad (Yorgey 2000).

Countries such as India, the Philippines and China have large, well educated, English speaking populations (Dash 2001). In fact, sourcing from these established markets and others like Singapore, Malaysia, Hong Kong, Taiwan, Ireland, Hungry, Russia, Ukraine and the Baltic States, who have highly qualified resources at a fraction of the costs of equivalent resources in the US and other industrialised countries, is a compelling consideration (Patane & Jurison 1994).

Some European countries are also emerging as leaders in the global call center market, because of their low cost, well educated and multi lingual workforces (Turek 2000b). Ireland, for example, has multiple call centers supporting the likes of American Airlines, Compaq, Dell, IBM and others (Turek 2000b). The Irish government is also supporting these strategies (including foreign investment) through training grants and foreign language curricula in schools, ensuring a sustainable abundance of suitably qualified resources is available in the servicing sector – Ireland, for example, has the lowest business tax rate in Europe, at 10% through 2010, and compares favourably with France at 57% and about 30% to 40% for the rest (Turek 2000b). The European based servicing sector employs a different approach and attracts university students who attend classes during the day, study in the evening and work on help desks later at night - this is generally a short term arrangement not lasting more than two years (Turek 2000b).
Other non European markets, including South America, China, India, Singapore, Malaysia, Australia and Japan were reported to have obstacles (Turek 2000b). For example, South America - too small (market size), China and India - too heavily regulated (telecoms networks), Singapore and Malaysia – poor telecoms infrastructure, Australia – too costly and Japan – preference for native language (Turek 2000b).

### 2.4 Technology solutions

This section focuses on the technology solutions supporting service optimisation efforts and the relationships these have with the sourcing arena. Firstly, a review of the literature is undertaken in order to better understand what influences the development and subsequent implementation of technology solutions. This is followed by a review of the types of solutions implemented in support of service optimisation efforts and a review of the sorts of performance expected and achieved from the same. Finally, a review of the emerging technology solutions is undertaken in order to elucidate key trends within the environment and allow likely future (conceptual) solutions to be considered. This constitutes the immediate discipline of this research (Perry 1998a).

#### 2.4.1 Background

The operational and logistical challenges associated with the provision of call center and back office services in high cost and mature markets like the US and UK are driving alternate servicing strategies (Anonymous 2000a; Bird 2000; Read 2001). These strategies include sourcing call center and back office services from third party and proprietary capacities in lower cost markets like India and the Philippines (Anonymous 2000a; Shermach 1995; Tehrani 1996). However, these lower cost markets are also ‘remote’, costly, less mature, heavily regulated (from a telecommunications perspective) and require substantial technology investments to enable the volumes to be serviced (Burroughs 1993; Moliteus 1999; Turek 2000a; Turek 2000b; Yorgey 1998).
However, increasing globalisation, deregulation and the general shift toward free market economies are reducing the impediments and costs (Kakabadse & Kakabadse 2000; Patane & Jurison 1994). In these circumstances, organisations leveraging new suppliers are also able to access to new information sources and technological and other innovations, expanding their knowledge and comprehension of the remote environments (Blaxill & Hout 1991; Chalos 1994; Teng, Cheon & Grover, 1995).

As a result of these changing dynamics, remote service providers are becoming increasingly accessible (Patane & Jurison 1994) and enabling organisations to address their operational and logistical challenges (Anonymous 1996; Bird 2000; Marwaha & Tommerdahl 1995; Read 2001; Spiegelman 2000; Turek 2000a), while realising financial and other benefits (Kakabadse & Kakabadse 2000). The higher technology and telecommunications costs (Dash 2001) are off-set by significantly lower labour and associated costs (Lacity & Willcocks 1998; Patane & Jurison 1994) and the surplus funds can be redirected into strategic growth areas, enabling competitive advantages to be developed or enhanced (Ang & Straub 1998; Kakabadse & Kakabadse 2000).

2.4.2 Solutions and costs

In early 1999 the global telecommunications industry was reported to be worth US $600 billion and key to the successful operation of both on shore and off shore customer servicing centers (Ferguson 1999). However, historically high telecommunications costs, coupled with language and cultural challenges, prevented earlier interest in sourcing customer service functions from off shore service providers (Dash 2001). Similarly, market size and the level of telecommunications regulation (Moliteus 1999; Yorgey 1998) also impacted viability from cost and performance perspectives (Turek 2000b).

With the ability to converge voice and data networks using voice over internet protocol (VOIP), organisations are streamlining service center functions, while generating greater economies (Schwartz 1997). These strategies, coupled with progressively declining telecommunications costs, are further fuelling the
establishment of off shore call center and back office capacities (Dash 2001; Egan & Malloy 1998; Moliteus 1999). The development of intelligent voice response (IVR), automatic call distribution (ACD), private business exchange (PBX) and other telephony solutions is shifting toward the software side and driving alliances between telecommunications vendors and database providers, making integration of computers and telephony less costly and arduous (Schwartz 1997).

The need to manoeuvre around these rapidly changing information technology platforms and services, however, requires attention and consequently becomes a key consideration for sourcing decisions (Atkinson 1985; Imrie 1994; Huber 1993). Similarly, organisations need to balance in-house competencies (Venkatraman 1997) with opportunities to leverage market and other expertise resident within third party service providers (Blaxill & Hout 1991; Chalos 1994). Sourcing solutions also offers additional flexibility, because the cost of acquiring these rapidly developing components, systems and technologies is diminished (Carlson 1989; Harrison 1994).

Furthermore, the fixed costs associated with ownership and operation of the technology components and other contracted services, such as telecommunications circuits, are replaced with variable, consumption based, costs (Currie & Willcocks 1997). Not only do these improve the balance sheet and financial position of the organisation, but they also enable the higher monitoring costs to be off-set by the lower production costs, generated through supplier leverage (economies of scope and scale, quantity discounts, focus on core business, access to new and lower cost technology) (Lewis & Sappington 1991 – also see ‘transaction and productions costs’ from Ang & Straub 1998).

When leveraging external service providers to access new capacities, technologies and innovations and to augment existing call center and back office operations, organisations must consider the need for these to be integrated with existing processes and technical solutions (Kakabadse & Kakabadse 2000). Many organisations view their internal technology divisions as being accountable for solutions integration, although the ‘owning’ business units often have the scope to source these if they are unsatisfied with the solutions provided from their internal partners (Venkatraman 1997).
The leverage opportunities associated with in house capabilities, such as existing information systems and information technologies efficiencies, should, nevertheless, be maintained and only non value adding functions sourced (Kakabadse & Kakabadse 2000). However, increasing global competition, rapidly evolving and changing technology, optimisation strategies (such as downsizing and rightsizing) and a concentrated focus on core business competencies continue to erode many of the in house benefits (Atkinson 1985; Imrie 1994; Huber 1993).

Organisations are consequently sourcing these solutions so that they can continue to focus on strategic improvement (efficiency and cost reduction), strategic business impact (improving performance of existing functions and operations) and strategic commercial exploitation (leveraging technology and other assets) (DiRomualdo & Gurbaxani 1998). These approaches enable internal technologies divisions to concentrate on key strategic objectives, while lowering overhead costs and reducing costly investments in technology products and service (Kliemm 1999; Quinn 1999).

In a study of 100 companies, The Boston Consulting Group (1991) found that some organisations source some of their technology solutions and services to reduce overhead and short term costs (Kakabadse & Kakabadse 2000), while others did so to access information technology capacities (McFarlan & Nolan 1995), particularly when these were not considered core competencies (Chalos 1994; Branda 1999). In fact, telecommunications networks have been sourced like commodities and managed as utilities, largely independent of business strategy (Venkatraman 1997). These approaches have further propagated the commodification of information technology products and services (Kakabadse & Kakabadse 2000), which are progressively being accounted for like utilities on the basis of consumption (Narin 1999).

The commodification of information technology products and services has also seen a shift from sourcing entire operations from single suppliers to more focused and specialised sourcing of various segments, such as call centers, data centers, desktops, networks and the like, to best in class providers (Kakabadse & Kakabadse 2000). The nature of the relationships established between organisations and suppliers is
consequently dependant on the products, competitive conditions, technology platforms and infrastructures required and available in the market place (Bensaou 1999).

Engaging call center specialists, who are able to leverage common processes, real estate, technology systems and infrastructures, may yield savings of as much as 50% (Price 1999; Kakabadse & Kakabadse 2000). However, the provider’s systems must be efficiently and effectively integrated with the organisation’s existing systems (Venkatraman 1997). These integration activities are complex and allow internal resources to be redeployed against higher value added areas, enhancing the organisation’s value proposition (Venkatraman 1997; Murray & Kotabe 1999).

2.4.3 Influence and integration

When engaging specialists and prior to committing or investing significant resources, organisations may establish pilot or proof of concept initiatives to ‘test the water’ (Hoare 1997). This strategy enables integration activities to progress, while contractual and other arrangements are reviewed and recalibrated before longer term agreements are made (Anonymous 1997c).

Less experienced organisations are also leveraging other third parties to examine the feasibility of sourcing specific call center services in a trial or pilot form, allowing additional experience and exposure to be gained (Dwek 1995). For example, a global financial services company determined the feasibility of sourcing service center functions while concurrently migrating and transforming its own internal operations (Venkatraman 1997).

Proof of concept approaches, coupled with rapidly evolving technologies and progressively decreasing costs, are fuelling remote operations, particularly in the call center arena (Read 2001). However, when sourcing call center and similar capacities from abroad, organisations need to consider the high costs of shifting customer calls overseas, particularly with regard to the technology and telecommunications solutions used (Dash 2001).
2.4.4 **Emerging technologies**

Technical solutions leveraging VOIP, which enable voice and data to be transported over the same physical infrastructure, are being employed as lower cost alternatives (Dash 2001). In fact, according to the Telecom Applications Research Alliance in Halifax, Nova Scotia, VOIP solutions can yield potential savings of as much as 35% in comparison to traditional private branch exchange (PBX) systems (Dash 2001). VOIP is also fuelling the emergence of multi channel servicing environments, that is, environments in which customers can traverse different communications mediums in the same ‘contact’ (email, to web to telephone, for example) (Anonymous 2000b; Mitchell 2000).

Voice response units (VRU), also known as interactive voice response (IVR) units or audio response units, and Web self service platforms are replacing call center agents (Read 2001; Rokoff 1999). These systems are commonplace in call centers where there is a need to respond to commonly asked questions and inquiries, such as requests for account balances, and it is suggested that IVR solutions enable these responses to be delivered more efficiently and effectively (Rokoff 1999). In fact, 60% to 70% of customer calls can be handled in the VRUs, enabling organisations to significantly reduce their agent populations (Rokoff 1999).

In addition, voice recognition technologies are being used to ‘profile’ callers and present scripts to call center agents, which is propagating the transition to ‘self service’ (Schwartz 1998). For example, using IBM’s Natural Language Speech Recognizer, which in an application resident on many contemporary IVR systems, customers can call 24x7 and talk to the ‘system’ using natural language and the system will route the call to the appropriate destination (Schwartz 1998).

VRUs are influencing the way business is done over the phone (Rokoff 1999). They support cross selling and up selling opportunities by cross referencing and consolidating customer information entered during a call with other information retained (Marlin 1999). In concert with the speech recognition technology, VRUs
are also handling routine outbound telephone sales and confirmation calls, taking orders, supplying basic information, screening and culling applicants in recruiting campaigns and solving simple problems instead of call center agents (Read 2001). However, forcing too many customers into IVR or Web self-servicing, which are often poorly designed with complicated menus and options and limited opportunity to transfer to an agent, can be detrimental and impact customer satisfaction, loyalty and retention (Read 2001).

Technological innovations and the emergence of the multi-channel service center, allow customers to contact organisations by various means, including inbound and outbound telephone, email, IVR, fax, Web and the like (Kleinknecht 2001). However, the means in which organisations engage their customers will have as much impact on retention and profits as anything else (Kleinknecht 2001). Some proponents claim that VRUs empower customers and enable them to determine their own course, while concurrently providing supplementary and complementary information, such as ‘place in queue’, wait time and other additional services (Keith & Hirschfield 1996; Schwartz 1997). The use of these advanced technology solution, however, does not guarantee the delivery of quality services to customers (Tehrani 1998). Poorly designed VRUs, for example, where customers get stuck in ‘loops’ or reach dead ends can result in poor or no service delivery, high customer dissatisfaction and increased workload for the more costly call center agents (Tehrani 1998).

When establishing call center capacities with third party service providers, additional complexities are introduced, particularly with regard to who owns, configures and deploys the technical systems supporting the ‘entire’ network (Dash 2001). Some organisations, for example, are using technologies such as GeoTel (intelligent call routing technology also referred to as an ‘Intelligent Call Router’ or ‘Intelligent Call Manager’) to automate and optimise their call routing requirements, particularly when they have multiple servicing capacities (Marlin 1999; Rohde 1998). GeoTel enables customer calls to be directed to the next available agent, regardless of the service center’s location (Marlin 1999).
The development and deployment of flexible multi-gigabit networks, based on fast-switch Ethernet ATM and fibre optic backbones, are also supporting the rapidly expanding call center and back office servicing networks (Schwartz 1998). However, compatibility of existing infrastructures is a key consideration when contemplating the implementation and integration of new capacities into the existing servicing environment (Rokoff 1999).

2.4.5 Summary of technology solutions associated with service optimisation

In summary, it is clear that there is little information available in the extant literature regarding the technology solutions supporting service optimisation efforts. Hence, this area is under-researched and pre-paradigmatic (Borch & Arthur 1995) and, as such, constitutes a valid inquiry that contributes to the industry and other bodies of knowledge.

The literature review has revealed the need to further explore the reasons why global organisations pursue service optimisation efforts using off shore providers. This coupled with the lack of information pertaining to the development and implementation of the technology solutions currently supporting these efforts, in concert with the emerging technologies and potential solutions that will likely support future efforts, warrants even more attention. Consequently, a summary of the theoretical framework and research issues follows.

2.5 Summary of theoretical framework and research issues

The literature pertaining to servicing and sourcing strategies facilitated the development of a theoretical framework (see figure 2.3 on page 55) that enables the research problem to be addressed. For reference, the research problem is:

“Why do global financial organisations leverage Asian based suppliers for the provision of front office and back office services and how effective are the technologies solutions supporting these?”
In summary, the five research issues are:

1. What is a service optimisation initiative and why do organisations pursue these in Asia?
2. Which Asian markets are leveraged and what factors influence the decisions to utilise third party versus proprietary service providers?
3. What influences the technology solutions employed and why?
4. How do the existing technologies solutions perform and are they optimal?
5. How should the technologies solutions perform and what factors should influence the design?

**Figure 2.3 Theoretical framework for this research**

![Theoretical framework](image)

*Source: developed for this research.*
2.6 Conclusions

A theoretical framework to address the research problem was established in this chapter in concert with the literature review. Pursuant to which, five research issues were detailed. These, in culmination, will be explored through a qualitative investigation, using a case study based methodology, which will allow theory to be developed about this phenomenon. The methodology is discussed in detail in chapter 3.
3 Methodology

An extensive review of the literature was undertaken in chapter 2 in order to inform the development of the research study and to identify relevant theoretical issues. This chapter, depicted in figure 3.1 on page 58, describes the methods and procedures used to address the research problem and questions. The research paradigm and case study methodology are examined and justified in the context of the research problem and the development of prior theory and the use of preliminary indepth interviews are discussed. The case study design and purposeful selection of cases are then presented, as are the data collection and data analysis methods. Finally, the limitations of case study research and ethical considerations applicable to this research are discussed.
3.1 Research paradigm

This section of the research establishes the bases on which the research paradigm was selected and employed. It discusses the costs, benefits and implications of using various paradigms and ultimately argues that scientific realism is most appropriate.

Deductive theory testing and inductive theory building are the two major approaches to theory development (Parkhe 1993; Romano 1989; Bonoma 1985). The differences between these approaches can be viewed in terms of scientific paradigms. A paradigm is an overall conceptual framework within which a researcher may work (Perry, Riege & Brown 1999) or a worldview that guides the researcher (Guba & Lincoln 1994).
The positivist paradigm represents the deductive approach, whilst the phenomenological paradigms, including critical theory, constructivist and realism, represent the inductive approaches (Easterby-Smith, Thorpe & Lowe 1991; Healy & Perry 2000; Perry 1998a). Each of these scientific paradigms has elements of ontology, epistemology and methodology (Healy & Perry 2000) and these are illustrated in table 3.1.

**Table 3.1. Elements of alternative scientific paradigms**

<table>
<thead>
<tr>
<th>Scientific Paradigms</th>
<th>Element</th>
<th>Positivism</th>
<th>Realism</th>
<th>Critical theory</th>
<th>Constructivism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ontology</strong></td>
<td>Naïve realism: reality is real and apprehensible</td>
<td>Critical realism: reality is ‘real’ but only imperfectly and probabilistically apprehensible and so triangulation from many sources is required to try to know it</td>
<td>Historical realism: ‘virtual’ reality shaped by social, economic, ethnic, political, cultural, and gender values, crystallised over time</td>
<td>Critical relativism: multiple local and specific ‘constructed’ realities</td>
<td></td>
</tr>
<tr>
<td><strong>Epistemology</strong></td>
<td>Objectivist: findings true</td>
<td>Modified objectivist: findings probably true</td>
<td>Subjectivist: value mediated findings</td>
<td>Subjectivist: created findings</td>
<td></td>
</tr>
<tr>
<td><strong>Methodology</strong></td>
<td>Experiments / surveys: verification of hypotheses; chiefly quantitative methods</td>
<td>Case studies / preliminary indepth interviewing: triangulation, interpretation of research issues by qualitative and quantitative methods such as structural equation modeling</td>
<td>Dialogic / dialectical: researcher is a ‘transformative intellectual’ who changes the social world within which participants live</td>
<td>Hermeneutical / dialectical: researcher is a ‘passionate participant’ within the world being investigated</td>
<td></td>
</tr>
</tbody>
</table>

Note: Essentially, ontology is ‘reality’, epistemology is the relationship between that reality and the researcher and methodology is the technique used by the researcher to discover that reality.


**3.1.1 Positivist paradigm**

**Positivism.** Positivism is deductive and seeks to measure independent facts about an apprehensible reality that is premised on discrete elements, which are known and can be categorised (Guba & Lincoln 1994; Tsoukas 1989). Its purpose is theory-testing and data are primarily collected and analysed using quantitative techniques.
employed in an objective and structured way (Perry, Riege & Brown 1999). The researcher is independent in this form of enquiry and does not intervene in the phenomenon of interest, resulting in the development of value free generalisations.

The positivist paradigm was not suitable for this research, because there is little or no research on technology optimisation strategies employed in migrating front office and back office functions from higher cost to lower cost economies, nor are there existing constructs or theories to test (Perry 1998a). In fact, theory testing is impossible and deductive methods are therefore moot in this regard. Furthermore, the positivist paradigm is usually inappropriate for theory building research involving human participants, who are capable of acting and reflecting on real life situations and problems, as positivists consider the respondents independent objects (Perry, Riege & Brown 1999). Because the intent of the research is to understand reality through the complex interactions between respondent perceptions and other complex social constructs, this paradigm was unsuitable.

### 3.1.2 Phenomenological paradigms

Three inductive scientific paradigms were also considered (Easterby-Smith, Thorpe & Lowe 1991).

**Constructivists.** Constructivists see reality as multiple realities premised on intangible mental constructions of individual persons (Healy & Perry 2000). In this paradigm meaning has more value than measurement, for perception itself is considered the most important reality (Perry, Riege & Brown 1999). Knowledge is created on the interactions between the researcher and the respondent and the former is considered a passionate participant during the fieldwork (Guba & Lincoln 1994).

The constructivist paradigm was not suitable for this research, because the approach excludes concerns about the clearly real economic and technological dimensions of business (Hunt 1991). That is, constructivists focus on the beliefs of people and exclude influences of the external market and other pertinent and complex social constructs (Perry, Riege & Brown 1999).
**Critical theory.** Critical theory seeks to influence social, political, cultural, economic, ethnic and gender values by examining and critiquing organisational processes and structures over time (Perry, Riege & Brown 1999). It basically necessitates a dialogue or process that enables the researcher to influence the subjects or respondents social consciousness (Riege & Nair 1996). This approach is essentially subjective in nature, because knowledge is grounded in social and historical routines and assumptions are thus value dependent (Guba & Lincoln 1994).

There are certainly aspects of this paradigm that are aligned with the premises of this research. However, the primary intention was not to influence the social consciousness of the participants, so this paradigm was inappropriate. Moreover, there was no intent for the researcher to become a ‘transformative intellectual’ who liberates people from their historical, mental, emotional and social structures (Guba & Lincoln 1994). And whilst this research aims to influence strategy, this is achieved through understanding the motivations and actions of decision makers, as opposed to influencing, changing or transforming them.

**Realism.** Realism seeks to understand a common reality of an economic system in which people independently operate (Perry, Riege & Brown 1999). This reality is developed through the triangulation of multiple perceptions (Perry, Riege & Brown 1999) and researchers within this paradigm acknowledge that there is no absolute truth, but rather interpretations and models of truth and reality that can be developed through empirical analysis and review of prior theory (Healy 2000). Moreover, perception is not considered reality, although multiple perceptions developed through or via multiple means and subsequently triangulated are considered a picture of reality (Perry, Riege & Brown 1999). There are no criteria for distinguishing knowledge from belief or opinion (Smith 1992). Realism reflects the imperfect world and accepts that there is no factual account of the situation under investigation, but rather a fallible understanding of the phenomena (Masters 2000).

Realism was considered most appropriate for this research, because the researcher was neither independent, as is required in the positivist paradigm, nor integrally involved, as is required in the constructivist and critical theory paradigms. Instead,
the researcher sought relative objectivity in understanding why and how decisions were and are made within specific environments. That is, social phenomena are fragile and their fundamental impacts are not firmly established but contingent on their environment (Perry & Alizadeh 2001). The realism paradigm facilitates the research intent and, as such, was used for this enquiry.

3.2 Research methodology

Pursuant to the selection of the research paradigm, this section concentrates on the research methodology and argues that means aligned with inductive theory building are necessary. Specifically, this section argues that case study methodology is suitable for inductive enquiries that are premised on empirical data and where contemporary phenomena are investigated within real life contexts. It further argues that case study methods are particularly useful when phenomena and context are not clearly evident and where multiple sources of evidence are used (Yin 1994).

Case study research methodology is aligned with the realism paradigm, as it provides the framework for inductive theory building research. It also recognises that ‘…fact and theory (induction and deduction) are each necessary for the other to be of value’ (Emory & Cooper 1991). For the purposes of this research, case study methodology is defined as “a research methodology based on interviews and empirical analysis that focuses on delineating between a contemporary phenomenon and its context, in order to contribute to the broader body of knowledge”.

Case study research methodologies accommodate qualitative and quantitative approaches, although the former are more prevalent (Guba & Lincoln 1994). Within the realism paradigm, the outcomes or findings of these approaches (qualitative and quantitative) can be triangulated to form a better picture of reality (Perry, Riege & Brown 1999). The discussion now focuses on qualitative and quantitative approaches within the context of this research.
3.2.1 Qualitative and quantitative approaches

In a contemporary world, optimisation strategies lend themselves to quantitative analyses, as proponents seek to identify lower cost solutions. However, optimisation extends well beyond pure quantitative metrics and includes quality, service, performance, support and other dimensions. So whilst it is acknowledged that at least some portion of this research leverages and no doubt benefits from the quantitative enquiry, the primary areas of interest stem from the qualitative aspects and these form the bases of theory development. In fact, the qualitative analysis undertaken was largely an inductive enquiry, triangulating interviews with subject matter and technical experts.

The aim of this research was to influence strategy based on empirical analysis and theoretical replication. The intent was to develop theory, which will enable informed decisions regarding service optimisation and the technology solutions employed to facilitate the migrations of front office and back office functions from higher cost to lower cost economies. Whilst there was a quantity of research available on the development of front office and back office service centers in lower cost economies, there was almost none on the technology solutions employed to facilitate the same. Furthermore, there was none on the technology optimisation strategies employed in deregulating and emerging markets. Hence, this area was under-researched and pre-paradigmatic (Borch & Arthur 1995).

In the initial phases of theory development where phenomena are unknown and cannot be distinguished from context, quantitative methods may lead to inconclusive results (Parke 1993). However, theory developed or built in qualitative case study research, where comparisons and contrasts can be made to identify similarities and differences within the collected data, are likely to derive more conclusive findings (Neuman 1994:405).

Qualitative case studies address theory construction and theory building, as opposed to theory verification and theory testing (Lincoln & Guba 1985; Tsoukas 1989). In particular, elements of theory are being confirmed or disconfirmed, as opposed to being tested for generalisability to a population (Perry, Riege & Brown 1999), and
qualitative (exploratory) research methods are more flexible, enabling data and theory to interact (Neuman 1994).

3.2.2 Case study method

Case study research is suitable for exploratory enquiries where the lines between phenomena and context cannot be distinguished (Yin 1994). Case studies allow for detailed analyses of complex social constructions and strategies and polices that change due to human intervention and reaction (Perry, Riege & Brown 1999). This method allows the researcher relatively short, but intensive exposure to the researched (Sofaer 1999).

The intention of this enquiry was to enable an understanding of reality through triangulation of multiple perspectives. The ability to compare and contrast findings, perspectives, views and understandings of respondents, solicited through structured and unstructured interviews, affords better objectivity and a better view of reality. In fact, case study methods facilitate an in depth understanding of the phenomenon (Gilmore & Carson 1996) and allow this to be achieved by correlating data and findings from multiple sources. Interviews, for example, enable an understanding of respondents’ perspectives in their own terms and allow the researcher to get physically and psychologically closer to the phenomenon (Carson & Coviello 1996).

Case studies allow unknown relationships to be discovered and phenomenon to be rethought (Stake 1981). Data and findings are classified into categories and relationships between categories are uncovered, described and compared (Bonoma 1985). Case study research allows detailed information about complex phenomenon involving people and organisations to be collected and compared in order to develop theory and ultimately strategy.

Case study research has been noted for its limitations (see section 3.9) within doctoral research (Edwards 1998), although proponents have advocated its use in specific areas of management and marketing (Yin 1994; Perry 1998a). In fact, the use of case study research is becoming more popular in contemporary investigations that leverage the realism paradigm and where inductive based qualitative research is

Case study methods are suited to complex enquiries concerning the interrelationships between people and context, particularly in the management arena (Perry 1998a; Perry & Coote 1994). This method focuses on contemporary phenomenon where the interest is in ‘how’ and ‘why’ and where there is little or no control over behavioural events (Yin 1994), as illustrated in table 3.2. For these reasons, a case study research method was selected for this enquiry.

**Table 3.2. Criteria for selecting an appropriate research methodology**

<table>
<thead>
<tr>
<th>Research Methodology</th>
<th>Form of research question</th>
<th>Requires control over behavioural events?</th>
<th>Focuses on contemporary events?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>How, why</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Survey</td>
<td>Who, what, where, how many, how much</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Archival analysis</td>
<td>Who, what, where, how many, how much</td>
<td>No</td>
<td>Yes/No</td>
</tr>
<tr>
<td>History</td>
<td>How, why</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Case study</td>
<td>How, why</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Source: based on Yin (1994)*

3.3 Quality criteria for case study research

The intention of this section is to establish the criteria in which the use of the research paradigm and research methodology can be assessed, particularly in terms of quality (applicability and rigour). There are various methods used to determine the quality of scientific research and these will be discussed next.

Constructivists and critical theorists establish similar tests of dependability, credibility and transferability (Hirschman 1986; Lincoln & Guba 1985; Miles & Huberman 1994) and positivists consider construct validity, internal validity, external validity and reliability to be key quality determinants (Chia 1997; Neuman 1997). Realists, however, use six criteria, which are established within the elements of ontology, epistemology and methodology (Healy & Perry 1998a). Table 3.3 illustrates the quality criteria for the aforementioned scientific paradigms.
### Table 3.3. Comparison of quality criteria among scientific paradigms

<table>
<thead>
<tr>
<th>Element</th>
<th>Scientific Paradigms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Realism</td>
</tr>
<tr>
<td><strong>Ontology</strong></td>
<td>1. Ontological appropriateness</td>
</tr>
<tr>
<td></td>
<td>2. Contingent validity</td>
</tr>
<tr>
<td><strong>Epistemology</strong></td>
<td>3. Multiple perceptions of participants and of peer researchers</td>
</tr>
<tr>
<td></td>
<td>6. Construct validity</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Specifically, the criteria used for determining quality in the realism paradigm are ontological appropriateness, contingent validity, multiple perceptions of participants and of peer researchers, methodological trustworthiness, theory building and construct validity.

#### 3.3.1 Ontological quality criterion

**Ontological appropriateness.** Ontological appropriateness mandates that the research must focus on a complex social phenomenon (Healy 1998). It necessitates the discovery of reality, albeit probabilistically apprehensible (Perry, Alizadeh & Riege 1997), and as this research in an inductive enquiry premised on questions of how and why, ontological appropriateness is ensured.

**Contingent validity.** Contingent validity relates to credibility, but also considers the significance of the generative mechanisms in their contexts. Moreover, it is similar too, but beyond, quality criterion used in alternate paradigms, such as internal validity and credibility, and seeks to understand contingencies that exist in specific contexts. Internal validity is like a quality determinant that is associated with ontology in the positivism paradigm (Guba & Lincoln 1994), which considers the degree to which the results of the study can be relied upon (Davis & Cosenza 1985; Emory & Cooper 1991). This criterion, however, concentrates on causal
relationships and may be vulnerable if the relationships between variables are improperly inferred (Yin 1989). Similarly, credibility is a quality determinant used by constructivists, who expect respondents and peers to construct multiple realities (Perry, Alizadeh & Riege 1997). As such, respondents and peers are required to endorse the research findings (Lincoln & Guba 1985) and this method is tainted when multiple answers stem from multiple sources and all are considered constructed reality. Hence, this method affords no clear yardstick in which to determine quality.

The realism paradigm espouses one reality, supported by the triangulation of perspectives solicited or gleaned from multiple sources (Perry, Alizadeh & Riege 1997). This research seeks to understand a contemporary and complex social phenomenon by leveraging multiple sources and asking how and why type questions. As such, the ontology quality criteria necessary within this paradigm are addressed within this research.

### 3.3.2 Epistemological quality criterion

**Multiple perceptions of peers and participants.** Multiple perceptions of peers and participants is a pluralist approach that recognises multiple perceptions of reality. That is, it notes that perception is not reality, but a window on to which reality can be interpreted (Perry, Riege & Brown 1999). As a quality criterion within the epistemological element of scientific paradigms, it seeks to understand reality by triangulating multiple views (Perry, Riege & Brown 1999). Positivists have no quality test for the relationship between the reality and the researcher and critical theorists and constructivists utilise a test of confirmability (Guba & Lincoln 1994). Triangulation of information about a phenomenon facilitates understanding through convergence (Patton 1990) and the views and perceptions of participants and researchers alike are critical in this regard (Healy 2000). This research leverages multiple perceptions and seeks to understand and interpret reality through triangulation, so the epistemological quality criterion was addressed.
3.3.3 Methodological quality criterion

**Methodological trustworthiness.** Methodological trustworthiness is a quality test of audit-ability. Moreover, it seeks to assess the extent to which the research can be audited and thus depends on clearly articulated methods of process, protocol, data collection, data analysis and general traceability. This criterion is equivalent to positivism’s reliability and constructivism’s dependability and the rigour established in the methodological framework ensures this quality criterion was addressed. Specifically, this was achieved through the objective formulation and representation of methodological strategies and the detailed and documented data collection and data analyses processes employed.

**Theory building.** Theory building research is applicable when the social phenomena being investigated are complex and where the body of knowledge is under-researched and pre-paradigmatic (Borch & Arthur 1995). This criterion, unlike external validity, which is espoused as a suitable test within the positivist paradigm, necessitates an inductive enquiry and is, as such, aligned with the realism paradigm (Easterby-Smith, Thorpe & Lowe 1991; Healy & Perry 2000; Perry 1998a). Furthermore, external validity was considered an inapplicable criterion for qualitative case study research, because it is founded on and relies on statistical generalisation, which is quantitative in nature (Yin 1989). Transferability, from the critical theory and constructivist paradigms, is analogous to external validity and, therefore, similarly inappropriate.

The theory building quality criterion can be achieved via literal and theoretical replication, empirical analysis and by leveraging prior theory (Healy 2000). The intent was to address the gaps in the body of knowledge by developing theory through inductive means and this is aligned with the foundation philosophy of this research being pre-paradigmatic.

**Construct validity.** Construct validity is similar to the aforementioned theory building quality criterion and is similar to the construct validity criterion used in the positivist paradigm. It seeks to assess or measure the appropriateness or validity of constructs developed in support of the theory and can be achieved by using multiple
sources to substantiate a chain of evidence. This is merely a convergence strategy that propagates validity through the triangulation of perceptions and interpretations, thus leading to more rigorous and convincing results and conclusions that can better withstand examination.

### 3.3.4 Summary and applicability of quality criteria

The quality of this inductive case study enquiry, which subscribes to the realism research paradigm, was assured through alignment with the six aforementioned criteria. In fact, the tactics used to achieve this alignment are summarised in table 3.4 and were used to ensure an appropriate degree of rigour was employed in exercising the research.

**Table 3.4. Summary of quality tactics**

<table>
<thead>
<tr>
<th>Case Study Quality within the Realism Paradigm</th>
<th>Element</th>
<th>Quality criterion</th>
<th>Tactic(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ontology</td>
<td>1. Ontological appropriateness 2. Contingent validity</td>
<td>• utilise inductive implements</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• compare and contrast findings from multiple sources</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• develop explanations using various means (e.g. Data and diagrams)</td>
</tr>
<tr>
<td></td>
<td>Epistemology</td>
<td>3. Multiple perceptions of participants and of peer researchers</td>
<td>• data and conclusions reviewed by peers and participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• interpretations and perceptions of participants solicited and recorded</td>
</tr>
<tr>
<td></td>
<td>Methodology</td>
<td>4. Methodological trustworthiness 5. Theory building 6. Construct validity</td>
<td>• continually develop and refine the research protocols</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• ensure alignment within and between findings from disparate sources</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• use replication logic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• compare outcome with the literature review to outline contributions and generalise those within the scope and boundaries of the research</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• utilise multiple sources of evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• establish a chain of evidence</td>
</tr>
</tbody>
</table>

*Source: based on Guba & Lincoln (1994), Healy & Perry (1998) and Yin (1989).*

### 3.4 Case study design

This section establishes the framework in which the research methodology was exercised. It considers the applicability and opportunity of prior theory and argues why specific research implements, such as the literature review and preliminary
indepth interviews, were used in this enquiry. Finally, the case study design was considered and a holistic multi case approach advocated.

3.4.1 Prior theory

The quantity of prior research to be considered and used in this enquiry was a necessary first step. The costs and benefits of prior theory were examined and the use of inductive and deductive strategies discussed. Finally, the methods of collecting and using prior theory for this research were determined.

Proponents argue that there are a number of benefits in using prior theory in case study research. Prior theory can guide the researcher and the design by specifying the type of data to be collected and analysed (Dick 1990; Lincoln and Guba 1985; Mintzberg 1973). It can assist in the purposeful selection of respondents and target organisations (Eisenhardt 1989; Yin 1989), which in turn may reduce the total required interviews, because the respondents have been carefully selected and are information rich (Dick 1990). Finally, prior theory can assist the preparation of more effective research questions (Dick 1990; Miles & Huberman 1984) and assist the researcher to recognise critical content during the interview process (Dick 1990).

In earlier sections of this research, the alignment between the realism paradigm, case study methods and inductive implements and processes was established (see sections 3.2, 3.3 and 3.4). Similarly, it has been acknowledged that case study methods leverage both inductive and deductive implements, but the former is more common, or primary, when the enquiry is a contemporary and complex exploration of a social phenomenon (see sections 3.3 and 3.4). However, there is debate among researchers, as to the degree in which inductive theory building strategies and deductive theory testing strategies should be applied in case study research. Moreover, many researchers acknowledge the need for prior theory when entering case study research, but they have disparate views on whether it should be applied before the data collection phase (Eisenhardt 1989; Miles & Huberman 1984; Perry and Coote 1994; Yin 1989).
Pure inductive methods, such as grounded theory, require the researcher to enter the field without preconceived notions or theoretical definitions and, as such, prior theory is not required (Glaser & Strauss 1970; Strauss 1987; Strauss 1991). Deductive methods, however, require prior theory to precede data collection as the intent is to test and validate existing theory. In quantitative enquiries, verification takes place when theory building has been completed (Sarantakos 1993). Table 3.5 summarises the salient features of inductive and deductive approaches.

Table 3.5. Summary of features associated with induction and deduction

<table>
<thead>
<tr>
<th>Feature</th>
<th>Deductive</th>
<th>Inductive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direction of theory building</td>
<td>Begins from theory</td>
<td>Begins from reality</td>
</tr>
<tr>
<td>Verification</td>
<td>Follows theory building</td>
<td>Data generation, analysis and theory verification take place concurrently</td>
</tr>
<tr>
<td>Concepts</td>
<td>Firmly defined before research commences</td>
<td>Commences with orientation and flexible concepts</td>
</tr>
<tr>
<td>Generalisations</td>
<td>Inductive generalisations</td>
<td>Analytic or exemplar generalisations</td>
</tr>
</tbody>
</table>

Source: based on Sarantakos (1993)

Some researchers argue that case study research is purely inductive in nature (Dyer & Wilkins 1991; Eisenhardt 1989). They argue that prior theory and deduction are not required, because the intent is to build theory without preconceived notions or theoretical definitions (Glaser & Strauss 1970). This view necessitates a limited review of the literature prior to data collection, because there is no theory under consideration and no hypothesis to test (Eisenhardt 1989). This approach, however, is fraught with vulnerability, because the researcher risks rediscovering existing theory and limiting or eliminating the opportunity to contribute to the ‘body of knowledge’ (Perry 1998a; Yin 1989; Yin 1994).

Deduction requires a pre-structured approach to the research, where there is a base level on known information and understanding and where the collection and analysis of empirical data is used to test the hypotheses (Miles & Huberman 1994; Yin 1994). The deductive approach, unlike the inductive approach, mandates a clear unaltered direction and execution of the research, including research protocols and strategies, once it has begun. Figure 3.2 on page 72 illustrates the continuum of inductive and
deductive implements employed during the various stages of exploratory research, including the use of prior theory.

**Figure 3.2**  **Inductive and deductive implements used in exploratory research**

Source: based on Perry (1998)

It is unlikely that the researcher could effectively separate the two approaches of induction and deduction (Miles & Huberman 1994). This separation is unsustainable and unnecessary, as theory advancement necessitates the continual interaction of both (Parkhe 1993). In addition, both have limitations, as previously discussed, and these can be mitigated, at least to some degree, when using a combination of the two. Pure induction, for example, is unable to utilise prior theory and may potentially lead to the rediscovery of existing theory, whilst deduction may prevent the development of useful and applicable theory. As the intent of this research was to build theory regarding service optimisation and associated technology optimisation strategies, a combination of inductive and deductive approaches has been used, so as to enable
the strengths of each to be leveraged (Miles & Huberman 1994; Parkhe 1993; Perry 1994; Perry 1998a).

3.4.2 Exploration - developing prior theory

Whilst there is debate among researchers as to the degree of prior theory to be developed and used in case study research, as well as the point at which to use it (Eisenhardt 1989; Miles & Huberman 1984; Perry & Coote 1994; Yin 1989), this research leverages the literature review and preliminary indepth interviews to assist in the solidification of the research problem, issues and questions. Moreover, the intention of this strategy was to establish a foundation upon which the main data collection stage of this research could be executed. Descriptions of the implements used in the stages of inductive theory building are discussed next (refer to figure 3.2 on page 72).

Literature review. The first stage of this research is inductive and exploratory and a review of the literature was undertaken (refer to chapter 2). The intention was to critically review the extant literature in order to compare, contrast and elucidate the pertinent and salient issues associated with service optimisation, with a particular interest in the servicing and sourcing strategies and associated technology solutions employed when migrating front office and back office functions to lower cost economies. Furthermore, the purpose of this endeavour was to identify similar, disparate and related arguments and to highlight the shortfalls or gaps in the research and industry bodies of knowledge, enabling the latter to be leveraged, augmented and developed in the context of this research.

The literature review confirmed that the research area is under-researched and pre-paradigmatic (Borch & Arthur 1995). It enabled research probes to be developed through an evolutionary framework and the research problem and questions to be refined in consideration of the same. The literature review also enabled the relationships between the existing and emerging research to be identified and some prior theory to be established.
**Preliminary indepth interviews.** The literature review was followed by two preliminary indepth interviews, which were aimed at further refining the research area and informing the development of a structured approach to data collection. These interviews enabled additional context to be gained, which stems to quality (contingent validity) within the realism paradigm, and afforded a focus on the salient aspects of the research area (see section 3.4 for further information about the quality criteria applicable to case study research within the realism paradigm). That is, the collection, analysis and interpretation of a small number of respondents’ perspectives, enabled context to be formed and awareness of the salient issues to be acquired (Dick 1990; Perry 2001).

Allowing respondents to share their experiences was at the crux of data collection within this research and the preliminary indepth interviews were a forerunner to the main data collection stage. That is, the preliminary indepth interviews, which were exploratory in nature, afforded the researcher an opportunity to continually refine the research questions and probes, prior to the confirmatory / dis-confirmatory stage. The respondents were invited to share their personal experiences and there was little structure associated with this part of the interview. This allowed the researcher to glean critical information about the respondents’ abilities, methods and perspectives, as well as the research area (Edwards 1998, Perry & Coote 1994; Perry 1998a).

The preliminary indepth interviews were used specifically to explore the research area and not as a research method in their own right (Carson, Gilmore, Gronhaug & Perry 2001). They were useful in identifying the salient issues and aspects of the research area and in formulating a structured approach for the main data collection stage of this research (Perry 2001). Similarly, the preliminary indepth interviews informed the development of other interview questions, which were exercised during the confirmatory / dis-confirmatory stage of this research (Hyde 2000; Perry 1998a).

**Pilot studies.** The literature review enabled many of the salient issues and aspects of the research to be identified and the preliminary indepth interviews enabled these to be explored further and additional context to be gained. These processes contributed to the development of prior theory and enabled the researcher to develop and continually refine the research questions and the approach.
The final process associated with the development of prior theory, was to exercise the data collection strategy developed thus far. Two pilot studies were undertaken in order to exercise the interview questions developed for this research and to allow for gaps or short falls to be identified and addressed prior to moving into the main data collection, or confirmatory / dis-confirmatory stage of the research (Eisenhardt 1989; Yin 1994). The result was further refinement of the research area and interview questions and some level of assurance that the data to be collected would facilitate the need.

### 3.4.3 Confirmatory / dis-confirmatory – main data collection

Prior theory was developed during the in the exploratory stage of this research. Specifically, the literature review enabled the salient issues and aspects of the research to be identified and preliminary questions to be formulated. The preliminary indepth interviews enabled further context to be developed and the interview questions to be refined and the pilot studies enabled the research and data collection strategies to be exercised and further refined before proceeding into the main data collection or confirmatory / dis-confirmatory stage of the research.

**Main data collection.** During this phase of the research, the data collection techniques and interview protocols developed during the exploratory stage were employed. Specifically, in-depth interviews were completed with respondents from the pertinent sub-case groups. Additional in-depth interviews were also conducted with subject matter experts directly associated with the research area and who had a stake in the decisions to employ or pursue specific solutions or options. This latter strategy facilitated triangulation of the perceptions and results.

In all cases, the respondents were encouraged to express their own personal views, opinions and perceptions. Where the respondents failed to address pertinent and salient areas on their own volition, they were prompted using content developed during the exploratory stage of the research.
The data collected during the confirmatory / dis-confirmatory stage of this research are analysed in chapter 4. Subsequent to these analyses, relevant theory was developed in chapter 5, along with various conclusions and suggestions for further research. In addition and pursuant to the model articulated in figure 3.2 on page 72, the final theory developed is ready for deductive statistical testing and generalisation.

### 3.4.4 Criteria for research design and case selection

Case selection is a critical part of the case study design and whilst the design can be manipulated throughout the course of the research, this is not ideal and may ultimately stem to the perceived credibility (Yin 1994). This section discusses and justifies the criteria used to determine the type and number of cases used in this research.

Four types of research design were considered for this enquiry; holistic single case, embedded single case, holistic multi case and embedded multi case (Yin 1989). Firstly, the ‘unit of analysis’ or ‘units of analysis’ were considered, so as to determine whether a holistic or an embedded approach would be used. As this research focuses on a strategic optimisation program within the organisation examined and, even more specifically, the service optimisation and associated technology solutions employed, a single unit of analysis is applicable. Hence a holistic approach was deemed appropriate.

Secondly, with the holistic dimension determined, consideration was given to whether one or more cases would be used. A single case is deemed applicable and appropriate in four situations (Yin 1989):

- if the case is critical and it is possible to examine an existing theory; or
- if the case is unique (extreme or rare, for example) and worth documenting; or
- if the case if revelatory and allows the researcher to explore a previously inaccessible phenomenon; or finally,
- if the case is used as a precursor or pilot to a subsequent multi case investigation.
Whilst there was a common unit of analysis, there were also a number of contextual dimensions applicable in this research. For example, the research considers diverse servicing functions, including ‘telephone service center’ and ‘data keying’ functions, and whether there are discrepancies across or between the lower cost economies such as India versus the Philippines. Hence, this research does not fit with the aforementioned criteria, as the case is neither unique, revelatory, intended as a pilot for a multi case investigation nor examining an existing theory.

Notwithstanding the fact that this research fails to meet the single case criteria (Yin 1989), the salient aspects of the alternate were, nevertheless, explored. For example, multi case designs are considered superior to single case designs, as the variety of evidence, including interviews, documentary analysis and the like, is more holistic and compelling (Bonoma 1985; Eisenhardt 1989; Gersick 1988; Miles & Huberman 1994; Parkhe 1993; Patton 1990; Romano 1989; Yin 1994). Similarly, the diverse sources of evidence support the triangulation proposition (Eisenhardt 1989; Yin 1994) and the investigation has the capacity to explore complex social phenomenon (Eisenhardt 1989; Patton 1990; Yin 1994). The multi case approach also allows for theory testing (Bonoma 1985; Eisenhardt 1989) or theory generation and generalisation (Deshpande 1983; Eisenhardt 1989; Guba & Lincoln 1994; Patton 1990). Finally, the previously described strengths, coupled with the additional methodological rigour, achieved through replication logic (Tsoukas 1989; Yin 1994), culminate in a more comprehensive, compelling and credible investigation.

Based on the aforementioned, this research employed a holistic multi case research design. This strategy leveraged replication logic in as much as the purposeful selection of applicable cases was necessary to allow for literal and theoretical replication to be achieved. The foundation of replication logic and the purposeful selection of cases are discussed next.

### 3.5 Case selection

The previous section considered the intent of the research and established the research or case design. It considered the degree of prior theory applicable, as well as the implements used in each stage of exploratory research. Finally, a holistic
multi case approach advocated. This section discusses the foundations upon which the cases for this research were selected. Specifically, it justifies the selection of a small number of pertinent cases that allowed common themes and causes that were linked to specific outcomes to be identified and ultimately used in this research (Ragin 1999).

3.5.1 Replication logic

Selecting pertinent cases is a critical component to the research design, particularly within the realism paradigm, where a complex social phenomenon is being investigated and theory is being developed or generated. The selection of cases that yield similar results or different results for predictable reasons is at the crux of this logic (Parkhe 1993; Yin 1994).

Sampling logic and replication logic have been used in case selection, although the former seeks representativeness and is considered inferior in comparison with replication logic (Patton 1990), which seeks relevance in case study research (Stake 1994; Yin 1994). In fact, proponents of replication logic note that the random selection of cases in neither ideal nor necessary (Eisenhardt 1989) and that each case, in a holistic multi case approach, should be treated as an experiment and not as a data point in a survey (Yin 1989). For these reasons, replication logic was deemed appropriate for this research and was used in the selection of cases.

In this research, cases were selected for their specific relevance to the research area. Each case was purposefully selected in order to generate similar findings (literal replication) or to generate disparate findings for predictable reasons (theoretical replication) (Parkhe 1993; Yin 1994). In fact, this research was multi dimensional in as much as it utilised theoretical and literal replication (Carson, Gilmore, Gronhaug & Perry 2001) to glean information rich data (Yin 1989; Patton 1990).

3.5.2 Purposeful selection of cases

Section 3.4.4 of this research discussed the criteria pertinent to the research design, which ultimately influenced the purposeful selection of cases. The unit of analysis,
for example, was the technology solutions employed within the Service Optimisation program of the organisation examined. However, the holistic multi case approach pursued in this research required cases enabling literal and theoretical replication to be achieved and, as such, three specific contextual dimensions were used for this purpose (see table 3.6).

**Table 3.6. Case selection with a multi dimensional construct**

<table>
<thead>
<tr>
<th>Unit of analysis</th>
<th>Case</th>
<th>Business (2a)</th>
<th>Function (2b)</th>
<th>Customer base</th>
<th>Provider (1)</th>
<th>Location (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C1</td>
<td>A</td>
<td>TSC1</td>
<td>US</td>
<td>Proprietary</td>
<td>India</td>
</tr>
<tr>
<td></td>
<td>C2</td>
<td>A</td>
<td>TSC1</td>
<td>US</td>
<td>Third party</td>
<td>India</td>
</tr>
<tr>
<td></td>
<td>C3</td>
<td>A</td>
<td>BO</td>
<td>US</td>
<td>Proprietary</td>
<td>India</td>
</tr>
<tr>
<td></td>
<td>C4</td>
<td>A</td>
<td>BO</td>
<td>US</td>
<td>Third party</td>
<td>India</td>
</tr>
<tr>
<td></td>
<td>C5</td>
<td>A</td>
<td>TSC2</td>
<td>US</td>
<td>Third party</td>
<td>India</td>
</tr>
<tr>
<td></td>
<td>C6</td>
<td>A</td>
<td>TSC2</td>
<td>US</td>
<td>Third party</td>
<td>Philippines</td>
</tr>
<tr>
<td></td>
<td>C7</td>
<td>B</td>
<td>TSC1</td>
<td>US, JAPA, EMEA</td>
<td>Third party</td>
<td>Philippines</td>
</tr>
<tr>
<td></td>
<td>C8</td>
<td>C</td>
<td>TSC1</td>
<td>US</td>
<td>Proprietary</td>
<td>India</td>
</tr>
<tr>
<td></td>
<td>C9</td>
<td>C</td>
<td>TSC1</td>
<td>US</td>
<td>Third party</td>
<td>Philippines</td>
</tr>
<tr>
<td></td>
<td>C10</td>
<td>C</td>
<td>BO</td>
<td>US</td>
<td>Third party</td>
<td>India</td>
</tr>
</tbody>
</table>

Notes:

Contextual dimension 1: Provider (proprietary or third party)
Contextual dimension 2: Business unit and function
Contextual dimension 3: Location (India or the Philippines)

1. TSC1 – Telephone Service Center (service type 1)
2. BO – Back Office
3. TSC2 – Telephone Service Center (service type 2)
4. US – United States
5. JAPA – Japan, Asia, Pacific and Australia
6. EMEA – Europe, Middle East and Africa

*Source: developed for this research.*

The first contextual dimension enabled a comparative analysis between service providers. That is, it enabled a comparison between ‘in house’ versus outsourced service provision, as well as outsourced versus outsourced service provision in disparate geographies and with disparate functions and business units.

The second contextual dimensions enabled the various servicing functions to be compared and contrasted in order to delineate between technical function complexity and the performance of the technology solutions. This was achieved between ‘like’ service providers located in disparate geographies and, similarly, like service providers located in the same geography, albeit proprietary versus third party based
service provision. Similarly, like functions serviced by proprietary business units were compared and contrasted, as were like functions between proprietary and third party based service providers.

The third contextual dimension facilitated a comparative analysis between geographies. This allowed pertinent information to be collected and compared and contrasted with an equivalent function from an equivalent service provider.

Whilst these dimensions allow literal and theoretical replication to be achieved, the application of replication logic was, thus, expected to deliver varying results between some cases. Specifically, data patterns were expected to vary between third parties located in disparate geographies and facilitating the same functions and between third party and proprietary service provision within the same geographies. These results support the theoretical replication required within the research design. However, data patterns generated from third parties located within the same geographies, regardless of the functions supported, were expected to generate similar results, thus meeting the literal replication imperative. The use of the literal and theoretical replication supports the quality criteria discussed in section 3.4 of this research. The following section discusses the number of cases and interviews used in this research.

3.5.3 Number of cases

There is debate amongst case study researchers, as to the number of cases and interviews necessary (Romano 1989) to solicit valid and reliable data upon which the analyses could be undertaken. With the criteria for the purposeful selection of cases established, this section discusses and justifies the number of cases and interviews used in this research.

There are broadly two schools of thought with respect to the quantity of cases required for case study research. The first suggests that there is no minimum or maximum number of cases. Some researchers argue that the decision is up to the researcher (Romano 1989) and that there are no rules governing the quantity of cases (Patton 1990). However, others argue that additional cases should be added until the
point of redundancy (Lincoln & Guba 1985) or to the point of theoretical saturation (Eisenhardt 1989).

The second school of thought argues for a distinct numbers of cases premised on specific criteria. For example, some researchers note that the high costs associated with qualitative research (interviews), coupled with the subsequent complexities of assimilation and interpretation, warrants a ‘capping’ or ‘ceiling’ of 12 cases (Hedges 1985) and others argue that 15 or more is untenable for similar reasons (Miles & Huberman 1994). Finally, some researchers advocate a minimum of four cases to support theory generation with a suitable level of empirical grounding (Eisenhardt 1989, Perry 1998a).

The acceptable number of cases required in support of qualitative case study investigation of a complex social phenomena, seems to fall between four (4) and twelve (12) (Perry 1998b). The types of cases necessary to achieve literal replication and theoretical replication were determined in section 3.5.2 and consequently established a minimum number of cases required to achieve that dimension of the research design (Patton 1990; Yin 1989). Similarly, during the aforementioned process, due consideration was given to whether these cases would enable salient and pertinent aspects of the complex social phenomenon to be determined (Gummesson 2000).

Ten cases, which fall within the ranges advocated by many case study researchers (Eisenhardt 1989; Hedges 1985; Miles & Huberman 1994; Perry 1998b), were consequently selected for this research (see table 3.6 on page 79). These cases were also selected in consideration of the costs and complexities associated with assimilating and interpreting the data. The number of interviews necessary to collect sufficient data to compare and contrast information within and between cases is discussed next.

3.5.4 Number of interviews

The selection of participants, stems to credibility within qualitative case study research and was discussed in section 3.4 of this research. In fact, this aspect is
directly attributable to the epistemological criterion of multiple perceptions of peers and participants (Perry, Riege & Brown 1999). Moreover, the selection of information rich participants (Patton 1990; Yin 1989), coupled with the employment of strategies used to achieve the same (literal and theoretical replication), contributed to the credibility and quality of this research (Carson, Gilmore, Perry & Gronhaug 2001).

The number of required participants was also influenced by the ability of the researcher to assimilate, analyse and ultimately interpret the collected data (Patton 1990). However, the researcher has been a key leader and contributor to the Service Optimisation program, from a technologies perspective, for more than three years. As such, participants were carefully and purposefully selected for their ability to contribute diverse and ‘information rich’ data pertinent to this research (Patton 1990).

In each case business and technologies leaders of vice president, director or senior manager levels were interviewed, along with key technology experts, culminating in five interviews per case (see table 3.7). This selection provided sufficient information to identify the different perspectives of the various participants and supported the triangulation strategy employed in this research.

<table>
<thead>
<tr>
<th>Case</th>
<th>Business unit</th>
<th>Function</th>
<th>Provider</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>A</td>
<td>TSC1</td>
<td>Proprietary</td>
<td>5</td>
</tr>
<tr>
<td>C2</td>
<td>A</td>
<td>TSC1</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C3</td>
<td>A</td>
<td>BO</td>
<td>Proprietary</td>
<td>5</td>
</tr>
<tr>
<td>C4</td>
<td>A</td>
<td>BO</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C5</td>
<td>A</td>
<td>TSC2</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C6</td>
<td>A</td>
<td>TSC2</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C7</td>
<td>B</td>
<td>TSC1</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C8</td>
<td>C</td>
<td>TSC1</td>
<td>Proprietary</td>
<td>5</td>
</tr>
<tr>
<td>C9</td>
<td>C</td>
<td>TSC1</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C10</td>
<td>C</td>
<td>BO</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

Source: developed for this research.

A total of 50 main case study interviews were completed across the ten case study areas identified in table 3.7. This number of interviews falls within the range of 20
to 50 respondents recommended by various researchers (Perry 1998b) and was in compliance with the minimum and maximum range established by others (de Ruyter & Scholl 1998). Adding the two preliminary indepth interviews and the two pilot case interviews conducted during the stage one of this research, a total of 54 interviews were conducted. Specifically, in stage one of this research, two preliminary indepth interviews were conducted with key business and reengineering stakeholders to develop and refine the interview questions. Then, two pilot case interviews were undertaken with subject matter and technical experts to further refine the interview and case study frameworks.

In stage two of this research, business and technology leaders and technology subject experts were interviewed within each case.

3.6 Data collection

The previous section established and justified the foundation criteria for the purposeful selection of cases. It justified the selection of a small number of pertinent cases that allowed common themes and causes that were linked to specific outcomes to be identified and ultimately used in this research (Ragin 1999). This section outlines the procedures used to collect the data and focuses on the case study protocol applied in the field investigation.

The methods used to collect data in case study research are diverse (Yin 1989). As such, structured and unstructured interviews were employed and undertaken respectively (Yin 1994). These data collection methods, which yielded both qualitative and quantitative data, were appropriate for this research and established a foundation upon which the data can be triangulated during the analysis phase of this research (Guba & Lincoln 1994; Perry, Alizadeh & Riege 1997).

3.6.1 Case study protocol

In consideration of the quality criteria propagated in section 3.4 of this research, the development and application of a rigorous case study protocol was arguably the most critical aspect of this research, from reliability and validity perspectives. Similarly,
it enabled a consistent approach to the application of the data collection instruments by developing a framework for the investigation and consequently establishing a guide for subsequent researchers, who may seek to replicate the study (Emory & Cooper 1991; Wimmer & Dominick 1983; Yin 1989).

In order to enable a consistent approach to data collection a framework premised on four elements and specific requirements for case study research was used (Yin 1989). These elements and requirements form the basis of the case study protocol employed in this research and are illustrated in table 3.8. The case study protocol was applicable to the entire research, including the preparation of the thesis. It was divided into four elements, which are pertinent to various stages of the research and which are discussed in further detail below.

Table 3.8. Protocol elements and requirements

<table>
<thead>
<tr>
<th>Elements</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overview</td>
<td>• Project objectives and auspices</td>
</tr>
<tr>
<td></td>
<td>• Case study issues</td>
</tr>
<tr>
<td></td>
<td>• Relevant readings</td>
</tr>
<tr>
<td>2. Field procedures</td>
<td>• Credentials</td>
</tr>
<tr>
<td></td>
<td>• Access to site</td>
</tr>
<tr>
<td></td>
<td>• General sources of information</td>
</tr>
<tr>
<td></td>
<td>• Procedural reminders</td>
</tr>
<tr>
<td>3. Case study questions</td>
<td>• Specific questions</td>
</tr>
<tr>
<td></td>
<td>• Table shells for specific arrays of data</td>
</tr>
<tr>
<td></td>
<td>• Potential sources of answers</td>
</tr>
<tr>
<td>4. Report format</td>
<td>• Outline</td>
</tr>
<tr>
<td></td>
<td>• Format</td>
</tr>
<tr>
<td></td>
<td>• Other documentation</td>
</tr>
</tbody>
</table>

Source: based on Yin (1989)

The overview element provides background information to the research, introduces the salient issues and problems and identifies relevant readings about the same (Yin 1989). This information is developed and presented in chapter 1 and chapter 2 of this thesis. The field procedures element is concerned with establishing a framework in which the research plan can be executed in the field and in consideration of real events, as opposed to a laboratory or the like. This framework extended to the planning and execution of the various data collection implements and adequately
catered for the respondents’ schedules and availability (Yin 1989). This information is presented in chapter 3 of this thesis.

With the field procedures developed, the case study questions element focused on the delivery of the research questions and the methods in which the responses were recorded. It considered the most likely sources of pertinent and information rich data and involved the preparation of ‘shells’ or templates which were used to record the data (Yin 1989). The case study questions element is arguably the most critical of all the elements, as it was the primary means of soliciting and collecting the information necessary to address the research problem, issues and questions. Similar to the field procedures element, information applicable to the case study questions element is presented in chapter 3 of this thesis.

The report format is the final element in the case study protocol. It served as an outline of the case study report and directed the data collection and recording mechanisms used in the execution of the data collection instruments. This research follows a five chapter model and was considered a case study unto itself (Perry 1998a). As such, the report format element contributes to the development of the case study database (Yin 1989) and the information is largely presented in chapter 4 of this thesis.

3.6.2 Interview protocol

The interview protocol supported the case study protocol referred to in section 3.6.1 and specifically addressed the case study questions element. The interview protocol was arguably the most critical attribute of all the case study protocol elements, as it was the primary method of collecting pertinent data to address the research problem and issues.

The interview protocol served two primary functions in this research. Firstly, it guided the researcher in the preparation and delivery of the interview questions and, secondly, it enabled specific research questions to be grouped in order to address specific dimensions of the research (Yin 1994). The latter aspect also established a
framework for the efficient and effective analysis of collected data in consideration of the research issues (addressed in chapter 4).

The preparation and delivery of the interview questions, coupled with the methods in which they were grouped to address the specific dimensions and research issues, stems to construct validity within the realism paradigm. Similarly, the replication logic is premised on a common format and repeatable method of delivering the interview questions and recording the responses (collecting and recording the data). A framework was utilised in the collection of data across all cases so as to ensure the researcher did not influence the data collected (Carson, Gilmore, Perry & Gronhaug 2001; Perry & Alizadeh 2001).

The research issues identified in section 2.6 and the associated interview questions pertinent to the case study protocol are summarised in table 3.9. The complete interview protocol for this thesis is attached as appendix 1.

Table 3.9. Research issues and associated interview questions

<table>
<thead>
<tr>
<th>Research Issues</th>
<th>Interview Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precursor</td>
<td>Introductions and protocols</td>
</tr>
<tr>
<td>Research Issue 1: What is a service optimisation initiative and why do organisations pursue these in Asia?</td>
<td>Questions 1.1 to 1.6</td>
</tr>
<tr>
<td>Research Issue 2: Which Asian markets are leveraged and what factors influence the decisions to utilise third party versus proprietary service providers?</td>
<td>Questions 2.1 to 2.18</td>
</tr>
<tr>
<td>Research Issue 3: What influences the technology solutions employed and why?</td>
<td>Questions 3.1 to 3.4</td>
</tr>
<tr>
<td>Research Issue 4: How do the existing technologies solutions perform and are they optimal?</td>
<td>Questions 4.1 to 4.5</td>
</tr>
<tr>
<td>Research Issue 5: How should the technologies solutions perform and what factors should influence the design?</td>
<td>Questions 5.1 to 5.9</td>
</tr>
</tbody>
</table>

Source: developed for this research

The literature review enabled the salient aspects of the research, as well as the shortfalls in the research and industry bodies of knowledge, to be identified. This review facilitated the development of research probes and enabled the research problem, issues and questions to be refined. This process also allowed the relationships between the existing and emerging research to be identified and some prior theory to be established. The literature review was followed by two
preliminary indepth interviews, which were aimed at further refining the research area and informing the development of a structured approach to data collection.

The instruments used in the preliminary indepth interviews were simple and allowed the respondents to share their thoughts and experiences, enabling additional context to be gained and further refinement of the preliminary research protocol. Two pilot studies were then executed in order to exercise the protocol and the interview questions. This process allowed for anomalies and other short falls to be identified and addressed prior to moving into the main data collection, or confirmatory / dis-confirmatory stage of the research (Eisenhardt 1989; Yin 1994). The preliminary indepth interviews and pilot studies allowed for the interview protocol, attached as appendix 1, to be developed and ultimately deployed in the main data collection phase of this research. It established a repetitive process that enabled the data to be collected consistently across all cases.

Each interview started with two open ended questions, which solicited salient contextual information from respondents, without any promoting or intervention from the researcher (Patton 1990). This process was employed to mitigate the collection of ‘context stripped’ data (Miles & Huberman 1994) and to ensure the benefits associated with qualitative contextuality were achieved. Subsequent questions, which were grouped according the specific research dimensions and issues, were then asked.

Probe questions, which were determined during the literature review and subsequently refined during the preliminary indepth interviews and pilot studies, were also asked when the respondents failed to offer information pertinent on specific aspects of the research. The researcher avoided direct questions during the execution of the interview, except where the respondent failed to address the salient issues identified during the preceding processes.

The final group of questions provided an opportunity for the respondents to express their views and opinions on other areas they considered pertinent to the research, but which were not specifically addressed. The respondents were also asked to comment
on the quality and comprehensiveness, or otherwise, of the research protocol used and the interview questions asked.

In order to assist in the analysis of the collected data and so as to enable triangulation of the responses, Likert scales were used for some of the interview and probe questions. However, the researcher recorded the response ratings on specific aspects of the research using information provided by the respondents, as opposed to having them complete surveys. This strategy was isolated to specific areas of the interview and largely resided in areas where the respondent had already answered the more open ended questions.

The interview protocol provided a reference point and a guide for the consistent delivery of the interview questions. It established the means for collecting data in a consistent and logical way and ultimately facilitated the efficient and effective analyses of the data (discussed in section 3.7 and presented in detail in chapter 4). Responses to the interview questions were taped and electronically recorded in transcripts, so as to ensure the pertinent aspects were easily identified. The taped interviews were then reviewed with the transcriptions, allowing the researcher to review the content and reaffirm the salient points.

3.6.3 Sources of data

The data for this research was collected from multiple sources and, as previously mentioned, this research used unstructured and structured interviews and a pilot study (Yin 1989; Yin 1994). Through these sources, qualitative and quantitative data were collected and provided a foundation for the data to be triangulated during the analysis phase of this research (Guba & Lincoln 1994; Patton 1990; Perry, Alizadeh & Riege 1997).

The primary source of data stemmed from the in-depth interviews undertaken in the confirmatory / dis-confirmatory phase of this research. This data was supplemented, augmented and ultimately triangulated with data collected during the other phases of this research.
3.7 Data analysis

The previous section discussed the methods employed in collecting the data for this research. This section discusses the means in which the data is compiled and assessed in order to address the research problem and questions (Eisenhardt 1989; Yin 1994).

The analysis of the data collected during the exploratory and confirmatory / dis-confirmatory stages of this research, forms the basis for theory building (Eisenhardt 1989), which was the intent of this research. However, it is acknowledged that the data analysis portion of case study research was also delimited by the capacity of the researcher, with respect to the rigour employed in his thinking during the analysis phase (Yin 1994). Hence, theory building may be influenced by the researcher’s interpretation and analysis of the collected data.

Whilst there is no specific formula that can be used or applied by the researcher when analysing the qualitative data collected in this research (Eisenhardt 1989; Wimmer & Dominick 1983; Yin 1984), there are some procedural guidelines that were used to assist (Patton 1990). Whereas the data analysis is presented in detail in chapter 4, the methods used are discussed briefly in this section.

3.7.1 Analytical strategy

The inherent nature of case study research necessitates the analysis of multiple variables stemming from, and pertinent to, a single unit and, thus, warrants a structured approach (Gilgun 1994; Silverstein 1988). As such, a rigorous analytical strategy was developed to guide the analysis of the collected data (Patton 1990; Perry 1998b; Yin 1989).

The analytical strategy focused on transcribing and coding the data, comparing and contrasting the data, presenting the data and ultimately drawing conclusions (Miles & Huberman 1994). This strategy also provided a basis for the evaluation, contributing to the likelihood of the researcher collecting the necessary data and
ensuring that the research problem, issues and questions were addressed (Miles & Huberman 1994).

**Transcription and coding.** Transcription is an integral part of analysis and is employed in a diversity of research methods and protocols (Lapadat & Lindsay 1999). The process establishes a foundation upon which the researcher develops and applies interpretive thinking with respect to the data (Lapadat & Lindsay 1999). Moreover, the transcription of responses was a preliminary opportunity for the researcher to apply interpretive thinking to the data and to glean respondent perspectives.

With this in mind, it is noted that within the realism paradigm, it is not necessary to consider all perceptions. In fact, only those perceptions that are considered relevant to the external reality being investigated are applicable and these were drawn from the conceptual framework within this research (Perry & Alizadeh 2001).

Some researchers advocate the use of software for coding and retrieving qualitative data. This process involves coding or indexing perceptions, for example, and utilising the associated tools and features to quickly retrieve pertinent data. Hence, the software assists in managing the transcribed data and perceptions and supports theory emergence (Richards & Richards 1994). However and as mentioned previously, the realism paradigm requires only that the salient and pertinent perceptions be recorded and considered (Perry, Alizadeh & Riege 1997; Riege 1997). In addition, coding and categorising copious quantities of data is time consuming and would seem to have little utility within this research. As such, the benefits of using software in support of this effort were considered insufficient, particularly given the inability for the software to be sensitive to the relationships, connections and creativity emphasised in realism research (Carson & Coviello 1996; Perry 2001).

**Cross-case and cross-cluster analysis.** Cross-case and cross-cluster analysis was used to build conceptual and theoretical coherence (Miles & Huberman 1994). This strategy allowed the individual cases and categories within these cases, such as the variations between business units, to be compared and contrasted. The intent was to
emphasise the reasons for similarities and differences between the relationships and to determine patterns within the data (Eisenhardt 1989; Neuman 1997). Cross-case and cross-cluster analyses also contribute to the reliability of this research (Eisenhardt 1989).

There are two primary approaches to cross-case and cross-cluster analysis (Miles & Huberman 1994). The first is case oriented and focuses on an in depth study of one case or cluster. Patterns identified in this study become benchmarks in which subsequent cases or clusters are compared and contrasted. That is, this approach seeks to identify common patterns between the benchmark and subsequent cases or clusters (Miles & Huberman 1994).

The second is variable oriented and focuses on one variable or one category of variables across all cases (Eisenhardt 1989). This approach compares and contrasts the similarities and differences across specific categories or dimensions and then considers the similarities and differences between the cases (Eisenhardt 1989). As the variable oriented approach is aligned with theoretical and literal replication, this approach to cross-case and cross-cluster analysis was used in this research.

**Presenting the data.** Like methodology, the analysis, interpretation and presentation of the data is not limited or constrained by one mode (Hill & McGowan 1999). The visual presentation of information, systematically arranged so as to enable valid conclusions to be drawn by efficient and effective means, was critical in addressing the research problem, issues and questions (Miles & Huberman 1994). Moreover, the presentation stemmed to ‘ease of use’ when combining, comparing and contrasting the data in order to address the research problem, issues and questions and in examining the complexities and relationships between the issues (Griggs 1987; Miles & Huberman 1994; Yin 1994).

So as to effectively facilitate the cross-case and cross-cluster analysis, a phased approach was employed. Data was firstly organised by case and then cross-referenced between cases. As the selection of implements used to collate and present the data is left to the researcher’s discretion (Miles & Huberman 1994), progressively populated tables and matrices were used to present and illustrate the
There are three guidelines for illustrating data within the realism paradigm (Perry & Alizadeh 2001). Empirical frequencies are displayed numerically and subsequently supported by textual interpretations. Explanations are then generated to explain the aforementioned observations, with specific regard to structures, mechanisms and contingencies, and, finally, quotations supporting the deductions are included (Perry & Alizadeh 2001). Moreover, credibility stems from the summary, which is followed by suitable reasoning, a more detailed justification and, finally, supporting quotations (Healy & Perry 2000; Patton 1990).

**Drawing conclusions.** The use of the aforementioned strategies and approaches culminated in an ability to efficiently and effectively draw conclusions from the collected data. Transcribing, collating, comparing, contrasting and drawing conclusions were transformative processes, wherein the researcher progressively identified similarities and differences within categories and between cases (dimensions, issues and functions) (Miles & Huberman 1994). The cross-case and cross-cluster analysis afforded the researcher an opportunity to establish relationships between content from the various cases, demonstrating consistency and regularity (Miles & Huberman 1994). Similarly, the content and cross-case and cross-cluster analysis, coupled with the use of quotations (Perry 1998b; 2001), also supported conclusion verification in this research.

Whilst it is acknowledged that the transcription, collation and interpretation of realism research lacks some clarity and precision (Perry & Alizadeh 2001), this model was considered most suitable for this research. In fact, the realism paradigm allowed an adequate quantity of pertinent information to be collected and analysed in order to address the research problem and questions and was considered more realistic than the alternate methods (Heally & Perry 2000).

The final effort in the data analysis stage was to build conceptual and theoretical coherence through comparisons with the literature and prior theory established for
this research (Miles & Huberman 1994). Specifically, opportunities to replicate the research findings were sought and are discussed further in chapter 5.

### 3.8 Limitations

This section discusses the limitations associated with case study research (Eisenhardt 1989). The case study methodology espoused and used in this research, was a rigorous and coherent approach that was premised on a justifiable philosophical position (Perry 1998b; 2001). However, inductive based empirical enquiries, such as this, have some noted limitations (Eisenhardt 1989). These limitations are summarised in table 3.10 and are discussed in more detail below.

#### Table 3.10. Limitations of case study research

<table>
<thead>
<tr>
<th>Limitations and Mitigation Strategies</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Results in overly complex theories</td>
<td>• Develop prior theory and use specific research questions</td>
</tr>
<tr>
<td>2. Result may be narrow idiosyncratic theory</td>
<td>• Use of multiple-case studies and view the research as a contributor to theory development, as opposed to final theory</td>
</tr>
<tr>
<td>3. External validity</td>
<td>• Use of replication logic and triangulation</td>
</tr>
<tr>
<td>4. Difficult to conduct</td>
<td>• Use case study and associated protocols</td>
</tr>
<tr>
<td>5. Difficult to analyse</td>
<td>• Develop an analytical strategy using cross-case and cross-cluster analyses, tables, matrices and quotations</td>
</tr>
<tr>
<td>6. Researcher’s bias and lack of rigour</td>
<td>• Establish and measure against specified quality criteria, utilise justified methods and protocols</td>
</tr>
<tr>
<td>7. Lack of generalisability</td>
<td>• Use multiple-case studies</td>
</tr>
</tbody>
</table>

*Source: developed from Eisenhardt (1989); Hirschman (1986); Malhotra (1993); Merriam (1998); Miles & Huberman (1984); Parkhe (1993); Teale (2000) and Yin (1994).*

The first limitation suggests that overly complex theories are developed, ultimately sacrificing the parsimony of the research (Eisenhardt 1989; Parkhe 1993). However, the development of prior theory and specific research questions guided the researcher and enabled a focus to be established and maintained throughout the course of the research.
The second limitation of case study research suggests that theory development may be narrow and idiosyncratic (Eisenhardt 1989), although there is no single approach to theory development that is self-sufficient (Parkhe 1993). Within this research, preliminary indepth interviews and pilot studies were completed during the development of prior theory and multiple-cases were examined for similarities and differences during the confirmatory/dis-confirmatory stage. This approach, coupled with the notion that theory development is considered a journey, as opposed to a final theory, mitigated this limitation.

The third limitation centers on the ability to gain or achieve external validity within case study research. It is suggested that this is unachievable, even when careful replication is pursued. However, replication logic, including literal and theoretical replication, was established and employed within all cases in this research. In addition, external validity was further supported by comparing and contrasting the collected data with the literature reviewed in chapter 2 (Yin 1994).

The fourth limitation with case study research is that it is difficult to conduct, due to operational and logistical problems (Eisenhardt 1989; Merriam 1998; Parkhe 1993b; Yin 1994). With the development of comprehensive case study and associated protocols, which included procedures to guide the researcher in the conduct of the research, this limitation was adequately mitigated.

The fifth limitation is premised on the difficulties associated with processing and analysing the data, particularly due to the quantity of qualitative data collected (Malhotra 1993; Miles & Huberman 1994). As noted in section 3.7, the analytical methods developed for qualitative research are not well formulated (Miles & Huberman 1994). In addition, critical information may be overlooked, due to the methods in which it was collected and presented. Moreover, vivid information may be considered ahead of, and potentially to the detriment to, equally critical information that is not so obvious (Eisenhardt 1989; Miles & Huberman 1984). To address this limitation and the associated issues, an analytical strategy, including cross-case and cross-cluster analysis, coupled with a systematic approach of interpreting and presenting the data, was developed and used.
The sixth limitation stems from the researcher’s own style of thinking (Yin 1994). It is concerned with the researcher’s potential bias and lack of rigour and how this may be propagated during the research process (Eisenhardt 1989; Parkhe 1993; Yin 1994). In short, some authorities note that case study researcher’s have been delinquent and allowed their personal biases to influence the preparation of research implements and ultimately the research findings and conclusions (Eisenhardt 1989; Parkhe 1993; Wimmer & Dominick 1983; Yin 1989). Developing and employing the case study and associated protocols addressed this limitation and was further supported by the framework established to collect, analyse, interpret and triangulate the findings.

Other limitations for case study research include the inability to generalise theory (Yin 1994). This notion is founded on the basis that case studies are generalisable to theoretical propositions, but not to populations (Yin 1994). Hence, a case study is not considered a sample and where the intention is to generalise theory by analytical or statistical means (analytical and statistical generalisation respectively), limitations exist (Perry 1998b; 2001). This research, however, seeks to develop theory, as opposed to generalise theory and, as such, the limitation is moot in this regard.

In summary, it is acknowledged that there are some limitations to case study research. These, however, were noted and rigorous strategies were developed and deployed throughout the research process in order to mitigate these limitations. Case study methodology was considered to be a sound and suitable methodology for this inductive enquiry.

3.9 Ethical considerations

This section discusses the ethics associated with research involving human participants. The primary purpose of research ethics is to ensure that the participants and organisations involved in the research are treated appropriately and protected from adverse consequences stemming from the research activities and potentially unethical behaviour (Emory & Cooper 1991; Miles & Huberman 1994; Patton 1990). Similarly, the quality of the research findings may also be impacted if the ethical issues are not adequately addressed (Cooper & Emory 1991).
The ethical standards applied in this research stem from the appropriate treatment of respondents and organisations and issues such as deception, privacy, anonymity and confidentiality were considered (Emory & Cooper 1991; Miles & Huberman 1994; Neuman 1997). In response, the following strategies were employed in support of these ethical standards.

An introductory letter, which is attached as appendix 2 described the research interest and purpose, was prepared and dispatched to respondents prior to the interview process. This correspondence included contact details for the researcher and the researcher’s supervisor, so as to enable the respondent to solicit additional information, if required. Consent was also solicited prior to the interview being planned and ultimately conducted (Banister, Burman, Parker, Taylor & Tindall 1996; King 1996).

The research interest and purpose, which formed part of the interview protocol, were reiterated during the introductory stage of the interview process and the respondents were invited to solicit any additional information or clarity required. Due to the nature and purpose of the research, confidentiality and anonymity were not significant issues, as the research focused on one specific organisation and the respondents were leaders and, or, subject matter or technical experts within this organisation. Moreover, the organisation sponsored the research and the individuals who participated did so in a professional capacity.

Where appropriate, the respondent’s identity and the information provided were not disclosed publicly. During the process, care and due diligence were exercised to ensure exchanges in personal and other information were considered and treated appropriately (Miles & Huberman 1994). The interviews were set up and conducted in a professional setting and manner, some of which were completed via teleconference, due to the diverse locations of specific respondents. Respondents were also advised that the research and the research findings would be used appropriately and professionally.
The ethical considerations applied in this research were premised on the guidelines established for postgraduate research within the Southern Cross University’s Graduate College of Management. Ethical concerns were alleviated through the application of transparent and consistent methods involving respondents and exchanges in personal and other information.

### 3.10 Conclusions

This chapter described the methods and procedures used to address the research problem, issues and questions. The realism paradigm was justified in the context of the research problem and the development of prior theory was discussed, including the use of preliminary indepth interviews and pilot studies, as an exploratory method. Case study methodology was then discussed in the context of the confirmatory / dis-confirmatory stage of the research and was ultimately determined most suitable for this inductive enquiry. The criteria pertinent to assessing the quality of this case study research were also discussed.

The case study design was then developed, along with the strategies for purposefully selecting suitable and salient cases. This was followed by a review of the data collection and data analysis methods and strategies, including the development of the case study and interview protocols. Finally, the limitations associated with case study research and ethical considerations were discussed. In culmination, this chapter established the methodological framework for the collection of pertinent information that will allow the research problem, issues and questions to be addressed during the data analysis and concluding chapters (chapters 4 and 5 respectively).
Chapter 3 described the methods and procedures used to collect the data required to address the research problem and questions. This chapter, depicted in figure 4.1 on page 99, analyses and categorises the collected data and identifies and interprets core patterns and themes. An overview of the analytical strategy and the background to the cases ensues. The cross case and cross cluster analysis is then undertaken and the core patterns and themes are explored in order to address the research problem, issues and associated questions. A summary of key findings with respect to the research issues is presented, followed by the chapter conclusion.
Figure 4.1 Chapter outline (Data analysis)

Introduction

Analytical Strategy

Background to cases

Background to program

Research Issue 1
Service Optimisation Reasons

Research Issue 2
Market Selection & Service Provision

Existing solutions

Research Issue 3
Solutions Engineering

Research Issue 4
Point of Departure Solutions

Research Issue 5
Point of Arrival Solutions

Summary of findings

Conclusions

Source: developed for this research.
4.1 Overview of the analytical strategy

The analytical strategy was discussed in detail in section 3.7 and is reviewed here for orientation and context. Whilst there was no specific formula employed or applied, a rigorous analytical strategy guided the data analyses (Eisenhardt 1989; Patton 1990; Wimmer & Dominick 1983; Yin 1994).

4.1.1 Transcribing the data

The analytical strategy focused on transcribing and coding the data collected during the interviews. The transcription of responses was a preliminary opportunity for the researcher to apply interpretive thinking to the data and to glean respondent perspectives (Lapadat & Lindsay 1999). Software was not used to code and categorise the data, because the realism paradigm only requires that the salient and pertinent perceptions be recorded and considered (Perry, Alizadeh & Riege 1997; Riege 1997).

4.1.2 Cross-case and cross-cluster analysis

A cross-case and cross-cluster analysis was used to build conceptual and theoretical coherence (Miles & Huberman 1994) and this strategy allowed the individual cases and categories within these cases, such as the various business units and migrated servicing functions, to be compared and contrasted. The intent was to emphasise the reasons for similarities and differences between the relationships and to determine patterns within the data (Eisenhardt 1989; Neuman 1997). Cross-case and cross-cluster analysis also contributed to the reliability of this research (Eisenhardt 1989).

As the variable oriented approach is aligned with theoretical and literal replication, this approach to cross-case and cross-cluster analysis was used in this research. This approach focuses on one variable or one category of variables and compares and contrasts the similarities and differences across specific dimensions and then considers the similarities and differences between the cases (Eisenhardt 1989).
4.1.3 Presenting the data

The visual presentation of information, systematically arranged so as to enable valid conclusions to be drawn by efficient and effective means, was critical in addressing the research problem and questions (Miles & Huberman 1994). Progressively populated tables and matrices were used to illustrate the data, along with a limited use of Likert scales (Perry 1998b). In some instances and where appropriate, the matrices and tables were used to summarise the findings and frequencies, which in turn reflected the relative importance of the attribute or criteria. However, as the data were collected in interviews, as opposed to surveys, the frequencies are indicative of the approximate importance and were used to establish general direction and emphasis only.

The three guidelines for illustrating data within the realism paradigm were applied (Perry & Alizadeh 2001). Empirical frequencies were displayed numerically and subsequently supported by textual interpretations. Explanations were then generated to explain the observations, with specific regard to structures, mechanisms and contingencies, and, finally, quotations supporting the deductions were included (Perry & Alizadeh 2001).

4.1.4 Conclusions

The use of the aforementioned strategies and approaches culminated in an ability to efficiently and effectively draw conclusions from the collected data. Transcribing, collating, comparing, contrasting and drawing conclusions were transformative processes, wherein the researcher progressively identified similarities and differences within the categories and between the cases (dimensions, issues and functions) (Miles & Huberman 1994).

Whilst it is acknowledged that the transcription, collation and interpretation of realism research lacks some clarity and precision (Perry & Alizadeh 2001), the model employed was considered most suitable for this research. In fact, the realism paradigm allowed an adequate quantity of pertinent information to be collected and
analysed in order to address the research problem and questions and was considered more realistic than the alternate methods (Heally & Perry 2000).

4.2 Background to cases

The following subsections introduce the unit of analysis (including the organisation, program, lines of business and areas of interest), the cases and the participants.

4.2.1 Unit of analysis

As noted in section 3.4.4, this research employed a holistic multi case approach (Yin 1989) and the organisation examined was the designated unit of analysis. More specifically, the research focused on the service optimisation and technology solutions employed.

Organisation examined. The organisation examined is a truly global organisation, with a presence in most international markets. With net revenues exceeding US$20 billion and total assets exceeding $150 billion, the organisation is an industry leader, or among the industry leaders, in every facet of its operation. The organisation provides financial and related services and employees more than 70,000 employees world wide.

The organisation examined, like many truly global organisations, is structurally differentiated along and within ‘lines of business’ and further differentiated by geography. These lines of business include both core (such as sales and marketing) and utility type functions (such as operations, technologies, finance and human resources) and this research focused on specific business operations and the technology solutions supporting the same.

Service Optimisation. The Service Optimisation program is one of organisation’s ‘top five’ initiatives and is jointly sponsored by the Chief Executive Officer and Chief Financial Officer. The program is a primary contributor to the organisation’s growth and reengineering strategies and is expected to save millions of dollars in operating costs each year.
Whilst the primary motives or drivers associated with the Global Infrastructure Optimization program are fiscally based, there are several others that are considered primary determinants. These include a capacity to reduce attrition (also referred to as ‘churn’), develop alternate servicing capacities for business continuity and disaster recovery and access higher quality service provision or delivery. The substantial and sustainable savings generated also facilitates subsequent investment and strategic growth.

Service Optimisation focuses on migrating front office and back office customer service functions from higher cost economies to capable lower cost economies. For example, migrating customer contact or call center functions (front office) facilitating customer service by telephone from the US to India or migrating data entry functions (back office) facilitating new accounts set up (customers) from the US to the Philippines. These migrations are enabled by and premised on the development and implementation of costly technology and telecommunications infrastructures.

**Technology solutions.** This research focused on the service optimisation strategies and technology solutions employed in support of the Service Optimisation program. Specifically, it compared and contrasted the various proprietary and third party service provider solutions with an intention of understanding the costs, benefits, opportunities and vulnerabilities associated with each. The objectives were to determine whether the existing environments should be reengineered and to build theory about the type(s) of technology solutions to be employed in subsequent green field initiatives.

The variation in solutions employed in this program stem from the initial approach. That is, the program commenced as a suite of ‘proof of concept’ initiatives and all stakeholders sought to minimize capital investment, mitigate risk and reduce lead times until the concept had been proven. However, new business partners and additional functions and volumes were pursued prior to the original initiatives being effectively examined and, as such, these subsequent initiatives followed the same
original design and implementation strategies, with one exception. This exception was associated with the development of an off shore (non US) proprietary capacity.

The Service Optimisation program has evolved over time, the concepts have been proven and disparate third party and proprietary solutions are in operation. The existing solutions, however, were developed and implemented on a piece meal basis and in a proof of concept framework and the resultant costs, benefits, opportunities and vulnerabilities associated with the environment are unknown. In addition and more importantly for this research, the method in which subsequent green field initiatives would be undertaken, either in the same or in new markets, is critical, so as to ensure an optimal environment from cost, performance and service perspectives is established.

4.2.2 Case context

This section provides context to the research and establishes a foundation for the within case analysis (Yin 1994). Due to the structural or horizontal differentiation that exists within the organisation, a brief introduction to the participating business units and servicing functions will be provided.

Participating business units. The Service Optimisation program is an organisation wide strategic initiative. It focuses on business operations (business) and utility units who are responsible for providing front office and back office customer services. Moreover, front office customer contact services such as answering queries about accounts or payments and back office functions or non contact services such as entering or changing information about a customer on a database or system.

In a preliminary assessment of the Service Optimisation program and the seven participating business units, it was found that more than 98% of the existing ‘volumes’ were associated with business units A, B and C. Given the significant costs associated with undertaking a review of this magnitude, it was decided to delimit the investigation to the aforementioned business units and specific cases within each. Refer to table 4.1, which illustrates the participating business units, servicing functions and other pertinent dimensions of the research.
Table 4.1. Case codes and context

<table>
<thead>
<tr>
<th>Case</th>
<th>Business (2a)</th>
<th>Function (2b)</th>
<th>Customer base</th>
<th>Provider (1)</th>
<th>Location (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>A</td>
<td>TSC1&lt;sup&gt;1&lt;/sup&gt;</td>
<td>US&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Proprietary</td>
<td>India</td>
</tr>
<tr>
<td>C2</td>
<td>A</td>
<td>TSC1</td>
<td>US</td>
<td>Third party</td>
<td>India</td>
</tr>
<tr>
<td>C3</td>
<td>A</td>
<td>BO&lt;sup&gt;2&lt;/sup&gt;</td>
<td>US</td>
<td>Proprietary</td>
<td>India</td>
</tr>
<tr>
<td>C4</td>
<td>A</td>
<td>BO</td>
<td>US</td>
<td>Third party</td>
<td>India</td>
</tr>
<tr>
<td>C5</td>
<td>A</td>
<td>TSC2&lt;sup&gt;3&lt;/sup&gt;</td>
<td>US</td>
<td>Third party</td>
<td>India</td>
</tr>
<tr>
<td>C6</td>
<td>A</td>
<td>TSC2</td>
<td>US</td>
<td>Third party</td>
<td>Philippines</td>
</tr>
<tr>
<td>C7</td>
<td>B</td>
<td>TSC1</td>
<td>US, JAPA&lt;sup&gt;5&lt;/sup&gt;, EMEA&lt;sup&gt;6&lt;/sup&gt;</td>
<td>Third party</td>
<td>Philippines</td>
</tr>
<tr>
<td>C8</td>
<td>C</td>
<td>TSC1</td>
<td>US</td>
<td>Proprietary</td>
<td>India</td>
</tr>
<tr>
<td>C9</td>
<td>C</td>
<td>TSC1</td>
<td>US</td>
<td>Third party</td>
<td>Philippines</td>
</tr>
<tr>
<td>C10</td>
<td>C</td>
<td>BO</td>
<td>US</td>
<td>Third party</td>
<td>India</td>
</tr>
</tbody>
</table>

Notes:

Contextual dimension 1: Provider (proprietary or third party)
Contextual dimension 2: Business unit and function
Contextual dimension 3: Location (India or the Philippines)

1. TSC1 – Telephone Service Center (service type 1)
2. BO – Back Office
3. TSC2 – Telephone Service Center (service type 2)
4. US – United States
5. JAPA – Japan, Asia, Pacific and Australia
6. EMEA – Europe, Middle East and Africa

Source: developed for this research.

Business Unit A. Business unit A provides front office and back office services to the organisations US based customers. These services range from general account inquiries to changing a postal address or removing a spouse from the account or card.

Business unit A has established six Telephone Service Center and two Back Office capacities in off shore locations (India and the Philippines). However, two of the Telephone Service Center capacities leverage US based third party service providers who have partnered with remote service partners and these have been omitted from the research.

Business unit B. Business unit B provides front office services to customers and merchants (sellers of stored value products like gift vouchers and certificates)
located throughout the globe. These services range from ‘voucher’ replacements to authorisations and encashments.

Business unit B has established a single Telephone Service Center capacity in the Philippines, although services are provided to customers located around the globe. These services include interactions with English and non English (mainly Asian based) speaking customers. The business unit’s case includes US originating volumes, but also provides insight into the other 2% of the participating business units (excluded from this research), who have volumes emanating outside of the US. In addition, the telecommunications carriers vary, along with the physical distances and the findings associated with this case will influence subsequent commercial / professional research efforts.

**Business Unit C.** Business unit C provides financial planning and associated services to more than 100,000 US based customers. Specifically, business unit C provides front office and back office customer services ranging from general account inquiries to information about the financial markets. Business unit C has established a Back Office and two Telephone Service Center capacities in off shore locations (India and the Philippines).

### 4.2.3 Cases and interviews

This section provides additional context to the research and each of the cases. It constitutes the first necessary step and serves as the within case analysis (Yin 1994). Patterns and themes identified and illustrated here are leveraged in the subsequent and more important cross case and cross cluster analyses (Miles and Huberman 1994).

Specific information about each of the cases, including the method of service provision (third party or proprietary), service function, geographic location and, finally, the technology solutions employed follows. Table 4.2 illustrates the magnitude of each case in terms of a percentage of the total number of full time equivalent (FTE) positions established.
### Table 4.2. Case size

<table>
<thead>
<tr>
<th>Case</th>
<th>Business unit</th>
<th>Function</th>
<th>Size (S, M, L)</th>
<th>% of Total</th>
<th>FTEs</th>
<th>Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>A</td>
<td>TSC1</td>
<td>L</td>
<td>30%</td>
<td>443</td>
<td>Proprietary</td>
</tr>
<tr>
<td>C2</td>
<td>A</td>
<td>TSC1</td>
<td>L*</td>
<td>20%</td>
<td>291</td>
<td>Third party</td>
</tr>
<tr>
<td>C3</td>
<td>A</td>
<td>BO</td>
<td>S</td>
<td>6%</td>
<td>88</td>
<td>Proprietary</td>
</tr>
<tr>
<td>C4</td>
<td>A</td>
<td>BO</td>
<td>S</td>
<td>3%</td>
<td>49</td>
<td>Third party</td>
</tr>
<tr>
<td>C5</td>
<td>A</td>
<td>TSC2</td>
<td>M</td>
<td>9%</td>
<td>139</td>
<td>Third party</td>
</tr>
<tr>
<td>C6</td>
<td>A</td>
<td>TSC2</td>
<td>M</td>
<td>10%</td>
<td>148</td>
<td>Third party</td>
</tr>
<tr>
<td>C7</td>
<td>B</td>
<td>TSC1</td>
<td>M*</td>
<td>10%</td>
<td>141</td>
<td>Third party</td>
</tr>
<tr>
<td>C8</td>
<td>C</td>
<td>TSC1</td>
<td>S</td>
<td>2%</td>
<td>33</td>
<td>Proprietary</td>
</tr>
<tr>
<td>C9</td>
<td>C</td>
<td>TSC1</td>
<td>S</td>
<td>2%</td>
<td>35</td>
<td>Third party</td>
</tr>
<tr>
<td>C10</td>
<td>C</td>
<td>BO</td>
<td>M</td>
<td>8%</td>
<td>114</td>
<td>Third party</td>
</tr>
</tbody>
</table>

**Totals**: 100% 1,481

**Notes:**

1. S – Small: less than 100 full time equivalents (FTEs)
2. M – Medium: between 100 and 300 FTEs
3. L – Large: more than 300 FTEs
4. FTEs - full time equivalents

* Case C2 is noted as large and is expected to exceed the 300 FTE criteria before year end 2002.

*Case C1* is a business unit A Telephone Service Center initiative located in a proprietary site in New Delhi India. C1 was established in 2002 and is still ‘ramping up’. It is the largest of all cases and constitutes 30% of the total volume, based on the number of full time equivalent positions established. It is also one of three initiatives that afford the opportunity to compare and contrast the costs associated with proprietary versus third party service provision. In addition, when compared and contrasted with C2, it provides an opportunity to compare the costs associated with proprietary versus third party service provision within the same country, but in an alternate state or sector (New Delhi versus Mumbai).

The proprietary site in New Delhi India accommodates various business units and functions. The facility is a licenced Export Oriented Unit (EOU), which is a legal status allowing foreign transactions (only) to be processed and significant tax and other benefits to be realised. Moreover, the Indian government incents foreign organisations to process ‘export oriented’ (non domestic) transactions in India. The transaction volume stems from multiple US based business units and are channelled through the organisation’s primary data center in the US.
Voice content is facilitated via 16 US domestic T1 (approximately 1.5 mega bits per second – mbps each) telecommunications circuits. These are then consolidated and combined with the data content and channelled between the organisation’s primary data center in the US and the proprietary site in New Delhi India via 12 E1 (approximately 2 mbps each) telecommunications circuits.

Case C2 is a business unit A Telephone Service Center initiative located in third party site in Mumbai India (also known as Bombay India). C2 was established in 2002 and in still ramping up. It is the second largest of all cases and constitutes 20% of the total volume, based on the number of full time equivalent positions established. C2 has been denoted as large, even though it has not yet reached the 300 FTE benchmark, because the capacity is ‘ramping up’ and is expected to exceed this metric by year end 2002. In addition, as it is similar in size and function to Case C1 and will afford an opportunity to compare and contrast the costs associated with proprietary versus third party service provision.

Like the proprietary site briefly described in Case C1, this third party facility located in Mumbai India is also an EOU. This provider connects to the US via a total of five E1 telecommunications circuits terminating in two points of presence. Voice connectivity is facilitated via 16 US domestic T1 telecommunications circuits, eight terminating in each location. The provider owns or leases the technology and telecommunications infrastructures facilitating the international and remote end connectivity. Moreover, the connectivity between their owned or leased points of presence in the US and their site in India. The organisation interconnects with the third party service provider via two T1 telecommunications circuits connecting the organisation’s primary data center to each of the third party’s points of presence.

Case C3 is a business unit A Back Office initiative located in a proprietary site in New Delhi India. It was established in mid 2002 and is currently ramping up. C3 is similar in size and function to C10, which is located in a third party site in the same state / sector. These cases provide an opportunity to compare and contrast the costs associated with proprietary versus third party service provision within the same state / sector.
This facility is briefly described in Case C1 along with the general technology and telecommunications connectivity.

*Case C4* is a business unit A Back Office initiative located in a third party site in Gurgaon India. It was established in mid 2002 and is currently ramping up. C4 is a similar function to C3, although approximately half the size. C4 provides an opportunity to compare and contrast the costs associated with proprietary versus third party service provision within the same state / sector and business unit.

This third party facility is located in New Delhi in reasonable proximity to the proprietary site. It also operates as an EOU and accommodates multiple business units and multiple back office functions. This provider connects to the US via a total of two E1 telecommunications circuits terminating in the US. However, the provider has an additional point of presence in the US that interconnects with the aforementioned. Voice connectivity is not required because this third party provides back office services only, that is, no direct customer contact. The provider owns or leases the technology and telecommunications infrastructures facilitating the international and remote end connectivity. The organisation interconnects with the third party service provider via primary and secondary data centers in the US. Two T1 telecommunications circuits interconnect the third party via the primary data center and another two T1 telecommunications circuits interconnect the third part via the secondary data center.

*Case C5* is a business unit A Telephone Service Center (service type 2) initiative located in third party site in Bangalore India. C5 was established in 2000 and was among the first functions commissioned in support of the Service Optimisation program. At approximately 10% of the total volume and with in excess of twelve months in tenure, C5 provides an opportunity to compare and contrasts the technology and telecommunications costs associated with third party service providers in located in India and the Philippines (see Case C6). In addition, C5 also provides an opportunity to compare and contrast the costs associated with third party service provision in difference states / sectors within the same country.
This third party facility is located in Bangalore India and also operates as an EOU. The provider connects to the US via a two E1 telecommunications circuits. Voice connectivity is facilitated via five US domestic T1 telecommunications circuits terminating in the third party’s points of presence and the provider owns or leases the technology and telecommunications infrastructures facilitating the international and remote end connectivity. The organisation interconnects with the third party service provider via two 256 kilo bits per second (kbps) telecommunications circuits connecting the organisations’ primary data center to the third party’s points of presence.

*Case C6* is a business unit A Telephone Service Center (service type 2) initiative located in third party site in Manila Philippines. C6 was established in 2000 and was also among the first functions commissioned in support of the Service Optimisation program. Like C5, C6 caters for approximately 10% of the total volume and with in excess of twelve months in tenure, it provides an opportunity to compare and contrasts the technology and telecommunications costs associated with third party service providers in located in India and the Philippines. In addition, C6 will provide an opportunity to compare and contrast the costs associated with the provision of disparate services (functions) and different business units within the same country.

This third party facility is located in Manila in the Philippines and connects to the US via a two E1 telecommunications circuits. Voice connectivity is facilitated via five US domestic T1 telecommunications circuits and the provider owns or leases the technology and telecommunications infrastructures facilitating the international and remote end connectivity. The organisation interconnects with the third party service provider via one 512 kbps telecommunications circuit connecting the organisation’s primary data center to the third party’s points of presence.

*Case C7* is a business unit B Telephone Service Center initiative located in a third party site in Manila Philippines. C7 was established in 2000 and was the first initiative commissioned in support of the Service Optimisation program. C7 caters for approximately 10% of the total volume and represents the consolidated effort or focus of business unit B endeavours associated with the program. Although C7 is similar in function to C5 and C6, it provides an additional reference point for
comparison (and triangulation), because the applicable volumes originate in various countries, as opposed to the US only. Moreover, the volumes applicable to all other cases originate in the US, whilst the volumes applicable to C7, stem from the US, European and Asia Pacific regions.

This third party facility is also located in Manila in the Philippines and connects to the US via a three E1 telecommunications circuits. Voice connectivity is facilitated via three US domestic T1 telecommunications circuits and one US domestic E1 telecommunications circuit. The provider owns or leases the technology and telecommunications infrastructures facilitating the international and remote end connectivity. The organisation interconnects with the third party service provider via six T1 telecommunications circuits, two connecting the organisation’s primary data center and four connecting the organisation’s secondary data center to the third party’s points of presence.

*Case C8* is a business unit B Telephone Service Center initiative located in a proprietary site in New Delhi India. C8 was established in mid 2002 and is the most recent initiative commissioned in support of the Service Optimisation program. In addition to being the newest of initiative among the cases, C8 is also one of the smallest and caters for approximately 2% of the total volume. Nevertheless, it provides an opportunity to compare and contrasts the technology and telecommunications costs associated with third party versus proprietary service provision in India and the Philippines.

The facility is briefly described in Case C1 along with the general technology and telecommunications connectivity.

*Case C9* is a business unit B Telephone Service Center initiative located in third party site in Manila Philippines. C9 was established in 2001 and, like C8, is one of the smallest initiatives, catering for approximately 2% of the total volume. However, it provides an opportunity to compare and contrasts the technology and telecommunications costs associated with third party versus proprietary service provision in India and the Philippines.
The facility is briefly described in Case C7 along with the general technology and telecommunications connectivity.

Case C10 is business unit B Back Office initiative located in third party site in New Delhi India. C10 was established in 2000 and is noted as a medium sized function, accommodating approximately 8% of the total volume. Similar to business unit A Back Office initiatives, cases C3 and C4, C10 provides an opportunity to compare and contrast the technology and telecommunications costs associated with third party versus proprietary service provision within India and between India and the Philippines. C10 is also similar in size to C3, which is a proprietary operation facilitated in the same state / sector in India, so comparisons between the costs of third party versus proprietary service provision can be examined across an additional dimension.

The facility is briefly described in Case C4 along with the general technology and telecommunications connectivity.

In each case, a total of five interviews were conducted (see section 3.5.4 for additional information). A brief description of each interviewee is provided below to establish further context and to ‘set the scene’ (Patton 1990).

As noted in section 3.5.4, information rich participants were carefully and purposefully selected to contribute to the credibility and quality of this research and to ensure literal and theoretical replication were achieved. In each case a business unit sponsor of vice president or director level was interviewed, along with a business or technology program leader of director level, two technical experts and one subject matter expert. Table 4.3 denotes the number of interviews conducted in each case.

**Table 4.3. Interviews by case**

<table>
<thead>
<tr>
<th>Case</th>
<th>Business unit</th>
<th>Function</th>
<th>Provider</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>A</td>
<td>TSC1</td>
<td>Proprietary</td>
<td>5</td>
</tr>
<tr>
<td>C2</td>
<td>A</td>
<td>TSC1</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C3</td>
<td>A</td>
<td>BO</td>
<td>Proprietary</td>
<td>5</td>
</tr>
<tr>
<td>C4</td>
<td>A</td>
<td>BO</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C5</td>
<td>A</td>
<td>TSC2</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>Case</td>
<td>TSC</td>
<td>Ownership Type</td>
<td>Type</td>
<td>Frequency</td>
</tr>
<tr>
<td>------</td>
<td>-----</td>
<td>----------------</td>
<td>------</td>
<td>-----------</td>
</tr>
<tr>
<td>C6</td>
<td>A</td>
<td>TSC2</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C7</td>
<td>B</td>
<td>TSC1</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C8</td>
<td>C</td>
<td>TSC1</td>
<td>Proprietary</td>
<td>5</td>
</tr>
<tr>
<td>C9</td>
<td>C</td>
<td>TSC1</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td>C10</td>
<td>C</td>
<td>BO</td>
<td>Third party</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

*Source: developed from the research protocols (case study and interview).*

The intent of this section (section 4.2) was to provide background to the cases, established context and analyse and illustrate the high level similarities and differences (within case analyses). The patterns and themes identified in the within case analyses are then leveraged in the more important cross case and cross cluster analysis that follows in section 4.3 (Miles and Huberman 1994; Yin 1994). The research issues form the bases of the cross case and cross cluster analysis and will be considered in turn.

### 4.3 Research issue 1 – Reasons

Research issue 1 is guided by the interview protocol described in section 3.6.2 and the interview questions listed in appendix 1. The questions associated with this issue were designed to establish context on service optimisation and service function selection, while learning about the motives for pursuing these strategies and longevity of the program. The research issue explored was:

*What is a service optimisation initiative and why do organisations pursue these in Asia?*

#### 4.3.1 Service optimisation

Question 1.1 focused on the servicing functions and inquired about the service optimisation initiatives. Specifically, each of the respondents was asked what constituted a service optimisation initiative.

Respondents associated with cases C1 through C6 were relatively consistent in their responses, although all supported the same business unit. Generally, their responses suggested that low risk simple servicing functions were targeted during the proof of
concept phases. However, more complex functions have been migrated to specific service providers who have met or exceeded service and performance levels.

The respondents also noted that service optimisation initiatives are generally low to medium risk service functions. They vary in complexity and are relatively high in cost when delivered in the US, compared with off shore service providers (cost avoidance opportunities). These service functions generally have little impact on revenue and no impact on competitive advantage. Finally, the technology requirements and solutions are considered manageable and service providers’ capabilities are considered suitable.

The respondents associated with case C7 stated that service optimisation initiatives originally focused on ‘non core’ service functions that could be migrated to an off shore (non US based) service providers at a lower total cost of operation. In fact, the business leader accountable for these efforts stated that ‘Anything that benefits the customer, shareholder or employee [constitutes a service optimisation initiative]’. Continual examination of the service optimisation efforts were then undertaken during the proof of concept phases, so as to determine whether the service functions were being delivered in alignment with the financial expectations and whether service and performance levels were being achieved. Post proof of concept the service optimisation efforts expanded to include service functions that were considered more core.

Finally, cases C8 through C10 revealed a slightly different set of criteria with regard to what constitutes a service optimisation initiative. Again, the responses were generally consistent among the respondents, all of whom support the same business unit.

In these cases the respondents noted that all service functions were considered candidates for the service optimisation efforts. In fact, the business leader accountable for the selection and subsequent implementation of the service optimisation capacities stated that ‘All contact services (service functions) are included – no exceptions’. Based on this statement and other information provided by other respondents, the service optimisation initiatives included, but were not
limited to, service functions associated with business, administration, property and technology operations.

4.3.2 Service function selection

Question 1.2 of the interview protocol asked the respondents how specific service functions were selected. The intent of the question was to establish the criteria upon which the service functions were selected. It also served as a precursor to the question 1.3, which inquired about the reasons for pursuing service optimisation initiatives. Moreover, a strong correlation between the responses to questions 1.2 and 1.3 was expected, as the selection criteria were considered ‘metrics’ of a sort with respect to the perceived motives for pursuing the service optimisation efforts.

Table 4.4 illustrates the salient criteria articulated by the respondents with respect to how service functions are selected. A review of these findings, coupled with those presented in table 4.5 (on page 116), reveals that there is a strong correlation between the service function selection criteria and the reasons for pursuing service optimisation initiatives.

<table>
<thead>
<tr>
<th>Selection criteria</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complexity of function</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Revenue impact</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>6</td>
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<tr>
<td>Receivables impact</td>
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<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Strategic significance (competitive advantage / core competence)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Technology requirements (complexity)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Service provider capabilities</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>7</td>
</tr>
<tr>
<td>Service function skill requirements</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Flexible workforce (time of year)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Reduce operating costs</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Time to market (ease of implementation)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Training capacity (do training materials exist)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
Question 1.3 related to the problems being solved and the opportunities being seized by establishing servicing capacities in India and other markets in South East Asia. The respondents identified a variety of reasons and these are summarised in table 4.5. The response frequencies are summed in the ‘total’ row and column, depicting common patterns.

### Table 4.5. Reasons for pursuing service optimisation initiatives

<table>
<thead>
<tr>
<th>Reason</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible workforce (hours of operation)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>9</td>
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<tr>
<td>Alternate labour market</td>
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<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>4</td>
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<tr>
<td>Labour shortage in US</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Develop competitive advantage</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Reduce operating costs</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Leverage lower operating costs for growth investments</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Leverage lower employee attrition / churn</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Risk management (spreading risk)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Service alternatives (diversification &amp; flexibility)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>6</td>
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<tr>
<td>Improve customer loyalty</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
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<tr>
<td>Improve service levels (performance)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>6</td>
</tr>
<tr>
<td>Contingency &amp; disaster recovery</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Improve time to market</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>6</td>
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<tr>
<td>Leverage available infrastructure (time of day)</td>
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<td>1</td>
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<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>Establish additional capacities &amp; capabilities</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Source: developed from field data
### 4.3.4 Significance of service optimisation

In section 3.2.1 (Qualitative and quantitative approaches) it is argued that the development of optimisation strategies is propagated by the use of both qualitative and quantitative investigation. As this research builds theory that will likely influence reengineering and subsequent implementation efforts, it is necessary to understand the significance of the existing service optimisation initiatives and how these contribute to the business units’ and the business units’ constituents or organisation goals.

Question 1.4 of the interview protocol asked the respondents how the service optimisation initiatives and the Service Optimisation program contributed to their respective business unit or organisation goals. The key metrics or factors were gleaned from the responses are illustrated in table 4.6, along with the respective frequencies.

Table 4.6. Factors supporting business unit and organisation goals

<table>
<thead>
<tr>
<th>Factors</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce operating costs</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<td>1</td>
<td>1</td>
<td>10</td>
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<tr>
<td>Flexible servicing</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Improved service levels</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Increased competent employee base</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Generate investment dollars</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>3</td>
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<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: developed from field data
4.3.5 Tenure and evolution

Similar to question 1.4, questions 1.5 and 1.6 of the interview protocol focused on the tenure and evolution of the program respectively. Whilst the theory developed has wider scope than the Service Optimisation program, its application to the program must be considered (see chapter 5, Conclusions). Specifically, the investment associated with inductive theory building and the data collection, mandate some return to the funding providers. In this sense, the tenure and evolution of the Service Optimisation program is critical, because it denotes the ‘window of opportunity’ to reengineer the technology and telecommunications infrastructures supporting the program and will likely influence subsequent service optimisation initiatives.

Question 1.5 is concerned with the tenure of the program and the respondents were asked when they expected the program to be completed. Respondents associated with cases C1 through C6 stated that the ‘program’ was not really a program and was, in fact, a routine or regular operating practice. Specifically, one business sponsor stated that the ‘[business unit A] continually reviews alternate servicing sites’. Other salient responses regarding tenure noted that the Service Optimisation program was ‘business as usual’ and formed part of other strategic efforts like the relevant business unit’s ‘Network Servicing Strategy’. The respondents explained that the Network Servicing Strategy was premised on similar foundations to the Service Optimisation program, although the former originally focused on the efficient and effective servicing across all domestic and centers, regardless of whether they are third party or proprietary based.

The respondents from case C7 indicated that the Service Optimisation program will be completed mid 2003. However, it was further noted that like the collective remarks of the respondents associated with cases C1 through C6, the program would then form part of the business units usual practices. Moreover, the program would transition into business as usual. The respondents to cases C8 through C10 noted that the Service Optimisation program will be completed at the end of 2003 and then transition into business as usual. They also stated that the practice of continually reviewing alternate servicing capacities or sites would continue as it has in the past.
Question 1.6 of the interview protocol then asked what would likely supersede the Service Optimisation program. Whilst the data collected in response to question 1.5 also covered the evolution of the program, the respondents provided additional information about some of the relevant emerging strategies. Refer to table 4.7 on page 120, which summarises the programs and strategies that the respondents stated would supersede the Service Optimisation program.

The responses to this question were consistent at the business unit level, as they were throughout the inquiry. Similarly, the respondents noted that the programs and strategies likely to supersede the Service Optimisation program are related. For example, the Network Servicing Strategy will likely evolve to the Global Servicing Strategy, which will conjointly focus on the efficient and effective servicing across all domestic and international centers, regardless of whether they are third party or proprietary based.

The responses to cases C1 through C6 illustrated a focus on service differentiation and clearly demonstrated a transition from an integrated domestic servicing framework to that of an integrated global servicing environment. In fact, one business leader stated that ‘within this framework [Global Servicing Strategy], customers will be serviced by the next available service representative, regardless of location’.

The respondents to case C7 were less concerned with the transitionary servicing strategies and programs and stated that the Global Servicing Strategy will succeed the Service Optimisation program. As noted in section 4.2.2 and 4.2.3, case C7 focuses on a distinct line of business and a specific function that services customers from multiple markets (countries). As such, the respondents associated with case C7 were specifically focused on the evolution of the servicing strategies employed by their specific line of business.

Respondents to cases C8 through C10 espoused strategies that would accommodate service provision at the organisation level, as opposed to the business unit or campaign level. Moreover, the strategies and programs noted focused on solutions
that would enable customers relevant to specific business units to be serviced by the same centers and programs as customers pertinent to other business units. This approach was summarised by one business leader who stated that the "concept of a universal agent who is able to accommodate or service customers from disparate business units may provide...opportunities at the blue box [organisation] level".

Table 4.7. Next evolution programs and strategies

<table>
<thead>
<tr>
<th>Programs / strategies</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Servicing Strategy</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Global Servicing Strategy</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Service differentiation strategy</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>One Account</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Universal Agent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>One stop shop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: developed from field data

4.3.6 Conclusions associated with research issue 1

Service optimisation initiatives support the efficient and effective provision of customer contact and associated services. These services are generally non core and considered low to medium risk. They have little to no impact on revenue or competitive advantage, vary in complexity (service, infrastructure and support) and can be delivered by off shore proprietary and third party providers more efficiently and as or more effectively (service quality) then their on shore counterparts.

Service functions are generally selected via six or seven criteria. These included both inclusion and exclusion criteria, some of which can be cross referenced with the indicators identified in question 1.1. Strategic significance, which included competitive advantage and core competence, and the complexity of the technical requirements were key in this regard. These criteria were supplemented by the perceived capabilities of the service providers, the complexity of the service function and the potential impact on revenue and receivables. Other criteria reported less frequently, but considered salient in the context of this research, included time to
Service optimisation initiatives were being pursued in India and other markets in Asia for a diversity of reasons. However, the potential to leverage lower employee attrition or churn and the expected lower operating costs were reported as primary reasons or drivers. Flexible workforces (hours of operation), potential to develop competitive advantages and diversifying risk were also statistically significant reasons, while the development of contingency (business continuity) and disaster recovery capacities were also key. Other pertinent reasons included service alternatives and the potential to improve service levels and customer loyalty. Service optimisation initiatives also contributed to the business units’ and organisation’s goals. The reduction in operating costs, for example, was deemed an important measure of business unit performance. Access to a broader resource (people) base and improved service levels were also considered salient.

The reported tenure of the program varied depending on the respondent and business unit, although the general outcome and intent was common to all. The program was not considered a program by all and was reported to be a business as usual strategy. In this sense, the view was that the model would continually evolve and focus on service optimisation, but with a broader focus. Other views, however, noted that the program will likely finish toward the end of 2003 and then transition into a business as usual strategy. As an adjunct to tenure, it was also noted that the premise would evolve and continue under the auspices of a broader servicing strategy. In fact, it was noted that the Service Optimisation program would likely evolve into a ‘Global Servicing Strategy’, executed at the organisation, as opposed to the business unit, level.

4.4 Research issue 2 – Market selection and service provision

Research issue 2 is guided by the interview protocol described in section 3.6.2 and the interview questions listed in appendix 1. This research issue was multi pronged and focused on market selection and factors that influenced third party versus proprietary service provision. The research issue explored was:
Which Asian markets are leveraged and what factors influence the decisions to utilise third party versus proprietary service providers?

4.4.1 Markets and selection criteria

Question 2.1 related to the Asian markets being used by the business units. However, one business leader noted at the outset that ‘An Asia only focus is too narrow, [as the] Service Optimisation program extends globally’. Nevertheless, all respondents stated that India and the Philippines were the only two Asian markets being leveraged at the time of the interview.

Question 2.2 then inquired about the motives or factors considered and used when selecting the specific markets. The responses were consolidated and are summarised in table 4.8.

Table 4.8. Market selection criteria

<table>
<thead>
<tr>
<th>Selection criteria</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language capability (English)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Labour availability (pool)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Lower operating costs</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Resources (people and infrastructure)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Technology environment</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Education</td>
<td>1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Source: developed from field data

The respondents to cases C1 through C6 and C8 through C10 noted that language capability was a key criterion with respect to selecting markets in Asia. With that said and although not explicitly stated, the respondents to case C7 also eluded to the fact that they had similar motivation and selection criteria to the other participating business units.
The respondents to all cases noted that labour availability and lower operating costs were the most significant criteria. All respondents noted that these factors were crucial determinants in market selection. When considered in light of the aforementioned criteria, it is obvious that language is a precursor or condition upon which labour availability is measured and, as such, this argument supports the proposition that language is equally important.

The respondents to cases C1 through C6 noted that the local environment, from a people and infrastructure (resource) perspective, was an important factor. In fact, the respondents explicitly stated that the decisions were dependant on ‘technology and labour infrastructure’. Similarly, the respondents to cases C8 through C10 stated that they had leveraged much of the decision criteria developed and used by the other participating business units, although the Philippines was originally targeted due to its perceived ‘accent [language] and technology infrastructure advantages’.

Finally, the respondents to case C7 noted that the large and highly (suitably) educated populations were also factors. Whilst not explicitly solicited, the respondents stated that the education levels varied significantly between Asian and US locations. One business leader commented that the ‘high unemployment and high underemployment’ resulted in a low cost, well educated and accessible ‘labour pool’.

Questions 2.3 was concerned with the use of other Asian markets and inquired about the potential use of other markets in Asia. Respondents associated with cases C1 through C6 advised that there were no immediate plans to consider alternate markets in Asia. However, several responses indicated that other associated business units (none of which were included in this study) were considering markets within the Asia Pacific region, such as China, and that if capabilities are proven, they too would consider these markets. Moreover and as noted previously (see table 4.4 on page 115 - Service function selection criteria for additional context), the respondents associated with the relevant business unit and cases stated that there is ‘no perceived benefit until capability is established or confirmed’ and that they have no interest in ‘pioneering’ alternate markets. The respondents to cases C7 through C10 indicated that there are no immediate plans to consider other markets in Asia.
Similar to question 2.3, questions 2.4 inquired about the potential use of non Asian markets including, but not limited to, Brazil, Mexico, Spain and Germany. The respondents to cases C1 through C6 noted that Canada and Mexico are already being used. However, the informants also noted that they were not considering other non Asian markets at the time of the interviews, although leaders associated with business unit A would consider other markets depending on capabilities. In fact, one respondent stated that ‘some Caribbean markets are progressively looking more attractive’.

The respondents to case C7 indicated that several non Asian markets were being considered for language and business continuity options. Specifically mentioned were Sao Paulo in Brazil and Edinburgh in Scotland, both of which are markets where customers are familiar with and use the products and service supplied by business unit B. The respondents to cases C8 through C10 were less informative, indicating that Canada was being considered as a potential non Asian market for risk mitigation and service differentiation purposes.

Questions 2.5 was concerned with the purposeful division of volumes between the markets being used and, in fact, asked whether there was an ideal spread. The question enabled the respondents to share the criteria and logic associated with the division, which also provided useful insights into the ‘how should’ aspects and questions associated with this research.

Generally, the respondents noted that there were no discrete criteria, although most said they were guided by various principles. For example, one respondent stated that the ‘current thought is not to migrate more than 33% of the function volume to any one market’. Table 4.9 summarises the ‘guiding principles’ reported by the respondents.

Table 4.9. Guiding principles to dividing volume between markets

<table>
<thead>
<tr>
<th>Principle</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 33% of any non commodity type function</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>
The respondents to cases C1 through C6 noted that a maximum of 33% of any non-commodity type function could be migrated to an off shore market. However, there was no further distinction on how the volumes would be spread among the recipient markets (India and the Philippines). Furthermore, when asked how the respondents and the business unit determined whether the function was of commodity type, the responses varied from ‘lower risk’ to ‘less strategic’. The same respondents reported that up to 50% of commodity type functions could be migrated, although, again, there were no additional criteria communicated on how the 50% would be divided among the recipient markets.

Noting that the respondents associated with cases C1 through C6 had provided general percentages of commodity and non-commodity type functions, they also stated that approximately 33% of the total volume would likely be vested in the US, a further 33% in Canada and the remaining in Asia. However, several respondents noted that this guiding principle was a ‘work in progress’ and that it would be some time until these numbers evened out. While not asked specifically, the information provided by the respondents also suggested that they consider India and the Philippines to be part of the Asian market.

The respondents to case C7 stated that no firm decisions had been made with regard to spreading the volumes between the recipient markets (in this case, India and the Philippines). They further stated that the business unit C would look to business units A and B for guidance.

| ≤ 50% of any commodity type function | 1 | 1 | 1 | 1 | 1 | 1 | 6 |
| ≤ 33% of each function would be vested in US, Canada and Asia | 1 | 1 | 1 | 1 | 1 | 1 | 6 |
| ≤ 60% to be migrated off shore | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ≤ 50% to be migrated off shore | 1 | 1 | 1 | 1 | 1 | 1 | 3 |
| Total | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 3 |

*Source: developed from field data*
Like the respondents to cases C1 through C6, the respondents to case C7 also consider India and the Philippines to be part of the Asian market. One business leader, for example, explicitly stated that there is ‘no distinction between India and the Philippines at this time’. In fact, the respondents generally stated that the focus is on spreading the volumes between service providers rather than countries or markets. However, they also noted that up to 60% of the available volume could be vested in off shore (non US) markets.

The respondents to cases C8 through C10 indicated that their high level goals included the migration of up to 50% of the available to off shore (non US) markets. However and similar to the respondents associated with business unit A, only 33% of functions that are considered ‘high financial risk’ would be migrated off shore and, again, there was no distinction made between India and the Philippines.

4.4.2 Third party or proprietary service provision

Questions 2.6 inquired about the decision processes associated with determining whether to use a third party or a proprietary service provider. The respondents were also asked whether the decision criteria differ between markets, such as India and the Philippines. The responses are summarised in table 4.10.

Table 4.10. Third party versus proprietary service provision / market influence

<table>
<thead>
<tr>
<th>Criteria</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capability</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Risk (political stability, geo-political risk)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Time to market (readiness)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Market size (resource availability / service provider abundance)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Market maturity *</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
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<tr>
<td>Language and skill availability</td>
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<td></td>
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<td>1</td>
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<tr>
<td>Cost</td>
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<tr>
<td>Performance</td>
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<td></td>
<td></td>
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<td></td>
<td>1</td>
<td>1</td>
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<td>3</td>
</tr>
<tr>
<td>Accent*</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Technical infrastructure*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>
* Denotes criteria used initially (during program infancy), but not considered significant now.

Source: developed from field data

The respondents to cases C1 through C6 noted that capability was a key determinant in selecting third party or proprietary service provision and while capability is similar to ‘readiness’, the respondents stated that these criteria were considered distinct. Moreover, capability was viewed as a capacity to effectively accommodate or service the function, while readiness was the metric applicable to how fast the provider could accommodate the content. So, pending both the third party and proprietary service providers were deemed capable, ‘readiness’ could become a distinguishing factor. These criteria were reported to be market independent, that is, the market did not impact on the decision to select third party versus proprietary service providers.

The ability to manage risk or geo-political risk was reported by all respondents (cases C1 through C10) as the primary criterion. In fact, this was the only attribute that was unanimously supported by all respondents as a key determinant in the selection of third party versus proprietary service providers. In response to whether the particular market (India versus the Philippines, for example) influences the decision, one business leader stated that ‘Geopolitical risk disparity between countries is a critical determinant’. However and as mentioned previously, readiness may be the distinguishing criterion applicable to the selection of the service provider if geo-political risk is assessed similarly in the relevant markets.

The respondents to cases C1 through C6 noted that time to market (verified as equivalent to readiness) was an important criterion in the selection of a third party or proprietary service providers. Similarly, the respondents to cases C8 through C10 stated that readiness at the receiving site (third party or proprietary) was key. However, these respondents also noted that if the service provider was already used by the organisation, ‘Performance against SLAs and price are also major drivers’.

Respondents to cases C1 through C6 and C8 through C10 reported market maturity as an influencing factor, along with market size, which was additionally reported by
the respondents to cases C1 through C6. That is, the numbers of service providers or potential service providers, coupled with their tenure within the industry, were influencing criteria. However, along with accent and technical infrastructure, these criteria were considered more important during the program’s infancy and hold less weight now.

Language and skill availability were also reported by the respondents to case C7 as important factors in selecting third party versus proprietary service providers. However, the business unit associated with these respondents uses only third parties and all are located in the Philippines. Based on information solicited or reported in other interview questions, coupled with practical knowledge of the program, the language and skill availability criterion are considered to be included in the capability criteria reported by the respondents to cases C1 through C6 and whom have exercised the same in selecting third party and proprietary providers.

4.4.3 Service provision and volume division

In question 2.7 the respondents were asked whether they had determined an ideal spread between the number of third party and proprietary service providers within each market and across all the markets they were using. In the case that they had determined the ideal spread, they were also asked what it was.

The respondents to cases C1 through C6 stated that they had not yet determined the ideal spread. The respondents to case C7 reported that even though the ideal spread had not been determined, they expected to divide volumes evenly between the third parties they were currently using. In addition, they also noted that approximately 40% of the total volume would be retained within the US and that this would support business continuity (risk management) and provide a competitive base (platform).

The respondents to cases C8 through C10 also stated that the ideal spread was yet to be determined. They noted that approximately 50% of the total volume would be retained in the US and the other 50% would be spread amongst off shore third party and proprietary service providers. They also noted that a maximum of 30% of the total volume of any function considered a high financial risk would be vested off
shore in wither third party and proprietary capacities. Finally, the respondents also noted that some additional capacities are likely to be pursued in either India, Canada or some other country.

Question 2.8 inquired about the number of third party service providers being used by the respective business units now and how many will likely be used in the future. Although the question focussed on the business units, the question was asked to all respondents and provided an opportunity to triangulate the responses.

The respondents to cases C1 through C6 noted that they distinguish between on shore (US based) and off shore (other) service provision. Moreover, their model treats the on shore operations / capacities differently from the off shore operations / capacities, although it was noted that these are interrelated. They also further delineated the response categories, noting that strategic and local service providers are bound by different criteria – *’Strategic partners are defined as having multiple capabilities in multiple markets (three or more countries), whereas local partners operate within one or two locations only (major cities within a country or up to two countries)’.*

At the time of interview, the respondents stated that they were using eight off shore service providers, including one proprietary service provider, and eleven on shore service providers of which seven were third parties. They indicated that these will likely be rationalised into five (+/-) off shore service providers (including proprietary capacities), a number of local partners and on shore proprietary service providers.

The respondents to case C7, however, stated that they were currently using two off shore third party service providers and will potentially add one more. In addition, a number of proprietary capacities residing in the US, UK, Australia and Latin American will be maintained to handle local or regional languages.

The respondents to cases C8 through C10 stated that they were using four off shore service providers, including one proprietary service provider, and six on shore service providers of which five were third parties. With respect to the off shore
capacities, the respondents indicated that one third party will be maintained in India and one in the Philippines, with an additional third party or proprietary service provider established or maintain in India, Canada or some alternate location.

The next question, question 2.9, was concerned about the division of total volume between third party and proprietary service providers and inquired about any further distinction or division between specific providers or countries (markets). The responses across cases C1 through C6 were relatively consistent, noting that no specific divisions had been determined. However, the respondents to case C7 stated that 40% of the volumes would be maintained in proprietary capacities and 60% would be migrated off shore. They also noted that 100% of the volume channelled off shore will be serviced by two third party service providers located in the Philippines, with a 50% / 50% split.

Respondents to cases C8 through C10 indicated that up to 50% of the total volume of one specific function was slated for migration to off shore service providers. They also stated that there were many other functions where no division had been determined and in all cases the service provider and servicing country were not factored into decisions regarding volume division.

4.4.4 Service provider retention

The respondents were then asked about the number of existing third party providers to be retained until the end of 2004 (question 2.10). Respondents to cases C1 through C6 stated that the total number was to be determined, but would likely be less. They also noted that any additional off shore capacities will likely stem from the existing service providers. Moreover, the same organisation operating in a different location (city or country).

Case C7 respondents reported that they would retain two off shore third party service providers. However, they indicated that these may not be the same service providers as currently being used, noting that performance against service and quality levels will be key determinants. The respondents to cases C8 through C10 stated that they
will retain at least two off shore third party service providers in addition to at least one off shore proprietary service provider.

Question 2.11 inquired about the factors influencing the retention or divestiture of the existing third party service providers. The responses are summarised in table 4.11.

Table 4.11. Factors influencing third party service provider retention

<table>
<thead>
<tr>
<th>Criteria</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capability</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service levels &amp; associated performance metrics</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Cost (price / performance)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Servicing flexibility *</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td></td>
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<tr>
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<td>1</td>
<td>3</td>
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<tr>
<td>Support</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
<td></td>
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<td></td>
</tr>
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<td>Values</td>
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<td>1</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Leverage availability</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Denotes factors reported as ‘willingness to migrate to service partners models’ and ‘aligned servicing philosophies’.

Source: developed from field data

Respondents to cases C1 through C6 indicated that five factors influenced third party service provider retention, while respondents to cases C8 through C10 indicated that seven factors were used in their retention decisions. The respondents to case C7, however, indicated that only one factor influenced retention.

Achieving service levels and other performance metrics was considered by all respondents to be the most critical or key factor in determining third party service provider retention. Depending on the service levels and other performance metrics applicable to the particular business unit, function or service provider, this factor may include other factors not explicitly noted and, hence, delimit the responses.
Cost, also described as ‘price versus performance’ and ‘continued realization of benefits’, and servicing flexibility were also reported as key factors by respondents in nine of the ten case studies. Servicing flexibility was the term used to describe ‘maintenance of similar servicing philosophies’ and ‘willingness of the service provider to migrate to the strategic partner model’. Strategic partners were defined early as ‘having multiple capabilities in multiple markets (three or more countries)’.

Respondents to cases C1 through C6 reported capability and responsiveness as important factors influencing third party service partner retention, while respondents to cases C8 through C10 reported technology infrastructure, support, values and leverage availability. Of particular note is the ‘leverage availability’ factor, which constitutes a capacity for one business unit to use infrastructure and other solutions implemented in support of an alternate business unit. This factor was reported as critical by respondents associated with the smaller business units and functions (initiatives), because their business cases would not sustain the investment commitments required for many of their efforts.

4.4.5 Legal and regulatory environments

Question 2.12 was concerned about the influence of legal and regulatory conditions on the selection of proprietary versus third party service providers. The question specifically asked whether third party service providers would be pursued, as opposed to establishing new proprietary capacities, in order to accelerate or by pass the legal and regulatory conditions. These conditions, which include telecommunications network approvals, international call center licences and permits to transport equipment between states or sectors in India for example, can take months to navigate through the various iterations of submissions, modification and ultimately approval.

The respondents to cases C1 through C6 unanimously stated that they pursue third party service providers to accelerate legal and regulatory lead times or avoid the need to manage these at all. Specifically, the respondents noted that this strategy was often employed when time to market was a key driver and critical to a successful outcome. One business leader stated that the third party service providers
remove the need for his business unit ‘to focus significant attention on legal and regulatory concerns associated with specific countries (labour, technology and others), because this is not [their] core business’.

The respondents to case C7 stated that they did not pursue third party service providers to accelerate or bypass legal and regulatory conditions and noted that they had limited discretion in this arena, because they were too small to establish a proprietary site on their own. They further noted that they would potentially leverage other proprietary capacities, but had no immediate plans to do so.

The respondents to cases C8 through C10 also stated that they did not pursue third party service providers, as opposed to establishing proprietary capacities. Reasons supporting this approach included relatively slow ramp up strategies being employed post 2002 and consideration of the legal and regulatory impediments and conditions during the initial technologies assessment, which forms part of the service provider selection process.

Question 2.13 was also concerned about the influence of legal and regulatory conditions, but in this instance the question inquired about market selection, as opposed to the service provision. In all cases, the respondents unanimously stated that the legal and regulatory conditions influenced market selection. One business leader, however, stated that the legal and regulatory environments are less significant now, then they were when the program commenced.

4.4.6 Costs, benefits and investment decisions

The next several questions and responses relate to the costs, benefits and investment decisioning associated with using specific markets and third party or proprietary service providers.

In question 2.14 the respondents were asked whether they pursue third party service providers, as opposed to establishing new proprietary capacities to minimize capital investment (leverage strategy). In the cases that the respondents did or would pursue
third parties to minimize capital investment, they were asked whether their decisions would change if the organisation owned the infrastructure.

The respondents to cases C1 through C6 stated that they would pursue third party service providers, as opposed to establishing proprietary capacities, particularly if time to market was a key driver. However, they also stated that if the organisation owned the infrastructure then the decision would be premised on other criteria. Moreover, in the case where the third party and proprietary service providers could accommodate the ‘new business’, the decision would be determined on other criteria. Furthermore, one business leader indicated that when the program ‘becomes truly global the infrastructure implemented in support of the other business units may be leveraged as entry portals’ forming ‘a holistic whole of organisation network infrastructure’.

The respondents to case C7 indicated that they would not pursue third party service providers to minimise capital investments and that the decision would be based on broader criteria. In addition, they noted that their business unit was too small to contemplate establishing a proprietary capacity and were unsure whether the circumstances would change if the organisation owned the infrastructure.

In cases C8 through C10, the respondents also stated that they would not pursue third party service providers to minimise capital investment. They noted that the service provider is selected on the basis of ‘best value’ across a number of dimensions and that the initial investment was one of many criteria. For the most part, the respondents associated with this business unit also indicated that proprietary capacities were attractive because they are lower risk, important for contingency and more flexible with regard to change management.

Question 2.15 inquired about how the costs and benefits compare between third party and proprietary service providers located in the US, India, the Philippines and other relevant markets. The metric applicable to this question was ‘fully blended costs’, which refers to the total cost of an individual to the organisation. As an example and with the caveat of the following not being all inclusive, fully blended costs would include; salary and on costs (superannuation, medical, workers
compensation, payroll tax etc if applicable), real estate costs (rent or equivalent interpolated cost on a square meter or similar basis), the costs of tools and other business or technology products consumed (computers, telephones, faxes, printers, computer and physical storage space, stationary etc), training and other development costs and the like.

The respondents in cases C1 through C6, all of whom stem from the same business unit, noted that Indian and Philippines based third party operations are between 30% and 50% lower than US proprietary operations, while Indian and Philippines based proprietary operations are about 10% more costly than Indian and Philippines based third party operations. They also noted that Philippines based third party and proprietary operations are about 10% more costly than Indian based third party and proprietary operations. Canadian based third party operations were reported to be 20% to 25% lower than US based proprietary operations and US based third party operations were reported to be 10% to 20% lower in cost than US based proprietary operations. A further comment was also made by one business leader who noted that *proprietary operations require capital investments where third party operations do not*.

The respondents to case C7 had limited information to offer, because they only use Philippines based third party operations. However, they did note that these operations were about 30% lower than US based proprietary operations.

The respondents to cases C8 through C10 reported that Indian and Philippines based third party and proprietary operations were 38% to 64% lower than US based proprietary sites. They also noted that the Indian based third party and proprietary operations were lowered in cost than the Philippines based third party and proprietary operations, although these were within 10% and somewhat dependent on the function type and volume.

### 4.4.7 Risk and geopolitical risk management

Question 2.16 inquired about risk and geopolitical risk. Specifically, the respondents were asked whether the service volumes would be divided between countries and
service providers to manage risk and geopolitical risk. For the purpose and context of this question, risk was defined as the likelihood and potential implications of some inability to service the volumes resulting from circumstances such as technology or telecommunications failures. Geopolitical risk was defined as the likelihood and potential implications associated with terrorist or other political activity.

In the case of risk, respondents to cases C1 through C10 unanimously stated that they would divide volumes between countries. One respondent associated with case C7, however, stated that the decision would be made in conjunction with and weighted against other relevant criteria. In addition, all respondents stated that they would establish ‘like’ capacities at different service providers and in different countries to manage and minimize the impact of geopolitical activity.

4.4.8 Time to market

The final section associated with market selection and service provision was concerned with time to market. Question 2.17 asked whether time to market requirements influenced the decision to pursue or engage third party or proprietary service providers. In the case that the respondents indicated that time to market requirements did influence the decision, they were asked what the ‘trigger’ timeframes were.

The respondents to cases C1 through C6 stated that time to market did influence the decisions to pursue third parties or proprietary service providers. In fact, derived benefits from cost reduction and revenue generation perspectives are considered. In addition, it was noted that flexibility was also a key determinant, particularly in fluctuating environments, and one respondent stated that ‘third parties are more flexible in this regard’. Trigger timeframes were not considered or used as reported by the respondents.

The respondents to case C7 simply stated that time to market did not influence the decisions to select third party or proprietary service providers and would not likely impact these decisions in the future. The respondents to cases C8 through C10, however, stated that time to market did influence their decisions, although this
criteria was considered less important than others. Again, the respondents noted that no trigger timeframes were used.

The final question is this section, question 2.18, was similar in to the previous question and asked whether existing infrastructure influenced the decision to pursue or engage third party or proprietary service providers. Infrastructure, in this sense, referred to plant, equipment, technology, telecommunications infrastructure and the like.

In each case, all respondents indicated that the existing infrastructure did influence the decisions. It was also explained that these decisions were premised on ‘compliance’ to internal standards and afforded time to market advantages where the infrastructure was in place and compatible with the organisation’s technology environment.

4.4.9 Conclusions associated with research issue 2

India and the Philippines are the primary markets targeted for service optimisation initiatives, although Mexico and Canada are also used. These markets have extensive resource pools (labour and infrastructure), significantly lower operating costs, English language capabilities and sound technological environments. Other markets in Asia and South America would be considered once capabilities, such as those mentioned above, have been confirmed.

There were no specific criteria used to purposefully divide service volumes between India and the Philippines, although some guiding principles were applied. Up to 50% of commodity and 33% of non commodity type services would be migrated and about 33% of the total volume would be spread between Asia, Canada (or other) and the US.

Risk, geopolitical risk, political stability and market maturity are considered key determinants when deciding whether to use third party or proprietary service providers, although market maturity is only significant during the original selection
process. Capability, readiness and resource and service provider abundance and availability are also considered significant.

Time to market influenced decisions to pursue third parties or proprietary service providers and derived benefits from cost reduction and revenue generation perspectives were considered. Flexibility was a key determinant, particularly in fluctuating environments, although the ‘time to market’ timeframes had not been determined. Existing infrastructure also influenced decisions to pursue third parties or proprietary service providers, particularly from ‘compliance’ to internal standards and time to market perspectives.

There are no distinct criteria applied to determine the division of volumes between proprietary and third party service providers, although between 33% and 50% of the total volume of any service function will be retained in the US. Off shore volumes will be handled by at least two service providers (proprietary or third party). There is, however, a relative balance between on shore (US or country of origin) and off shore (Asia, Canada and others) service providers and this is regardless of whether they are proprietary or third party based. The balance is about 40% off shore and 60% on shore and the intention is to rationalise the numbers over time. Third party providers who have a presence (operations or capacities) in several of the target markets will have significant advantages over those that do not during the rationalisation processes. It is also important to note that new non English speaking markets are likely to be considered and the leverage strategy associated with extending an additional partnership will be viewed favourably.

The retention of third party service providers will be driven by performance against service levels, whilst cost and servicing flexibility will also be key determinants. Capability and responsiveness were also noted, along with support, values and leverage availability.

Only business units sufficiently large enough to establish an off shore proprietary capacity considered the use of third party service providers to mitigate the need to traverse the complex legal and regulatory frameworks. However, other criteria, such as implementation timeframes (time to market), were also considered in deciding
whether to engage third party service providers or leverage new or existing proprietary capacities

Larger business units favourably consider third party service providers in order to minimise capital investment, except where proprietary infrastructure is available. In the case of the latter, the decisions to use third party versus proprietary capacities are made on the basis of other criteria. The smaller business units do not favourably consider third party service providers, as opposed to existing proprietary providers with associated infrastructure, to minimise capital investment and always consider the options on their broader merits. However, proprietary capacities are favourably considered along the risk, contingency, flexibility and change dimensions.

Indian and Philippines based third party operations are between 30% and 64% lower than US proprietary operations, while Indian and Philippines based proprietary operations are about 10% more costly than Indian and Philippines based third party operations. Philippines based third party and proprietary operations are about 10% more costly than Indian based third party and proprietary operations. Canadian based third party operations were reported to be 20% to 25% lower than US based proprietary operations and US based third party operations were reported to be 10% to 20% lower in cost than US based proprietary operations. So, in order of most cost effective to least cost effective in comparison the US based proprietary service providers (data is function specific, but indicative of general cost differentials):

- India based third party capacities (up to 64% lower)
- Indian based proprietary capacities (up to 54% lower)
- Philippines based third party capacities (up to 54% lower)
- Philippines based proprietary capacities (up to 44% lower)
- Canadian based third party capacities (up to 25% lower)
- US based third party capacities (up to 20% lower)

Volumes will be divided between countries to manage risk. Similarly, ‘like’ capacities will be established at different service providers (third party and, or proprietary) and in different countries to manage and minimize the impact of geopolitical activity.
4.5 Research issue 3 – Solution influences

Research issue 3 is guided by the interview protocol described in section 3.6.2 and the interview questions listed in appendix 1. This research issue was related to the development and performance of the technology solutions used throughout the evolution of the program and how the design and implementation strategies were influenced and by whom. The research issue explored was:

What influences the technology solutions employed and why?

4.5.1 Business partner influence and approach

In question 3.1 the respondents were asked whether they approached the ‘proof of concept’ phase of the original migrations as a market entry strategy. If so, they were then asked whether this motivated them to influence the technology infrastructure solutions developed and implemented. In all cases, the responses indicated that a market entry approach was taken and that this motivated them to influence the technology solutions developed and implemented.

Based on the proof of concept approach undertaken in all cases during the initial or original migrations, question 3.2 asked whether a proof of concept approach would be taken if a service optimisation initiative were now pursued in a new market such as China, Mexico, Spain and Brazil. In the case that the respondents did use this strategy, they were then asked whether they would seek to influence the technology solutions.

The respondents to cases C1 through C6 and C8 through C10 indicated that a proof of concept approach would be pursued. However, the respondents to case C7 stated that the concept had been proven during the original (previous) migrations. One business leader stated that ‘The technology proof of concept has already been completed…and would only be revisited if there was some anomaly’. In response to the interest in influencing the technologies solutions, all relevant respondents (C1 through C6 and C8 through C10) noted that they would seek to influence the
technology solutions. None elaborated on how this would be done, although one respondent suggested that the pending a common proprietary ‘plug and play’ suite of infrastructures was implemented, ‘A new market would connect to the closest node’, preventing the need to ‘route transactions around the globe, when they really need only go between geographies in close proximity’.

Question 3.3 related to solutions engineering and asked whether the business units influenced the technology infrastructure designs. In the case that the respondents indicated that they had influenced the designs, they were asked how they did this.

The respondents to cases C1 through C6 stated that they worked with the relevant technologies teams to influence the designs. The business unit respondents indicated that the reasons for influencing the designs included reduced time to market, ease of implementation, minimise capital investment and leveraging third party service provider solutions to shift risk.

The respondents to case C7 also stated that they influenced the technology infrastructure designs by engaging relevant technology teams. However, they offered no additional reasons to the respondents from cases C1 through C6 for doing so. The respondents to cases C8 through C10, like all other respondents, indicated that they partnered with the relevant technology teams to influence the technology infrastructure designs. When asked why they did this, they noted that the primary interests were in reducing time to market and solution costs. One business leader stated that the ‘Business required proven, reliable and cost effective technology’ and that the influence exerted supported this mandate.

Question 3.4 was concerned with the feasibility period associated with the proof of concept phase, as well as the key factors and determinants used in assessing the same. In addition, the respondents were asked what label was given to the phase that immediately followed proof on concept.

The respondents to cases C1 through C6 stated that feasibility was usually determined within three months from on the job training, which requires an operational or production environment. Key factors or determinants were reported to
be performance against service levels, quality and stability of the technology and telecommunications infrastructures. Respondents associated with these cases stated that the next phase was labelled ‘expansion’ or ‘network optimization’.

In case C7, the respondents indicated that feasibility was determined within three months and that the phase that followed proof of concept was ‘business as usual’. The respondents to cases C8 through C10 stated that feasibility was determined within six months from on the job training and that key determinants included performance against expectations and a demonstrated capacity to maintain the operation. Like the respondents to case C7, these respondents stated that the phase immediately following proof of concept was ‘business as usual’.

4.5.2 Conclusions associated with research issue 3

The original service optimisation initiatives were approached as ‘proof of concepts’, under the notion of market entry and 90% of the business units would employ the same approach if service optimisation initiatives were pursued in new markets such as China, Mexico, Spain and Brazil. The business unit representatives would continue to influence the technology and telecommunication solutions, until such time as a ‘plug and play’ scenario was available. Moreover, in the absence of a simple, common and effective suite of solutions, the business unit representatives will continue to contribute to and influence the technology solutions employed.

Business unit representatives engage directly with the technology subject matter experts to influence the solutions. The perceived benefits of this approach include reduced time to market, ease of implementation, minimisation of capital investment and leveraging third party service provider solutions to shift risk.

The ‘proof of concept’ period extends between three and six months beyond ‘on the job’ training, which requires a production environment. In total and depending on the duration of the training, this results in a four to ten month period in which the viability of the servicing capacity is determined. Key factors or determinants in assessing the viability included performance against service levels, quality and
stability of the technology and telecommunications infrastructures and a demonstrated capacity to maintain the operation.

Post proof of concept, the servicing capacities are considered business as usual. However, expansion and network optimisation, in the sense of the servicing networks as opposed to the computer networks, are the labels given to the post proof of concept phases.

4.6 Research issue 4 – Point of departure solutions

Research issue 4 is guided by the interview protocol described in section 3.6.2 and the interview questions listed in appendix 1. This research issue was related to the development and performance of the technology solutions implemented throughout the evolution of the program and the perceived costs, benefits, limitations and opportunities associated with these. The research issue explored was:

*How do the existing technologies solutions perform and are they optimal?*

4.6.1 Effectiveness of existing solutions

The first question associated with research issue 4 solicited an overarching perspective on the effectiveness of the solutions implemented thus far. Specifically, question 4.1 asked the respondents how effective the technology solutions were in terms of supporting the relevant business unit’s needs and expectations. A Likert scale was used to measure the effectiveness and a rating of 1 (highest / best) through 5 (lowest / worst) was used, because the organisation uses a similar model to measure the performance of employees and organisations within the organisation. The effectiveness ratings recorded in table 4.12.

<table>
<thead>
<tr>
<th>Rating</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – exceeds all needs and expectations</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<td>6</td>
</tr>
<tr>
<td>2 – exceeds most needs and expectations</td>
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<td></td>
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<td>1</td>
<td></td>
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</tr>
</tbody>
</table>

Table 4.12. Technology solution effectiveness
The respondents to cases C1 through C6 stated that the technology solutions employed in the program exceed all their needs and expectations. The respondents to case C7 stated that the technology solutions employed exceed most of their needs and expectations and the respondents to cases C8 through C10 indicated that the technology solutions only met some of their needs and expectations.

In question 4.2 the respondents were asked about the strengths of the existing technology solutions. Their responses are summarised in table 4.13 and discussed further below.

### Table 4.13. Technology solution strengths

<table>
<thead>
<tr>
<th>Strength</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
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<th>C8</th>
<th>C9</th>
<th>C10</th>
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<tr>
<td>Solution consistency</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Accountability (some vested with third parties)</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Continuity of resources</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Flexibility (Technology Team)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Time to market</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Problem resolution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>‘Cutting edge’ solutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Cost effective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Controllable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
considering strengths of the solution itself and is more associated with implementation strengths.

Flexibility of the technology team, resource continuity and the level of accountability and responsibility vested with the third party technical teams were also reported as key strengths by the respondents associated with cases C1 through C6. Other strengths reported by the respondents to cases C8 through C10 included ‘cutting edge’ controllable and cost effective technical solutions. One respondent associated with case C7 also stated that an ‘Ability to handle world wide calls in a uniform manner, regardless of the country of origin, and a single point of resolution for problems’, as being key strengths.

Question 4.3 inquired about the perceived weaknesses of the existing technology solutions. Their responses are summarised in table 4.14 and discussed further below.

**Table 4.14. Technology solution weaknesses**

<table>
<thead>
<tr>
<th>Weakness</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network resilience (at proprietary site)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Network stability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Level of expertise of third party resources</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Third party support (including support processes)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Solution (support) ownership (internal and external)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Utilisation of telecommunications bandwidth</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Telecommunications bandwidth contingency and business continuity</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Disparate focus on voice versus data transport</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Servicing applications deficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>14</td>
</tr>
</tbody>
</table>

*Source: developed from field data*
The respondents to cases C1 through C6 reported network resilience as a primary weakness. Technical support, including the level of expertise resident at the third party service providers, was also noted, along with ownership and accountability of the support resolution processes. Utilization of telecommunications bandwidth and the telecommunications contingency and business continuity strategies were also reported to be weaknesses by these respondents. One respondent suggested that the ‘business as usual support frameworks need to be revised, particularly with regard to the servicing aspects’.

The respondents associated with case C7 stated that there is a disparity between the voice and data network solutions engineered and implemented. Reporting on experience across his business unit and with regard to the disparity between the voice and data transport solutions, a respondent stated that the ‘data transport [engineering] needs to be improved’. The respondents to cases C8 through C10 reported network stability and servicing application stability as the two key weaknesses.

4.6.2 Technology infrastructure solutions

This section inquired about the existing and potential technology infrastructure solutions. It drew on the earlier section with regard to the business partner influences and approach and solicited additional information about subsequent efforts and perceived ideal solutions.

With respect to project lifecycle and with particular interest in the ‘expansion’, ‘network optimisation’ or ‘business as usual’ phase (refer to section 4.5.1, question 3.4), question 4.4 asked the respondents to describe the ideal technology infrastructure solution(s). The key attributes were solicited from the responses and are summarised in table 4.15 and other pertinent comments are included below.
Table 4.15. Attributes on an ideal technology infrastructure solution

<table>
<thead>
<tr>
<th>Attribute</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common proprietary infrastructure across all business units (leverage strategy)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Distribution nodes in relevant countries</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Dynamic bandwidth allocation (flexible and timely bandwidth adjustments)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Suitable redundancy and alternate telecommunications bearer routes</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>‘Plug and play’</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Ability to traverse multiple servicing channels (email / internet / phone etc)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Use of public internet via VPN for data traffic</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Use of non terrestrial solutions for data transactions</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>End to end bandwidth availability and utilisation monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Re-routing of volumes / transactions dynamically</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Source: developed from field data

The respondents to cases C1 through C6 and C8 through C10 described the ‘ideal’ suite of technology and telecommunications infrastructures using eight and six attributes respectively. The respondents associated with case C7 offered no description per se, but did note that the business unit ‘would consider alternative infrastructures, including proprietary infrastructures, pending they were attractive in comparison to the existing solutions’.

Of the attributes noted as key, four were common to nine of the ten cases. The first key attribute reported was that the infrastructure should be common across all business units and the enterprise affording leverage opportunities. Moreover, where infrastructure is implemented in support of one business unit or process, the infrastructure should be able to be used by other business units, where possible, for
subsequent efforts. The respondents stated that this strategy would likely reduce capital expenditures and implementation and start up times.

The second key attribute reported was an ability to dynamically allocate telecommunications bandwidth. The respondents stated that this feature would provide greater servicing flexibility and allow the business units to route volumes to service providers who are meeting or exceeding service and performance levels. In addition, several respondents stated that this attribute also supports the development of a ‘plug and play’ environment, where service providers can be commissioned or decommissioned quickly based on their performance and compliance to service and performance levels.

The third key attribute was reported to be suitable redundancy in the telecommunications network. It was further stated by one business leader that ‘Redundancy should not be a constraint’ and that ‘bandwidth should be available without distinction between primary and backup’. Similarly, telecommunications circuit route diversity was noted as a critical element in achieving suitable levels of redundancy.

The other key element espoused by respondents associated with nine of the ten cases was an ability to seamlessly traverse multiple servicing channels. That is, for a customer to initiate contact via the internet and, for example, click on an icon that initiates a voice conversation (using an Internet Protocol (IP) phone or similar) to enable the same or some alternate service to be completed. This element was reported as a significant and inevitable future requirement that warrants consideration in terms of the ideal solution.

Other attributes reported by more than 50% of the respondents included access points (network access points) in relevant countries, a capacity to commission and decommission service providers quickly (reported as ‘plug and play’), the use of the public internet via virtual private network (VPN) for lower cost and robust data transactions and the use of other non terrestrial media, such as microwave and satellite, for non time critical (data) transactions. The last two attributes, reported by 30% of the respondents, were an ability to monitor the availability and utilisation of
the telecommunications bandwidth and a capacity to re-route transaction volumes dynamically. The latter was reported to be important for business continuity and disaster recovery reasons.

Question 4.5 inquired about the perceived performance of the existing technology infrastructure solutions. Specifically, the respondents were asked to comment on what was perceived as working well, what was deficient and what required immediate attention in order for the relevant business unit to achieve its objectives. The responses to ‘what was working well’ are summarised in table 4.16 and discussed further below.

**Table 4.16. Positive technology solution performance**

<table>
<thead>
<tr>
<th>Positives</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Cookie cutter’ approach</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Continuity of support resources</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Swift problem resolution</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Works well when it works</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

*Source: developed from field data*

Whilst specifically asked about what works well with regard to the existing technology infrastructure solutions, the respondents associated with all cases stated that the business, technology and utility stakeholder relationships were positive. In addition, the respondents to cases C1 through C6 noted that the cookie cutter approach to solution design and implementation had resulted in solutions that worked well during the pilot or proof of concept phases. They also stated that the continuity of support resources was a positive and that this resulted in faster problem resolution. The respondents to case C7 reported no perceived positives, whilst the respondents to cases C8 through C10 stated that the technology infrastructure solutions worked well, when they worked.
The next area of inquiry focused on the perceived negatives of the technology infrastructure solutions or what was perceived as deficient. These negative attributes are summarised in table 4.17 and discussed below.

**Table 4.17. Negative technology solution performance**

<table>
<thead>
<tr>
<th>Negative</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of business comprehension and understanding</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Unsure about technology product consumption*</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Lack of cross product, function and business unit leverage opportunities</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Telecommunications bandwidth is not managed like a utility with regard to ownership</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Point to point environment not flexible</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Proof of concept solutions don’t scale well</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network stability</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service availability</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice quality</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third party service provider support not aligned with the organisation’s</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure capacity constraints</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network security</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inconsistent solutions implemented across the participating business units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

*Technology products include telecommunications bandwidth, switches (including ports), routers, computers, licences and the like.

Source: developed from field data

The number of deficiencies associated with the existing technology infrastructure solutions ranged from one to seven and none were common between the business
units. That is, the deficiencies reported were consistent between the respondents and cases associated with each business unit, but inconsistent across the business units.

The first deficiency identified by respondents associated with cases C1 through C6 indicated that there was generally a lack of comprehension and understanding of the technology infrastructure solutions. It was further stated by one respondent that a ‘better understanding would result in better opportunities to manage expectations’. Similarly, the next deficiency identified by the same respondents supported the first. Specifically, these respondents stated that they were unable to determine the quantity of technology product being consumed, which rendered them ignorant to identifying reengineering and optimisation opportunities. Technology products include telecommunications circuits, routers and switches, computers, servers, licences and the like and the consumption of these products results in charges incurred by the relevant consumer(s). Hence, an inability to effectively understand the quantity of technology products consumed, renders the respondents unable to rectify, reduce or mitigate the same.

It was noted that telecommunications bandwidth, although considered a technology product, was not managed as a utility with regard to ownership, even though it is charged as such. Several respondents noted that telecommunications bandwidth was procured and implemented on an ‘as needs’ basis, which usually stemmed from a specific business need. During the process, the telecommunications bandwidth was sized according to the specific needs, which in many instances negated the opportunity for other business units to leverage the infrastructure. In addition, fulfilment of the need was then seen by many respondents to associate process, function and business unit ownership of the product.

In alignment with the above, the respondents also stated that the piece meal approach taken to technology infrastructure solutions development had resulted in applicability challenges with regard to leverage. Moreover, the solutions implemented for specific processes, functions and business units were not necessarily suitable for other processes, functions or business units necessitating additional capital investment and work effort instead of leveraging scaleable solutions. This approach was also reported to be the basis of the point to point
environment currently in place, which delimits flexibility and opportunities to spread or spread costs across a great base.

Like the deficiencies reported by the respondents to cases C1 through C6, the respondents to case C7 reported that the inconsistencies in solutions implemented [across business units] was a significant weakness. The respondents noted that their business unit was too small in many instances was unable to justify business cases requiring reasonable capital investments due to their lack of economy. However, it was thought that common and consistent solutions implemented across all business units would result in opportunities not currently available due to the disparities.

The respondents to cases C8 through C10 stated that the proof of concept solutions initially implemented were not easily scaleable and, as such, deficient from a growth perspective. One business leader stated that the ‘Perception [of the solutions engineers] is that the proof of concept solutions are considered final solutions in many instances’. These respondents also stated that network stability, network availability, network security and voice quality were also key deficiencies, along with inconsistent and incongruent support processes between the third party service providers and the organisation respectively. Finally, they reported that capacity constraints [interpreted as telecommunications capacity constraints] delimited rapid growth post proof of concept.

The final area of inquiry associated with this question were the areas requiring immediate attention and these are summarised in table 4.18.

**Table 4.18. Technology infrastructure areas requiring immediate attention**

<table>
<thead>
<tr>
<th>Area</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication between business and technologies</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Cross product, function and business unit opportunities</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Telecommunications bandwidth should be managed like a utility</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Establish a ‘plug and play’ set of infrastructures</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Common and consistent solutions</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transition service provider support structures to align with the organisation’s support structures</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End to end network monitoring</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved and holistic capacity planning</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved network security</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

*Source: developed from field data*

In summary, the respondents indicated that there were four areas requiring immediate focus for each business unit, except C7, where the respondents indicated that the only area requiring immediate attention was to address the inconsistencies between the existing solutions. This area is associated with the leverage opportunities espoused by the respondents to cases C1 through C6, where it was noted that opportunities to leverage solutions implemented in support of processes, functions and business units were diminished or absent due to the implementation of inconsistent solutions and technology product ownership.

The respondents to cases C1 through C6 also stated that telecommunications bandwidth should be managed like a true utility, with common ownership, and that this method would enable sharing and consumption across the relevant business units. In addition and coupled with the implementation of consistent and common solutions, theses attributes were reported as providing the basis to establish a plug and play environment where service providers can be commissioned and decommissioned quickly in response to service and performance. Finally, these respondents suggested that improved communication between the business, utility and technology organizations would result in better comprehension of the solutions and enable relevant leaders to manage stakeholder expectations better.

The respondents to cases C8 through C10 noted that realignment of the third party service provider support structures and processes with the organisation’s support structures and processes would result in more timely fault and problem resolution.
The respondents also indicated a need to conduct timely end to end monitoring of the technology infrastructures, from service availability and utilisation perspectives. It was also noted that the end to end monitoring would support holistic capacity planning across functions and business units and enable informed decisions to be taken on network security shortfalls, both of which were considered areas requiring immediate attention.

4.6.3 Conclusions associated with research issue 4

The effectiveness of the technology solutions ranged from exceeding all needs and expectations to meeting some needs and expectations, with the weight about 70% and 30% respectively. Solution consistency and time to market were considered key strengths of the implementations, while the continuity and flexibility of the technologies teams and the ability to leverage third party service providers (people, infrastructure and other resources) during solution delivery were also significant.

In contrast, network resilience (telecommunications robustness) in the offshore proprietary service provider and ownership of support resolution were key weaknesses. The level of expertise of third party service provider resources, also including support resolution processes, was lacking. Similarly, the utilisation of telecommunications bandwidth and the availability of the same for contingency and business continuity were suboptimal.

The technology solutions should leverage common proprietary infrastructures, regardless of business unit or function. Telecommunications bandwidth should be available on demand (‘bandwidth on demand’) and increases or decreases should be able to be commissioned dynamically. Telecommunications redundancy, including route diversity, should be available and enable multiple servicing channels, including telephone, email and internet. Other key attributes include availability in all relevant countries with ‘plug and play’ type access, the use of the public internet, using Virtual Private Networks (VPN), and the employment of non terrestrial solutions, particularly for data transport.
The continuity of the support resources, that is, resources accountable for designing and implementing the solutions, the general ‘cookie cutter’ approach taken and the swift resolution of problems were positive indicators associated with the existing solutions. However, the business’ lack of understanding and comprehension of the technology solutions was a key deficit and indicative of the suboptimal understanding of technology product consumption and cross product, function and business unit leverage opportunities associated with the same. Similarly, the failure to effectively manage telecommunications bandwidth like a utility and the inflexible ‘point to point’ solutions were detractors. Other aspects denoting the state of the existing technology solutions included limited scalability of the ‘proof of concept’ solutions and suboptimal network stability, availability, capacity, security and voice quality.

Key areas requiring immediate attention included the identification of cross product, function and business unit opportunities and the development and subsequent implementation of a suite of ‘plug and play’ type infrastructures. Improved communication between business and technology stakeholders and the methods of managing and accounting for telecommunications consumption also required focus.

4.7 Research issue 5 – Point of arrival solutions

Research issue 5 is guided by the interview protocol described in section 3.6.2 and the interview questions listed in appendix 1. This research issue was related to the development of the optimal or point of arrival solutions, with a particular interest in how these solutions should be engineered and the factors that should influence the designs. The research issue explored was:

*How should the technologies solutions perform and what factors should influence the design?*

4.7.1 Point of arrival design considerations

The first question associated with research issue 5 considered the perceived effectiveness, strengths and weaknesses of the existing solutions, the respondents
were asked about other design considerations. Specifically, question 5.1 inquired about the technology and design considerations. The responses are summarised in table 4.19 and discussed further below.

**Table 4.19. Technology and design consideration**

<table>
<thead>
<tr>
<th>Technology &amp; design considerations</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic allocation of voice and data telecommunications bandwidth</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Ability to migrate between servicing channels (eg email to chat)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Utility voice and data network</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Intelligent contact routing (eg VR* and Internet)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Interactive VR*</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Customer data sent with voice call</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Voice over internet protocol (VOIP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>End to end monitoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

*VR – voice response.

Source: developed from field data

The respondents suggested that an ability to dynamically allocate telecommunications bandwidth was a key design consideration and further noted that an ability to seamlessly migrate between servicing channels was paramount. Moreover, an ability to initiate a servicing transaction via email and ultimately talk to a customer service representative was becoming increasingly important.

Treating the telecommunications network as a utility was considered important by the respondents to cases C1 through C6. The same respondents, as well as those associated with case C7, noted that the use of interactive voice response units and intelligent contact routing (achieved through the same) were technologies and design considerations. Other responses included a capacity to send customer data with
voice calls [already available to some business units], voice over internet protocol (VOIP) and an ability to monitor the technology solutions from end to end.

### 4.7.2 Point of arrival technology solutions (voice transport)

This section inquired about the technology point of arrival solutions for voice transport. The respondents associated with each of the cases were asked to comment on various aspects, which ranged from their perceptions of the ideal solution to the tenure of these ideal solutions.

Conceding that the technology and telecommunications environments are dynamic, particularly with regard to change, question 5.2 asked each respondent what he or she considered the point of arrival solution for voice transport. The respondents associated with cases C1 through C6 stated that the point of arrival solutions for voice transport should enable dynamic allocation of bandwidth across the proprietary or virtual network. They also stated that the ability to shift between the various servicing channels, such as email to internet to telephone (voice) was a critical requirement.

The responses associated with case C7 indicated that the point of arrival for voice transport should be an ‘Intelligent switched network with one telephone number worldwide’. However, one respondent also pointed out that this solution would necessitate a capacity for relevant countries to connect to the intelligent network (referred to as the carrier cloud). Finally and although expressed differently, the respondents associated with cases C8 through C10 although stated that a capacity for the carrier to route calls, independent of the organisation’s infrastructure was optimal. In addition, these respondents also stated the use of pure internet protocol (IP) was ideal.

Question 5.3 then asked the respondents whether they thought that the point of arrival solutions they espoused for voice transport would change between 2002 and year end 2003. In the case that they thought the point of arrival solutions would change, they were asked how. All responded ‘no’.
Question 5.4 then asked the respondents whether they thought that the point of arrival solutions they espoused for voice transport would change between 2002 and 2005. In the case that they thought the point of arrival solutions would change, they were asked how. In this question, all respondents stated that the point of arrival solutions for voice transport would likely change between 2002 and 2005.

The respondents associated with cases C1 through C6 stated that the 2005 point of arrival solutions for voice transport should enable dynamic allocation of bandwidth across the proprietary or virtual network. They also stated that the ability to shift between the various servicing channels, such as email to internet to telephone (voice), was a critical requirement. Although these respondents unanimously stated that the point of arrival solutions would change between 2003 and 2005, they offered the same general description of the technology solution.

The respondents associated with case C7 and those associated with cases C8 through C10 also stated that the solutions would likely change between 2003 and 2005. The former respondents indicated that voice over internet protocol (VOIP) would likely be prevalent. The respondents associated with the other cases noted the use of pure internet protocol (IP) with a high degree of reliability as likely attributes of the 2005 point of arrival solutions. In addition, they also stated that the ability for telecommunications carriers to intelligently route calls was key.

The final question associated with this section was concerned with the respondents’ perceptions of the costs and benefits associated with the 2003 and 2005 point of arrival solutions for voice transport. Specifically, question 5.5 asked the respondents whether they would pursue both point of arrival solutions (2003 and 2005) if they were different. The responses were consistent across all cases, with all indicating that both would be pursued.

4.7.3 **Point of arrival technology solutions (data transport)**

This section inquired about the technology point of arrival solutions for data transport. The respondents associated with each of the cases were asked to comment
on various aspects, which ranged from their perceptions of the ideal solution to the
tenure of these ideal solutions.

Again, noting that the technology and telecommunications environments are
dynamic, particularly with regard to change, question 5.6 asked each respondent
what he or she considered the point of arrival solution for data transport. The
respondents associated with cases C1 through C6 stated that the point of arrival
solutions for data transport should enable dynamic allocation of bandwidth across
the proprietary or virtual network. The ability to shift between the various servicing
channels, such as email to internet (data), and the intelligent distinction between data
able to be directed over the internet versus the proprietary network, were identified
as necessary attributes. However, availability, cost and time to market were also
considered important with respect to the aforementioned. Finally, an ability to
accommodate video was considered important with respect to video conferencing
and remote training.

The responses associated with case C7 indicated that the point of arrival for data
transport should be a proprietary network (backbone) with local or regional access
points (hubs). It was reported that this point of arrival solution for data transport
would ‘minimize time to market, cost and security challenges’. Like their responses
to the point of arrival solutions for voice transport, the respondents associated with
cases C8 through C10 although stated that the use of pure internet protocol (IP) was
ideal and considered point of arrival for data transport.

Question 5.7 then asked the respondents whether they thought that the point of
arrival solutions they espoused for data transport would change between 2002 and
year end 2003. In the case that they thought the point of arrival solutions would
change, they were asked how. All responded ‘no’.

Question 5.8 then asked the respondents whether they thought that the point of
arrival solutions they espoused for data transport would change between 2002 and
2005. In the case that they thought the point of arrival solutions would change, they
were asked how. In this question, all respondents stated that the point of arrival
solutions for data transport would likely change between 2002 and 2005.
The respondents associated with cases C1 through C6 stated that the 2005 point of arrival solutions for data transport would likely have reduced dependence on terrestrial media, due to greater of satellite. The respondents associated with cases C7 through C10 merely stated that a ‘holistic suite of voice and data infrastructures’ enabling the business needs would be available.

4.7.4 Attributes of an optimal technology solutions

This section inquired about the attributes associated with an optimal technology solution. Specifically, question 5.9 asked the respondents to nominate or describe the features of an optimal set of voice and data infrastructures. The responses are summarised in table 4.20 and discussed further below.

### Table 4.20. Technology and design consideration

<table>
<thead>
<tr>
<th>Features / attributes</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resilience (reliable and redundant)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Capacity</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Cost (economical)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Dynamic telecommunications bandwidth allocation</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Service channel flexibility</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Utility type network – pay for consumption</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>No or limited latency</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Use of terrestrial and non terrestrial media</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>High quality</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

*Source: developed from field data*

The respondents across all cases were unanimous in their nomination of three key features of an optimal technology solution. Firstly, the resilience of the telecommunications network, including reliability and suitable levels of redundancy, was nominated. Secondly, sufficient capacity to support the current functions and processes and afford a degree of flexibility with regard to short term variations in the
same. Thirdly and associated with the aforementioned attribute, an ability to dynamically allocate voice and data bandwidth between entities attached to the network.

The respondents to cases C1 through C6 and C8 through C10 also stated that an ability to traverse the various servicing channels [seamlessly] was an important feature. The respondents associated with cases C1 through C6 indicated that a utility type network was an important attribute, along with the use of diverse telecommunications media, such as fibre and satellite, and minimal [none or limited] latency. The same respondents, as well as those associated with case C7, indicated cost and economics as key attributes. Finally, the respondents associated with case C7 indicated that quality was also an important attribute of an ideal (optimal) set of voice and data infrastructures.

4.7.5 Conclusions associated with research issue 5

The ability to dynamically allocate telecommunications bandwidth for voice and data bandwidth is primary design consideration, along with the ability to intelligently route volumes from and between disparate customer entry points, such as the voice response units or internet. Similarly, the capacity to seamlessly migrate between the various ‘servicing channels, such as those previously noted, is key. Other salient design considerations include expanded use of interactive voice response units and improved resolution of customer inquires in the same.

The ability to shift from non voice to voice mediums was considered a key attribute of the point of arrival solution for voice transport. This, coupled with a single world wide contact number that could be handled in a virtual servicing network, where volumes (calls) could be routed to the next available and, or, best agent anywhere, was considered to be utopia. The point of arrival for voice is not expected to change in the next year or so, although the use of the telecommunications carriers’ networks and infrastructures and the extended use of voice over internet protocols are expected to become more prevalent.
Dynamic allocation of telecommunications bandwidth is a key attribute of the point of arrival solution for data transport, regardless of whether the bandwidth supports the proprietary or virtual (public) networks. However, sufficient access to proprietary network ‘nodes’ in relevant countries is an imperative for time to market, cost and security reasons.

The capability to traverse the data based servicing channels, such as email to internet or vice versa, and the intelligent distinction between data able to be directed over the internet versus the proprietary network, were also identified as necessary attributes. Finally, video must be effectively catered in the point of arrival solutions for data transport, as video will be key for global conferencing and operations training.

In summary, the point of arrival solutions for voice and data transport will change between 2002 and 2005. Key features and attributes will include the ability to dynamically vary telecommunications bandwidth and traverse servicing channels within a single contact, including email to internet to telephone. Telecommunications and network capacities will be abundant, resilient and reliable and the same will support redundancy and service availability.

The point of arrival solutions will be economical (cost effective) and run like a utility. Fees will be incurred on the basis of consumption, latency will be limited or non existent and terrestrial and non terrestrial media will be used.

4.8 Summary of findings associated with the five research issues

This chapter analysed, categorised and presented the collected data. Cross case and cross cluster analyses were undertaken and the core patterns and themes explored in order to address the research questions and ultimately the research issues and problem. This section summarises the key findings associated with the research issues.

Service optimisation initiatives were pursued in Asia in support of the efficient and effective provision of customer contact and associated services. Asian based service providers experience lower employee attrition or churn and operating costs were
lower then many of their western counterparts. In addition, flexible workforces (hours of operation), diversifying risk and establishing business continuity and disaster recover capacities were also significant drivers.

India and the Philippines were primarily targeted for service optimisation efforts, although Mexico and Canada were also used. Other markets in Asia and South America would be considered once capabilities and capacities have been confirmed (the organisation would be a close follower, but not a pioneer in these cases).

India and the Philippines have extensive resource pools (labour and infrastructure), significantly lower operating costs, English language capabilities and suitable technological environments and, as such, account for the majority investments to date. However, risk, geopolitical risk, political stability and market maturity were key determinants in deciding whether to use third party or proprietary service providers, although market maturity is only significant during the original selection processes. Other factors influencing the decisions to use third party or proprietary service providers included time to market, flexibility and existing infrastructure.

As the program evolves, third party providers who have a presence (operations or capacities) in several of the target markets will have significant advantages over those that do not. Similarly, service providers who have other relevant language capabilities will become increasingly attractive as the program expands to include non English speaking volumes, although volumes will continue to be divided between countries to manage risk. Similarly, ‘like’ capacities will be established at different service providers (third party and, or proprietary) and in different countries to manage and minimize the impact of geopolitical activity.

The efforts to date, however, were approached as ‘proof of concepts’, under the notion of market entry, and 90% of the existing stakeholders would employ the same approach if service optimisation initiatives were pursued in new markets such as China, Mexico, Spain and Brazil. Technology solutions engineering and implementation strategies will continue to be influenced by business and other stakeholders, until such time as a ‘plug and play’ scenario is available. Moreover, in the absence of a simple, common and effective suite of solutions, the existing
stakeholders will continue to contribute to and influence the technology solutions employed by engaging the technology subject matter experts directly. The perceived benefits of this approach include reduced time to market, ease of implementation, minimisation of capital investment and leveraging third party service provider solutions to shift risk.

The effectiveness of the technology solutions ranged from exceeding all needs and expectations to meeting some needs and expectations, with the weight about 70% and 30% respectively. Solution consistency and time to market were considered key strengths of the implementations, while the continuity and flexibility of the technologies teams and the ability to leverage third party service providers (people, infrastructure and other resources) during solution delivery were also significant.

In contrast, network resilience (telecommunications robustness) in the off shore proprietary service provider and ownership of support resolution were key weaknesses. The level of expertise of third party service provider resources, also including support resolution processes, was lacking. Similarly, the utilisation of telecommunications bandwidth and the availability of the same for contingency and business continuity were suboptimal.

Key opportunities, however, included leveraging common proprietary infrastructures, regardless of business unit or function. Telecommunications bandwidth should be available on demand (‘bandwidth on demand’) and variations of the same should be able to be commissioned dynamically. Telecommunications redundancy, including route diversity, should be available and enable multiple servicing channels, including telephone, email and internet. Other key attributes include availability in all relevant countries with ‘plug and play’ type access, the use of the public internet, using Virtual Private Networks (VPN), and the employment of non terrestrial solutions, particularly for data transport.

The continuity of the support resources, that is, resources accountable for designing and implementing the solutions, the general ‘cookie cutter’ approach taken and the swift resolution of problems were positive indicators associated with the existing solutions. However, the business’ lack of understanding and comprehension of the
technology solutions was a key deficit and indicative of the suboptimal understanding of technology product consumption and cross product, function and business unit leverage opportunities associated with the same. Similarly, the failure to effectively manage telecommunications bandwidth like a utility and the inflexible ‘point to point’ solutions were detractors. Other aspects denoting the state of the existing technology solutions included limited scalability of the ‘proof of concept’ solutions and suboptimal network stability, availability, capacity, security and voice quality.

The ability to dynamically allocate telecommunications bandwidth for voice and data bandwidth is primary design consideration, along with the ability to intelligently route volumes from and between disparate customer entry points, such as the voice response units or internet. Similarly, the capacity to seamlessly migrate between the various ‘servicing channels, such as those previously noted, is key. Other salient design considerations include expanded use of interactive voice response units and improved resolution of customer inquiries in the same.

The ability to shift from non voice to voice mediums was considered a key attribute of the point of arrival solution for voice transport. This, coupled with a single world wide contact number that could be handled in a virtual servicing network, where volumes (calls) could be routed to the next available and, or, best agent anywhere, was considered to be utopia. The point of arrival for voice is not expected to change in the next year or so, although the use of the telecommunications carriers’ networks and infrastructures and the extended use of voice over internet protocols are expected to become more prevalent.

Dynamic allocation of telecommunications bandwidth is a key attribute of the point of arrival solution for data transport, regardless of whether the bandwidth supports the proprietary or virtual (public) networks. However, sufficient access to proprietary network ‘nodes’ in relevant countries is an imperative for time to market, cost and security reasons.

The capability to traverse the data based servicing channels, such as email to internet or vice versa, and the intelligent distinction between data able to be directed over the
internet versus the proprietary network, were also identified as necessary attributes. Finally, video must be effectively catered in the point of arrival solutions for data transport, as video will be key for global conferencing and operations training.

In summary, the point of arrival solutions for voice and data transport will change between 2002 and 2005. Key features and attributes will include the ability to dynamically allocate and vary telecommunications bandwidth and traverse servicing channels within a single contact, including email to internet to telephone. Telecommunications and network capacities should be abundant, resilient and reliable and the same will support redundancy and service availability.

The point of arrival solutions will be economical (cost effective) and run like a utility. Fees will be incurred on the basis of consumption, latency will be limited or non-existent and terrestrial and non-terrestrial media will be used.

4.9 Conclusions associated with the five research issues

The purpose of this chapter was to summarise the information collected from the ten case studies and 50 in-depth interviews with senior leaders and subject matter experts associated with each. In addition and in order to address the research issues and the research problem generated in chapter 2, the data were analysed using cross case and cross cluster examinations and patterns and themes in were identified and presented.

A high degree of literal replication was observed within cases pursued by the same business units, although the converse was observed in cases associated with disparate business units. The theoretical replication reflected in the latter yielded expected and unexpected findings, which included the significance of the business units size and how they approached the service optimisation efforts.
The research issues provided a logical approach to identifying the motivations and factors for pursuing service optimisation initiatives in Asia and the use of third party and proprietary service providers. Influences to solution engineering were then explored and the costs, benefits, vulnerabilities and opportunities associated with the existing solutions were examined in order to establish a point of departure. Finally, the point of arrival solutions were explored. Chapter 5 compares and contrasts the findings with the literature, addresses the research issues and problem, illustrates the contribution to the industry body of knowledge and makes specific recommendations about this and other subsequent research opportunities.
Chapter 4 summarised the information collected from the ten case studies and 50 in-depth interviews with senior leaders and subject matter experts associated with each. The data were analysed using cross case and cross cluster examinations and patterns and themes in them were identified and presented. This chapter, depicted in figure 5.1 on page 170, and the intent of this research was to addresses the research problem outlined in section 1.2:

“Why do global financial organisations leverage Asian based suppliers for the provision of front office and back office services and how effective are the technologies solutions supporting these?”
In pursuing the research problem, five research issues (see section 1.2) were identified:

1. **What is a service optimisation initiative and why do organisations pursue these in Asia?**
2. **Which Asian markets are leveraged and what factors influence the decisions to utilise third party versus proprietary service providers?**
3. **What influences the technology solutions employed and why?**
4. **How do the existing technologies solutions perform and are they optimal?**
5. How should the technologies solutions perform and what factors should influence the design?

A review of the literature pertinent to the research problem was undertaken in chapter 2 and informed the development of the research protocol in chapter 3. These, in concert, allowed the research issues and problems to be effectively examined in chapter 4 through ten case studies, 50 in-depth interviews and cross case and cross cluster analyses.

This chapter commences with the findings and contributions of this research and then presents the conclusions associated with each of the research issues. The conclusions associated with the research problem are then presented and the implications for theory and practice discussed. Finally, the limitations of the research are outlined and recommendations for further research in this arena are made. The research contributions are exhibited throughout this chapter through the comparison of the findings in chapter 4 and the literature reviewed in chapter 2.

5.1 Findings and contributions associated with the research issues

This section compares and contrasts the key themes and findings associated with each of the research issues examined in chapter 4 (Data analysis), with the key themes and directions solicited from the literature reviewed in chapter 2. This process enabled contributions to the body of knowledge and the phenomenon to be determined and the research issues and problem to be addressed.

5.1.1 Findings and contributions associated with research issue 1

What is a service optimisation initiative and why do organisations pursue these in Asia?

The first research issue inquired about service optimisation initiatives and focused on the reasons why organisations pursue these in Asia. While the literature is abundant
with respect to the reasons why organisations source, there are several other contextual dimensions that are key in understanding these reasons, as well as the ‘servicing’ environment, and these are not covered as extensively or at all in the literature. Moreover, these contextual dimensions underpin the reasons why organisations pursue service optimisation initiatives in Asia and while these are not covered extensively in the literature, they were addressed in this research. Refer to table 5.1 for a summary of the findings and contributions associated with research issue 1.

**Table 5.1. Findings and contributions associated with research issue 1**

<table>
<thead>
<tr>
<th>No.</th>
<th>Findings</th>
<th>Explicit in Literature</th>
<th>Explicit in Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Service optimisation is the effective and efficient provision of non core services (front and back office) that have little or no impact on revenue generation.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1.2</td>
<td>Service optimisation initiatives do not generate competitive or strategic advantages, but enable these to be created through the redeployment of surplus funds (financial slack generated through reductions in operating costs).</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>1.3</td>
<td>Service optimisation functions are selected on the basis of strategic significance (core competence or competitive advantage), technical and service complexity and potential impact on revenue or receivables.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>1.4</td>
<td>Size and stability of the service function, capability of the service provider, training requirements and set up times influence service function selection, along with financial risk.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>1.5</td>
<td>Organisations establish servicing capacities in Asia to address workforce, competitive advantage, economic, risk, growth and operational issues and opportunities.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>1.6</td>
<td>Impacts of employee attrition are reduced when organisations establish servicing capacities in Asia, where there is an abundance of suitably qualified and highly educated English speaking resources.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>1.7</td>
<td>Asian based providers (third party or proprietary) achieve higher service performance (call quality, average handling times, customer satisfaction) and generate greater customer loyalty.</td>
<td>No</td>
<td>To some extent</td>
</tr>
<tr>
<td>1.8</td>
<td>Production and transaction costs (operating costs) are lower in Asia and enable surplus funds (generated financial slack) to be invested in growth areas.</td>
<td>No</td>
<td>To some extent</td>
</tr>
<tr>
<td>1.9</td>
<td>Third party and proprietary servicing capacities in Asia diversify risk and augment business continuity and disaster recovery capabilities.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>1.10</td>
<td>Organisations establish servicing capacities in Asia to address workforce, competitive advantage, economic, risk, growth and operational issues and opportunities.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Source: developed from the research protocols (case study and interview).*
**Finding 1.1: Service optimisation is the effective and efficient provision of non core services (front and back office) that have little or no impact on revenue generation.**

In the context of this research, service optimisation initiatives support the efficient and effective provision of non core customer contact and associates services. This research and the literature support the notion that the provision of non core services does not require key fundamental corporate skills and the services do not render unique value to the organisation or its customers (Prahalad & Hamel 1990; Mintzberg & Quinn 1996; Tehrani 1996).

Little to no revenue is generated through the provision of general customer contact (front office) and associated (back office) services. However, cross selling and up selling opportunities are being progressively exploited in an attempt to transform this arena into a 'profit center' (Walker 1996; Clayton 1998). Organisations are consequently scrutinising the functions sourced to balance performance benefits and cost savings with potential revenue opportunities (Walker 1996).

Sourcing these services from lower cost off shore third party and proprietary capacities enables organisations to redeploy otherwise committed funds (see conclusion 1.2 for additional information on financial slack) into core areas (Walker 1996; Spiegelman 2000). The additional focus on core areas allows strategic and competitive advantages to be generated by these organisations in areas where unique value is delivered to its customers (Mintzberg & Quinn 1996; Quinn & Hilmer 1994).

**Finding 1.2: Service optimisation initiatives do not generate competitive or strategic advantages, but enable these to be created through the redeployment of surplus funds (financial slack generated through reductions in operating costs).**

When organisations source servicing functions from lower cost markets, regardless of whether proprietary or third party providers are used, financial slack is often generated (Walker 1996; Spiegelman 2000). Financial slack is the surplus funds
generated when production cost advantages are not sufficiently diminished by associated transaction costs – the costs associated with establishing, monitoring and managing the service contracts (Ang & Straub 1998; Mahoney 1992; Bakos & Brynjolfsson 1993).

Financial slack affords organisations opportunities to address problems and pursue prospects through the deployment of surplus funds, allowing economies of scope and scale to be generated and creating significance in the marketplace and industry (Awh & Primeaux 1985; Bourgeois 1981; Sutton & D’Aunno 1989). Moreover, financial slack allows organisations to generate strategic and competitive advantages (Quinn & Hilmer 1994) and the associated costs (transaction and production) are considered primary drivers of sourcing decisions (Walker & Webber 1987).

This research clearly found that financial slack was a key driver of sourcing decisions and this contradicted some of the literature (refer to Ang and Straub 1998). In fact, opportunities to reduce production and transaction costs and invest surplus funds in core areas were considered significant. The program, for example, was engineered to support the organisations reengineering and growth strategies.

Finding 1.3: Service optimisation functions are selected on the basis of strategic significance (core competence or competitive advantage), technical and service complexity and potential impact on revenue or receivables.

The literature notes that companies are divesting specific activities and functions so they can focus on their core business and competencies (Lissak 1995; Shermach 1995; Zimmerman 2001). These functions are considered non core and yield no strategic or competitive advantage (Ang & Straub 1998; Forth 1998; Hellenbrand 1995; Prahalad & Hamel 1990; Quinn & Hilmer 1994). They are limited to no impact on revenue, with the exception of emerging cross selling and up selling
opportunities (Clayton 1998; Walker 1996), and the production cost differentials are not adversely impacted by the transaction costs associated with the arrangement (Ang & Straub 1998).

This research found that strategic significance and technical complexity were the two most prominent determinants of service function selection. Functions considered core or that potentially enable competitive advantages to be developed were not migrated by the business units who were pursuing the service optimisation efforts. Technical complexity and the service provider’s capabilities were also significant. That is, the more complex a function is from set up and provisioning perspectives, the less likely the function would be selected for migration. Similarly, the service provider’s demonstrated capabilities were also considered important, particularly with regard to their capacity to provision routine and more complex services.

There was sufficient evidence in the literature to suggest that non core functions are primary candidates for sourcing. This extended, too some degree, to the provision of front office and back office services, although emerging trends indicate that new opportunities are present with respect to cross selling and up selling opportunities (revenue opportunities). However, there was limited evidence of technical and service complexity being important considerations within the literature, yet these were significant within the research.

**Finding 1.4: Size and stability of the service function, capability of the service provider, training requirements and set up times influence service function selection, along with financial risk.**

The literature suggests that organisations specialising in the provision of specific services often develop mass production and labour specialisation efficiencies, regardless of service function size (Awh & Primeaux 1985; Bendor-Samuel 2000; Bourgeois 1981; Lacity and Willcocks 1998; Shermach 1995 and others). Paradoxically, when service function size is determined on the basis of headcount, budget and instructions processed, large organisations pursuing sourcing
arrangements did not achieve cost saving advantages more frequently than their smaller counterparts (Lacity and Willcocks 1998).

Economic, contract management and relationship capabilities were found to influence both service provider and service function selection (Kakabadse and Kakabadse 1999). However, the selection of service functions was also influenced on the basis of the service provider’s demonstrated capacity to deliver, maintain and support the services (Kakabadse and Kakabadse 1999; Mintzberg & Quinn 1996; Turek 2000a).

The level of training required also influenced service function selection (Anonymous 1996; Read 2001). This was particularly true when the services are provisioned ‘off shore’ and linguistic training, in the form of accent neutralisation, was required (Dash 2001; Turek 2000a).

Recognising customer contact / call centers are premier opportunities to interact with customers, some organisations are maintaining these capacities in house to mitigate or minimise financial risk and seize cross selling and up selling revenue opportunities (Walker 1996). In fact, some organisations are transforming routine call center transactions into sales opportunities to increase revenues (Clayton 1998).

This research found that the size and stability of the servicing functions influenced selection, particularly with regard to the service providers demonstrated ability to establish new functions and ramp up quickly. Demonstrated capabilities of the service providers were also considered in this regard and this extended to the ability of the service provider to recruit and train their customer service staff. Moreover, service functions that had previously been established and were stabilised quickly by service providers, were more often selected for subsequent efforts than those that were not. Financial risk also influenced service function selection decisions and those that enable revenue generation (marketing, cross selling and up selling) or receivables (credit and collections) were often maintained in house. However, there were specific instances of these functions being sourced from ‘abroad’.
Information gleaned from the literature was largely consistent with the findings of this research. However, specific aspects of the literature, such as the specialisations of the service providers and the size of the service functions sourced, seemed to be contradictory from volume perspectives. That is, service provider specialisation yielded mass production and labour specialisation efficiencies, regardless of service function size (Awh & Primeaux 1985; Bendor-Samuel 2000; Bourgeois 1981; Lacity and Willcocks 1998; Shermach 1995), while large organisations pursuing sourcing arrangements did not achieve cost saving advantages more frequently than their smaller counterparts (Lacity and Willcocks 1998), suggesting that volume is less relevant. Finally, there was no evidence of set up times influencing service function selection in the literature, although the research found that these did influence decisions, primarily due to enabling the opportunities faster.

Finding 1.5: Organisations establish servicing capacities in Asia to address workforce, competitive advantage, economic, risk, growth and operational issues and opportunities.

There is an abundance of information in the literature about the motivations and reasons why organisations establish servicing capacities in Asia. In broad terms, these reasons are related to workforce, competitive advantage, economics, risk management, growth and operations. Within each of these categories, there are numerous sub areas that are relevant to solving existing organisational problems, seizing new opportunities and, in some instances, enabling.

Related to workforce, reasons include salary costs, resources abundance, language availability, employee attrition or churn and recruiting and training times and costs (Anonymous 1996; Bird 2000; Carr 2001; Korzeniowski 2000; Marwaha & Tommerdahl 1995; Read 2001; Spiegelman 2000; Turek 2000a). However, core business is also a primary consideration with regard to workforce, among other areas, because it assists organisations focusing on the unique value they provide to their customers (Prahalad & Hamel 1990; Mintzberg & Quinn 1996). That is, core functions are retained in house, while essential non core functions are outsourced (Prahalad & Hamel 1990; Mullin 1996; Quinn & Hilmer 1994; Thames 1992),
freeing up internals to build strategic and competitive advantages (Anonymous 2000a).

Lower resource costs in Asia and other emerging markets, coupled with progressively declining technology and telecommunications costs, provide a substantial platform for organisations to reduce operating costs and grow without substantial capital and associated investments (Anonymous 1996). That is, sourcing capacities from lower cost and emerging markets in Asia and elsewhere, facilitates reduced capital expenditure, increased capacity (scalability), improved disaster recovery risk management and around the clock service at a fraction of the cost of establishing and maintaining additional in house capacities (Anonymous 1996; Bendor-Samuel 2000; Mitchell 2001; O’Herron & Throne 2001; Tehrani 1996).

The research found that organisations establish servicing capacities in Asia to address workforce, competitive advantage, economic, risk, growth and operational issues and opportunities. Specifically, a shortage of increasingly costly people resources, high levels of attrition and churn, expensive recruiting and training costs and recognition that these essential, but non core, functions were historically concentrated within ‘host’ countries, culminated in increased risks and delimited opportunities to focus on core functions and generate competitive advantages.

In contrast, Asian based organisations generally had access to an abundance of low cost, highly educated (at least undergraduate university qualified), multi-lingual resources who were prepared to work variable shifts (day shift, afternoon shift and night shift) in a rotating fashion, to secure a ‘prestigious’ and relatively well paid job in their country of residency. Sourcing these capacities from Asian based providers also enabled risks to be diversified beyond the country of origin, as well as operational and growth opportunities to be exploited through access to new (third party) competencies and reduced capital investments on the part of the ‘procuring’ organisation.

For the most part, the research findings support information in the literature regarding the reasons why organisations establish servicing capacities in Asia. However, there were specific contributions from this research that either extended on...
or added to the information available. For example, access to degree qualified people resources that consider ‘servicing’ jobs as prestigious and who are prepared to work flexibly in rotating shifts. Increased customer loyalty and improved performance and service through better qualified and educated people resources, with an ability to vary capacities to handle volume spikes experienced during specific periods (for example, during holiday periods). Timely access to existing servicing capacities and expertise, which improve time to market and enable greater leverage of existing infrastructures. Augmented benefits associated with reducing operating costs and enabling growth with little to no capital investment. Enhanced strategic and competitive advantages generated through the redeployment of surplus funds (redeployment of financial slack generated through reduced operating costs). Geopolitical risk diversification through the development of new servicing capacities in alternate countries. Increased or enhanced performance through the development of a ‘champion / challenger’ environment, including proprietary and third party service providers in multiple locations and countries.

**Finding 1.6: Impacts of employee attrition are reduced when organisations establish servicing capacities in Asia, where there is an abundance of suitably qualified and highly educated English speaking resources.**

The literature notes that employee attrition in service centers is an issue in many first world countries and that this is driving organisations to outsource these sorts of operations (Anonymous 1996; Bird 2000; Marwaha & Tommerdahl 1995; Patane & Jurison 1994; Quinn & Hilmer 1994; Read 2001; Spiegelman 2000; Turek 2000a). Countries including India, the Philippines and China are primary targets, because of their large well educated English speaking populations, although cultural training is often required to indoctrinate the foreign staff (Dash 2001).

The findings of this research conclude that employee attrition is a primary driver of off-shore outsourcing, specifically in the service center (back and front office) arena. The ability to leverage lower employee attrition or churn from Asian based service providers, coupled with large populations of highly qualified English speaking people, were considered significant in this regard. Similarly, access to flexible workforces and hours of operation were also noted as significant.
The literature certainly recognises that outsourcing is underpinned, in many instances, by the needs organisations have to address resourcing problems, such as churn or attrition. However and for the most part, the literature does not indicate that the service functions are shifted to Asian based service providers. Rather, the literature refers to the ‘shifting of accountabilities’ to service providers who specialise in the provision of relevant services. While the research findings concur with the underlying motivations for sourcing, they also indicate that the service provision is best delivered by Asian based organisations. Specifically, the research findings note that Asian based service providers have access to abundant and highly qualified English speaking populations and this, coupled with the other economic benefits, is significant in terms of attrition.

**Finding 1.7: Asian based providers (third party or proprietary) achieve higher service performance (call quality, average handling times, customer satisfaction) and generate greater customer loyalty.**

Service and performance improvements were noted in the literature as reasons for sourcing (Read 2001; Spiegelman 2000; Thames 1992; Turek 2000a). Similarly, models espousing performance improvements were also referenced in the literature (DiRomualdo & Gurbaxani 1998 cited in Kakabadse & Kakabadse 2000).

The research also found that organisations pursue sourcing arrangements to improve service delivery, service availability and performance. However, the research also identified improved service levels associated with the use of Asian based organisations, regardless of whether they were third party or proprietary, and these generated additional benefits in the form of improved customer loyalty.

No evidence within the literature suggested that improved performance would be achieved through the use of Asian based service providers. In contrast, a statistically significant percentage of the research respondents noted that Asian based organisations, regardless of whether they were third party or proprietary, delivered improved levels of performance. In addition, customer loyalty was also found to be higher when Asian based providers were used.
Finding 1.8: Production and transaction costs (operating costs) are lower in Asia and enable surplus funds (generated financial slack) to be invested in growth areas.

According to the literature and with respect to the notion that organisations are motivated by profit maximisation, sourcing decisions are often premised on the comparative costs (transaction and production costs) associated with internal versus external service provision (Ang & Straub 1998; Saarinen & Vepsalainen 1994; Williamson 1981). Financial slack is generated when organisations outsource to service providers who have lower ‘operating’ costs (Awh & Primeaux 1985) and this slack can be used to reduce the ‘total cost of operation’ or can be deployed in alternate areas (Bourgeois 1981; Sutton & D’Aunno 1989).

The research found that operating costs significantly influence business unit performance and, as such, drive sourcing decisions. The large suitably qualified English speaking populations in Asian based markets, coupled with high unemployment and underemployment, results in lower operating costs, while addressing other key concerns experienced in western markets. In fact, the operating cost differentials generated sufficient financial slack to enable the organisation to invest in strategic growth.

There was sufficient evidence in the literature and research finding to confirm that many sourcing decisions are underpinned by differentials in operating costs. However, there was no evidence in the literature that production and transaction costs (operating costs) are lower in Asian based markets. Similarly, while reductions in operating costs were noted as significant drivers of sourcing decisions, there was no evidence that the financial slack is subsequently invested in strategic growth areas. This research, however, found that operating costs were significantly lower in Asian based markets and that surplus funds (financial slack) was redeployed in support of strategic growth.

Finding 1.9: Third party and proprietary servicing capacities in Asia diversify risk and augment business continuity and disaster recovery capabilities.
The literature revealed that customer contact is considered a critical relationship opportunity and organisations establish sufficient business continuity and disaster recovery capabilities to ensure they are able to effectively service their customers and maintain positive and productive relationships (O’Herron & Throne 2001). These business continuity and disaster recovery capabilities include co-locating (also referred to as a cosourcing strategy), redirecting volumes to alternate capacities (proprietary or third party), leveraging disaster recovery facilities and temporarily relocating staff (Anonymous 1996; Fuhrman 1999; O’Herron & Throne 2001).

The research findings suggest that organisations leverage Asian based service providers (third party or proprietary) to augment existing servicing capacities for a various of reasons, including risk diversification, business continuity and disaster recovery. The use of Asian based service providers for the aforementioned reasons is, however, dependant on the maintenance of up to 40% of the total volume within existing (non Asian based) capacities.

The literature and the research findings are similar in as much as they conclude that risk diversification, business continuity and disaster recovery are augmented when leveraging externals. However, the research findings suggest that the use of Asian based service providers enables geographic and associated diversification (different service providers, telecommunications carriers and the like), regardless of whether they are third party or proprietary.

5.1.2 Findings and contributions associated with research issue 2

Which Asian markets are leveraged and what factors influence the decisions to utilise third party versus proprietary service providers?

The second research issue inquired about the Asian markets being used in support of the service optimisation program. It was also concerned with other markets that are being considered. The second line of inquiry with regard to this research issue was concerned with the selection and use of third party versus proprietary service
providers. Specifically, the reasons for selecting third party or proprietary service providers were explored. Refer to table 5.2 for a summary of the findings and contributions associated with research issue 2.

Table 5.2. Findings and contributions associated with research issue 2

<table>
<thead>
<tr>
<th>No.</th>
<th>Findings</th>
<th>Explicit in Literature</th>
<th>Explicit in Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>India and the Philippines are primary sourcing markets for service optimisation efforts, because of lower operating costs and the abundance of suitably qualified and highly educated English speaking people.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2.2</td>
<td>When other Asian markets have developed capabilities (suitably qualified and available people) and equivalent or lower operating costs, they will be considered for service optimisation efforts.</td>
<td>No</td>
<td>To some extent</td>
</tr>
<tr>
<td>2.3</td>
<td>Geopolitical risk and market maturity are key factors in selecting proprietary versus third party service providers.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2.4</td>
<td>Readiness (available and capable capacities) and service provider abundance (competition) influence decisions to use third party versus proprietary providers.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2.5</td>
<td>Time to market, service provider flexibility and the ability to leverage existing infrastructures influenced decisions to utilise proprietary versus third party capacities.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>2.6</td>
<td>Third party providers are used to traverse the complex legal and regulatory frameworks (shifting accountabilities).</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2.7</td>
<td>Third party providers are used to minimise capital investments.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: developed from the research protocols (case study and interview).

Finding 2.1: India and the Philippines are primary sourcing markets for service optimisation efforts, because of lower operating costs and the abundance of suitably qualified and highly educated English speaking people.

Conclusion 1.7 revealed that there was insufficient evidence in the literature to support the notion that production and transaction costs are lower in Asia than they are in western markets. However, there is some evidence supporting the fact that lower labour and capital costs, which are also constituents of production costs, exist in various Asian based locations. Countries like India and the Philippines, for example, are primary locations for service optimisation efforts, because of their large well educated English speaking populations (Dash 2001) and lower operating costs (Patane & Jurison 1994). While not stated explicitly, these operating costs are the culmination of production and transaction costs (Ang & Straub 1998).
The research found that service optimisation initiatives were being pursued in India and the Philippines for a diversity of reasons, including access to large and highly qualified English Speaking resource pools and lower operating costs. Key drivers of sourcing in these locations were underpinned by business unit and organisation goals associated with reducing operating costs, along with the ability to redeploy surplus funds (financial slack) into strategic growth areas.

Information presented in the literature is consistent with the findings of this research and conclude that organisations do pursue sourcing strategies in India and the Philippines to access suitably qualified resources and lower operating costs.

Finding 2.2: When other Asian markets have developed capabilities (suitably qualified and available people) and equivalent or lower operating costs, they will be considered for service optimisation efforts.

In the literature examined, there were no indications that organisations would look beyond India, the Philippines, China and Malaysia for their servicing needs. That is, other Asian markets were not being considered, regardless of capacities and capabilities. This research, however, found that other Asian markets would be considered and pursued when there is sufficient evidence of extensive resource pools (labour and infrastructure), significantly lower operating costs, English language capabilities and sound technological environments. This approach also supports the development of a broader risk management strategy, enabling more robust business continuity and disaster recovery (further geographic diversity, lower volumes at a broader ranges of service providers and the like).

Finding 2.3: Geopolitical risk and market maturity are key factors in selecting proprietary versus third party service providers.

The concept of risk was evident in the literature, particularly with regard to sourcing strategies, although nothing to suggest that risk was a consideration in making decisions between proprietary and third party service providers (Quinn & Hilmer 1994; Read 2001; Spiegelman 2000; Thames 1992; Turek 2000a; Venkatraman
Furthermore, there were no references to geopolitical risk or commentary suggesting that geopolitical risk was a consideration in making decisions between proprietary and third party service providers. Similarly, there were no references in the literature to market maturity with respect to making decisions between third party and proprietary service provision.

Findings in the research, however, indicate that risk, geopolitical risk, political stability and market maturity are considered key determinants when deciding whether to use third party or proprietary service providers. Geopolitical risk, including covert and overt activities within specific markets or regions may influence the decision to build proprietary capacities, as opposed to leveraging third parties. Market maturity is most relevant during the initial or original market reviews and is not considered again post. Moreover, once a market is deemed suitable from a maturity perspective, this criteria does not influence subsequent decisions.

**Finding 2.4: Readiness (available and capable capacities) and service provider abundance (competition) influence decisions to use third party versus proprietary providers.**

Notwithstanding the fact that ‘readiness’ is a likely prerequisite underpinning any sourcing arrangement, there was no information presented in the literature to suggest that this aspect influences decisions to use third party versus proprietary service providers. Similarly, while service provider abundance is aligned with supply and demand economics, there was no evidence in the literature to suggest that decisions to use third party or proprietary service providers was influenced by the resident ‘competition’.

While not primary determining factors, this research concluded that the selection of third party versus proprietary capacities is influence by the service provider’s readiness, particularly when all other factors are equivalent. Moreover, readiness often influences the decisions to select between third party and proprietary service providers, because it enables the benefits to be realised sooner.
Readiness, also referred to as ‘time to market’, may also be a determining factor for managing geopolitical risk – for example, if an existing function was resident in a proprietary capacity off shore (non US) and an additional capacity was required, a third party might be selected, pending all other things were equivalent, to diversify the geopolitical risk.

The abundance of viable third party capacities and true market competition also influenced the selection of third party versus proprietary service providers. This research concluded that service provider abundance was an indicator of market maturity, along with tenure and size, and evidence of the same would influence the selection of third parties because of reduced capital investment and implementation timeframes.

**Finding 2.5: Time to market, service provider flexibility and the ability to leverage existing infrastructures influenced decisions to utilise proprietary versus third party capacities.**

The literature suggests that some organisations source services from others to traverse rapidly changing markets and technological situations, with a particular interest in reducing risk and time to market by leveraging existing capital (Quinn & Hilmer 1994). Moreover, employing existing capacities owned by externals who specialise in the provision of relevant services, removes the need for the organisation to invest and implement additional infrastructure (Anonymous 2000a; Quinn & Hilmer 1994).

Similarly, organisations specialising in the provision of relevant services offer greater flexibility in areas of service provision through price (Bendor-Samuel 2000; Kakabadse & Kakabadse 2000; Read 2001; Shermach 1995; Spiegelman 2000; Thames 1992; Turek 2000a). However, it is noted that the transaction cost overhead may also increase because of special contractual or other controls necessary to mitigate risks and vulnerabilities, while maintaining the flexibility (Quinn & Hilmer 1994).
Finally, the literature also suggests that general leverage opportunities, including access to: economies of scope and scale, information, resources, existing infrastructure and other capital, as well as price flexibility, are considerations in the selection of service providers (Bendor-Samuel 2000; Lissak 1995; Shermach 1995; Thames 1992; Turek 2000a). Leverage is the key to successful sourcing, because without leverage the supplier would be unable to provide the same quality delivery at a cost lower than the organisation contracting the services, including a margin for profit (Bendor-Samuel 2000).

This research found that time to market influenced decisions to pursue third parties or proprietary service providers and derived benefits from cost reduction and revenue generation perspectives were considered. Flexibility was a key determinant, particularly in fluctuating environments, although ‘time to market’ timeframes had not been determined prior to making decisions. Moreover, there was no benchmark timeframe established to make the time to market decisions on. Existing infrastructure also influenced decisions to pursue third parties or proprietary service providers, particularly from ‘compliance’ to internal standards and time to market perspectives.

The literature and the research were consistent with respect to the underlying premises or considerations. However, the literature suggested that the various attributes (time to market, flexibility and leverage) were sourcing decision criteria, as opposed to criteria used to select third party versus proprietary service providers. The research, on the other hand, concluded that these criteria were significant influences of the decisions to use internal or external service providers and that the ‘benefits realisation’ was often the driving force.

**Finding 2.6: Third party providers are used to traverse the complex legal and regulatory frameworks (shifting accountabilities).**

Legal discussion in the literature was primarily focused on the preparation and execution of contracts between the parties (Diamond 1992). Some discussion on compliance to performance and service levels was also evident (Girard 1997; Ragowsky & Stern 1995).
The research, however, focused on alternate aspects of the legal and regulatory environment and found that business units sufficiently large enough to establish proprietary capacities also considered the use of third parties, so as to shift accountabilities for traversing the legal and regulatory environment. Moreover, these business units considered the third parties to be experts within their environments and, as such, were of the opinion that they had greater comprehension of the legal and regulatory frameworks and would, therefore, be able to negotiate these more efficiently and effectively then the business unit.

While noting that there was some discussion and evidence in the literature regarding the legal and regulatory environments, there was no focus on selecting third party providers in attempt to shift the accountabilities for negotiating the legal and regulatory frameworks. Research respondents stated that, particularly during the programs infancy, there was a degree of ignorance associated with the various off shore (non US) environments and this influenced the use of third parties – the perceived experts.

**Finding 2.7: Third party providers are used to minimise capital investments.**

The use of third party providers to mitigate or minimise up front capital investments was discussed frequently in the literature (Anonymous 1996; Anonymous 2000a; Bendor-Samuel 2000; Fuhrman 1999; Lacity & Hirscheim 1993; Quinn & Hilmer 1994; Shermach 1995; Thames 1992). Specific instances discussed accessing existing and emerging technologies, therefore, minimising capital investment (Fuhrman 1999), while other instances recounted access to exiting facilities and other infrastructure (Anonymous 1996). Further and of specific note for organisations using third parties in this regard, constructive accounting practices yielded improved financial standing on balance sheets and where net present value calculations informed the sourcing decisions (General Accounting Office [US] 1992; Lacity & Hirscheim 1993). Finally, in instances where strategic growth is desired, but the organisations size is insufficient to justify the necessary capital and other expenditures, outsourcing was denoted as a cost effective solution (Anonymous 1996).
The research findings suggested that larger business units considered the use of third party providers to minimise or mitigate capital investments, except where proprietary capital (infrastructure) is available. Where proprietary capacities exist, the decisions to use third parties were then based on other criteria. The smaller business units did not favourably consider third party service providers, as opposed to existing proprietary providers with associated infrastructure, to minimise capital investment. Decisions by these business units always considered a broader range of criteria. However, proprietary capacities were favourably considered along the risk, contingency, flexibility and change dimensions.

Information in the literature was relatively consistent with the research findings. There were various nuances specific in each, such as the financial accounting benefits noted in the literature and the variances in approaches used by larger versus smaller business units in the research, but the general conclusions were similar.

5.1.3 Findings and contributions associated with research issue 3

What influences the technology solutions employed and why?

The third research issue inquired about the development and performance of the technology solutions used throughout the evolution of the program. The research issue explored how the design and implementation strategies were influenced and by whom. Refer to table 5.3 for a summary of the findings and contributions associated with research issue 3.

Table 5.3. Findings and contributions associated with research issue 3

<table>
<thead>
<tr>
<th>No.</th>
<th>Findings</th>
<th>Explicit in Literature</th>
<th>Explicit in Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Third party solutions (infrastructures and capacities) are used during proof of concept or pilot phases.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>3.2</td>
<td>Business unit representatives influence the use of third party solutions (infrastructures and capacities) during proof of concept or pilot phases to minimise capital investment and risk, traverse complex legal and regulatory environments and to reduce time to market.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>3.3</td>
<td>Solutions used for proof of concept or pilot phases are</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
considered suboptimal post-performance against service levels, quality and stability of the telecommunications and technology infrastructures and a demonstrated capacity to maintain operations are key influences driving alternative solutions.

Source: developed from the research protocols (case study and interview).

Finding 3.1: Third party solutions (infrastructures and capacities) are used during proof of concept or pilot phases.

According to the literature, organisations do leverage third party service providers to access existing technology and telecommunications solutions (King 1995; Pappalardo 1996). The need to continually manoeuvre around rapidly changing technologies is a key driver of sourcing decisions (Atkinson 1985; Imrie 1994; Huber 1993). Additional flexibility is also developed when leveraging third parties, because the cost of acquiring rapidly developing components, systems and technologies is diminished (Carlson 1989; Harrison 1994). The trade off between lower production costs generated through supplier leverage (economies of scope and scale, quantity discounts, focus on core business, access to new and lower cost technology) and higher monitoring costs is also augmented through this process (Lewis & Sappington 1991). In these circumstances, the organisation divests the need to continually update its technology and telecommunications solutions and relies on the third party who is often able to spread the costs across a number of customers (Bendor-Samuel 1999).

The research concluded that third party solutions are used during proof of concept or pilot phases and, in fact, beyond. During the program’s infancy, all service optimisation initiatives were approached as ‘proof of concepts’ and the business units elected to use third parties who had existing technology and telecommunications solutions. Moreover, only third party services providers who had existing connectivity between their servicing locations in India or the Philippines and the sending locations in the US and, later Canada, the UK and Australia, were considered. The research found that the benefits of this approach included reduced time to market, ease of implementation, minimisation of capital investment and leveraging third party service provider solutions to shift risk.
While the literature confirmed that organisations do use third party service providers to minimise capital investments, access existing technology and telecommunications solutions and to divest the need to continually manoeuvre between existing and emerging technologies, there was no evidence that this is only done during proof of concept or pilot phases. Conversely, the research found that the use of third party solutions was originally premised on the perceived benefits identified immediately prior and intimated that these would transition post proof of concept. However, the research also revealed that no subsequent effort was expended in transitioning from the proof of concept to more holistic ‘business as usual’ solutions.

Finding 3.2: Business unit representatives influence the use of third party solutions (infrastructures and capacities) during proof of concept or pilot phases to minimise capital investment and risk, traverse complex legal and regulatory environments and to reduce time to market.

The literature indicates that organisations leverage third party service providers to access existing technology and telecommunications solutions, negating the need to directly invest in new capital and reducing time to market (King 1995; Pappalardo 1996). In this scenario, the organisation also divests the need to continually assess (Atkinson 1985; Imrie 1994; Huber 1993) and potentially procure and implement new and rapidly developing technology and telecommunications products and services (Carlson 1989; Harrison 1994). Similarly, organisations sourcing their call center capabilities also mitigate the need to recruit, staff and run their centers, further diminishing up front investments (King 1995; Pappalardo 1996).

It was concluded that successful sourcing decisions required a mix of political and technical competencies (Lacity & Willcocks 1998). As a result and regardless of the factors and motives considered, sourcing decisions are progressively being made at more senior levels within organisations and often include the Chief Information Office (CIO), the Chief Financial Office (CFO) and the Chief Executive Officer (CEO) (Kakabadse & Kakabadse 2000). In fact, in a review of 48 IT outsourcing decisions with discernable cost outcomes, it was found that 29% were sponsored by senior executives, 40% were sponsored by senior information technology managers and 31% were jointly made (Lacity & Willcocks 1998). Of these, it was further
found that when information technology sourcing decisions were jointly made between senior executives and information technology managers, cost savings were achieved more frequently than either group making the decisions on their own (Lacity & Willcocks 1998).

The research findings indicate that the business unit representatives influenced the technology and telecommunications solutions employed during the proof of concept phases. The findings also suggest that this approach would continue until the technology and telecommunication solutions become ‘plug and play’ like. Moreover, in the absence of commodity type solutions, the business unit representatives will continue to contribute to and influence the technology and telecommunications solutions employed.

Business unit representatives engage directly with the technology subject matter experts to influence the solutions. The perceived benefits of this approach included reduced time to market, ease of implementation and minimisation of capital investment and leveraging third party service provider solutions to shift risk. In addition, much of the implementation risk is shifted to the third party service provider, along with on going operation and support of the technology and telecommunications solutions. Similarly, accountability for legal and regulatory compliance is also vested with the third party, negating the need for the procuring organisation to invest in or focus on areas that are clearly outside of their core business.

For the most part, information in the literature is consistent with the findings associated with this research. Business unit representatives do influence the use of third party solutions (infrastructures and capacities) during proof of concept or pilot phases to minimise capital investment and risk and to reduce time to market. However, there is no evidence of business unit representatives influencing the use of third party service providers in order to shift the responsibilities or accountabilities of managing the complex legal and regulatory environments in the literature.

**Finding 3.3:** Solutions used for proof of concept or pilot phases are considered suboptimal post - performance against service levels, quality and stability of the
telecommunications and technology infrastructures and a demonstrated capacity to maintain operations are key influences is driving alternative solutions.

There was no explicit evidence in the literature to suggest that solutions used during proof of concepts or pilots were considered suboptimal post implementation, particularly with regard to the ‘entire’ solution. However, there was an abundance of evidence suggesting that various aspects of the solutions required continual review and focus – for example, the literature suggests that organisations continually focus on the reduction of technology and telecommunications costs, improving service and performance, enhancing resource availability, more efficiently and effectively integrating services, developing new business opportunities, increasing solution flexibility, focusing on core competencies and risk management, among others (Read 2001; Spiegelman 2000; Thames 1992; Turek 2000a).

The research findings indicate that the proof of concept solutions were originally and specifically commissioned to minimize capital investment, mitigate risk and reduce lead times, while feasibility of the ‘servicing’ capacities were determined. Each proof of concept, however, was successful and the associated business units aggressively added more volume to yield the associated benefits.

The research also found that the proof of concept technology and telecommunications solutions were expanded to support the growth and not redesigned or reengineered to meet the likely point of arrival volumes and expectations. As such, the ‘off-shore servicing environment’ was developed in a piece meal fashion and with little consideration of the costs, benefits and vulnerabilities associated with the same. Moreover, the complex suite of technical solutions required greater levels of monitoring and support, did not enable quantity and volume discounts to be realised and were found to be substantially less flexible with regard increasing and decreasing volumes, shifting volumes between service providers and the like. The research revealed that these conditions, in culmination, occasionally resulted in performance and service level deficiencies (including response time and call quality) caused through technology and telecommunications systems stability and availability.
While the literature indicated a need to focus on the continual improvement of the solutions from technical and non-technical aspects, there was no information suggesting that the solutions used during the initial phases (start up or proof of concept) were considered suboptimal post implementation. In fact, the same holds true beyond implementation and includes iterations of increased growth of the servicing capacities. The research findings, however, do suggest that the proof of concept solutions are considered suboptimal post implementation, although the solution beneficiaries were more focused on enhancing each of the existing solutions, as opposed to reengineering on a holistic basis. The latter point was underpinned by the diversity of participating business units and premised on the fact that each were measured separately on profit and loss. In fact, there is some evidence to suggest that a holistic approach is more difficult because of the funding mechanisms in place and applicable to each of the participating business units.

5.1.4 Findings and contributions associated with research issue 4

How do the existing technologies solutions perform and are they optimal?

The fourth research issue was concerned with the technology and telecommunications solutions implemented during and beyond the initial phases. In particular, the performance of the solutions implemented during the proof of concept phases and those currently supporting the program were examined. Refer to table 5.4 for a summary of the findings and contributions associated with research issue 4.

Table 5.4. Findings and contributions associated with research issue 4

<table>
<thead>
<tr>
<th>No.</th>
<th>Findings</th>
<th>Explicit in Literature</th>
<th>Explicit in Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>The existing technologies solutions, which were commissioned to support the proof of concept or pilot initiatives, perform as expected, although suboptimal from telecommunications bandwidth, availability and service restoration perspectives.</td>
<td>No</td>
<td>To some extent</td>
</tr>
<tr>
<td>4.2</td>
<td>The proof of concept or pilot solutions meet most (approximately 70%) stakeholder expectations (performance and cost) by function, but not for the program or portfolio.</td>
<td>No</td>
<td>To some extent</td>
</tr>
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<tr>
<td>4.3</td>
<td>Telecommunications capacities provisioned for the proof of concept or pilots were considered suboptimal from availability and utilization perspectives, along with the problem resolution support provided by the third party service providers.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>4.4</td>
<td>The existing technology solutions are considered inflexible with regard to telecommunications bandwidth variations.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>4.5</td>
<td>The need to provision additional (between 60% and 100%) telecommunications capacities on alternate cable routing systems leveraging different originating and terminating exchanges (local, national and international telecommunications exchanges) and using diverse telecommunications carriers is considered necessary, but suboptimal.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>4.6</td>
<td>Proprietary solutions enable business unit functions, as opposed to ‘enterprise’ operations.</td>
<td>No</td>
<td>To some extent</td>
</tr>
<tr>
<td>4.7</td>
<td>The use of ‘public’ telecommunications systems is preferable and should include all necessary diversity and capacity.</td>
<td>To some extent</td>
<td>To some extent</td>
</tr>
<tr>
<td>4.8</td>
<td>Common implementation and operational support teams are considered ideal.</td>
<td>No</td>
<td>To some extent</td>
</tr>
<tr>
<td>4.9</td>
<td>Business and utility stakeholders were poorly placed to manage demand on the technology products because of a lack of understanding about the technology solutions.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>4.10</td>
<td>Business and utility stakeholders consider telecommunications to be a utility and prefer that bandwidth is accounted for like a commodity (such as electricity), as opposed to the existing point to point approach.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: developed from the research protocols (case study and interview).

Finding 4.1: The existing technologies solutions, which were commissioned to support the proof of concept or pilot initiatives, perform as expected, although suboptimal from telecommunications bandwidth, availability and service restoration perspectives.

The literature indicates that proof of concept approaches allow organisations to examine feasibility prior to making significant investments (Anonymous 1997c; Hoare 1997; Read 2001). The research findings, however, varied between the business units. In the large majority of cases the proof of concept solutions exceeded expectations, while others only met some.

Key shortfalls identified in the research findings included poor utilisation of bandwidth, service availability and service restoration timeframes. Of specific note was the fact that technology contingencies were often established post proof of
concept, although relief varied between business units from a service level standpoint. Moreover, minimal investments were made in the technologies and telecommunications infrastructures during the proof of concept phases and service level relief varied between the providing and several consuming parties.

There was no evidence in the literature to suggest that the technical solutions supporting the proof of concepts performed better or worse than expected. However, the research findings suggested that the majority of proof of concept solutions actually exceeded expectations, although not all.

**Finding 4.2: The proof of concept or pilot solutions meet most (approximately 70%) stakeholder expectations (performance and cost) by function, but not for the program or portfolio.**

In the literature examined, there was no information about the perceived performance of proof of concept or pilot solutions, particularly with regard to stakeholder expectations. The research findings, however, indicated that the proof of concept or pilot solutions implemented met or exceeded internal customer expectations on 70% of occasions.

**Finding 4.3: Telecommunications capacities provisioned for the proof of concept or pilots were considered suboptimal from availability and utilization perspectives, along with the problem resolution support provided by the third party service providers.**

There was no evidence in the literature examined suggesting that telecommunications solutions implemented during proof of concept or pilot initiatives were considered suboptimal from availability and utilisation perspectives post. Further, there was no information indicating that third party service providers had challenges associated with problem resolution or service restoration.

The research findings suggested that the technology and telecommunications solutions delivered during the proof of concepts were suboptimal post, from availability, utilisation and support perspectives. Network resilience at proprietary
sites and ownership of service restoration activities were seen as key weaknesses, particular in the case of the third parties with regard to the latter.

While proof of concept or pilot approaches are discussed in the literature, there is no information presented on the performance of the technology or telecommunications solutions. As such, there is no information offered on the strengths and weaknesses of the various solutions implemented. The research findings did reveal key deficiencies in the solutions implemented during proof of concept or pilot approaches. In particular, comments on the performance of the solutions were offered and indicated that availability, utilisation and support were key shortfalls. However, this perspective contradicts the majority of findings in Conclusion 4.2, which indicated that 70% of the technology and telecommunications solutions deployed in support of proof of concept or pilot solutions exceeded customer expectations. Complete triangulation could not be achieved as a result, but the contrast in findings is likely to be associated with the variation in findings associated with conclusion 4.2.

**Finding 4.4: The existing technology solutions are considered inflexible with regard to telecommunications bandwidth variations.**

The literature revealed that organisations are increasingly sourcing from off shore service providers, because of deregulation and decreasing telecommunications costs (Burroughs 1993; Chalos 1994; Dash 2001; Patane & Jurison 1994; Turek 2000a). In fact, reports suggest that telecommunications circuit costs are dropping by as much as 60% per annum (Dash 2001). However, the literature also suggests that telecommunications circuits are being progressively considered as technology products or commodities and accounted for on the basis of consumption (Kakabadse & Kakabadse 2000; Narin 1999).

The research findings concluded that telecommunications circuit availability (bandwidth) was inflexible and delimited opportunities. Moreover, the findings suggested that the ‘servicing network’ could not be optimised on the basis of demonstrated performance, because the long lead provisioning times associated with the procurement and implementation of new telecommunications circuits,
circumvented the ‘carrot and stick’ options available to the business units to reward exception performance and penalise suboptimal performance. Further, it was found that telecommunications bandwidth is viewed as a commodity and should be available on demand. Respondents stated that variations in bandwidth, increases and decreases, should be commissioned dynamically and immediately and the use of both terrestrial and non terrestrial mediums should be used.

While not explicitly obvious in the literature, the notion of bandwidth on demand was espoused, particularly with regard to the commoditisation of telecommunications circuits. However, there was no evidence suggesting that existing solutions lacked flexibility with regard to the same. In fact, the literature basically intimated that progressively lowering bandwidth costs made off shore sourcing more attractive. The research findings, however, specifically noted the lack of flexibility associated with varying telecommunications bandwidth. The piece meal approach to commissioning telecommunications circuits, coupled with the long lead times associated with commissioning or decommissioning circuits, underpinned these findings.

Finding 4.5: The need to provision additional (between 60% and 100%) telecommunications capacities on alternate cable routing systems leveraging different originating and terminating exchanges (local, national and international telecommunications exchanges) and using diverse telecommunications carriers is considered necessary, but suboptimal.

There was no information offered in the literature that suggested organisations needed to implement additional telecommunications circuits to for redundancy reasons. As a result, there was no information about whether the existing telecommunications solutions were optimal or not.

The research findings revealed an explicit need for additional telecommunications circuits to be provisioned for service availability reasons. Moreover, redundant telecommunications circuits that traverse alternate physical cables, routes, exchanges and are, where available and applicable, provided by alternate carriers, are necessary to ensure service availability. It was found that these redundant capacities were
generally in the order of 60% to 100% of the required bandwidth and that stakeholders considered this both necessary, but suboptimal. Of particular note was the separation or distinction of the primary and redundant telecommunications circuits and the fact that the consumers did not want to distinguish between the two.

**Finding 4.6: Proprietary solutions enable business unit functions, as opposed to ‘enterprise’ operations.**

There was limited information available in the literature regarding the type and, or, performance of the technology and telecommunications solutions supporting sourcing strategies. As a result, there was no commentary on the utility of these sorts of solutions and the business or other constituents they serve. However, the research findings suggest that proprietary solutions were designed and implemented in support of specific functions. Moreover, the solution design considered the existing and new project requirements of the business unit, in isolation of the requirements and future requirements of other business units within the organisation. Hence, each business unit funded a solution to support their proof of concept or pilot, with little consideration of the leverage opportunities that existed when the requirements were considered holistically.

**Finding 4.7: The use of ‘public’ telecommunications systems is preferable and should include all necessary diversity and capacity.**

There was sufficient evidence in the literature to suggest that public telecommunications systems are both preferable and abundant, with multiple global carriers (suppliers or vendors) offering products and services, including ‘value added’ services, to organisations pursuing sourcing strategies (Anonymous 1996; Dash 2001; Pappalardo 1996). In fact, some proponents argue that the general deregulation of the telecommunications sectors, coupled with expanding submarine cable capacities and lower access and operational costs, are propagating the global sourcing arena (Burroughs 1993; Dash 2001; Pappalardo 1996).

The research findings revealed two significant points with respect to the use of private (publicly available telecommunications systems dedicated to the organisation
for their explicit use) and public telecommunications systems. The first suggested that the private solutions should be leveraged more extensively and that common proprietary infrastructures should be leveraged holistically, regardless of the consuming business unit or service function.

The second indicated that the use of public telecommunications systems if preferable, because the accountability for availability, capacity, redundancy and the like is shifted to the telecommunications carrier. Similarly, the public systems facilitate a lower total cost of operation, because the physical infrastructures are shared among a greater numbers of consumers. However and with respect to this point, the research found that the use of public systems is somewhat dependant on the suitability of the service function and the assurance of the telecommunications carrier to guarantee the performance (for example, network responsiveness, availability, quality and the like).

Common themes and findings were evident in the literature and the research. However, the conclusion notes that explicit use of public telecommunications systems, particularly where service guarantees are available, is preferable from an accountability perspective.

**Finding 4.8: Common implementation and operational support teams are considered ideal.**

In the literature examined, there were no comments made or positions taken on the use of common implementation and, subsequent, operational support teams. The research, however, indicated that the users or ‘consumers’ of the technology and telecommunications solutions, advocated the use of common implementation and post implementation support teams. Moreover, the continued use of the resources responsible for all facets of the technical designs through implementations were considered ideal. This approach mitigated the need for other resources to be trained and educated in the technical aspects of the systems until they had been ‘run or bedded in’.
Finding 4.9: Business and utility stakeholders were poorly placed to manage demand on the technology products because of a lack of understanding about the technology solutions.

The complexity of the technology and telecommunications solutions supporting front office and back office servicing was noted in the literature (Anonymous 2000a; Bendor-Samuel 1999; Shermach 1995; Spiegelman 2000). However, there was no evidence suggesting that business and other relevant stakeholders were poorly placed in terms of understanding the technology products and services and how these could or should be consumed from an efficiency and effectiveness standpoint.

The research findings indicate that the business constituents lacked sufficient understanding of the technology products and services and, as such, were poorly placed to manage consumption of the same. As a result, the consumption of telecommunications bandwidth, among other technology products and services, was poorly managed and subsequently delayed new opportunities to migrate additional function and, or, volumes. Stakeholders consequently perceived the technologies and telecommunications solutions to be inflexible.

While the complexity of the technical solutions is recognised in the literature, there is no information indicating that insufficient comprehension leads to poor management of technology product and service consumption. The research, however, clearly identifies the implications and concludes that business and utility stakeholders would be much better places to manage demand if they had a better understanding of the technology products and services.

Finding 4.10: Business and utility stakeholders consider telecommunications to be a utility and prefer that bandwidth is accounted for like a commodity (such as electricity), as opposed to the existing point to point approach.

The commodification of information technology products and services is discussed in the literature, particularly with regard to core business and consumption (Kakabadse & Kakabadse 2000; Narin 1999). There is also evidence that indicates that a variety of related functions, including call centers, data (back office) centers,
and computer and telecommunications networks are being commoditised (Kakabadse & Kakabadse 2000). In fact, some of these products and services are already being charged on the basis of consumption, for example, telecommunications charged on minutes consumed or kilobytes transferred (Narin 1999). It is also argued that this commodification is driving organisations to re-focus on higher value areas (Murray & Kotabe 1999; Venkatraman 1997).

The research findings indicated that the existing methods of managing and accounting for the technology and telecommunications products and services were insufficient and suboptimal. Specifically, the inability to manage these products and services like utilities was considered to be a detractor, even though some were accounted for in this way. Moreover, the technology and telecommunications products and services were, in some part, charged for like utilities, although not based on consumption, which resulted in an inability to effectively manage the demand on the same. Finally, the utility model espoused also called from a common owner who would administer the consumption and accounting of these products and services centrally, assisting the organisation towards a ‘plug and play’ environment that would enable service providers to be commissioned and decommissioned quickly in response to service and performance.

The literature and the research findings were closely aligned. The former noting that the commodification of information technology products and services, as well as other functions related to this research, allowed organisations to re-focus on their core business competencies. While not reflecting the focus on core business in the same way, the research findings suggest that organisations are striving to simplify the methods and means in which technology and telecommunications products are accounted for and managed. This simplification and general progression toward ‘plug and play’ certainly support the notion that the provision of these technology and telecommunications solutions is becoming more routine and, therefore, unlikely to yield unique value to organisations. Moreover, the directions identified in the research support those found in the literature.
5.1.5 Findings and contributions associated with research issue 5

How should the technologies solutions perform and what factors should influence the design?

The firth research issue also focused on the technologies solutions, but from a design and performance perspective. Specifically, the inquiry focused on the performance expectations of key stakeholders and the factors they considered necessary in terms of designing solutions that would meet or exceed these. Refer to table 5.5 for a summary of the findings and contributions associated with research issue 5.

**Table 5.5. Findings and contributions associated with research issue 5**

<table>
<thead>
<tr>
<th>No.</th>
<th>Findings</th>
<th>Explicit in Literature</th>
<th>Explicit in Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>The ability to dynamically vary telecommunications bandwidths and intelligently route call volumes (such as customer calls) is considered a primary performance indicator.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>5.2</td>
<td>The ability to seamlessly migrate between servicing channels (such as voice response unit to customer service agent or from the internet to a customer service agent) is a primary design influence.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>5.3</td>
<td>The ‘virtual call center’ concept, where customers use one telephone number globally and are serviced by the next suitable customer service agent, is a key design attribute.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>5.4</td>
<td>Regardless of whether the data solution is proprietary or public, access nodes must be in reasonable proximity to servicing locations.</td>
<td>To some extent</td>
<td>Yes</td>
</tr>
<tr>
<td>5.5</td>
<td>The capability to route non time sensitive data, or time sensitive data during specific ‘network outages’, over the public internet is a key design consideration from both cost and business continuity perspectives.</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>5.6</td>
<td>Effective transportation of video is a key design influence, because of its progressive use in ‘remote’ training.</td>
<td>No</td>
<td>To some extent</td>
</tr>
<tr>
<td>5.7</td>
<td>The point of arrival voice and data solutions should be accounted for on the basis of consumption using metrics such as call minutes of kilobytes per second (kbps) transmitted.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
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</table>

*Source: developed from the research protocols (case study and interview).*

Finding 5.1: The ability to dynamically vary telecommunications bandwidths and intelligently route call volumes (such as customer calls) is considered a primary performance indicator.
The ability to dynamically vary telecommunications bandwidths was not found in the literature reviewed. However, the employment of flexible high speed multi-gigabyte telecommunications networks, using Ethernet ATM and fibre optic backbones, was discussed as an emerging solution for call center and back office servicing (Sewartz 1998), although compatibility and integration with existing infrastructures was propagated as a key consideration (Rockoff 1999). The ability to intelligently route calls to and between multiple service centers was also noted as an important requirement, particularly when leveraging some combination of on shore and off shore proprietary and third party capacities (Dash 2001; Marlin 1999; Rohde 1998). These ‘facilities’ enable more effective customer service, because calls can be quickly directed to the next available and suitable agent, regardless of the service center’s location (Marlin 1999).

The research findings indicate that the performance of the technologies solutions deployed in support of the service optimisation program is underpinned by the ability to dynamically vary telecommunications bandwidths and intelligently route call volumes. The dynamic variation in telecommunications bandwidths enables the competitive champion / challenger model to be exercised by allowing volumes to be shifted between performing and non performing service providers (dynamic in this sense means quickly, not immediately). Moreover, the performing service providers are rewarded with additional volumes and the poorer performing service providers have their volumes reduced – given both are paid, to some degree, on the volumes serviced, this has a direct impact on their bottom lines. Similarly, the ability to intelligently route calls the next available and suitable agent is a key customer satisfier and, as such, a primary performance indicator. According to the research findings the ‘systems’ must enable calls to be directed to the provider who is most ready and able to service the customer, regardless of location or distinction (proprietary or third party).

The research findings support the concept of intelligent call routing as described in the literature. However, additional information regarding the performance benefits that can be generated when bandwidth can be varied dynamically are revealed in the research findings and only marginally supported in the literature. In addition, the dynamic bandwidth variations enable the competitive champion / challenger model
to be leveraged to further support the effective and efficient provisioning of customer services and these aspects were not identified within the literature reviewed.

**Finding 5.2: The ability to seamlessly migrate between servicing channels (such as voice response unit to customer service agent or from the internet to a customer service agent) is a primary design influence.**

The was no information in the literature reviewed indicating a need for customers to enter the ‘servicing portal’ via one means and seamlessly manoeuvre to others in the same contact. However, the research findings indicate that this is an emerging requirement and a primary design consideration. The research suggests that customers should be able to initiate contact with the organisation via the internet, as an example, glean specific information and then swap to a voice response system or customer service agent to have other inquire handled. While these facilities are not yet in place, the business stakeholders believe the ability to traverse multiple servicing channels within a single contact, will result in better customer service and better support customer loyalty.

**Finding 5.3: The ‘virtual call center’ concept, where customers use one telephone number globally and are serviced by the next suitable customer service agent, is a key design attribute.**

In general, the literature related to this finding is the same as was reported for intelligent call routing in finding 5.1 and, as such, will not be repeated here. The research findings were also similar to those reported in finding 5.1, although more focused on a global ‘virtual call center’. Moreover, the findings associated with this research issue were focused on the ability for the next available and suitable agent to service the customer, as opposed to being able to shift volumes (calls) from those not performing as well as others. Hence, this finding is specifically related to the ability to service customers efficiently and effectively, as opposed to rewarding or punishing proprietary or third party providers. The research findings support information in the literature about the need for intelligent call routing, but the concept of a global virtual call center using both proprietary and third party providers is an addition.
Finding 5.4: Regardless of whether the data solution is proprietary or public, access nodes must be in reasonable proximity to servicing locations.

The literature indicated that worldwide deregulation of the telecommunications sectors, coupled with increased competition, the expansion of cable capacities and emergence of value added ‘infrastructure service providers’, is driving a trend toward the global expansion of public and private networks (Burroughs 1993). These expansions, to some degree, are also driven by reducing telecommunications costs and organisations who have established call centers and other servicing capacities in multiple countries, but retained key customer information sources centrally (Egan & Malloy 1998; Dash 2001; Moliteus 1999). These virtual private network solutions leverage multilateral arrangements between telecommunications carriers and allow seamless connectivity between participating countries (Burroughs 1993).

The research findings note that the expansion of global networks, regardless of whether they are public or proprietary, must enable access in the countries in which the servicing in being conducted. Access points in the servicing countries enable the ‘virtual call center’ concept, improve time to market and reduce costs, because the providers generate greater economies and can distribute the cost base across many customers.

While the literature and the research findings are aligned on the expansion of global telecommunications networks, only the latter indicates the need for these to be accessed in all countries in which servicing is being conducted to support the virtual call center concept.

Dynamic allocation of telecommunications bandwidth is a key attribute of the point of arrival solution for data transport, regardless of whether the bandwidth supports the proprietary or virtual (public) networks. However, sufficient access to proprietary network ‘nodes’ in relevant countries is an imperative for time to market, cost and security reasons.
Finding 5.5: The capability to route non time sensitive data, or time sensitive data during specific ‘network outages’, over the public internet is a key design consideration from both cost and business continuity perspectives.

In the literature reviewed, there was no information related to routing non time sensitive data via lower cost means, such as the public internet, to reduce costs. Nor was there any information related to routing time sensitive data via these same means when the usual methods are not available, that is, when the network is unavailable due to a service disruption. The research findings, however, indicated a need to design technology and telecommunications solutions to allow these options to be leveraged in appropriate circumstances.

In the first instance, the transport of non time sensitive data via the public internet, for example, will likely reduce operating costs, because these methods are inexpensive and do not require any specific investments on the part of the consuming organisation. The use of the public internet for the transportation of time sensitive data is also a viable proposition, particularly when the ‘usual’ methods are unavailable. This is premised on the notion that it is better to deliver the data a little late than not deliver it at all. In addition, some time sensitive data, such as specific financial transactions that must be posted within 24 hours of receipt, may not be that sensitive to the minor delays and, as such, this mechanism enables business continuity.

Finding 5.6: Effective transportation of video is a key design influence, because of its progressive use in ‘remote’ training.

There was no information about the transportation of video in the literature reviewed. However, the research findings noted that the transportation of video would become increasingly important as organisations continued to established servicing capacities abroad or away from their primary data centers. Identified as an adjunct to the implications of long lead times associated with the provisioning of telecommunications circuits, the transportation of video was deemed to be an emerging design requirement for training purposes. Moreover, video could be deployed from ‘central’ servers to facilitate, in some part, service center training well
before the technology and telecommunications solutions have been implemented. In addition, video, in this sense, would also enable global conferencing and effectively support communications across the servicing network.

**Finding 5.7:** The point of arrival voice and data solutions should be accounted for on the basis of consumption using metrics such as call minutes of kilobytes per second (kbps) transmitted.

Refer to finding 4.10, which compares and contrasts the information found in the literature with the research findings.

### 5.2 Conclusions about the research issues

The previous section (5.1) enabled the key themes in the literatures to be compared and contrasted with the findings of this research. The variations between the literature and the findings enable the contributions of this research to be exposed. However, the intent of this research was to generate theory about a contemporary phenomenon and to address the research issues and problem. As such, this section illustrates the conclusions associated with each of the research issues in preparation for section 5.3, which addresses the research problem.

#### 5.2.1 Conclusions about research issue 1

*What is a service optimisation initiative and why do organisations pursue these in Asia?*

This research issue has two key dimensions. Firstly, it seeks, within the context of this exploration, to define service optimisation and then it focuses on why organisations pursue these initiatives in Asia. While the findings and contributions associated with research issue 1 extend beyond these areas, this section will focus on the conclusions specific to the research issue.
Conclusion 1.1. Service optimisation constitutes the strategic engagement and use of on-shore and off-shore proprietary and third party capacities for the effective and efficient provision of non core call center and back office customer services.

Conclusion 1.2. Organisations establish servicing capacities in Asia to address workforce, competitive advantage, economic, risk, growth and operational issues and opportunities. Various locations within Asia host abundance of providers who have access to low cost, highly educated, multi-lingual resources who are prepared to work day shift and night shift to cover business and other relevant hours of customers in other countries and time zones. The subsequent reduction in operating costs allows for investments in strategic growth areas enabling competitive advantages to be achieved or enhanced. Organic servicing growth can also be achieved quickly and with little to no capital investment by leveraging existing third party and proprietary capacities, who are often able to enhance customer loyalty and delivery better performance due to specialisation.

5.2.2 Conclusions about research issue 2

Which Asian markets are leveraged and what factors influence the decisions to utilise third party versus proprietary service providers?

With respect to the pursuit of service optimisation initiatives, this research issue concentrates on the Asian markets used currently and those being considered for subsequent efforts. It also focuses on the factors that influence the selection and use of proprietary versus third party service providers. While the findings and contributions associated with research issue 2 extend beyond these areas, this section will focus on the conclusions specific to the research issue.

Conclusion 2.1. India and the Philippines are primary sourcing markets for service optimisation efforts, because both have an abundance of suitably capable low cost English speaking people resources and some whom are unemployed or underemployed. In addition, a large number of companies have been set up to provision these sorts of services in India and the Philippines and, with respect to the
former, these capacities attract taxation relief from the government for attracting volumes and revenue from abroad (enhancing their competitiveness). Mexico and Canada were also being used, although the significant focus remained on Asia.

**Conclusions 2.2.** Organisations will consider sourcing customer servicing capacities from China and other low cost markets in Asia, once a competitive environment is in place, with sufficient providers who have demonstrated their capacity to delivery the relevant services efficiently and effectively. Other markets outside of Asia, including Argentina, Brazil, Scotland and specific locations within the Caribbean were also being considered.

**Conclusions 2.3.** Organisations were prepared to source specific percentages of commodity (generally between 33% and 50%) and non-commodity (up to 33%) servicing functions from abroad (outside the originating countries), regardless of whether they are third party or proprietary.

**Conclusion 2.4.** Organisations select third party versus proprietary providers on the basis of risk, capability, readiness, cost and performance. Managing geopolitical risk requires a division of volumes between proprietary and third party capacities, because both are vulnerable to some degree (see conclusion 2.3 for target divisions). Capability is measured on demonstrated performance to date and relates to readiness, which is the ability to commission the ‘new’ volumes faster than competitors (proprietary or third party) and this often influences costs and returns. Moreover, ‘slack’ within existing capacities can be leveraged more readily than capacities that need to be developed and consequently yield a time to market advantage as well – further enhancing the business case. Sourcing servicing capacities from third parties also enables organisations to minimise new capital investments to accommodate organic or other growth, while concurrently divesting the need to traverse the complex legal and regulatory environments.
5.2.3 Conclusions about research issue 3

What influences the technology solutions employed and why?

The third research issue was concerned with the technology solutions implemented in support of the service optimisation efforts. In particular, it focused on how the technology solutions were influenced.

Conclusion 3.1. Proof of concept or pilot technology solutions are implemented each time a new service provider is added. Feasibility is then examined for three to six months and, pending satisfactory performance, additional volumes are added. The proof of concept solutions remain in place and are expanded to cater for the additional volumes.

Conclusion 3.2. Key business stakeholders influence the proof of concept technology solutions supporting service optimisation initiatives, particularly when leveraging third party service providers. In particular, the influences concentrate on minimising capital investments, risks and the period in which feasibility is determined. Of specific note, is the requirement for the third party service providers to have or establish points of presence in and connectivity to the countries in which the volumes originate (the sending end) – this strategy shifts the burden of capital investment (hardware, telecommunications circuits etc) to the supplier and consequently mitigates the majority of financial risk. In addition, legal and regulatory compliance also rests with the third party and, where connectivity between the sending and receiving countries is already in place, feasibility can be determined faster, because the long lead times associated with commissioning international telecommunications circuits is removed.

Conclusion 3.3. Key business stakeholders consider the proof of concept technology solutions to be suboptimal once feasibility has been determined and the capacities have been ramped up. Moreover, once the third party is facilitating the desired volumes, the solutions are then considered to be insufficient with regard to
performance against service levels (including resilience to telecommunications outages), cost and quality (from a call perspective).

5.2.4 Conclusions about research issue 4

How do the existing technologies solutions perform and are they optimal?

This research issue focused on the performance of the existing technology solutions. The performance of the solutions implemented during the proof of concept phases and those currently supporting the program were examined. While the findings and contributions associated with research issue 4 extend beyond these areas, this section will focus on the conclusions specific to the research issue.

Conclusion 4.1. (also see conclusion 3.1.) Proof of concept or pilot technology solutions are implemented during and beyond the development of new third party servicing capacities and perform in alignment with expectations with regard to each site in isolation. Moreover, the solutions enable the capacities to operate and for feasibility to be determined on a site by site basis. However, when considered collectively, that is, across the entire program, telecommunications capacities, service availability and service restoration are viewed as suboptimal.

Conclusion 4.2. The telecommunications capacities provisioned during and beyond the proof of concept phases are suboptimal from availability, utilisation and support perspectives. Somewhere between 60% and 150% of the telecommunications capacities are commissioned for redundancy and cannot be leveraged, in general, for servicing customers.

New volume requirements most often require additional telecommunications circuits to be provisioned, because these are costly and no put in place until required, resulting in significant delays. These circumstances also reduce opportunities to shift volumes between service providers as reward or punishment for ‘good’ performance, such as servicing customers within prescribed targets and gaining top customer service ratings (feedback from customers and internal monitoring).
Finally, restoring service outages is problematic, because the organisation and the service provider are accountable for some pieces of the end to end technology solutions and both need to interact with multiple telecommunications and component suppliers. Fault identification and rectification inherently involves mature support processes and well defined roles and responsibilities, which do not exist during early phases.

**Conclusion 4.3.** Business units orchestrate isolated technology solution to support their functions, even when these leverage proprietary capacities.

**Conclusion 4.4.** Relevant business and utility stakeholders are unable to effectively manage the consumption of technology solutions (products and services), because the lack the sufficient understanding of the drivers. Specifically, they lack understanding of the full suite of technologies products and services required to enable the functions to be facilitated by off shore (non US, UK etc) providers, resulting in insufficient information to manage demand.

5.2.5 **Conclusions about research issue 5**

*How should the technologies solutions perform and what factors should influence the design?*

Research issues 3 and 4 concentrated on the development, implementation and ongoing operation of the technology solutions deployed in support of the program, with specific interests in design influences and ongoing performance. This research issue was more theoretical in nature and sought to reveal the ideal design influences and performance expectations from the stakeholders involved. Conclusions associated with this research issue reveal that stakeholders are less inclined to influence the design of the point of arrival solutions, but certainly want to describe the characteristics associated with the same. While the findings and contributions associated with research issue 5 extend beyond these areas, this section will focus on the conclusions specific to the research issue.
**Conclusion 5.1.** Public telecommunications networks are low cost, robust (self healing, due to built in redundancy) and extensive and should be exploited when designing solutions.

**Conclusion 5.2.** Publicly available and similar managed service solutions offer significant performance benefits including flexibility, scalability and are accounted for ideally (on the basis of consumption, allowing demand to be more effectively managed).

**Conclusion 5.3.** Where public telecommunications or managed service solutions are not available, proprietary solutions mirroring and leveraging these should be developed.

**Conclusion 5.4.** Technical solutions should dynamically leverage lower cost alternatives where transactions are not time sensitive or where the usual or substantive solution has failed (eg use of the public internet for batch processing).

**Conclusion 5.5.** Technology solutions perform ideally when customers can call one number globally and be directed to the next available and suitably qualified agent. In addition and where the initial point of entry is not via phone, ideal solutions enable customers to manoeuvre between various servicing channels (fax, web, voice response, agent etc) in the same contact.

### 5.3 Conclusions about the research problem

“Why do global financial organisations leverage Asian based suppliers for the provision of front office and back office services and how effective are the technologies solutions supporting these?”

The previous section distilled, from the findings and contributions, the conclusions associated with each of the research issues. This section leverages those conclusions
and other information presented in this thesis to address the research problem. Firstly, the reasons or drivers influencing the use of Asian based suppliers for the provision of call center and back office services are revealed, along with the implications for organisational strategy. In particular, performance, economics, core business, competitive advantage and sourcing are discussed. Strategic sourcing is then considered in light of the aforementioned, as well as the utility of leveraging others for growth, geopolitical risk management and legal and regulatory compliance. The technical solutions supporting these efforts are then discussed, from performance and cost perspectives, and the shortfalls disclosed. Finally, redesign and design propositions applicable to the existing and future technical solutions are presented, illustrating how these better support the service optimisation proposition.

In markets like the US and UK, service center jobs are in increasing demand, require incumbents to work in rotating shifts to support 24 x 7 operations and progressively competing with higher paid alternatives (Anonymous 2000a; Bird 2000; Read 2001). Although compensation levels have been adjusted, the increasingly competitive job markets, coupled with the inconvenience of working in rotating shifts, continue to drive service center attrition rates beyond 30%, with incumbents generally moving out of these roles within 12 to 18 months (Turek 2000a).

The consequence of this degree of churn is also broader reaching, with costly recruitment, selection and training further impacting on the organisation’s bottom line (Bendor-Samuel 2000; Bird 2000; Spiegelman 2000). While these operations and associated activities have historically been done internally, organisations are re-focusing on their core business and competencies (Bendor-Samuel 1999; Quinn & Hilmer 1994; Turek 2000a) and sourcing their non core functions from abroad (Anonymous 2000a; Shermach 1995; Tehrani 1996).

Some proponents have propagated sourcing as the panacea for organisations striving to concentrate on their core business (Shermach 1995). In fact, some argue that unless the organisation’s core business is operating service centers, than handling the hundreds of thousands of calls and managing the associated technology and
logistical challenges, like recruitment, selection and training, is a significant charge (Bendor-Samuel 2000; Bird 2000; Spiegelman 2000; Turek 2000a).

However, other commentators argue that functions that have traditionally been performed in house and are critical to business performance are core activities and enable growth and innovation, along with current and potential competitive advantages (Alexander & Young 1996). For example, there are emerging trends and opportunities in the call center environment that allow organisations to cross sell and up sell their products and services and, in the case of global financial organisations, these are certainly core activities (Clayton 1998; Walker 1996).

Recognising the benefits of retaining traditional service center activities internally, but balancing these with the resident problematics, global financial organisations have developed a strategic approach to insourcing and outsourcing (Venkatraman 1997). This sourcing strategy allows organisations to leverage proprietary capacities that contribute to their core business and distinguish them from their competitors (Prahalad & Hamel 1990; Mintzberg & Quinn 1996), while concurrently yielding the benefits from third parties who specialise in the relevant area (Quinn & Hilmer 1994).

Specifically, the strategic sourcing arrangement reduces capital expenditure and enables a competitive, champion / challenger, environment to be established, while diversifying geopolitical risk and accessing third party facilities and resources, industry and service delivery experience and new methods and approaches that have been effectively tested (Erwin 1992). However, organisations specialising in the provision of service center functions that are operating in markets like the US and UK are confronted with the same operational and logistical dilemmas experienced by those who do not. Organisations consequently looked elsewhere and found a different set of conditions in Asia. In fact and with respect to the provision of front office and back office services, global financial and other organisations have engaged and leveraged Asian based suppliers since the early 1990s (De Kruif 2001).

Various locations within Asia host an abundance of providers who have access to low cost, highly educated, multi-lingual resources who are prepared to work day
shift and night shift to cover business and other relevant hours associated with customers in other countries and time zones (Dash 2001; Patane & Jurison 1994). Service providers resident in countries like India and the Philippines also offer superior economics in the form of lower operating costs and financial slack (Ang & Straub 1998), although the technology and telecommunications environments are more costly, less mature and less stable.

Leverage points applicable to third parties who specialise in the provision of call center and back office services, including economies of scale, price flexibility, market and operational expertise, scalability and access to capital and other resources, enable lower operating costs (Bendor-Samuel 2000; Shermach 1995). Consequently, production and transaction costs are lowered through general (including labour) arbitrage and culminate in financial slack, which can be deployed in strategic and competitive growth areas (Ang & Straub 1998).

Similarly and particularly where third party service providers are engaged, little to no capital investment is required on the part of the ‘engaging’ organisation, allowing those funds to be invested elsewhere, while facilitating organic and non organic growth with little impact on the bottom line (Anonymous 1996; Quinn & Hilmer 1994). Sourcing in this sense, facilitates reduced capital expenditures, increased capacities (scalability), improved disaster recovery and around the clock service at a fraction of the cost of establishing and maintaining additional in house capacities (Anonymous 1996; Fuhrman 1999; Thames 1992).

Leveraging multiple proprietary and third party service providers also diversifies operational and geopolitical risks (Quinn & Hilmer 1994; Read 2001; Spiegelman 2000; Thames 1992; Turek 2000a; Venkatraman 1997). This strategy supports the notion of divesting non core business, while balancing the need to leverage new and emerging opportunities, from a risk management perspective (Anonymous 2000a; Mullin 1996; Prahalad & Hamel 1990; Quinn 1992; Quinn & Hilmer 1994; Thames 1992). Moreover, routine or commodity like call center and back office services can be sourced from third parties, while specific call center and back office services that enable cross selling and up selling opportunities can be retained internally (Clayton 1998; Walker 1996).
Maintaining existing capacities and operations in the volume ‘originating’ markets and strategically augmenting these with off shore (non US, UK etc) proprietary and third party capacities further mitigates the operational and other risks associated with the costly, heavily regulated, less mature and more vulnerable telecommunications environments (Burroughs 1993; Moliteus 1999; Turek 2000b; Yorgey 1998). While these strategies yield many benefits and reduce some operational and geopolitical risks, organisations are consequently challenged to select suitable partners who can deliver their services and maintain customer loyalty and satisfaction (Bendor-Samuel 2000; Kakabadse & Kakabadse 2000; Shermach 1995).

The selection and engagement of suitable third parties if often underpinned by a proof of concept or pilot approach, where the two organisations enter into a temporary relationship that will develop into a longer term relationship if the performance, economic and other criteria are achieved. These proof of concept approaches allow each organisation to progressively refine the conjoint processes and points of integration in a convergent fashion, while concurrently assessing performance and capability. As an adjunct, the procuring (foreign) organisations are able to shift the burden or accountability for compliance to the ‘resident’ third party, who will need to traverse the legal and regulatory milieu.

Primary call center and back office sourcing markets like India are also among the most heavily regulated from labour and telecommunications perspectives (Turek 2000b). As such, organisations sourcing in these environments influence the technology solutions installed during the period in which feasibility is determined and sometimes beyond. For example, organisations may solicit ‘expressions of interest’ or release a ‘request for proposal’ within a marketplace, mandating respondents have two or more points of presence (for redundancy reasons) in and telecommunications connectivity to the country(s) the volumes will be sent from, such as the US or UK. This strategy removes the need for the procuring organisation to manage the legal and regulatory requirements, it minimises capital expenditures, reduces time to market and mitigates risks associated with a failed or unsuccessful effort.
These risk averse methods enable organisations to enter new markets quickly and at little expense. However, feasibility is most often confirmed within three to six months and organisations aggressively add new volumes to maximise the benefits. The technology and telecommunications solutions are consequently extended through the addition of new circuits and components, using the proof of concept approach. Moreover, the additional volumes are supported by the same sorts of quick and risk averse technology and telecommunications solutions that were installed for the proof of concept initiatives and not reengineered in consideration of the point of arrival for that site or the program in general. The number of third party capacities established and the volumes vested with each exacerbates these circumstances.

For example, a program that leverages 10 off shore (non US, UK etc) proprietary and third party service providers, accommodating a total of 3,000 staff, can require 50 E1 (2 megabytes per second) telecommunications circuits at an end to end cost that exceeds US$220,000 pa each. A sufficient quantity of telecommunications bandwidth for the same operations, engineered on a holistic basis and provisioned in a consolidated fashion using larger circuits or in a managed service form, could be enabled at 50% to 70% of the original cost. In addition and more importantly, the latter solution could also deliver greater flexibility and scalability, significant performance benefits accompanied by service level guarantees and a volume or usage based accounting method that enables consumption to be more effectively managed.

While the proof of concept technology and telecommunications solutions perform in alignment with expectations, particularly during the feasibility period, they are also considered suboptimal, from performance and cost perspectives, post. The strategies employed to ‘ramp up’ each site, however, are influenced by the same stakeholders and lever the same methodologies from a technical engineering perspective. Moreover, a paradox consequently exists, because the intent of the program is to optimise service from both performance and costs perspectives, while addressing the aforementioned operational challenges.
The call center and back office services, in these instances, are being migrated from countries that have very mature and deregulating telecommunications environments to countries where the opposite holds true (Burroughs 1993; Moliteus 1999; Yorgey 1998). The technology and telecommunications costs, as a portion of the total cost of operation, also shift from relatively insignificant to absolutely significant. For example, procuring domestic telecommunications services from an abundance of suppliers is a different financial proposition than procuring international services from fewer (almost monopoly like), less competitive, suppliers. Moreover, a US domestic E1 telecommunications circuit costs about US$2,000 pa, while an end to end international equivalent costs about US$220,000.

When establishing servicing capacities in Asia, the salient attributes from a financial perspective change significantly. Nevertheless, the majority of focus remains on the operational aspects and not on optimising the costs and performance of the technology and telecommunications solutions. However, larger stakeholders are acutely aware of the changing dynamics and are more verbose about the costs and performance of the technology and telecommunications solutions. Specifically, they express concerns about the need to implement somewhere between 60% and 150% of redundancy in the costly ‘international’ telecommunications circuits and why these continue to fail on a periodic basis.

The need for this quantity of redundancy is underpinned by various factors, including the initial and planned volumes for and location of the site, the number of telecommunications carriers able to provide services, the existing technical environments of the ‘sending and receiving ends’ and the country in which the services will be provided. For example, a third party provider located in New Delhi India who is required to accommodate US back office volumes sufficient for 60 staff spread across three shifts within 16 hours, may require two thirds of an E1 (2mbps) telecommunications circuit. However, it is about the same cost to procure (lease) an E1 than a portion of an E1 and an additional E1 is required for redundancy.

The primary E1 circuit will be procured from a multitude of carriers, some in bilateral arrangements with others and some not. A US domestic circuit between the organisation and the supplier’s US based point of presence (POP) is required, along
with a US international half circuit, an India international half circuit, an Indian
national long distance circuit and an Indian local loop (last mile) circuit, most of
which are provided by different licenced telecommunications carriers. The
secondary or redundant E1 circuit, where applicable, will leverage a different US
domestic POP, different physical routes (that is, via different submarine and other
relevant cables travelling in different directions, such as Atlantic versus Pacific
routes), different telecommunications exchanges and international exist and landing
points and different telecommunications carriers.

Only two thirds of an E1 circuit is required to facilitate the servicing function, that is,
approximately 1,300 kilobytes per second (kbps). However and as mentioned
previously, it is about the same cost to procure an E1 as it is to procure a portion of
an E1 and the ‘slack’ can be used to accommodate additional volumes or volume
spikes, so this method is always used. Therefore, two E1 circuits (approximately
4,000kbps) are procured at an approximate end to end cost of US$220,000 pa each
(US$440,000 pa in total). In summary, only about one third of the total
telecommunications bandwidth (1,300kbps / 4,000kbps) procured is actually being
used to service the required volumes, assuming that the circuits are available. Based
on the way the telecommunications circuits can be used, this equates to at least 100%
redundant capacity and comes at an additional cost of at least US$220,000 pa.

The inability to leverage these redundant and costly telecommunications capacities is
a cause of stakeholder concern, among other things, and often renders the solutions
as inflexible. New volumes, for example, cannot be added until new
telecommunications services are installed and these can take between four and eight
weeks. While a competitive ‘champion / challenger’ environment is established to
optimise operational performance, the long lead times and general inflexibility of the
existing technology and telecommunications solutions, prevents any timely leverage
of the same. Moreover, the champion / challenger model is defunct in the short term,
because it is not possible to shift volumes between lower and higher performers
quickly and the cost of doing so (having available slack in the technology and
telecommunications solutions) is excessive.
In addition to the excess capacities, costs and utility of these circuits, supporting the same is problematic, because there are several telecommunications carriers involved, some with bilateral arrangements, and others without, who come together to provision and end to end connection. In the case of this example, the third party service provider procures the international and Indian domestic telecommunications circuits from various suppliers, while the ‘engaging’ organisation procures the US domestic telecommunications circuits. When service is disrupted by physical and logical means, there are a multitude of parties required to respond, identify the fault(s) and remediate the same and roles, responsibilities and ownership becomes an issue due to the complexity of the end to end service(s) and the number of parties involved.

The complexities associated with the end to end connectivities also make accounting difficult, along with the ability to effectively manage the consumption of the technology and telecommunications products and services. This is primarily due to the number of product and service suppliers required and used, the division of ownership of leases and the methods in which the third parties, particularly, account for and recover these costs. In some instances the costs of the technology and telecommunications solutions applicable to the third parties are built into their ‘charge out’ rates (the rates charged to the engaging organisation for the services rendered), while in other instances they are ‘passed through’ without mark up via invoice. Combining these with the portions that are paid for by the engaging organisation and dealing with a multitude of small variations in the aforementioned, render the investments required to effectively understand and account for these costs unworthy. Hence, consumption is largely unmanaged further contributing to the optimisation paradox mentioned previously.

The existing technical solutions are complex and do not effectively support the service optimisation proposition (program) in the same way the operational solutions do. However, the careful and considered redesign of the existing technology and telecommunications solutions or the similar design of new ‘green field’ efforts, will allow the performance and cost shortfalls to be addressed. These approaches will require a ‘bundling’ or consolidation of the technology and telecommunications capacities to enable leverage with suppliers. The potential solutions will also utilise
much of the same physical infrastructure that is used by the existing solutions, but ownership and accountability will transfer.

For example, specific telecommunications carriers have intimated an interest in building capabilities and capacities if sufficient volumes are available. Hence, the consolidation of the various isolated installations that currently leverage a multitude of carriers would likely yield sufficient volume and enable rationalisation, not to mention quantity discounts of one sort or another. In turn, the rationalisation would result in a reduced number of suppliers and accounting methods and also contribute to a simpler support framework, yielding better service availability further enhancing performance.

The use of public telecommunications networks, such as the internet, or publicly available managed service solutions, for example, would also enable greater flexibility and scalability, because the infrastructures already exist and provisioning then becomes an additional and an immediate revenue opportunity for the service provider (such as a carrier or carrier consortium). Revenue would be based on consumption, with clearly defined metrics (cost per minute consumed or kilobyte transferred), enabling consumers to more effectively manage demand. These capacities could be on sold to other organisations requiring similar services, yielding a greater ‘economy’, further reducing costs.

The managed service solution would also be of ‘carrier’ grade, necessitating ‘self healing’ properties or built in redundancies, appropriately shifting the burden of availability to the supplier as opposed to the consumer. Depending on the supplier or suppliers, these solutions may also extend to other relevant countries, enabling the competitive champion / challenger model to be exploited beyond the existing bounds. In addition, this model will also have greater utility in the sorter term, because telecommunications bandwidth variations can be done quickly with simple configuration changes, as opposed to provisioning new international end to end connectivities. Technical component refreshes, new innovative efficiencies and the like would then rest with the industry suppliers and ultimately enable service optimisation to be more effectively supported.
Finally and to link back into the service optimisation philosophy, the ability for customers to enter the servicing portal, regardless of location, will be paramount. This extends to the ability to enter via any method (internet, call center etc) and to traverse multiple channels (internet to voice response to agent etc) to gain the required service.

Finally and to link back into the service optimisation philosophy, the ability for customers to dial a single telephone number, regardless of location, and enter the ‘servicing portal’ will be paramount. However, the ability to determine and intelligently route the customer to the correct location, with a suitably qualified agent who is available or will be available before any other suitably qualified agent, will be of premier importance. Similarly, the correct location must inherently consider whether the ‘servicing’ opportunity is routine (non core) or whether it is an opportunity to cross sell or up sell products and services (core). If it is a core business opportunity, the use of proprietary versus third party service provision must be carefully considered to ensure strategic and competitive advantages are not eroded.

5.4 Implications for theory

A structured review of the contemporary extant literature was undertaken and presented in chapter 2. Specific gaps were identified and a theoretical framework identifying key research issues was developed (refer to figure 2.3 on page 55). Following the conduct of the research and in consideration of the findings and contributions presented in section 5.1, the research framework has been revised (see figure 5.1 on 170). In the preliminary model, core business considerations were considered key. However, the research revealed that ‘market dynamics’ were more significant and, in fact, influenced the ‘service optimisation’ strategies, which, in turn drove market selection and the sourcing strategy (proprietary versus third party service provision). Finally, technology solution performance and cost influenced the existing solutions and was subsequently inserted in the revised theoretical framework.
Figure 5.2 Revised framework for this research (refer to figure 2.3 on page 55)

While the findings and contributions associated with the research issues have been presented in detail in section 5.1, this section discusses the implications for theory in broader terms. Specifically, this section discusses the implications of the contributions beyond the immediate discipline and in terms of the wider body of knowledge.

Source: developed from original framework (figure 2.3 on page 55).
5.4.1 Core business

Front office (call center) and back office servicing functions are generally considered to be non core and are, consequently, candidates for outsourcing. These services offer little by way of providing unique value to customers and are problematic from an operational standpoint. Recognising that these functions are essential, organisations are sourcing the services from third parties in lower cost markets like India and the Philippines. However, customer contacts are progressively being leveraged to cross sell and up sell products and services and these constitute core business. Moreover, organisations are able to generate strategic and competitive advantages by seizing opportunities to cross sell and up sell their products and services.

5.4.2 Service optimisation

The literature regarding call center and back office servicing is relatively abundant and generally focuses on the operational and logistical challenges experienced, as well as the methods organisations employ to remediate these. High levels of staff attrition, for example, are discussed extensively, along with the many associated implications. In fact, most of the literature argues that the high levels of attrition, coupled with the associated financial and other implications, have significant impacts on the operational costs. Moreover, high attrition leads to an increase recruiting, training and compensation costs and adversely impacts customer service delivery.

The literature reveals a number of remediation strategies, which, for the most part, concentrate on various forms of sourcing. The foundations of these strategies are underpinned by theoretical discussions on core business and competitive advantage, as well as the opportunity to shift accountabilities for the challenges to an alternate (an expert) who specialises in one form or another. In fact, the specialty providers of these sorts of services are often located in lower cost markets like India and the Philippines, where there is an abundance of highly educated English speaking resources who are either unemployed or underemployed. Hence, organisations
establish a strategic network of on shore and off shore proprietary and third party service providers and the concept of ‘service optimisation’ emerges.

In the context of this research, service optimisation is under researched and pre-paradigmatic, particularly from a technically based financial perspective. For example, the financial constituents of the on shore versus off shore servicing capacities vary considerably and even more so when proprietary and third party costs are compared. Moreover, the ‘blended’ costs associated with the onshore, offshore, proprietary and third party provision of call center and back office services are completely different and require further exploration. As an example, the telecommunications costs associated with a domestic US based call center are insignificant (2mbps E1 circuit costs approximately US$2,000 pa) when compared to an Indian based call center supporting US customers (2mbps E1 circuit costs approximately US$220,000 pa).

As a result of this research, the service optimisation concept is more clearly defined - a better understanding of the varying technical and financial constituents and their significance is also available and, as such, organisations are more appropriately placed to make informed decisions about service optimisation efforts and where their focus should be (refer to section 5.3 for additional information on the service optimisation paradox, which basically concludes that organisations focus on the operational challenges resident in the originating country, as opposed to the broader challenges that exist when the content is taken off shore).

5.4.3 Geopolitical risk management and compliance

While also loosely associated with the core business commentary, this research offers additional insight into the levers available to organisations that use third party service providers. Specifically, shifting accountabilities for legal and regulatory compliance to the third parties was found to be beneficial from a time to market perspective and served as part of a risk mitigation strategy. However and with regard to the latter, the mitigation was associated with a failed proof of concept, as opposed to operational or service delivery risks.
In addition, the use of third party service providers was also found to diversify geopolitical exposures. In particular, the use of multiple proprietary and third party service providers located in several countries was found to be a significant contributor to geopolitical risk management.

5.4.4 Technology and telecommunications solutions

This research offers additional insight into the technology and telecommunications solutions employed in support of service optimisation efforts. The use of proof of concept solutions and their limitations from flexibility, cost, availability and other perspectives is disclosed, along with the paradox that exists when considering the concept of service optimisation. The research concludes that organisations should utilise publicly available or managed service solutions, which allow the risks to be managed effectively, while gaining access to more flexible, better performing and lower cost solutions.

5.4.5 Managing technology and telecommunications demand

Technology and telecommunications solutions that are consistently accounted for on the basis of consumption, offer organisations additional comprehension and control of expenditures. Moreover, with additional clarity on how relevant products and services are being consumed, organisations are better placed to focus efforts on reducing the same.

5.5 Implications for practice

The previous section (5.4) focused on the contributions this research makes to the broader body of knowledge and, in particular, the implications for theory. This section focuses on the implications for practice and is intended to provide managers and other administrators a basis for undertaking service optimisations efforts as they relate to this research.

Firstly, recognising that operational performance and costs are the two primary considerations underpinning a service optimisation effort, the findings of this
research suggest an inventory of the relevant constituent pieces be established in financial terms. This inventory must extend to all ‘activities’ that make up the function, regardless of how significant or insignificant they are in the existing models or situations. Next, the operational challenges should be inventoried and key metrics describing the existing performance associated with each. These undertakings will establish a performance and cost baseline for comparison.

Once the existing baseline has been established, solution options should be considered and explored. These options will focus on addressing the operational challenges, while enabling costs to be controlled or reduced. Options will consider markets, proprietary or third party service provision and the technical solutions to be employed, among others. Implications associated with these options should be noted for comparative purposes. When the solutions options have been developed, financial and performance metrics should be determined and added.

As a result of the aforementioned performance and financial assessments, a comparative analysis between the existing and potential solutions can be undertaken. Of significance will be the variations in costs associated with the constituent pieces of the existing and potential solutions, ensuring focus is adjusted accordingly. For example, if the telecommunications costs are insignificant in the existing solutions, but 50% of the cost base of the most likely potential solution, then additional focus is required on this element.

Finally, technology stakeholders need to engage in service optimisation decisioning and influence the technical solutions implemented in support of these efforts. Emerging technologies and managed service solutions offer many benefits and add significant flexibility, without the need to invest significantly in capital.

5.6 Limitations

The delimitations of this research were presented in section 1.6 and acknowledge that it largely concentrates on the servicing and sourcing strategies and technology solutions employed by a large global financial services organisation, who is migrating front office and back office functions from high cost markets like the US
and the UK to lower cost economies like India and the Philippines. However, additional limitations applicable to the methods employed in this research are now offered.

Firstly, the research concentrated on one organisation and leveraged a holistic multi-case approach. While the cases and participants were purposefully selected and were intended to be representative, this cannot be guaranteed. This limitation, however, is not considered serious, as the population was diverse and covered all significant business constituents engaging in service optimisation efforts.

Secondly, because of the purposeful selection of information rich participants, there is a risk that the business unit’s views were espoused, as opposed to the participant’s. Moreover, the relative consistency in the information furnished by the participants associated with each of the business units potentially delimited the quality and diversity of information presented. The selection of participants from multiple business units and the use of open questions were employed to alleviate this limitation, although it is difficult to determine whether additional insights would have been offered.

5.7 Recommendations

This inductive exploration was designed to build theory about a contemporary phenomenon. This theory now requires testing and, as such, it is a recommendation of this research. Secondly, the technical solutions employed by organisations who source call center and back office services from proprietary and third party providers in low cost markets like India and the Philippines requires further exploration. These technical solutions constitute a significant portion of the total cost of operation, but do not attract the same levels of consideration applied to the operational challenges. Finally, the notion of core business as it relates to front office and back office servicing requires additional attention – cross selling and up selling the organisations products and services is certainly more closely related to core business than routine customer service.
### Appendices

**Appendix 1. Interview protocol**

**Research project:** Technology and Telecommunications Optimization  
**Program:** Service Optimisation  
**Organisation:** Omitted

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**Introduction:** Firstly, I would like to take the opportunity to thank you for your participation in and contribution to this initiative (interview). This project seeks to understand how and why certain decisions were made regarding the technology and telecommunications solutions implemented within the Service Optimisation program. The intention is to use this understanding to compare and contrast the various technology and telecommunications solutions used in support of third party and proprietary initiatives, including a review of the similarities and differences that exist between the functions migrated and the geographies they were migrated to. This research will culminate in the development of theory that will enable the existing technology and telecommunications solutions, if appropriate, to be reengineered in order to derive cost, quality and performance advantages, in addition to supporting subsequent initiatives and implementations. In addition, a comprehensive Information Technology Strategy will be developed for subsequent greenfield initiatives.

**Background:** The Service Optimisation program commenced as a suite of ‘proof of concept’ initiatives that sought to examine the feasibility of migrating call center functions from high cost economies to low cost economies in order to generate economic advantages whilst maintaining quality levels. The program commenced in earnest in early 2000 with a number of initiatives commencing later that year. Small volumes of specific low risk functions were selected and a number of design and implementation criteria were established.

These criteria sought to minimise risk and capital expenditure during the feasibility or proof of concept phases. As a result, the organisation mandated that each of the selected third parties, who were located in either India or the Philippines, establish a point of presence within the United States. This strategy extended the third party’s voice and data networks from India or the Philippines to the United States. It also mitigated the necessity for organisation to invest in the expensive international telecommunications circuits and associated technologies necessary to transport the volumes from the United States to the Asian based third parties. On the basis of successful migrations during the early to mid parts of 2001, additional volumes and higher risk functions were pursued.
In the latter part of 2001 and following several comprehensive reviews of the costs and benefits associated with the migrations undertaken and completed at the time, the Service Optimisation program was deemed successful and strategic, as opposed to proof of concept. Decisions were subsequently taken to pursue aggressive ramp up strategies, which included additional volumes and higher risk functions.

**Context:** Service Optimisation is now one of organisation’s top five initiatives. New opportunities and higher risk functions and being considered and pursued and current operations aggressively expanded. In consideration of the premises of the technology and telecommunications solutions implemented to date, a comprehensive review has been commissioned (this research project). This review seeks to determine the costs and benefits of the existing solutions across a number of dimensions (business unit, function, geography and service provider) and to develop theory that will guide reengineering and subsequent Information Technology Strategy development efforts.

As a leader or subject matter expert within the Service Optimisation program, you have been selected as a key participant. Please refer to the attached correspondence, which explains how your contribution will be handled from an ethical perspective.

**Research Problem**

“*Why do global financial organisations leverage Asian based suppliers for the provision of front office and back office services and how effective are the technologies solutions supporting these?*”

**Contextual questions**

A. What is role with respect to the Service Optimisation program?

B. Can you describe the program, from your perspective, in order to establish context and set the scene for the subsequent questions?
Research issues and interview questions

Research issue 1 – Reasons

1. What is a service optimisation initiative and why do organisations pursue these in Asia?

1.1. What constitutes a service optimisation initiative?
1.2. How are the ‘service functions’ selected?
1.3. What are the reasons for pursuing service optimisation initiatives in Asia, what problem(s) are you trying to solve and what opportunities are you trying to seize?
1.4. How does this program contribute to your business unit or applicable organisation goals?
1.5. What is the tenure of this program (when will it be completed)?
1.6. What will likely supersede this program?

Research issue 2 – Market selection and service provision

2. Which Asian markets are leveraged and what factors influence the decisions to utilise third party versus proprietary service providers?

2.1. Which Asian markets does your business unit use?
2.2. Why have you elected to use these markets?
2.3. Are you considering other markets in Asia and if so why?
2.4. Are you considering non Asian markets, such as Brazil, Mexico, Spain and Germany and if so which one(s) and why?
2.5. Have you determined an ideal spread of functions and volumes between the markets you are using and, if so, what is it?
2.6. How do you decide whether to use a third party service provider or a proprietary capacity, is your choice influenced by market (eg India versus the Philippines) and, if so, why?
2.7. Have you determined an ideal spread of functions and volumes between third party service providers and proprietary capacities (both within market and across markets) and, if so, what is it?

2.8. How many third party service providers are you using now and how many will you likely use in the future?

2.9. What division of the available volume will be vested with the third party service providers and is there any further division between distinct third party providers or markets?

2.10. How many of your current third party service providers do you expect to retain until the end of 2004?

2.11. What factors will influence the third party service providers’ retention?

2.12. Have you or will you pursue third party service providers, as opposed to establishing new proprietary capacities, to accelerate (‘by pass’) legal and regulatory lead times, such as network approvals, call center licenses and the like?

2.13. Do the legal and regulatory conditions within particular markets influence your decisions to use those markets?

2.14. Have you or will you pursue third party service providers, as opposed to establishing new proprietary capacities to minimize capital investment (leverage strategy) and, if so, do you think this will change if the organisation owns the infrastructure?

2.15. How do the costs and benefits compare (fully blended costs on a per FTE basis) between proprietary and third party service providers facilitating like functions: (a) in India, (b) in other markets you are doing business in and (c) between (a) and (b)?

2.16. Do you or will you spread your volumes across countries to manage risks (geo-political, terrorism etc) and do you or will you establish like functions in multiple third party service providers and or in multiple countries to manage risks (geo-political, terrorism etc)?

2.17. Does time to market influence your decisions to pursue third party service providers or proprietary providers and, if so, what is the determinant timeframe?
2.18. Does existing infrastructure (plant, equipment, technology, telecommunications etc) influence your service provider selection and, if so, why?

**Research issue 3 – Solution influences**

3. *What influences the technology solutions employed and why?*

3.1. During inception and under the notion of ‘proof of concept’, did you approach this program as a market entry initiative and, if so, did this motivate you to influence the initial technology infrastructure solutions developed and implemented?

3.2. If your business unit decides to pursue related initiatives in other countries, such as Spain, Mexico, Brazil, China or Malaysia, will you take a ‘proof of concept’ approach, will you seek to influence the technology infrastructure solutions implemented and, if so, what is the period in which feasibility will be determined?

3.3. Did you or your business unit influence the initial (original) technology infrastructure solutions and, if so, how and why?

3.4. In the case where a proof of concept or market entry approach was taken, when did you decide that the concept (feasibility) had been proven, what influenced the decision(s) and what do you consider to naturally follow proof of concept or market entry?

**Research issue 4 – Point of departure solutions**

4. *How do the existing technologies solutions perform and are they optimal?*

4.1. How effective are the technology solutions in supporting the business needs and expectations? (Likert rating: 1 exceptional, 2 good, 3 satisfactory, 4 sub optimal, 5 poor)

4.2. What do you consider to be the strengths of solutions implemented to date?

4.3. What do you consider to be the weaknesses of the solutions implemented to date?
4.4. In the case of a growth or strategic program, what do you believe the technology solutions should look like?

4.5. In consideration to the existing technology solutions supporting the program, what works well, what is deficient and what requires immediate attention to enable the business unit objectives to be achieved?

**Research issue 5 – Point of arrival solutions**

5. *How should the technologies solutions perform and what factors should influence the design?*

5.1. What technologies and technology solutions do you believe warrant consideration in terms of design?

5.2. In consideration of the ever changing telecommunications environments, what do you consider to be point of arrival solution for voice transport?

5.3. Do you think the point of arrival solution for voice transport will change between now and year end 2003 and, if so, how?

5.4. Do you think the point of arrival solution for voice transport will change between now and year end 2004 or 2005 and, if so, how?

5.5. In terms of the likely costs and benefits of the immediate (2003) point of arrival solutions for voice transport and the year end 2004 or 2005 pint of arrival(s), do you believe both should be pursued if they are different?

5.6. In consideration of the ever changing telecommunications environments, what do you consider to be point of arrival solution for data transport?

5.7. Do you think the point of arrival solution for data transport will change between now and year end 2003 and, if so, how?

5.8. Do you think the point of arrival solution for data transport will change between now and year end 2004 or 2005 and, if so, how?

5.9. Describe the features of an ideal or optimal technology solution from a voice and data infrastructure perspective?
Follow up questions

C. Are there any other views, opinions or statements that you believe are pertinent to this research, but were not addressed during the interview? If so, please share these now.

D. Would you like to comment on the quality and comprehensiveness of the research protocol and the interview questions asked? If so, please share these now.
Appendix 2. Interview consent (ethics & confidentiality)

Shane Thatcher  
C/O Lot 26 Cherrybrook Chase  
Londonderry NSW Australia 2000  
+61 419 263 775

1 June 2002

Attention: Name  
Position Title  
Department

Re: Service Optimisation  
Interview request, ethics and confidentiality

Dear Name

The purpose of this correspondence is to invite you to participate in an interview regarding the voice and data infrastructures associated with the Service Optimisation (SO) program and, pending you agree, it explains how the information you impart will be treated from an ethical perspective.

The SO program is a key initiative supporting the organisation’s growth and reengineering strategies. It commenced in mid 2000 as a suite of proof of concept initiatives and has subsequently transitioned into a critical strategic program.

In consideration of this transition, a review of the voice and data infrastructures has been commissioned, with an intention of understanding how and why specific solutions were designed and implemented during the proof of concept phase. Similarly and in pursuit of a ‘whole of organisation’ approach, information regarding the business vision and strategies associated with the SO program will be solicited and a holistic and architecturally sound information technology strategy, focused on the optimization of voice and data infrastructures, will be developed in response. This strategy will guide subsequent reengineering and green field efforts.

In your capacity as a leader or subject matter expert within the SO program, you have been identified as a key contributor to this initiative and a source of critical information. As such, I would like to invite you to participate in a semi-structured interview, where a series of questions regarding voice and data infrastructures, business visions and strategies, technology solutions and architectures and information technology strategies associated with organisation and the SO program will be asked.

Should you choose to participate, the information you impart may be manually and electronically recorded, transcribed, analysed and used in the review of how and why specific solutions were implemented in the proof of concept phase. In addition, the
information will likely be used to inform the subsequent development of a holistic and architecturally sound information technology strategy that is focused on the optimization of the voice and data infrastructures supporting the SO program.

The information you impart will not be used or supplied for any other purpose, unless your explicit written consent in gained prior. Given the nature and purpose of this research and where applicable, your identity may be disclosed, unless you indicate otherwise in writing.

Should you be concerned about matters of ethics or confidentiality or if you would like additional information about this research, please contact my leader name and contact details omitted, my supervisor Angele Cavaye, Professor of Management at Southern Cross University (+617 5506 9322 – Gold Coast Australia) or myself (+614 1926 3775 – Sydney Australia).

If you agree to participate, I would be pleased if you provide written consent. Your consent can be faxed to Shane Thatcher at +612 9263 6078.

Yours sincerely

Shane Thatcher
References


Bendor-Samuel, P. 2000, ‘Capturing customers - how the new wave in call centers is aiding the financial industry’, *Telemarketing*, vol 18, no 11, pp 88-92.


De Kruijf, B. 2001, ‘Outsourcing may be the ticket for taking your e-business into Asia’, *World Trade*, vol 14, no 1, p 57.


Hoare, S. 1997, ‘Your call will be answered shortly by one of our operators’, *Director*, vol 51, no 4, November, pp76-80.


Moretti, P. 1993, ‘Choosing the right agency for the next generation of consumer telemarketing’, *Telemarketing Magazine*, vol 12, no 1, pp32-34.


Perry, C. and Alizadeh, Y. 2001, ‘Research design and data analysis in realism research’, Submitted manuscript.


Strassmann, P. 1995, ‘Outsourcing, a game for losers’, *Computerworld*, vol 29, no 34, p75.


