Exploring the use of ICTs in non-profit sector organisations: supporting the third act

By

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Dedicated to Amma and Thaththa with love.

Abbreviations

DHB	District Health Board
ICT	Information and Communication Technologies
IRD	Inland Revenue
NPO	Non-profit organisation
SAM	Social Actor Model
TOE	Technology, Organization and Environment
WINZ	Work and Income – New Zealand

I would like to explain that I have used the pronouns "we" and "our" in this thesis . The work I have presented here is my own. I have used the terms "we" and "our" in this thesis to explain in an active voice; it also indicates that my supervisors were consulted about important decisions and directions in the research.

This style of explanation has been previously used at the School of Information Management and I have adapted the definition of Dr. Mary Tate, SIM, Victoria University of Wellington.

Abstract

Exploring use of ICTs in non-profit sector organisations: Supporting the third act

Life after retirement from full-time work is known as the third act of an individual. In New Zealand the third act has become longer, resulting in an ageing population. An implication of population ageing is the need for increased support and services for older people who live within the community. Non-profit sector organisations primarily cater to those that are either beyond the reach of state services or are unable to afford services offered by the commercial sector.

This study is guided by the central research question: how can non-profit sector organisations use ICTs to support service provision for older people living within the community? Using Lamb and Kling's social actor model, adapted to the context of non-profit sector, the research project explores how ICT use is influenced by factors that are investigated under four key dimensions: affiliations, environment, identities and technology. Employing a case research method, it studies ICT use in four human services non-profit sector organisations.

The analysis of the case studies revealed how external influences are enacted within organisations. The study presents a framework which explains post-adoptive use in non-profit sector organisations incorporating external factors, the organisational view and social actor behaviours. The findings suggest that client and funder information requirements influence organisations to select one of four responses to external cues. Organisations adopt either a complementary perspective, a competing perspective, a compatible view or a negotiated view. These organisational information perspectives craft social actor behaviours within non-profit organisations.

Further, this study found information challenges associated with maintaining complex client requirements. Mobility of the work force, deficiencies in data capture and limitations of existing client information systems constrain information flow in these organisations. As a result analysis of service utilisation data fails to communicate the actual value created within communities.

This study has extended the understanding of ICT use in non-profit human services organisations in New Zealand and contributed to knowledge in the development of the social actor model within specific contexts. The original contribution of this study is the three-tier typology of social actor- information roles. The study presents social actor behaviour associated with a primary entity and an information role. Five main social actor- information roles were identified across three tiers and have been mapped against a spectrum of information behaviours associated with each role. When responding to external cues social actors engage in task related behaviours associated with their information roles. By contributing to ICT use practices, this research presents new perspectives on the components of value in organisational processes. Identifying value adding and value communicating information flows, information loss and informal ICT support roles this study presents a detailed analysis of the factors that enhance and constrain ICT use within human services non-profit sector organisations.

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Chapter 1 – Introduction

1.1 Background

Population ageing is a societal phenomenon throughout the world. Due to improvements in medicine and healthcare facilities the duration of the third act of individuals has increased. With over 650,000 of New Zealand residents aged 65 or older (Statistics New Zealand, 2014) the ratio of older people is projected to increase to one in four within a generation. New Zealand older people now make up 14 percent of the population, a 55 percent increase since 1994. An ageing population presents economical and societal implications (Boston and Davey, 2006) in terms of health care expenditure, retirement income, housing and social welfare. Healthcare expenditure takes priority in the economic agenda of state policy. But to cater to needs beyond health care of the increasing number of older people in society requires a multifaceted response. Societal implications range from providing social services to enable older people to overcome functional limitations and issues related to social isolation and loneliness.

New Zealand government and society promotes positive ageing and independent living for older people. Many state and commercial sector organisations focus on providing services to enable this. Non-profit organisations are able to provide the personalised required services perceived to be inadequately addressed by the state and commercial sector at an affordable cost to the ageing populace, who often have a reduced income. Furthermore, non-profit sector organisations create active roles for older people [that enable them to contribute to the society], thereby improving social inclusion amongst those older people who live within the community.

Non-profit sector organisations are faced with an ever-increasing gap with regards to obtaining funding, recruiting qualified staff and volunteers and maintaining a high quality of care while the ageing population is driving an

increasing demand for their services. Wilson (2001) and Dwyer (2006) explain that non-profit organisations faced with these issues need to continuously explore ways of meeting the complex service needs of older people living within the community. Therefore, increasingly non-profit sector organisations providing services for older people are examining the role of technology to improve service provision and to overcome operational issues.

There are significant numbers of older people living within community who require services. According to the 2014 Census (Statistics New Zealand, 2007, p. 115), 93% of older people live in the community and only 7% live in institutionalised settings such as rest homes, hospitals and other facilities. These older people who live in private dwellings require facilities and services that enable them to maintain their independence. The need for independence is more relevant to those who live in a single person household and who are 80 years of age or older. There are 30% (137,000) of older people living in single person households and 50,000 of these people are aged 80 years or older (Statistics New Zealand, 2007, p. 129). Providing facilities and services to older people living within the community is therefore increasingly important.

The Positive Ageing Strategy of New Zealand (Ministry of Social Development, 2001, 2014) focuses on providing state services and facilities to enable older people to live within the community and to maintain their independence. The state sector provides a broad range of services, such as transportation, healthcare, housing and social care services. However, there are a multitude of other services which the state does not provide, including specially personalised services and services requiring localised situational knowledge. Commercial and non-profit sector organisations specialise in providing these services. Older people with a limited income are reliant on non-profit sector organisations as opposed to commercial organisations. Therefore non-profit sector organisations have been identified as a key stakeholder (Boston and Davey 2006, p.379; Dwyer, 2006) in providing services to older people living in the community.

Population ageing presents many economic and social implications (Boston and Davey, 2006). Healthcare expenditure takes priority in the economic agenda of state policy. But to cater to needs beyond health care of the increasing number of older people in society requires a multifaceted response. Societal implications range from providing social services to enabling older people to overcome functional limitations and issues related to social isolation and loneliness. A recent study (Statistics New Zealand, 2013) states that "chances of being lonely decreased with age" and older people were least likely to feel lonely. A contrasting understanding is presented by the Ageing Strategy Report (Ministry of Social Development, 2014) that indicate older people feel increasingly lonely. However, both studies agree that economic standards and mental health are contributing factors.

Non-profit organisations that provide services in the community encounter several barriers in their service provision. Prevalent issues are lack of funding and difficulty with recruitment of qualified staff (NZCCSS 2004, p.31) and volunteers. Non-profit organisations that support older people receive the lowest number (Dwyer 2006, p. 342) of volunteering hours per year, an average of six hours per person per year. In comparison, leisure, sports and recreational organisations receive an average of 28 hours per year. As a result of this these organisations are concerned about the sustainability of their service provision (NZCCSS, 2004; Statistics New Zealand 2007, p. 56). Due to increased demand for community based services for older people, the commercial sector has entered this space, making the most vulnerable of older people unable to access the services they need. Cordery (20 12) presents an analysis of the social services sector in New Zealand and "Charities must design services which attract user fees as well as compete for philanthropic donations, if they are to survive. These policies also signal a potential return to privately funded cooperatives – a circumstance which is disadvantageous to those who cannot pay, but are most in need of welfare" (p.475). To overcome these issues while remaining sustainable, several non-

profit organisations utilise ICTs in their day to day activities. ICTs play an important role in these organisations.

The body of research which explores the use of existing ICTs in the non-profit sector is limited and studies of the use of ICTs by organisations which provide services to older people are even scarcer. With the exception of a few published case studies in Australia (Department of Communications, Information Technology and Arts, (2005)) and limited empirical work (Renold, Meronk and Kelly 2005), studies in this area are close to non-existent. This limitation of studies is starkly visible in the New Zealand context. ICT research in the New Zealand non-profit sector has been limited to a very few surveys which explore infrastructure capacity (Craig and Williamson, 2005) and the use of the internet and availability of web sites (Zorn, 2007) within the organisations.

1.2   Problem statement

Due to the increased proliferation of Information and Communication Technologies in the non-profit sector, several researchers have emphasised the need to conduct research in this context (Zmud, Carte and Te'nni, 2004; Reilly, 2005; Gutierrez and Zhang, 2007). There have been several studies that explore ICT adoption and ICT use in the non-profit sector.

The types of studies common in the non-profit sector are infrastructure capacity surveys (Te'nni and Speltz 1993; Burt and Taylor, 1999; Craig and Williamson 2005; Pinho and Macedo 2006) that investigate the adoption of ICTs. These studies focus on motivations and barriers to ICT adoption within non-profit organisations. Whilst these studies are important, they do not explore how non-profit organisations use existing ICT infrastructure and resources in their day-to-day operations.

Studies that explain ICT use in non-profit organisations in general focus on large transnational organisations, some of which have used ICTs to transform their

service provision (e.g. Amnesty International (Lebert, 2002), Oxfam International (Hajnal, 2001), Medicins Sans Frontiers (Orbinski, 2002)). These organisations differ from human services non-profit sector organisations in terms of their ICT capabilities and funding mechanisms. The existing studies focus on ICT innovations (e.g. improving end user experiences) and are limited in extending our understanding in the challenges that human services non-profit organisations encounter in the post-adoption phase. Human services non-profit organisations are unique as they deliver services within the community and are dependent on the external environment for their resources.

Whilst post-adoptive ICT use in commercial organisations has been explored extensively (Orlikowski, 2000; Chau and Tam, 1997; Lamb and Kling, 2003; Jasperson, Carter and Zmud, 2005; Burton-Jones and Gallivan, 2007) a similar investigation in the context of human services non-profit organisations is lacking.

Existing research in information systems has explored post-adoptive ICT use at individual and organisational level. At an individual level researchers have examined rational decision, habit, emotions (Jasperson, Carter and Zmud, 2005; Oritiz de Guinea and Markus, 2009), ICT skills and experience (Harrison and Murray, 2007; O'Hanlon and Chang, 2007) of users' influencing behaviour. Studies that examined post adoption at organisational level (Burton-Jones and Gallivan, 2007) explained how users adapted features of applications in their collective use.

However a similar understanding of external influences that modify user behaviour is deficient in information systems. As the human services non-profit organisations are situated within their external environment, external cues are an important factor when studying their ICT use. Several researchers have highlighted the importance of studying the influence of the external environment in ICT use in commercial sector organisations. DePietro, Wiarda and Fleischer (1990) contextualised the external environment as industry characteristics, government regulations and technology support infrastructure.

Lamb and Kling (2003) provided two specific dimensions, affiliations and environments to present situated behaviours in ICT use.

Whilst it is important to understand individualistic and organisational factors in post adoption phase, studying them in isolation ignores the external influences that impact non-profit organisations.

Organisations in this sector depend upon funding, skills and relationships in the external environment to overcome internal issues. Therefore explorations which exclude the external environment (e.g. relationships with funders and other non-profit organisations) may provide an incomplete understanding of the use of ICTs in non-profit sector organisations.

This study aims to contribute to the knowledge of post-adoptive ICT use by examining how external factors influence ICT use behaviours in post adoption stage.

1.3   Research design

To analyse factors influencing the use of ICTs within human services non-profit organisations, this research uses the social actor model Lamb and Kling (2003). The use of this model provides an opportunity to explore issues that extend beyond the internal organisational barriers (e.g. lack of ICT staff, funding and skills) and, to investigate previously unconsidered, yet vital, socially situated external factors affecting the organisation.

The social actor model is highly appropriate for the study as it examines the socially situated behaviour of the organisational members, and emphasises the institutionalisation of technology. Lamb and Kling (2003) identified organisational members as "socially situated individuals" influenced by contextual factors such as relationships with external organisations and environment in their use of information resources. In comparison to the individualistic models that focus on the skills, experience and attitudes of organisational members, the social actor

model considers the broader context beyond the organisational boundary. The model consists of four dimensions viz. *affiliations*, *environments, interactions*, and *identities*.

The main research question of the study is:

How can non-profit organisations use ICTs to support service provision for older people living in the community?

Sub questions:

1. How are ICTs being used within the "common core activities" to support the information use of non-profit sector organisations?
2. How do affiliations, environments, interactions and identities constrain and enhance ICT use in non-profit sector organisations?

This qualitative study employs interpretive case research method. Semi-structured interviews with staff and volunteers who carry out day-to-day activities of the organisation inform this study. This study employs four cases of non-profit organisations that support older people who live within the community. Concurrent data collection and analysis informs the development of theory for explaining (Gregor, 2006) the use of ICTs in human services non-profit organisations. The study is guided by the four criteria of evaluation, credibility, transferability, dependability and conformability recommended by Lincoln and Guba (1985).

1.4 Social actor model

The social actor model (Lamb & Kling, 2003) is a multidimensional framework which explains how ICT use is enacted in the context of affiliations, environments, interactions and identities. Within this study it is used as the theoretical lens to explore the research questions and present analysis.

Employing a theoretical lens provides a framework to scope the study and also a focal point to begin investigations in a relatively unexplored domain.

The social actor model investigates a socially situated organisation, its environment and the interactions which influence ICT use. The attributes in the framework are capable of depicting the intra-organisational and inter-organisational contexts which are of importance to a non-profit sector organisation. As organisations that operate in a resource scarce environment, non-profit organisations rely on the networks they build with external organisations for information, staffing and funding. Therefore, the ability to examine these socially rich interactions in the day-to-day activities of the organisations and their use of ICTs is important to the study.

Affiliations are defined in terms of the network of organisational and professional relationships that connect an organisational member with the industry. The *environment* takes into account the industry accepted technical and financial practices as well as the internal and external ICT infrastructure. *Interactions* and *identities* relate to how organisational members engage with external organisations, maintain relationships, form identities and control the perception of others and how this influences the use of ICTs. A detailed description of the model and operationalisation is provided in Chapter 3.

1.5   Significance and benefits of the study

This study contributes to both Information Systems and non-profit sector research.

1.5.1 Contribution to IS research

There have been several studies that focus on technology adoption by non-profit organisations. However, studies that explore post-adoptive use are limited. Ortiz de Guinea and Markus (2009) emphasise that there is a growing interest in this area of research. In relation to the non-profit organisations, Reilly (2005) explains

the importance of having a clear understanding on how technology infrastructure is used in non-profit sector organisations. This research explores how ICTs are used within common core activities of organisations and it provides an understanding of external factors that influence post-adoptive ICT use.

Published research in Information Systems consists of a rich understanding of how ICTs are utilised in commercial organisations (Tornatzky and Fleischer, 1990; Orlikowski and Baroudi, 1991; Chu and Tam, 1997; Orlikowski, 2000; Lamb and Kling, 2003; Molla and Licker 2005). These studies have enabled us to understand how ICTs become integrated and how their use can be influenced in daily operations. The concepts of continuing use, and how external and operating environment influences use, have not been investigated to provide an in-depth understanding of non-profit sector organisations and their use of ICTs. Human services non-profit organisations are heavily dependent on the external environment for resources and deliver a highly personalised set of services within the community. ICT use within these organisations is less investigated and the way external cues are enacted within organisational and individual facets are less explored. This study intends to bridge this gap in knowledge.

Due to the increased proliferation of ICTs in the non-profit sector, several researchers (Zmud, Carte and Te'nni, 2004; Reilly, 2005; Gutierrez and Zhang, 2007) have emphasised the need to conduct Information Systems research in this context. This study contributes to two of the research directions identified by these authors: influence of external entities and use of existing technology infrastructure.

Gutierrez and Zhang (2007) emphasise that the existing theoretical perspective of ICT use in non-profit organisations is inadequate, as it excludes the significant influence of external entities. The state, donors and volunteers are essential components in non-profit sector organisations, and the influence they have on technology use remains relatively unexplored. The authors state that the unique ambience of the non-profit sector and the existence of multiple stakeholders

with diverse roles influencing the development and use of Information Systems need to be considered.

Examination of country-wide surveys in Australia (Department of Communications, IT and Arts, 2005) and Canada (Statistics Canada, 2005) which focus on technological capacity building, suggests that future research in the sector should extend beyond the infrastructure level and internet adoption to focus on how technological infrastructure is used to support the desired outcomes of organisations.

In the context of non-profit sector research in New Zealand, this study adds value both in terms of adding to the currently limited body of research in the sector and by providing unique insights into organisations in the social services sector. The social services sector in New Zealand consists of multiple human services non-profit organisations that provide services for people in the community. In comparison to expressive organisations, human services non-profit organisations supporting clients who have complex needs require solutions catered at an individual level. Furthermore, the type of services required needs a high level of interaction between the client, staff members and volunteers. These constrain the type of volunteers and staff that can be employed by the organisation. For example, virtual volunteers that campaign in Greenpeace are easier to recruit and deploy as they do not require training, security screening and other processes that the volunteers of human services agencies need to fulfil. Depending on the type of functional limitation, human services non-profit organisations may require longer term solutions for the period that their clients live within the community. Therefore these human services non-profit organisations differ considerably from expressive organisations in terms of their client management, volunteer recruitment, type of services they provide and the type of clients they facilitate.

Studies which examine how such organisations function are scarce. Renold, Meronk and Kelly (2005, p.236) highlight that "literature on age based

community-service organisations is very limited". Whilst this study provides a contextual understanding of how technology is used in these organisations, it also adds to the knowledge on the workings of, and issues surrounding, non-profit sector organisations in New Zealand.

1.6 Delimitations of the study

As the primary focus of this study is the existing use of ICTs, factors contributing to readiness, technology acceptance, or adoption in organisations are beyond the scope of the study. The study focuses on the post adoption phase of ICT use. The study also excludes service provision to older people by state, quasi-state, commercial and trans-national organisations and only focuses on the non-profit sector organisations that provide services to older people living within the community. Therefore the research excludes the study of ICT use in rest homes and retirement villages, although some of these are managed by non-profit sector organisations.

1.7 Organisation of the thesis

The introductory chapter outlines the context of the study, the identified research problem and the significance of the study. Chapter two presents literature which defines the non-profit sector, explores service provision to older people who live within the community and ICT use in non-profit sector organisations. It also outlines existing understanding of ICT use in human service non-profit organisations and analyses gaps that have not been addressed by previous research. Chapter three presents the social actor model that is used for the study as a theoretical lens. Chapter four, the methodology chapter, addresses the research design and operationalisation of the social actor model. Case studies of the four organisations of the study are presented in chapters five to eight. Each of the organisations selected provides a range of services from supported independent living to hospice care and highlights information

challenges associated with delivering services relevant to stage of life. Chapters nine and ten consist of the cross-case analysis and discussion respectively. The conclusion of the study is presented in chapter 11.

Chapter 2 – Literature Review

This chapter consists of three main sections. The first section provides a definition for the sector and illustrates the drivers that influence non-profit sector organisations. It addresses the unique features of the non-profit sector, its membership and its operating environment. The second section describes the role of non-profit organisations in service provision to older people living within the community. The third section presents an analysis of extant literature on the concept of ICT use within non-profit sector and identifies the gaps in the existing knowledge.

2.1   Non-profit sector

Organisations that are not represented by the state and private sector are identified within the non-profit sector (Frumkin, 2005). This sector is known as not-for-profit, the third sector, the independent sector, the philanthropic sector, the voluntary sector, or the social sector. Further depending on the country that they operate in they are also identified as nongovernmental organisations (NGOs) or civil society organisations.

The following sections describe how we define non-profit organisations for the purpose of this study.

2.1.1 Definition of the non-profit sector

Several definitions of the non-profit sector can be found in the literature.

"true nonprofits are firms that are formally organised as either nonprofit corporations or charitable trusts which are subject to the 'non distribution constraint', that prohibits the distribution of residual earnings to individuals who exercise control of the firm, such as officers, directors, or members" (Hansmann, 1987, p. 28).
"body of individuals who associate for any of three purposes: (a) to perform public tasks that have been delegated to them by the state; (b) to perform public tasks for which there is a demand that neither the state nor for-profit organisations are willing to fulfil; and (c) to influence the direction of policy in the state, the for-profit sector, or other nonprofit organisations" (Hall, 1987, p. 3).
"whose goal is something other than earning a profit for its owners and to provide services either to the public or its members" (Anthony and Young, 1990, p. 216)
"legal entities created for the purpose of producing goods and services whose status does not permit them to be a source of income, profit or other financial gain to the units that establish, control, or finance them" (Anheier, Rudney, & Salamon, 1992, p. 25).
Nonprofit organisations are considered to be those that are: (1) *organised* (i.e., formalised to some extent)(2) *private* (i.e., institutionally separate from government); (3) *self-governing* (i.e., equipped to control their own activities); (4) *non-profit-distributing* (i.e., not returning profits to their owners or directors); and (5) *voluntary* (i.e., involving some degree of voluntary participation, either in their management or operations) Salamon and Anheier (1997).
"voluntary organisations are independent of the state, "quasi-state" institutions (such as hospitals and universities), are non-profit making and benefit from philanthropy" (Febbraro, Hall and Parmegianni, 1999, p. 9)
"locally based, significantly autonomous, formal, volunteer run, non-profit groups that have an official membership of volunteers and that manifest significant voluntary altruism" (Smith, 2000, p. 7)
"Three defining features of non-profit and voluntary sector organisations are that they do not coerce participation, operate without distributing profits to stakeholders and exist without simple and clear lines of ownerships and accountability" (Frumkin, 2005, p.3)

Table 2.1   **Defining non-profit sector**

The primary focus of the definitions varies with time. Early definitions focus on delivering a service (Hall, 1987, Anthony and Young, 1990) and establish the concept of service delivery by organisations in this sector. Hall (1987) clarifies the types of services that these organisations may engage in, perform public tasks and influence policy directions. The purposes described by Hall (1987) still encompasses majority of the services carried out by non-profit organisations.

The late definitions focus more on the structure (Frumkin, 2005, Smith 2000) and the type of characteristics that differentiate them from state and for profit organisations. There are several problems with these definitions. Definitions such as "locally based…. volunteer run" (Smith, 2000, p. 7) implies a territorial scope and absence of paid staff which is not applicable to all organisations as many employ paid staff.

Further that non-profit organisations "exist without simple and clear lines of ownership and accountability…" (Frumkin, 2005) does not depict a clear picture of the sector. These organisations are dependent on state and philanthropic funding and there has been increased pressure to maintain accountability and transparency in their operations. Therefore some of the definitions are not equally applicable across the entire sector.

Further some of the definitions are open to multiple interpretations. For example Anheier, Rudney, & Salamon's (1992) emphasis that their "status does not permit them to be a source of income" is ambiguous, as some of the organisations charge a membership fee from their members and that is considered a source of revenue. Adopting such a definition would exclude organisations that charge a membership fee to cover the cost of a service provided and not as a profit earning venture.

The only commonality amongst these definitions is that the organisations should be non-profit distributing.

Salamon and Anheier (1997) deviated from providing a definition and proposed five characteristics that could be commonly used to identify organisations in this sector. With the advent of the Comparative Nonprofit sector research project (John Hopkins University, Centre for Civil Society) which focuses on aggregating and analysing the impact of the sector in over 40 countries, it was necessary to adopt a common classification that best described the sector.

United Nations (2003) used a slightly modified version of Salamon and Anheier (1997) to define the non-profit sector globally. Non-profits are defined as organisations which are, self-governing, not primarily driven by profits, consist of a structure, are independent from the state, and membership is non-compulsory (United Nations, 2003). This encapsulates all of the main themes of the previous definitions and is commonly used at present. Adopting the above five factor criteria as a definition to identify organisations is common in other studies (Billis and Glennerster, 1998; Cukier and Middleton, 2003) and it provides a better categorisation in contrast to adopting a definition.

Stemming from this broad definition, the Office for the Community and Voluntary sector of New Zealand (Tennant et. al, 2006, p. 35-40) described how the following five characteristics of non-profit sector organisations are applicable: organised, private, non-profit distributing, self-governing and non-compulsory participation.

Organised: The "organised" nature of the institute is determined by the legal status, its recognition in a formal manner [i.e. registered for GST, PAYE] or its affiliation to a legal body. The criterion extends to the ability of the organisation to produce formal accounts by way of maintaining a bank account, and the existence of a written set of rules which defines its membership, structure and decision making as components of an "organised" institute.

Private: The term specifies that a non-profit organisation is "institutionally" separate from the government. To be considered a non-profit, the organisation must not be a crown reporting entity nor an entity of local governance. In addition, neither central nor local government should have authority to appoint the majority of its board members and staff and it should not be established within a public statute.

Non–profit distributing: The primary objective of the organisation must not be profit generation and the members or the governing board should not be able to gain financially.

Self-governing: As long as the organisation is in charge of its day to day operations and can dissolve itself and has no government appointees or corporate representatives with veto power, the non–profit is considered to be a self-governing entity.

Non-compulsory: This term explains the nature of its membership and is illustrated by stating that the membership is a matter of choice and not determined by birth, citizenship or law.

The five criteria define organisations in the entire non-profit sector ranging from civil society organisations that mediate between the individual and the state, to voluntary sector organisations that serve local communities; they may range from large quasi-state institutions (e.g. hospitals, universities) to community based, grass root organisations where group autonomy is prominent. Due to this diversity of organisations Febbraro, Hall and Parmegianni, (1999) suggested the exclusion of quasi-state institutions in their identification of *voluntary sector* organisations. This exclusion is appropriate in identifying VSOs, as quasi- state institutions in many countries have an indirect state affiliation and are resourced through established state funding and do not fulfil the "private" criteria.

In addition Salamon and Anheier's (1997) fifth characteristic *"voluntary"* (i.e. involving some degree of voluntary participation, either in their management or operations) enables us to further refine the concept of organisations. "Voluntary" in this context refers to non –coercive participation but more importantly to the form of "volunteering" where a member of community performs a social benefit without monetary gain. A non-profit that entirely consists of paid staff lacks the "voluntary" context.

Therefore this study adopts the five criteria to identify relevant organisations that have voluntary participation (management or operations) but will exclude quasi-state institutions.

In addition to discussing the defining features of the sector it is also necessary to understand the unique characteristics of these organisations and to explain the advantages that they have over state and private sector organisations. This is useful in determining the influences that motivate and constrain these VSOs.

2.1.2 Unique characteristics of non-profit sector organisations

Non-profit organisations differ from government and for profit organisations in several ways including their creation, drivers, operations and client characteristics.

Creation: Voluntary sector organisations are created "when human service needs are not met by the ordinary market but at which government services are inefficient" (Billis and Glennerster, 1998, p.82) or when unsatisfied demand for goods and services exceeds the service provision by government and private organisations (Frumkin, 2005, p. 168). Many organisations focus on catering to an excess demand that cannot be met by state and private sectors (e.g. food banks). However several others focus on meeting an unmet need of personalised nature, where the private and the state sector is not able to provide due to geographical limitations, type of client or due to profitability issues (e.g. meals on wheels).

Drivers : In comparing the operation of state, private and voluntary sectors, Billis and Glennerster (1998) highlight differences among them in relation to their primary stakeholders, the structure of the organisation, finances, and staff (see Table 2.2).

VSOs are driven by multiple stakeholders consisting of donors, staff, volunteers and service recipients. In addition state, public and private institutions may become stakeholders depending on the relationship they have with voluntary sector organisations. For instance some organisations may enter into contractual agreements to deliver services on behalf of public institutions or with private institutions for funding.

This identification of the different drivers in the sectors was further clarified by Hackler and Saxton (2007) and Moore (2000). Hackler and Saxton (2007) explained that while for profit organisations are focused on profit maximisation gaols and creation of wealth for their stakeholders, non-profit organisations focus on fulfilling a social mission. This view is supported by Moore (2000) who identified the main objective of the voluntary sector organisations as the creation of public value. These motivations of contributing to a "social mission" or creating a "public value" are not the primary objectives of for-profit organisations.

Sector	Driven by	Core Finance	Staff	Structure
Public	Voters and re-election	Taxes	Paid and some volunteers	Bureaucratic
Private	Shareholder and profit related goals	Sales	Paid	Bureaucratic
Voluntary	Multiple stakeholders	State allocated taxes, Donations, Charges	Paid and volunteers	Ambiguous

Table 2.2   Unique characteristics of voluntary sector organisations. Billis and Glennerster (1998).

Operation – Revenue and staffing: Voluntary sector organisations have a hybrid funding mechanism instead of a primary source of finance (Billis and Glennerster, 1998). Funding is a mix of state allocated taxes, donations by the philanthropic community and membership charges that VSOs may charge to cover their costs. In addition these organisations may also apply for competitive grant schemes as a source of funding.

Billis and Glennerster (1998) highlighted four key features that differentiate the voluntary sector from state and private sectors in terms of their operations.

- Complexity in resource allocation.

- Stakeholder ambiguity- refers to the lack of a clear differentiation between the roles of client, and member of the organisation.
- One person holding multiple roles within the organisation.
- The use of volunteers.

These features are commonly exhibited in non-profit human services organisations and therefore are important factors to consider within this study.

Complexity in resource allocation refers to funding mechanisms that non-profit organisations use to fund their programmes and how the resources are allocated across the organisation. Managing a hybrid funding mechanism and continuously seeking grants and donations to fund their work is part of the day-to-day activities of the non-profit staff. This relates to this study in two ways. First, searching for, collecting information and submitting completed applications for grants is an information intensive activity. Second, seeking for funding for an IT budget is a challenge in these organisations that are committed to human services. For instance donors prefer if their contributions go directly to the disadvantaged community and some see the investment in IT as an administrative cost. This study explores the influence of both these elements on ICT use.

Further the lack of funding is of a particular interest to New Zealand, as the state's contribution is only 25% of the non-profit revenue. This is low in comparison to an average contribution of the state of 36%, in the countries for which data is available. This makes the non-profit sector in New Zealand the recipient of one of the lowest state contributions in the country groups. The other country groups with a lower level of state contribution than New Zealand are Africa (20%), Latin America (19%) and other developing countries (16%). (Sanders, O'Brien, Tennant, Sokolowski and Salamon, 2008, p.19)

The other three features relate to staffing of the organisations. The *use of volunteers* is a very distinct feature in non-profits in comparison to state and for profit organisations. This is an important factor in the context of this study as

90% of New Zealand non-profit organisations do not employ paid staff (O'Brien, Tennant, Sokolowski and Salamon, 2008) and heavily reply on volunteers for its operations. In addition due to staffing shortages that exist in organisations staff members often hold *multiple positions* e.g. The project coordinator also serves as secretary and IT person (Schneider, 2003). In some instances service provider and the service recipient can be the same. Walsh O'Shea (2008) in their examination of rural communities of older people, explored community based organisations that were formed by older people themselves. They explain that members of the organisation who often provide services also consume the same services as clients, leading to *stakeholder ambiguity.*

Saidel and Cour (2003) identified two main characteristics of staff in non-profit organisations that are different to private and state sector employees. They explained (p. 6) that the staff members in non-profits "are more committed to organisational missions involving public benefits, seek more work related challenges and job and task variety, autonomy and collegiality". As the sector attracts people who are not primarily motivated by monetary rewards, the concept of contributing towards public benefit is better aligned with their motivations. This is an important concept within this study as we examine organisational identity.

However, the work related challenges, autonomy and collegiality that the staff seek may not be unique to non-profit sector staff. Commercial sectors e.g. the software industry also provides its employees with a working environment that caters to those specific requirements.

The high participation of females in non-profit sector organisations is also an important factor that differentiates it from the other two sectors. Saidel and Cour (2003) explained that in 1994, 68.4% of the non-profit workforce in the US was made up of female members of staff. This has been evident in the New Zealand voluntary sector as described by Dwyer (2005) "there is a high proliferation of middle aged female staff" in non-profit organisations. This is

relevant to this study as it considers organisations that provide services to older people. While the majority of staff at these organisations are females, the carer profiles in New Zealand also suggest that majority of the carers are females. Therefore the increase in participation by females in the paid workforce has been identified as one of the factors that is influencing the challenges that the organisations face in volunteer recruitment (Dwyer 2005; Sanders et. al, 2008)

Both the revenue structure and the use of volunteers is further discussed in detail in the following section, as unique features of the operating environment of organisations in New Zealand.

Characteristics of clients: non-profit human service organisations primarily cater to disadvantaged clients. Billis and Glennerster (1998) identified four main types of disadvantages that clients of these organisations may have encountered: financial, societal, personal and community. People who are identified as those that lack purchasing power to seek solutions from the for profit market are financially disadvantaged. Clients with personal disadvantages are those who are unable to "articulate a coherent preference" due to challenging mental or physical difficulties. The authors identify some clients as societally disadvantaged, when their voice is unheard or if the society makes it difficult for them to achieve economic power. The Community disadvantaged are clients who live in a community where the social structures have broken down and where the normal institutions of society (state and private) do not operate.

Billis and Glennerster (1998) conclude that non-profit are stronger in providing services to clients who endure combined *personal* and *societal* disadvantages (Table 2.3). However the identification of the state sector as the stronger sector in service provision to *financially* disadvantaged clients is misleading as it relates to beneficiaries who receive state assistance in the form of a financial payment. In contrast it is the financially disadvantaged clients that require and utilise the VSOs.

Disadvantage	Financial	Personal	Societal	Community
Sector				
Public	Strong	Either	Weak	Either
Private for profit	Weak	Either	Weak	Weak
Voluntary	Weak	Strong	Strong	Either

Table 2.3   Stronger to serve the disadvantaged clients. Billis and Glennerster (1998)

Walsh and O'Shea (2008) examine how organisations may also be better suited, than the other two sectors in serving clients with a *community disadvantage*. In their study of older people living in a rural community, where the private and state institutions were not functional, they identify how the older people themselves formed voluntary organisations to overcome the difficulties they encountered. This evolution of human services organisations in rural areas where *community disadvantage* is evident was also observed by Halseth and Ryser (2007) in their study of rural communities. They observed how the organisations formed collaborations to serve their clients better in a rural setting.

This study explores non-profit organisations that support older people who live within the community and these organisations encounter clients with financial, personal and community disadvantage. The New Zealand government has taken several measures to minimise societal disadvantage of older people. The Positive Ageing Strategy has been adopted across public and state institutions to consider and facilitate needs of older people. Similarly abolition of compulsory retirement has also encouraged older people to remain active within the work force. These initiatives reduce societal disadvantage to an extent.

2.2   The non-profit sector in New Zealand

The New Zealand non-profit sector is a $ 9.8 billion industry (Sanders et al, 2008 p.10), with an economic contribution of 3.64 billion to the gross domestic

product in the year 2004 (Statistics New Zealand 2007, p 3). Over 97,000 voluntary sector organisations employ 200,000 full time equivalent paid staff and volunteers. To discuss the unique features of the sector we first need to establish how these features arose.

Salamon, Sokolowski, and List (2003), identify eight country clusters that have similarities in five main factors in their non-profit sector.

- *Non-profit size* – Size of the non-profit sector and the average size of organisations.

- *Volunteer participation* – Volunteer input in terms of number of volunteers and volunteering hours in comparison to the economically active population within the country.

- *Revenue and structure* – Relates to the sources of funding. Contribution by state, collection of fees and philanthropic contributions considered.

- *Cultural similarities* – Cultural similarities between countries are considered.

- *Geopolitical proximity* – This relates to the geographical distance between countries and the similarities in their political systems.

Based on these factors the non-profit sector in New Zealand is identified within the Anglo Saxon cluster. However several of its unique factors display similarities with the Nordic cluster.

Country cluster	Main characteristics	Countries
Anglo –Saxon	Larger non-profit sector. Less government support - only one third of the total revenue is from govt. Other income is from fees and philanthropy.	New Zealand, United Kingdom, Australia, USA
Nordic	High level of volunteer in-put, High share of expressive activities (more than half of the workforce). Level of govt support is low.	Denmark Finland, Norway Sweden

Table 2.4   **Anglo-Saxon and Nordic clusters. Derived from Sanders, O'Brien, Tennant, Sokolowski and Salamon (2008)**

Sanders, O'Brien, Tennant, Sokolowski and Salamon, (2008) identified three unique factors in the New Zealand non-profit sector: strong focus on expressive functions, philanthropy based revenue structure, high level of volunteer participation.

(1) Expressive function

Expressive functions are activities which provide an opportunity for expressions of cultural, religious, professional or policy values and interest. Sectors such as civic and advocacy, arts, culture and recreation environmental protection are included within the expressive function. **Service function** refers to the delivery of direct services e.g. housing, community development, social services, education and health. Salamon, Sokolowski and List (2003) observed that the differences between expressive and service functions are not very clear and many organisations are engaged in both types of activities. However it is important to distinguish the difference as we focus on organisations which primarily deliver a service function.

Overall 49% of New Zealand non-profit sector work force engages in expressive functions (Sanders et al, 2008). This is above the average for the Anglo Saxon cluster of countries where 39% of the workforce is engaged in expressive activities. In this respect New Zealand is more similar to the Nordic cluster of countries where the expressive roles are at 57%. (Sanders et al, 2008, p. 15). Only the Nordic cluster and New Zealand exceed the 39% average.

(2) Philanthropy based revenue structure

The non-profit sector receives its revenue from three primary sources: the government, through membership fees and through philanthropy. Table 2.5 illustrates the revenue structure of the non-profit sector in New Zealand.

Revenue structure	Fees	Government	Philanthropy
New Zealand	55%	25%	20%
Australia	58%	32%	10%
Anglo Saxon cluster	50%	36%	14%
Nordic cluster	57%	35%	8%

Table 2.5   Revenue structure. Derived from Sanders, O'Brien, Tennant, Sokolowski and Salamon (2008)

In comparison New Zealand non-profit organisations receive a lesser amount of income from the government and more from philanthropists than most other countries (that data is available for). Philanthropic giving in New Zealand (households, corporations and foundations which also includes the gaming machine trust) amounted to NZ $1.6 billion in the year 2004. In terms of its revenue structure New Zealand closely resembles African, Latin American and other developing country clusters.

(3) High level of volunteer participation

New Zealand has the seventh largest non-profit workforce in the world, as a percentage of the economically active population. At 9.6% it places New Zealand ahead of the averages of the Nordic and Anglo Saxon country clusters (see Sanders et al, 2008, p. 13). At 67%, New Zealand non-profit sector also has a high level of volunteer participation, relative to the 42% average in all countries and 48% in the Anglo Saxon cluster. The authors observe that 90% of the non-profit organisations in New Zealand rely solely on volunteers to function and do not employ paid staff.

These unique characteristics affect VSO –OPs. The majority of the volunteers are engaged in three main expressive activities; cultural, recreation and sports. Social service which is a service function engages the highest proportion of paid staff and organisations that provide services to older people receive an average of six

hours of volunteer time per year. Therefore volunteer recruitment is a key activity amongst these organisations.

Further due to limited funding from the government these organisations need to consistently engage in fund raising activities. The increasing need for home based care amongst older people creates a demand for more community based programmes to be set in place. Due to limited number of volunteers, paid staff need to be engaged in supporting these initiatives, thereby increasing the need to raise funds to maintain the programmes set in place.

2.3   The non-profit sector and service provision to older people

The following section explains the importance of focusing this research on human service organisations and those that provide services to community dwelling older people. It presents population statistics, life expectancy, quality of life and housing arrangements of older people.

2.3.1 Demographics of older people

New Zealand's population of older people is increasing in absolute terms and percentage wise in relation to the overall population. In 2006 older people in New Zealand (Statistics New Zealand, 2007) make up one in eight of the total population. This is an increase from one in 12 in the early 1970s. It is projected that by the year 2040 it would increase to be one in four people older than 65 years of age. The latest census figures show that in 2006 there were 495,600 older people compared to 450,000 just 5 years earlier, showing the largest growth in this group during the last 100 years. Reflecting a worldwide trend, women outnumber men among older people in a ratio of 124:100. This disparity increases substantially with the increase in age, by 221:100 in the 85+ age category. Over a quarter of all older people (27%) were born overseas: 55% born in UK and Ireland with others from Asia, Pacific nations, North West Europe and Australia in that order. 75% of those born overseas have lived in New Zealand for

at least 30 years. If the present trend continues older people of Asian origin will become the fastest growing foreign born group of older persons in New Zealand (Statistics New Zealand, 2007, p. 37). Within an increasing older population it is important to consider their quality of life to understand why some older people may seek support from organisations.

Life expectancy and quality of life

Life expectancy has increased substantially within a generation. A male born in 1977 could expect to live to only to 69 and a female to 75.5 years. By comparison a male born in 2006 could expect to live to 77.9 years and a female to 81.9 years (Statistics New Zealand, 2007, p.63). Projection for 2051 shows a male life expectancy of 84 years and for females to be 87 years. An increasing population of older people and life expectancy has therefore altered the population structure significantly. Figure 1 illustrates this change.

Figure 2.1   **Estimated and projected age-sex distribution of the total population. Statistics New Zealand (2009)**

The growth of the 65+ population is expected to accelerate from 2011. By 2031 the people born in the highest growth period (1949-1961) would have turned 65+ and ageing is expected to slow down. However with increased life expectancy, growth in the 85+ population will continue to accelerate.

Although life expectancy has increased significantly, the quality of life, in relation to being disability free period has not increased at the same pace (Table 2.6).

	Life Expectancy	Disability free life expectancy
1996	Male – 74.4 [Female – 79.7]	Male – 57.8 [Female – 60.5]
2001	Male - 76.3 [Female – 81.1]	Male - 57.9 [Female- 60.9]

Table 2.6 **Life expectancy and disability free life expectancy. Derived from Statistics (2007) – Health Expectancy**

Disability free life expectancy is the age at which older people begin to experience functional limitations. In males this figure is at the age of 58 years and in females at the age of 60. These functional limitations do not impair their ability to live independently. However they contribute to the number of older people who require healthcare growing faster than their age group (Statistics New Zealand, 2007, p.64, p.75).

Employment

The number of older people in employment has increased over recent years, the primary reasons being (a) New Zealand superannuation age increased from 60 to 65 years gradually from 1992 to 2001 (b) changes to the Human Rights Act of 1993 abolishing the retirement age (effective 1999) and (c) in casual and part time work becoming more common. These changes have resulted in more than doubling of the older workforce in the last 18 years. In 1991, 17% of men employed were between the ages 65-69, which increased to 43% by 2006. In addition paid work older people are also engaged in voluntary work. In 2006 over 18.3 % of older people were engaged in such work. This is an increase from 2001 when 17% of were involved with voluntary sector. The majority of the older people engaged in voluntary work are in the age group of 65-69 years.

New Zealand Superannuation is a pension paid by the state. Most New Zealand residents are eligible to receive this at the age of 65. It is the primary source of income for about 60% of older people. According to the Ministry of Social Development (2007) superannuation is 28% less than the minimum wage. The median income from all sources for older people in 2006 was $15,500 per annum

as compared to $27,000 p.a. for the rest (15-64 year olds). This reflects a significant drop in purchasing power for older people. The median income of older women was $13,500 ($2000 less than their male counterparts) making them even more financially vulnerable.

Housing

Over 93% of older people in New Zealand live in private dwellings (Statistics New Zealand, 2007, p 115). Years spent in the same house increases with age: 33% of older people (65-75) have lived in their current house for 20 years or more and 23% of 75-79 year olds lived in their current house for more than 30 years. However not many (14%) of the 90+ age group are able to remain in their dwellings. This could be due to frail health, disability or other functional issues that require care in an institution.

2.3.2 Social care and Services

The Social services category of non-profit organisations encompass service provision for disabled and older people as well as for child welfare, youth services and family services (Statistics New Zealand 2007, p 110). Social Services category is prominent as it contributes 23% of total GDP of non-profit institutions and because it contains the highest number of paid staff at 30% (Tennant et al 2006, p. 24-26.)

The increase in older people living alone and the migration of family and friends limit the capacity of the informal carers (family and friends). Thus some caring responsibilities are likely to shift to formal organisations to cater for the increased demand for social care. This was demonstrated in a US study by Kendall, Knapp and Forder (2006), which showed that, older people account for largest share of social care resources.

Research which describe services that older people require within the community often perceive them as recipients of these services (Dwyer, Gray and Renwick, 2000; Foster 2002; Davey and Keeling, 2004). More recently research

has begun to consider the role that the older people themselves can play in service provision (Walker, 2006; Fine, 2007; Walsh and O'Shea, 2008). This study considered both perspectives however the main focus within this study is the service provision by the non-profit organisations.

It is evident that older people themselves work and manage in these organisations both as volunteers and as paid staff. They are one of the most active cohorts in organisations. An example of such empowerment is illustrated in Walsh and O'Shea (2008).They present transformation of rural ageing where older people are evolving from "care recipient" roles to providing reciprocal caring. The members of the organisation are both the clients and volunteers and are engaged in a variety of roles within the organisation. The primary role in the organisation consists of supporting and assisting other older people to within the community. Walsh and O'Shea (2008) state that there is an increasing demand for community oriented organisations, and older people are able to organise and lead these organisations.

A noteworthy New Zealand study (Dwyer, Gray and Renwick, 2000) focused on identifying personal and environmental factors and services that affect the ability of older people to live independently. Personal factors relate to the attitude and characteristics of the individual. Environmental factors include infrastructure and the attitude of others towards the older people. Health, security and information services are the main services identified within this study. A summarised version of the factors of each category is presented in Table 2.7.

Personal factors	Environmental factors	Services
▪ Attitudes of older people ▪ Social networks ▪ Volunteering ▪ Health and fitness issues ▪ Physical activity ▪ Mental Activity ▪ Financial circumstances	▪ Attitudes towards older people ▪ Housing ▪ Transport and local amenities ▪ Security ▪ Technology	▪ General Health services [Health promotion and injury prevention] ▪ Meals on wheels ▪ Security services ▪ Home delivery of groceries ▪ Information services- [Banks, IRD, Work and Income]

Table 2.7   Factors that affect the ability of older people to live independently. Derived from Dwyer, Gray and Renwick (2000)

The public institutions play a prominent role in facilitating *environmental factors* such as housing, transportation and security. Dwyer et al. (2000) provided the basis for the Positive Ageing Strategy of New Zealand (Ministry of Social Development, 2001). It outlines the response of public institutions to an ageing society and older people dwelling in the community. The responses include promotion of health and fitness programmes catering to older people, initiatives to improve their financial circumstances and infrastructure such as housing and transportation (Dwyer et al. 2000).

The technology component refers to the ability of older people to use technology when transacting with state departments and banks. Older people preferred the face to face interaction to technology. Use of ATM, interactive voice responses, telephone banking and call centres were not the preferred option of older people. This trend may change with time. Consider the "young-old" population in the present age group of 65-75. The majority of these older people are tech savvy and will be in the workforce relatively longer than the "old-old" group (80 years and above). Technology related skills and attitudes of "young-old" group will not be the same. This group is likely to consider technology as an essential factor in their environment.

The availability of *services* was identified as a contributing factor for independent living in the report. Provision of information services is an essential service to older people who live in the community (Dwyer et al., 2000). Older people were interested in receiving information on income, benefits, preventive health care programmes, housing and transportation. Availability of a consolidated source of information for older people was also identified as a primary need by Davey and Keeling (2004). Access to information was stated to be lacking and was identified as a cause for stress amongst older people and their carers (Davey et al., 2004, p.40).

The report also observes that due to the geographical spreading of families, it is likely that the family members may be caring from a distance and are able to only provide essential weekly care in terms of administrative support or household assistance. Therefore having a consolidated source of information about the services available in the community is a mechanism of supporting the carers as well as the older people themselves.

While community responses are required for environmental factors and services, *personal factors* relate to individuals. As families become more geographically distant the social networks of older become more important. Davey and Keeling (2004, p.50) in their key findings explained that loneliness and social isolation amongst older people may require new community responses. An Australian study by Fine (2007) supported the findings of Davey and Keeling (2004) and suggested that the state is more capable of providing mainstream services such as health care, transportation and housing while less able to provide "social inclusion" services to older people such as companionship support and social networking. Voluntary sector organisations which operate within the local community are better equipped for service provision in those areas.

The complexity of services that an older person may need cannot be catered to solely by public institutions. Foster (2002) provides an interesting single case study of a male older person and the challenges he faced in living in the

community. This narrative provides an insight into the practical services that the older person required in the form of advice on health services as well as pet caring. The complexity of the level of service requirement is depicted in this study which stresses the importance of providing social care services to an increased population of older people (Foster, 2002, p.239). Applying the categorisation provided by Dwyer, Gray and Renwick (2000), this older person needed social networks, financial assistance, security services and general health services to maintain his independence. A single organisation is unable to provide all of these services. In its conclusion Foster (2002) explains that two primary challenges that the social workers face are the limited availability of resources to cater to these complex needs and maintaining a positive approach in their work practices faced by this scarcity.

There are many organisations that provide services to older people and contribute to their ability to live independently. Public sector institutions, commercial sector and non-profit organisations provide a range of support and services. In addition to these organisational responses the family and friends of the older person are most important. Often they are part of the older person's social network. Some of them also provide informal care in the capacity of a carer.

2.3.3 Non-profit organisations and service provision to older people

Growth within the ageing population in New Zealand and across the world has given rise to a phenomenon referred to as the third act of an individual. This third act is perceived as a time of transformation where an individual is inter-dependent with their community. The non-profit sector has been identified as a key stakeholder (in addition to family and state organisations) in supporting older people who live in the community (Blackman, Brodhurst and Convery 2001; McPherson, 2003; Boston and Davey, 2006; Dwyer, 2006). There are different types of said organisations and they provide a diverse range of services. These include many faith based and non faith based organisations. The services these

organisations provide range from provision of home care and personal services to organisations that primarily focus on advocacy and information services.

The New Zealand Council of Christian Social Services (2000) and (2004) has presented an analysis of the religious organisations which provide services for older people. In their (NZCCSS, 2000) report they explain that the demand for home care services and home support services are on an increase. The report expressed a primary concern over the financial stability of the organisations that provide these services (p.2). Although the survey was limited to 120 organisations affiliated to NZCCSS that were providing some form of care for older people, it illustrated a wide variety of services ranging from home care to respite care. The report suggested that organisations will discontinue loss making services and will only continue with services that make profit or break even(p. 13). The report also stated that the sector which provides support for older people has now become a very competitive industry and that the voluntary sector organisations need to cater to increased service demands by those who cannot afford the services of the commercial sector (p.16). The report also suggests that the care of older people is now moving from rest home care to home based care and day care and that voluntary organisations need to cater to an increasing complex care needs (p.19). This requires an increased level of information to be maintained on service needs of clients as they differ according to their functional limitations and their physical environment. Further the organisation's ability to provide home based care now depends upon the number of skilled care professionals and volunteers as they are no longer constrained by space limitations. This results in increased emphasis on information management within these organisations.

NZCCSS (2004) confirmed the trend predicted by their (2000) report and stated that home and community based services will continue to expand and that the future focus of the organisations will be clearly on home based care and dementia care. The report presents the issues that are faced by the services

providers and states that the "*providers are struggling to maintain viability and quality of service delivery*" (NZCCSS, 2004, p.9). The main issues identified are the increase in an ageing population, emphasis on home based care and ageing in place initiatives, a changing regulatory environment which necessitates certification and staffing effectiveness etc., increasing participation of the commercial sector operators, and funding issues. Of the 47 organisations that responded to the survey, lack of funding and recruitment were prioritised as the two main issues faced by their organisations. Whilst highlighting many of the complex issues related to both service provision to older people and the organisational limitations, the report recommends that further research needs to be undertaken to provide guidelines for new service models in the sector.

There are many non-profit organisations that provide a wide variety of services in New Zealand. Whilst some maintain a dedicated profile on only serving older people other organisations include older people as one category of their customer base. Types of services provided vary from information services to home care and delivery services depending on the type of the organisations.

2.4   Non-profit sector and ICT use

Research publications on the non-profit sector and its ICT use appear to be largely fragmented between Information systems, Policy and administration. As the objective of the search was to identify literature in terms of service provision to older people, publications from gerontology studies were also included. Whilst every effort was taken to ensure that a thorough search was conducted, publications in the area of service provision for older people by non-profit organisations and their use of ICTs were limited to only a very few studies. Therefore the literature review presents the use of ICTs in the non-profit sector and is not limited to organisations that support older people.

2.4.1 ICT adoption

There are many studies that analyse the adoption of ICT in the non-profit sector (see Burt and Taylor, 1999; Williams, 1999; Wyatt, 2001; Hajnal, 2002; Lebert, 2002; McInerny, 2007). The primary focus of these studies is to identify the factors that influence the decision to adopt technology within the organisation. In comparison fewer studies focus on the actual use of the existing technology in non-profit organisations. The question of "how is technology used to achieve the objectives of the non-profits?", remains relatively unexplored. As the main focus of this study is to examine the post adoption phase of the ICT use, in day to day activities of organisations, the following section will present four main themes identified within ICT use in the sector. These themes were created for the purpose of presenting existing literature in this chapter. We have used these studies in operationalising the social actor model in chapter 3.

1.   Reconfiguring information flows
2.   Creating profiles and managing identity
3.   Transformation of work
4.   Data collection

(a) Reconfiguring information flows

Burt and Taylor (2003; 2001) explored the use of the Internet in two UK voluntary sector organisations, Friends of the Earth (FOE) and Samaritans. Both organisations used ICTs to reconfigure key information flows. The organisations were using ICTs to modify their information flows in their respective tasks of campaigning and providing enhanced user services. The study explored how the implementation of geographical information systems at FOE and the advanced networked telephony systems Samaritans modified their information practices.

The case studies in FOE and Samaritans were conducted by interviewing members of the senior management team and other staff members- both

volunteers and paid staff. In their analysis of the two case studies the authors demonstrated how ICTs are used to integrate the internal information flows and reconfigure the external information flows.

Integrating internal information flows: Prior to the introduction of the internet and web technologies, the communication at Friends of the Earth (FOE) had been more two-way between the national office, regional coordinators and the local groups. In the new model which takes a more collaborative form, the local groups are now able to communicate and share information with each other using web sites, bulletin boards and discussion forums. This sharing of data enables local groups to identify trends and create profiles by combining both local information as well as national information. This integration of internal flows support the ability of organisational members to communicate with the other staff within and external to local group.

Reconfiguring external information flows: Burt and Taylor (2003;2001) illustrated how the Samaritans use of Internet technologies have enabled collaboration with external agencies such as universities as well as with other community groups. This consideration of the external information flows is a facet that has not been examined in several of the studies that focus on technology adoption in voluntary sector organisations. Burt and Taylor (2003:2001) have extended our understanding by exploring the professional and organisational relationships of organisational members. Increasing the external information flows has become important. Several other studies have also emphasised on this finding. For example Stillman (2006) explained that VSOs increasingly use ICTs for work with clients, communication with other agencies, businesses, and government. Further Pinho and Macedo (2006) reiterated the influence of external organisations as the NPOs in their study, highlighting the importance of external organisational relationships

(b) Creating profiles and managing identity

Burt and Taylor (2001, 2003) also illustrate how FOE and Samaritans utilise ICTs to create profiles of entities (e.g. polluted sites, donor agencies) and community groups. In creating profiles of the polluted sites ICTs (web sites) were used by FOE to aggregate the information collected by different groups. This is an important finding as it explains that VSOs use technologies beyond basic communication. This contributes to their common core activities as it provides aggregate information that the organisation can be used to strengthen their position in applying for funding.

Similar to the finding of Burt and Taylor (2001; 2003) where technology was used to create a profile of a community, Pinho and Macedo (2006) illustrated the need within voluntary sector organisations to use ICTs for profiling. This relates to profiling of an affiliated organisation based on publicly available information e.g. VSOs use online information to profile donors to establish how best they should present their case when applying for competitive grants.

(c) Transformation of work

Saidel and Cour (2003) moved beyond the investigation and the adoption of ICTs in non-profit organisations and explored the effect of information technology upon the processes and relationships in non-profit organisations. The authors explored the effect that ICTs had on forming workplace identities. The central research question of the study was to investigate how ICTs have changed the "nature and distribution of work and workplace relationships" in non-profit organisations. The study looked at three non-profit organisations that had multiple contracting relationships with state organisations by conducting 23 semi structured interviews.

The study identified technology related job transformation in the sector. It provided two concepts – task expansion and task compression.

Task compression: Task compression refers to the ability to use ICTs to combine tasks that were formerly performed "separately and in sequence" by different individuals in an organisation which are now performed as a compressed single function by a single individual. The authors differentiate between upward task migration and lateral task migration in relation to task compression. Whilst upward task migration refers to organisational roles higher in the hierarchy/structure [e.g. Manager] performing these now compressed single functions, lateral task migration refers to different people getting to do different jobs that they did not do before.

Task expansion: Task expansion primarily refers to the expansion of the work at the level of administrative and clerical positions within voluntary sector organisations. The authors show that support staff now work with databases and spreadsheets for their clerical work in addition to managing logistics operations of the research coordination. It has changed their jobs from clerical work to higher order administrative and non-administrative jobs.

These findings relate to this study as they inform us how the identity of the individual is influenced by the technology they use and how the technology influences the role they perform within the organisation.

Uniformity of service provision

Burt and Taylor (2001; 2003) in their study of Samaritans highlight the use of technology to offer services in a uniform manner and provide a selection of choice for constituents. These two elements are unique in relevance to voluntary sector organisations and may relate to large organisations which have many branches. In showing how technology can be helped in reshaping internal relationships they explain that with the use of telephony the callers who call into the organisation could be routed either to a local organisation in the same locality or depending on the call volume they can even be routed to a branch elsewhere. This forces the branches to work and offer services in a uniform manner, an issue which has not been considered extensively in voluntary sector

literature. In the commercial sector uniformity of service provision is considered important as it improves service quality and overall organisational performance. This may not have the same importance in the VSOs as their priority is to cater to individual requirements.

(d) ICT for data management

West and Green (2008) used two case studies to evaluate data management practices and the challenges faced in community based voluntary sector organisations. In comparison with the Internet and websites, data management is an issue that has received less attention in these organisations (Thatcher et al, 2006). West and Green (2008) focus on exploring how the organisations they studied managed their client data and provide several important recommendations improving data management practices, of relevance to this study.

Their study is important as it creates a contextual understanding of the importance of the data of the clients. According to West and Green (2008), the client data is of strategic importance to the organisations and of value as aggregating and presenting such data strengthens their fund raising efforts. The donor organisations which receive competitive bids for the grants, evaluate the impact and the effectiveness of the organisation. This data provides an important insight about the utilisation of the resources to the grant makers. However, the authors discuss the importance of maintaining operational data in three important (p. 5) contexts that are unique to the non-profit sector.

Voluntary sector organisations

A

Client

A

Client

C

B

B
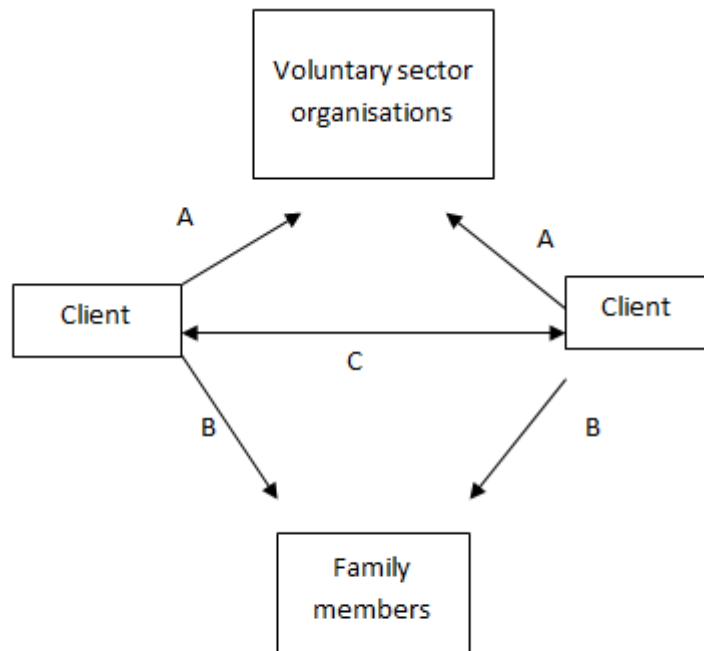
Family members

A- Relationships between the client and the non profit organisation.
B- Relationship between the client and their family members.
C- Relationships between clients.

Figure 2.2   Client and their relationships. Derived from West and Green (2008)

The study illustrates that within the voluntary sector data management client alone is not a central entity but the relationships that the client maintains need to be included as well. They highlight three types of relationships of where data is important: client and non-profit, client and family members, relationship between clients.

1.   Relationship between the client and the non-profit organisation

Unlike an individual's relationship with a commercial sector or state organisation, in the voluntary sector the individual can evolve and be in multiple relationships. Billis and Glennerster (1998) explain this ability of the constituent to be a client as well staff member in the voluntary organisations as "stakeholder ambiguity" and define it as a unique characteristic of the sector. West and Green (2008) concur with this by stating "A constituent relationship with the non-profit may be categorised by the different roles simultaneously such as a constituent who is

a donor, general volunteer, and teacher of the organisation or a constituent who is client and general volunteer of the organisation".(West and Green, 2008 p.5) In relation to our study, this works well with the practical example of older people serving both as clients and volunteers in rural communities which has been illustrated in Walsh and O'Shea(2008). In their study, Walsh and O'Shea categorised clients into five categories of: member, activity volunteer, service volunteer, activity participant and service user indicating that these categories were not mutually exclusive. A majority of the population fit into a combination of the categories as opposed to a single category of user or member, thus further illustrating the issue of role complexity in voluntary sector organisations.

2.   *Client's family member relationships*

The West and Green study (2008) discusses the importance of maintaining information about the family member relationships as they are part of important interactions with the client. This relates well to the studies which discuss the role of the informal carer in the lives of older people. Milligan (2006) has also observed the significance in and the evolution of the role of the informal carer in the context of older people. This relates to the voluntary sector organisations and how their use of ICTs needs to take into account the individuals who are not the direct clients of the organisation.

3.   *Relationships between clients*

Interactions between organisational members in non-profit organisations and the importance of capturing this data have been illustrated by West and Green (2008). In relation to this study, non-profit organisations often encourage interrelationship between groups older people and often provide facilities that encourage supportive environment. Walsh and O'Shea (2008) also provide detailed insights into how interrelationships are important in non-profit organisations whose primary clients are older people. The earlier respondents of the Walsh and O'Shea (2008, p.801) study indicated that they valued their membership as a means to alleviate their "loneliness and isolation (p.801)" and

highlighted the social gains more than the individual assistance from services (e.g. transportation services).

Recommendations for organisations: Schneider's study (2003) provides several recommendations on how data management practices can be improved in organisations in relation to these complex client management issues.

Including

- Establishing centralised client databases
- Improve the data collection process
- Establish partnerships with educational institutions and with Technology Assistance Providers.

Whilst the first two measures are related to the internal mechanisms of data collection and management, the collaborations with academia and technology assistance providers, the fact that this influence was considered states the importance of exploring mechanisms beyond the internal walls to overcome the prohibitive issues of staffing and time constraints prevalent in voluntary sector (Schneider, 2003). Thus it is important to consider how these collaborations influence the technology use in voluntary sector organisations.

2.4.2 Types of studies

Due to limited insights because of the lack of literature in the studies in NPOs several studies in ICT adoption were explored in order to extract relevant factors. In terms of the methodology in use in examining the use of ICTs in organisations most researchers used either case studies (Burt and Taylor, 2003; 2001; West and Green, 2008) or ethnographies (Schneider, 2003). In contrast to the in-depth case studies researchers that examine ICT adoption used surveys and presented a sector wide analysis.

Pinho and Macedo (2006) conducted a survey and evaluated the attitude of managers of 392 non-profit organisations towards Internet adoption in Portugal.

The study presented perceived benefits of Internet use amongst the 130 of the NPOs in the study that had internet access (see Table 2.8). Pinho and Macedo (2006) focused on investigating the specific and effective use of the Internet and attitude of managers towards Internet adoption. The study concluded that the managers have a positive attitude towards Internet adoption and illustrated the following areas where perceived benefits of the Internet were identified.

Internal	External
Recruitment of staff and volunteers.	Interconnectivity with state organisations.
Low cost communication.	Form and extend non-profit networks.
Fundraising source .	Improving the public image.
Savings in advertising cost.	Public recognition and notoriety.
Greater customer satisfaction.	Dissemination of programme of action.
	Dissemination of social values.
	Availability of expertise regardless of the location.

Table 2.8   Internal and external benefits of ICT adoption. Pinho and Macedo (2006)

Wolpert and Seley (2007) discuss adoption of technology in a study which encompassed over 3000 non-profit organisations. The study has used a survey method and provides aggregated information. While they recognise the internal motivations for adopting technology for cost saving and increasing the operational efficiency of the programme, they also discuss the external pressures to adopt ICTs. The study shows that the organisations that provide contracting services for the government are directly influenced to maintain relevant records. Indirect influences emerge when organisations apply for grants from the state and have to provide information for those grants. This identification of the external factors that motivate ICT adoption and use in voluntary sector organisations reiterates these studies which discussed external pressures (Zorn, 2007, Burt and Taylor, 2003 and Schneider, 2003).

Barriers for effective use: ICT adoption studies emphasise three main issues that prevent the organisation from effectively using ICTs: lack of funding, lack of ICT staff and lack of ICT skills amongst staff members. These issues are characteristic of the sector and it is important to explore how organisations can overcome them. Adoption studies do not focus on overcoming these issues or the outcome of ineffective ICT use.

Outcome of ineffective use of ICTs: Schneider (2003, p.391) explains the results of ineffective use of IT by stating that it creates an "additional strain" on an organisation and it may damage the organisation's reputation among its members and stakeholders. An organisation's reputation and relationships with the community is central to the sustainability. Schneider (2003) suggests that when an "organisation is unable to communicate effectively and present materials in an expected manner" that it creates a negative perception in the minds of the stakeholders and affects the organisations' ability to establish networks of trusting relationships. Organisations that use technology are able to collect and present information in a professional manner that creates a better impression on the stakeholders. In comparison an organisation which does not use technology is highlighted in a negative manner. Thus the ineffective use of technology may prevent organisations from gaining access to valuable sources of funding in the form of competitive grants or may reduce the likelihood of forming collaborations with other non-profits.

Overcoming barriers for effective use: The study Schneider (2003) presented two types of barriers that prevent organisations from making effective use of ICTs and illustrated how organisations can overcome these limitations. Their findings are presented under two facets of the non-profit: social capital and management.

Social capital relates to the networks that an individual forms and the good will and fellowship that extends within the community. Non-profit organisations are identified as a key contributor to the development of social capital and this in

turn can be used to overcome easy access to ICT and lack of ICT skills. Schneider (2003) illustrates social capital in terms of "trusting networks" in the community or neighbourhood. She refer to these as closed social capital networks and suggest that "bridging social capital networks" should be established across these closed networks and emphasises the importance of maintaining both closed and bridging social capital networks in relation to maintaining resources. These networks are important to draw resources and participants to the organisation. While Schneider (2003) advocates that tech savvy board members of the organisations can also be used to supplement lack of ICT skills in the organisation, Fletcher (2007) shows how clients' family members, spouses and relatives can be used as sources of technological expertise in organisations.

In order to address the two main *management issues* highlighted in her study (Schneider, 2003) staffing and lack of time, Schneider (2003) suggests that organisations adopt an outward looking perspective and was not limited by internal factors and proposes,

- Use board members, volunteers, and campus or community collaborations as a first step to overcome the lack of ICT skills.
- Establish relationships with organisations that use technology successfully.
- Build technology to suit user capabilities.

This external perspective to overcome internal factors is significant as many organisations are able to establish bridging networks.

2.5   Non-profit organisations, ICT and older people

In our literature review we found only two studies (Renold, Meronk and Kelly, 2005; Hedstrom, 2007) that specifically focus on a cluster of non-profit organisations that provided services to older people.

Renold, Meronk and Kelly, (2005) evaluated 17 community based organisations that serve older people in Orange County, California to ascertain the level of ICT

training and the attitudes towards technology amongst the members of staff. Although the primary focus of the research was around training needs, authors also attempted to identify the level of technological infrastructure and software used in organisations. The researchers conducted 40-60 minute interviews with the coordinators who were primarily in charge of the day to day operations of the organisations. The study focused on two research questions that were aimed towards the training and the attitude of staff towards technology. Although a limited sample, only seven of them were able to positively comment on the efficient use of technology. The findings suggested positive attitudes toward technology usage will lead to improvement of services delivered by these organisations. Further, the need for appropriate implementation of technology and reconfiguration of workflow processes were also suggested.

Hedstrom (2007) identified the use of ICTs in elderly care service provision as an important area of study due to the different *values* associated with care provision. The author identified three levels of values that an organisation would be influenced by in their care provision to older people.

- work practices of an organisation
- laws regulating elderly care
- values of the family and the older people (clients)

Due to these multiple values Hedstrom (2007) stated that it is important to study how ICTs are used amongst these different value systems. The study investigated three case studies and an action research study to explore factors that influenced the development or use of ICT systems in these organisations. The perception of **values** and the use of ICTs to contribute to those values is unique within this study and contributes to our understanding of how the organisations that provide services to older people perceive technology.

Hedstrom (2007, p. 77) identified four core value areas of ICT use in organisations that serve older people.

Administration values	Integration values
1. Increased efficiency	1. Cooperation
2. Cost reduction	2. Mutual perspectives and work routines
3. Administrative support	3. Increased understanding of other professional groups
4. Quality assurance	
5. Improved information security	
Care values	Professional values
1. Correction care	1. Modernization and increased status
2. Continuous care	2. Development of the role of nursing assistants
3. Increased time with older people	3. Make the care work more visible
4. Safe care	4. Knowledge development
5. Legal rights for care recipients	5. Support for norms

Table 2.9   Core values of ICTs in organisations. Hedstrom (2007)

There were three main findings of the study: administrative values were a strong motivator for ICT implementation, care values (quality of care and capacity of staff) benefit from increased use and contributed to enhance professional image of staff.

While administrative values such as cost savings can be identified as a motivator to adopt technology, its benefits shown in other areas influence continued use.

Hedstrom (2007) finding that technology contributed to enhance the professional image supports, Saidel and Cour (2003) which argued that ICTs modify professional identities. This finding is relevant to this study as we examine the influences of ICT use within human service organisations.

Renold, Meronk and Kelly (2005) state most organisations are using available technology in limited ways due to internal barriers such as lack of ICT skilled staff and lack of funding for training. There have been several suggestions on the potential use of technology in these organisations. The use of technology for volunteer recruitment (Dwyer, 2006) and offering new services and bridging existing service gaps (NZCCSS 2004, p. 8) has been suggested in the New Zealand context. Fine (2006a) suggests a different model of technology use for volunteer

recruitment in organisations. In addition to the high intensity of commitment that is provided by the core group of volunteers the author suggested that organisations should be equipped to facilitate the "low intensity and sporadic" participation of society in non-profit sector. The author argues that the challenge for organisations is to ensure that that there is a diverse variety of meaningful and participatory opportunities available for the community. Developing such participation initiatives amongst non-profit organisations that cater to older people will enable non-volunteer intensive models which may result in enhanced positive participatory practices.

2.6 ICT adoption and use in the New Zealand non-profit sector

As discussed before New Zealand has a significantly large non-profit sector. The majority of the studies conducted in the sector focus on different aspects of volunteering: volunteer motivations (Daniels, 2001; Vining, 1999), trends in volunteering (Wilson, 2001; Derby 2002; Cordery, Proctor-Thomson, and Smith, 2013), managing volunteers (Brosnahan, 1997; Hurrell, 2000) and volunteering in emergency services (New Zealand fire service commission, 2003). This is characteristic of the high level of volunteer participation we discussed in section 2.6.

In comparison there have been very few studies (Zorn, 2007; Zorn, Li, and Lowry 2007; Williamson and Dekkers, 2005; Craig and Williamson, 2005) conducted on the New Zealand non-profit sectors' adoption and use of ICTs. These studies mainly comprise of surveys which encompass the sector and explore IT adoption, the use of the Internet, websites and issues pertaining to building ICT capacity in non-profit organisations.

The most recent study by Zorn (2007; Zorn, Li, and Lowry, 2007) and the present ongoing survey (http://wms-soros.mngt.waikato.ac.nz/ict/survey) conducted by the same authors, focus primarily on the adoption and use of the Internet and its websites in the voluntary sector. Zorn (2007) evaluates the social and political

influences that motivate ICT adoption. The study was based on a postal survey conducted in 2005, of 1046 voluntary sector organisations. The purpose of the study was to determine the influences of ICT adoption. The main considered factors of ICTs consisted of websites and access to the Internet by organisational members.

These studies provide two important findings relevant to our study.

Zorn (2007) concluded that the main social and political influences for ICT adoption are identified as

- Influence of the stakeholders – The necessity to create a positive image for the donors, clients, government and regulators of the sector.
- Competition with similar organisations.
- Pressure to emulate the commercial sector – by ensuring professional standards are maintained.
- Values of the staff.

Whilst "values of the staff" relate to an internal motivation, the other three factors clearly illustrate the importance of considering influences external to the organisation. This finding in the non-profit sector is consistent with Lamb and Kling (2003) who considered the relationships with the industry as an important influence for ICT use.

The second important finding in the study was an introductory cluster of uses that Zorn (2007) established. Current forms and degrees of ICT use is discussed and has been presented in Table 2.10.

Basic Use	Advanced Use	
	Stakeholder engagement	Acquisition of resources
Communication and information exchange Record keeping Image enhancement	Reaching out to members and supporters in a variety of ways	Acquiring funding and information from government sources.

Table 2.10   Advanced and basic use of ICTs. Derived from Zorn (2007)

These "clusters of common use" (p.11) provide an introductory view of ICT utilisation in the voluntary sector in New Zealand and enable us to explore how the organisations are influenced to move from basic use to advanced use. Within this study we have incorporated these within "common core activities".

Zorn, Li, and Lowry (2007) have contributed to an understanding of the internal ICT environment of non-profit organisations show that there is a positive correlation with organisations which have large annual budgets and the presence, use and knowledge of ICTs. The report is mainly focused on the availability of websites, access to the Internet and how they are used. The study also considered the occurrence of an allocation of a budget line item for ICTs in terms of maintaining the computer system, purchasing and upgrading software, purchasing and upgrading hardware, ongoing computer related training and developing the website and concluded that 70% of the organisations allocated a budget for maintaining computer systems and for purchasing hardware and software. This is indicative of organisations' ICT spending.

A parallel study (Zorn, 2007) was conducted to achieve multiple objectives and attempted to identify,

- Current forms and degrees of ICT use
- The primary influences driving their adoption of ICTs,
- Intended ICT use for the future

- Major barriers or obstacles they perceive to effective ICT use
- Forms of support they desired from government or other sources to enable effective ICT use.

One of the limitations of the survey stems from the adaptation of the web site adoption model for this study which provided a limited perspective of these multiple objectives. Zorn (2007) use a model proposed by Flanagin (2000) which is primarily suitable for studying factors that influence web site adoption, was unsuitable to explore ICT use. Due to this limitation Zorn (2007) was unable illustrate other important factors that influence ICT use in organisations such as client demands, organisational roles and interactions amongst the non-profit organisation and the external environment. This limitation is a common occurrence in studies that utilise ICT adoption frameworks to explore ICT use. However there are further limitations in this study. The diversity of the organisations surveyed prevented Zorn (2007) from providing an in-depth understanding of the use of ICTs as it was not possible to consider ICT use in service provision. 1046 organisations which participated in the survey consisted of 12 different categories of primary groups, ranging from organisations that served women, children, older people, immigrants and people with health related problems. Due to the diversity of services provided by these organisations it was difficult to include an in-depth examination of the service provisions and how ICTs are used in that service provision. This is a common limitation in sector wide surveys (e.g. Burt and Taylor, 1999) due to the sheer number of organisations under consideration. Studies which examine service specific clusters of voluntary sector organisations (Wolpert and Seley, 2007; Gutierrez and Friedman, 2005), are better able to examine ICTs with relation to the service provision and result in providing an in-depth understanding of the factors that influence ICT use in day to day operations.

These previous studies (Zorn, 2007; Zorn, Li, and Lowry, 2007) contribute towards our understanding of the sector, however due to the technological focus

of the studies, the non-technical influences that exist in non-profit organisations, have not been explored in depth. The study fails to address societal factors, such as the involvement of the volunteers, role of individuals in the organisation and the services provided to the community, which are significant in the New Zealand voluntary sector.

A previous study (Craig and Williamson, 2005) which did consider the internal environment of the organisations, focused on ascertaining the level of ICT planning, technical support and training data of the New Zealand organisations. The authors used an online survey and findings suggest that of 43 respondents in the non-profit sector that lack of funds and ICT skilled staff in organisations are issues in ICT adoption in the sector. These findings are consistent with Ticher (2002), and Surman (2001), which also focused on internal factors. However, studies which focus on internal factors of the organisations are limited as they ignore collaboration amongst organisations (Guo and Acar, 2005; Halseth and Ryser, 2007) and external influences such as the state (Hiemstra, 2002) which enable organisations to overcome these issues.

The use of the Internet and mobile communication amongst individuals in the non-profit sector in New Zealand was explored in an attempt to capture their involvement in political and democratic activities (Williamson and Dekkers, 2005). The study surveyed 141 selected individuals through an online survey. These individuals were present users of ICTs and the study ascertained the nature of their internet access [location and frequency], their main motivations of using the Internet and their engagement with an online community. In their conclusion, Williamson and Dekkers, (2005, p 12) highlight the over- reliance on volunteer resources, lack of time and skills as key barriers that prevent effective use of ICTs. However they observe that organisations are able to overcome these barriers and suggested further research into how ICTs can be used to engage citizens.

The studies in the non-profit sector in New Zealand provide an initial understanding of the ICT infrastructure and use of the internet and provide significant insights into conducting research in organisations and create an important foundation for future researchers.

As there have been only very few studies conducted, they appear to be largely fragmented. This is understandable as the research in the area is new and has not been able to build on previous work. This could be due to the "consultancy" focus of the first two studies and the academic focus of the more recent ones and the fact that surveys have been utilised throughout. This has been a common occurrence in other countries as well. In Canada for example, Cuiker and Middleton (2003) explain "to date, most of the research seeking to understand how the voluntary sector uses information technology has been done by surveying organisations. Such surveys offer very basic findings and provide limited insight beyond the adoption rates of specific information technologies". Denison and Johanson (2007) suggest the importance of supplementing surveys with qualitative work to provide rich insight into how information technologies are utilised by the organisations. The technique of supplementing surveys and case study work is a common method in voluntary sector research.

2.7   ICT use in non-profit organisations

This section will address the question "what is effective use of ICT in voluntary sector organisations?" and will present an existing understanding of effective use in terms of internal and external factors that contribute to effective use. It will also present three possible models that can be used to explore post adoption phase of ICT use.

2.7.1 Concepts of use – non-profit sector

The concept of use of technology in voluntary sector organisations was introduced by Gurstein (2003, p.8), who defined effective use as "the capacity and opportunity to successfully integrate ICTs into the accomplishment of self or collaboratively identified goals". The "self or collaboratively identified goals" in relation to voluntary sector organisations can be identified as either fulfilling a social mission (Hackler and Saxton, 2007) or as the creation of public value (Moore, 2000).

Gurstein's definition has been accepted in subsequent studies that have focused on effective ICT use in the sector. McInerney (2007) further clarifies this definition by stating that the objective is to "connect technology to the social mission (p.158)" rather than to simply build ICT capacity. The collaboratively identified goals define the mission of a VSO. While many authors stay with the term "effective use" (Harrison and Murray, 2007; Salvador and Sherry, 2004; Pinho and Macedo,2006), others use terms such as "successful use" (Silverman, Rafter and Martinez, 2007) or "strategic use" (Hackler and Saxton,2007). However in their definition they are in agreement with the view that using technology to achieve the social mission of the organisation is central to its effective use.

One of the problems associated with Gurstein's (2003) is that it does not define effective use. It does not explain the way to identify effective use. Subsequent studies employ successful use and define successful use as alignment of IT with goals of the organisations. Silverman, Rafter and Martinez (2007) suggest that "a more important issue is how technology enables the non-profit to accomplish its social mission" and a similar view of strategic technology use is expressed by Hackler and Saxton (2007) who identify the "ultimate strategic goal" as the fulfilment of a social mission and creation of public value. These "mission related" uses of technology have been defined by Hackler and Saxton (2007) as strategic communications, marketing and relationship building; the acquisition of

funding sources and financial sustainability; and the use of partnerships, collaborations and donor assistance. There are several other factors that need to be included in the "mission related" uses of technology For instance, consider the importance of using technology in volunteer recruitment and management (Mathieson 2006; Harrison and Murray, 2007), resource utilisation and obtaining and maintaining membership details.

The existing studies which examine effective use as alignment of goals of the organisation with IT, explore effective use in terms of internal factors, external factors and collaborations. The following section explores each one of these in turn.

2.7.2 Factors that contribute to ICT use

Internal factors

In considering the role of internal factors, Silverman, Rafter and Martinez (2007, p. 4) provide a four factor definition for the successful use of ICT. They define successful use as the ability of organisations to,

1.   Use, maintain and upgrade technology

2.   Research, identify and implement appropriate technology.

3.   Adapt existing technology to new needs, and

4.   Be receptive to the end users of the technology (e.g. staff, clients)

The authors explain that at the very basic level, successful use is determined by the ability of an organisation to use its existing technology. They identified that the lack of time and the issues pertaining to the technical infrastructure may prevent an organisation from using the technology it already has.

They found that the key factors contributing to effective use of technology within the organisation were (a) having an organisational culture which is receptive to technology and (b) the availability of ICT skilled staff. In their investigation of small grass root non-profits they also found that creative thinking as to how the

organisational mission can be achieved with technology and a good understanding of clients were essential to effectively use technology to achieve the organisational mission. Allocation of time and funding for training, adoption and maintenance of technology were also identified as internal factors that influence effective use.

Schneider (2003) conducted an ethnographic study of five non-profit organisations that use ICTs and identified limited time, funding and staff with computer skills as three main reasons that prohibit effective use of ICTs. These findings are similar to those of Silverman, Rafter and Martinez (2007).

Hackler and Saxton (2007) evaluated 1572 survey responses of non-profit organisations in the U.S; to explore the strategic use of information technology and to investigate how organisations use technology to achieve the objectives of the mission. They identified six critical IT related factors that were antecedents of strategic use of ICTs in the voluntary sector (p.474), derived from Weil and Aral (2005) study of for profit organisations.

1. IT planning
2. IT budgeting, staffing and training,
3. Internet and website capabilities and use,
4. The measurement of IT effectiveness
5. Board support and involvement in IT decision making, and
6. Leaders' understanding of the strategic potential of IT.

The main limitation of the work carried out by Hackler and Saxton (2007) is that the six factor criterion is only applicable to large VSOs with ready access to funding and skilled ICT staff. This is specifically highlighted by the inclusion of internet and website capabilities and IT planning and budgeting. These factors are more applicable to large organisations with established funding sources.

While all three studies above are in agreement on the internal barriers for effective use of ICT as lack of skilled staff, time and funding; Schneider (2003)

and Hackler and Saxton (2007) illustrated the influence that the board members have in terms of overcoming these barriers for effective use. In the organisations they investigated they identified that ICT skilled board members with well-established external links act as enablers to overcome internal issues.

While the three previous studies examined the effective use of ICTs in a broad organisational basis, Harrison and Murray (2007) illustrated how effectiveness is portrayed within a *single organisational function; volunteer recruitment*. Volunteer recruitment is central to VSOs that depend on the community to assist them to carry out service functions of the organisations. The study utilised an electronic survey to collect 127 responses from individual members of staff who were responsible for volunteer recruitment within the VSOs. The model (Figure 2.3) presented an understanding on factors that contribute to ICT self-efficacy expectations.
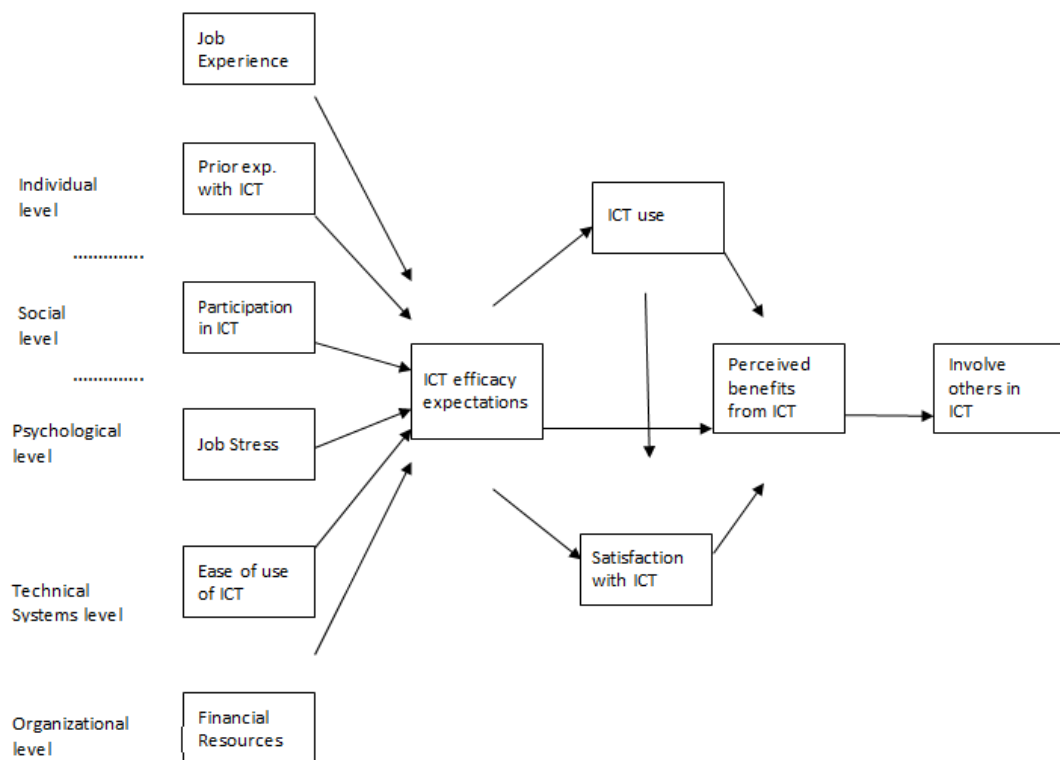
Figure 2.3   ICT effectiveness Model for the voluntary sector. Harrison and Murray (2007)

Harrison and Murray (2007) identified factors that contributed to ICT self-efficacy at five levels; individual, social, psychological, technical and organisational. The

authors defined feelings of efficacy expectations as (p.70) "expectations of the capability of ICT rather than individual capability to use ICT." Focusing on an individual's expectation of technology use was considered an important factor as it contributed to their eventual satisfaction with it. This ICT effectiveness model focuses on the individual organisational member whilst providing a limited understanding of the organisational level influences. Factors job experience, prior experience with ICT and job stress relate to the individual organisational member. The "ease of use" (p.74) which is considered at the technical systems level, relates to the individual's perception that ICTs are easy to use and should have been included at the individual level. At the organisational level the study considers the financial resources of the VSO but it does not consider the availability of technical support, which is a significant factor that is often identified as a barrier (Kerr, 2002; Saidal and Cour, 2003) for effective use of ICTs in the sector.

Whilst this model is adequate to examine the capabilities of the organisational members' to effectively utilise ICTs it does not overcome the established issues that are prevalent in the voluntary sector organisations of unskilled staff, lack of knowledge in ICTs and lack of technical support. Further, the authors (Harrison and Murray, 2007) have not considered the influence of the external environment. The collaborations with external organisations to overcome ICT utilisation issues, the influence of the state and the influence of the donor organisations are important factors for consideration. While individual factors are an important consideration, the omission of the influences of the external environment means that the ICT effectiveness model (Harrison and Murray, 2007) provides a limited perspective on the issue.

Although the model (Harrison and Murray, 2007) expands to an organisational level while considering financial resources of the voluntary sector organisation as a consideration, it does not consider any of the external factors that may influence the decision of the organisation to use ICTs. Whilst considerations of

the job experience, prior experience with ICTs and job stress relate to an individual and psychological level, the model attempts to consider a social level with participation of ICTs. The technical systems level is considered along with the ease of use factor. The main criticism about the model is that it does not consider the external environment and remains within a clear individual perspective with a limited understanding of the organisational level. This is common in studies that focus on an individualistic perspective.

O'Hanlon and Chang (2007) proposed the following model (Figure 2.4) for technology adoption and use in the non-profit sector. Although technology adoption is not relevant to this study, this model was investigated as it accounts for factors beyond the capabilities of the individual users that are of relevance to ICT use.
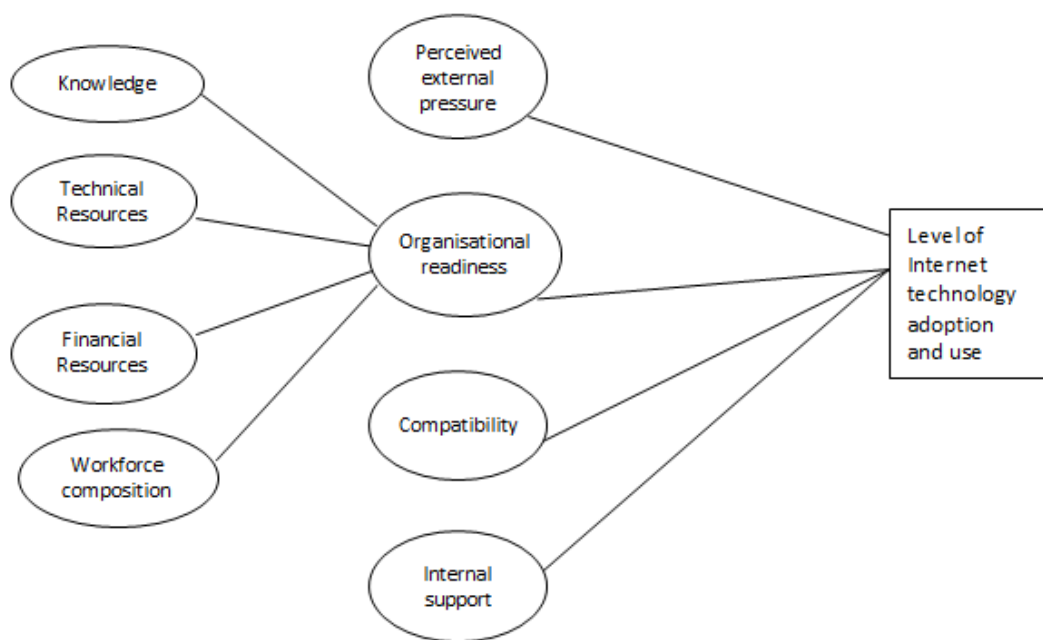
Figure 2.4   **ICT effectiveness Model for the voluntary sector. O'Hanlon and Chang (2007)**

This model overcomes the deficiency of Harrison and Murray (2007) by considering both the external environment and the technical resources of the organisation. This evident shift from individual factors to organisational and external factors implies that although individual factors are an important consideration, organisational and external factors also contribute towards ICT

adoption and use. The factor of compatibility in the model refers to the interaction between the client and the organisation and the social risk that the organisation faces. This examines the issue of whether the adoption of technology would inhibit the organisation's ability to serve its clients. This is an important consideration in voluntary sector organisations as they often serve communities that endure disadvantages. In their conclusion, O'Hanlon and Chang (2007) modified the above factors to show that external pressures were less significant than technical capacity both in terms of knowledge and resources.

A limitation of this model is that in their consideration of the external factors, the authors included only the influence of the major donors and the availability of volunteers among the workforce as an important factor to consider. This limited consideration excludes the influence of the state, both in terms of funding and contracting, non-profit technology providers and the partnerships formed by non-profit organisations.

While the central internal factors that influence effective use are similar to previous studies that have been identified (Te'eni and Speltz, 1993; Burt and Taylor, 2001 Kerr, 2002; Steyaert, 2002), these three studies are important: For the first time they recognise the importance of external factors detailed here overcome internal limitations to effectively use ICTs and they provide a clear understanding of the concept of effective use.

The six factors used by Hackler and Saxton (2005) only consider internal issues of organisations. In terms of the for-profit sector where the organisations focus on building ICT capacities internally this is adequate. However in the voluntary sector the ICT capacity building extends beyond the internal capabilities and flows to external organisations as such as collaborations, technology service providers and the use of volunteers.

External factors

Some studies have been more effective at identifying external factors. For example, Silverman, Rafter and Martinez (2007) identified the availability of external funding, access to technological infrastructure and the availability of affordable technical service providers as key external factors that contribute to effective use. They showed that access to people who provided knowledge and technological resources and access to technical assistance providers were essential "bridging networks" that enable organisations to overcome internal limitations. The same proposition has been suggested by West and Green (2008), who emphasised that voluntary sector organisations should engage in collaborations with universities to overcome lack of ICT skills.

The main outcome of these studies is the emerging understanding that factors beyond the organisational level can influence effective use of IT in voluntary sector organisations. Collaborations with universities (West and Green, 2008), influence of the non-profit technology providers (Silverman, Rafter and Martinez, 2007), use of community collaborations (Schneider, 2003) and the need for better understanding of technology amongst the donors (Hackler and Saxton, 2007) have all been suggested as ways of overcoming internal barriers to the effective use of ICTs and needs to be taken into account in this study.

Summary

Whilst internal factors can create significant barriers in the use of existing infrastructure to achieve the mission of the organisation, these studies illustrate that internal factors can be overcome by focusing on external factors and by building bridging networks.

Despite the emerging evidence on the influence of the state (Heimstra 2003), collaborations amongst non-profits (Guo and Acar 2006) and the influence of maintaining the image of the organisation, a theoretical understanding of effective IT use that combines internal and external factors is still lacking.

Unlike commercial sector and public sector organisations that focus on building internal ICT capabilities, voluntary sector organisations are not able to do so due to funding issues. Therefore they depend upon the external environment for their funding, expertise, advice and skills to effectively use technology. This means that an exclusive emphasis on organisational factors will not provide a complete set of factors that influence effective use within these organisations. To understand effective use in a holistic manner, research should be designed to explore the organisation from a socially situated point of view. Voluntary sector organisations interact with the state, the public, commercial sector organisations and the city councils immensely. They are influenced by the level of relationships they have with these external organisations as well as the level of funding that is available for technology both internally and externally. Unlike commercial sector organisations where technical support is built into the organisational system, the majority of the voluntary organisations depend upon volunteers or non-profit technology service providers to enable them to use technology effectively. Further, these organisations, with their limited budgets and staffing, need to manage their information activities in their daily service delivery. Acquiring data about their clients, storage, presentation and dissemination of data is influenced by the level of information required with their external relationship be it a state organisation or a donor. Further, the tools that are required to facilitate this interaction are influenced by the available budget and the technical expertise within and external to the organisation.

These voluntary sector organisations are recognised by the type of the mission that they serve within the society. Increasing research has displayed that they are motivated to use technology to create a positive image to their donors and collaborators (Zorn, 2007).

A theoretical understanding on the effective use of technology in this sector will need to be created by exploring factors that enable them to use technology effectively both within and external to the organisation. Unless these emerging

themes are built into the existing understanding we will not be able to arrive at a theoretical understanding of the phenomenon. Due to the limitations in the existing studies we explored other IS models to broaden our understanding in this area. We primarily looked at IS models that enabled us to explore post adoption phase of IS use and those where we could consider the context of organisational and external factors that influence ICT use.

2.8   Post-adoptive ICT use

Use of information technology after adoption is known in the literature as continuing IT use (Oritiz de Guinea and Markus, 2009), IT usage (Karahanna, Straub and Chervany, 1999; Burton-Jones and Gallivan, 2007) and as post-adoptive IT usage (Jasperson, Carter and Zmud, 2005). Studies in this area examine the behaviour of the individuals in organisations that have already adopted ICTs. This continuing IT use is the topic of this research.

Post-adoptive IT use has been explored at an individual level and at an organisational level.

Individual level: The focus of these studies is to explore how individual factors such a rational decisions, emotions associated with use and habits influence continuing IT use within organisations. These relate to cognitive function of an individual and the values they associated with ICT use. A recent development in this area is the call to examine environmental cues that influence continuing ICT use (Oritiz de Guinea and Markus, 2009, p. 441). The authors explain that this alternative view would direct attention to the characteristics of technology itself that may motivate or constrain continuing use.

Organisational level: At this level collective use of applications at group and organisational level are examined (Jasperson, Carter and Zmud, 2005; Burton-Jones and Gallivan, 2007). These studies focus on extending our understanding of

how organisations use technology as a collective and how users adapt the features of an application for continuous use.

However in reality technology adoption and post adoptive use is a continuous cycle. Further the concepts that explore *continuing use* are influenced by IT adoption studies. For example Ortiz de Guinea and Markus (2009, p.434) identify three key factors that explain *continuing IT use:* rational decision making, emotion and individual habit. The rational decision, the conscious intention to use was explained in the technology adoption model (TAM) which explained that perceived ease of use and the ability to achieve results (usefulness) informs usage intentions. Therefore post adoptive IT use is not isolated from IT adoption but rather they inform each other and are interconnected.

In order to study post adoptive IT use, this research considered the context of organisational and external factors that influence ICT use. Three models were examined to identify the most suitable model that would enable us to answer the research questions presented in this study in particular taking into account an organisational perspective.

1.   Technology, Organisation and Environment framework [TOE]
2.   Perceived E-Readiness Model [PERM]
3.   Social Actor Model [SAM]

The section below describes each of these models, their use in the Information Systems studies and their applicability to this study.

2.8.1 Technology, Organisation and Environment framework [TOE]

The framework defined by DePietro, Wiarda and Fleischer (1990) identifies three main contexts that influence the process by which it adopts, implements and uses technological innovations. It ties together nine factors that represent the contexts of *technology*, *organisation* and *external environment*. (see Figure 2.5)
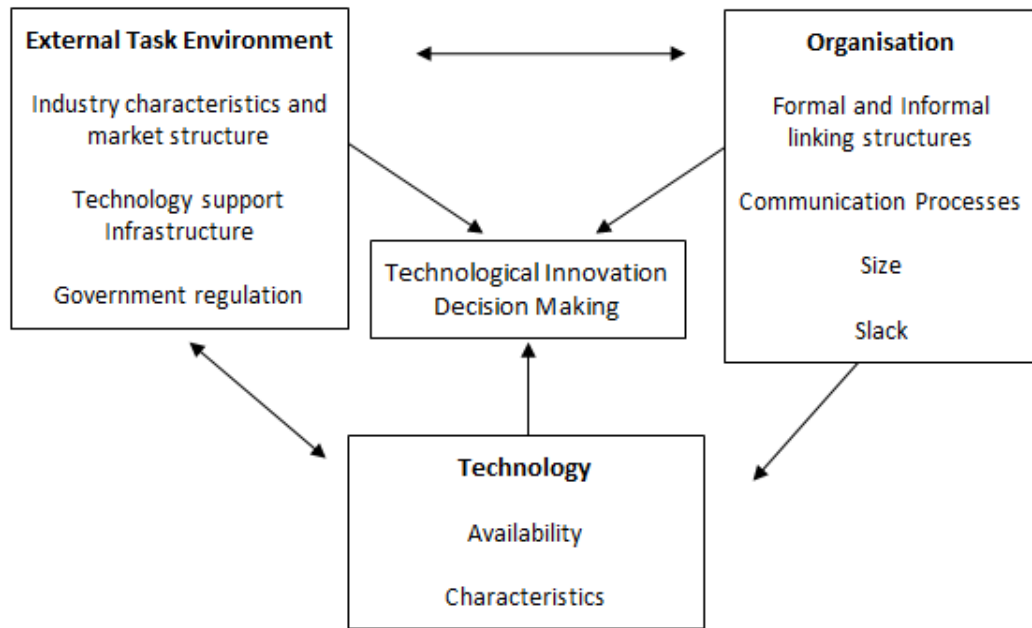
Figure 2.5   Organisation, technology and environment: the context of technological innovation. DePietro, Wiarda and Fleischer (1990)

The **organisational context** refers to the characteristics of the organisation. DePietro, Wiarda and Fleischer (1990, p. 153) proposed as characteristics, formal and informal linking structures, communication processes, size and the availability of slack resources. Of these contexts the informal linking structures, communication processes and the availability of slack resources are important concerns in non-profit organisations. NPOs are identified as organisations that contribute to social capital (Burt and Taylor, 2004) and operate in an environment that is rich in terms of social capital (Schneider, 2003), the context of informal linking structures is an important consideration. The staff and volunteers use these informal linkages to gain access to scarce resources and information. Communication processes both vertical and horizontal is an important factor within non-profit organisations.

This brings our attention to the availability of the slack resources. This is an issue within VSOs that have been discussed as the complexities of resource allocation (Billis and Glennerster, 1998). VSOs depend on a variety of funding mechanisms

and are constantly confronted by a lack of available resources. The capability to maintain slack resource within these organisations is not a prevalent factor.

The **external environment** relates to the background in which the organisation conducts its business. DePietro, Wiarda and Fleischer (1990, p. 152) provided the contexts of industry characteristics and market structure, technology support infrastructure and government regulations. Within this research , government regulations and technology support infrastructure are important.

The **technological** context (DePietro, Wiarda and Fleischer, 1990) relates to the technologies available to an organisation. It takes into consideration both the internal and external technologies that are relevant to the firm. The factors that have been explored within this context are

- Current practices and infrastructure internal to the firm.
- Available technologies external to the firm.

The authors argue that these two factors determine the technological context of an organisation. More importantly DePietro, Wiarda and Fleischer (1990) explain that available technologies external to the firm are dependent on the industry and on the maturity of the industry. This is relevant to the voluntary sector as it is considered as a new sector in organisational studies, as the definition of the sector is less than two decades old. The organisations' evolutionary use of software from proprietary to more recent open source, to internet based models can be considered within this context.

a. The adoption of the technology, organisation and environment framework to IS studies.

Several IS studies have utilised the technology, organisation and external environment model (Tornatzky and Fleischer, 1990) to explore the use of information systems in organisations. Three of the studies (Chau and Tam, 1997; Zhu and Kraemer, 2005; Mishra, Konna and Barua, 2007) that used this theory in IS have extended our understanding on how it can be used to explore adoption

and post adoption phase of IS use in organisations. Although all these studies were conducted in the commercial sector, they contribute to our understanding of how external factors can effect the organisational environment and influence ICT use.

Chau and Tam (1997) used the TOE framework to analyse factors that affected open systems adoption in commercial sector organisations. There were two main findings in their study. One of their main findings were that organisations focused more on their ability to adopt technology than on the benefits from adoption. This is evident in the voluntary sector organisations as well and it manifests in the majority of the research has been conducted in the area of adoption of technology (Burt and Taylor, 1999; Lebert 2002; Pinho and Macedo 2006; McInerny, 2007; Zorn 2007) but much less so in actual use.

The major contribution of Chau and Tam (1997) to the technology, organisation and environment model was the further development of the technology context. From the Tornatzky and Fleischer (1990) to Chau and Tam (1997) adaptation of the model there were several key differences in the Organisational and Technology contexts.
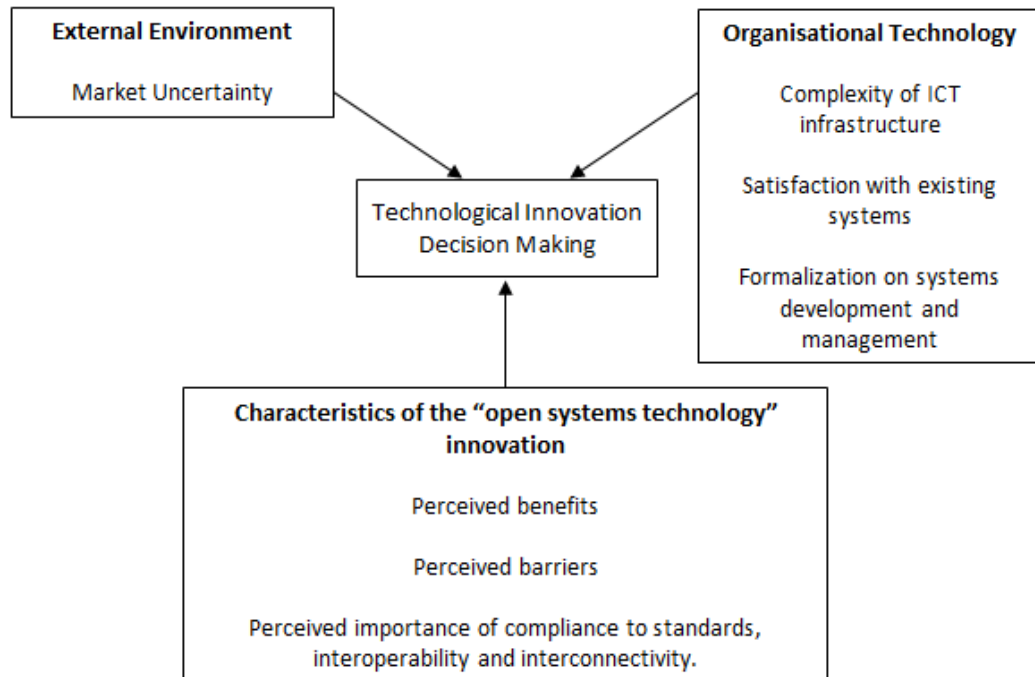
Figure 2.6 **Organisation, technology and environment. Model for open systems adoption, Chau and Tam (1997)**

Overall the changes made to the model focused on two main components of existing technological infrastructure and the characteristics of the proposed technological innovation. As Chau and Tam (1997) used the TOE framework to investigate open systems adoption they needed to consider the integration of the existing technology and the open systems- thus the focus of the model was shifted to provide a more technological focus. One of the advantages of the framework presented by Chau and Tam (1997) was its ability to consider the characteristics of the technology.

Zhu and Kraemer (2005) used the technology, organisation and external environment framework to investigate the post adoption of e-business by retail organisations. Their main focus was to examine the variations in use and value created with the adoption of the technology. Within the **organisational** context they explored the size, international scope and the financial commitment of the organisation. The **environment context** was explored within two factors- competitive pressure and regulatory support. The **technology context** was represented with technology competence and was conceptualised as both

technology infrastructure and IT human resources. They (Zhu and Kraemer, 2005) conceptualised that all the factors discussed above influenced e-business use which in turn influenced the e-business value. Further, two factors that were examined as possible influences to e-business value were front-end functionality and back-end integration. The e-business value was conceptualised as the impact on sales, internal operations and procurement.

The main finding of Zhu and Kraemer (2005) was that the finding technological competence was the strongest factor that influenced e-business use within the organisations. The other factors that positively influenced its use were financial commitment, competitive pressure and regulatory support. Another important finding of their work was the linkage between use and value. A positive linkage between e-business use and value was explained as a higher degree of use was associated with improved business performances (p. 78). The study also highlighted that use is moderated by local environments.

b. Relevance of TOE to this research study.

The framework provides the ability to consider the external environment and factors beyond the individual. The ability to consider the influence of regulatory pressure and formal and informal linking structures are important to the proposed study. One of the key contributions of this framework to this study is its technological focus in terms of the influence that it has on the use of technology. The influence that the technical competence and characteristics of technology have on actual use is important to the proposed study.

De Pietro, Wiarda and Fleischer (1990, p.153) explained their reasons for considering technology as a separate context – *"We consider it separately from the rest of the environment to focus attention on how features of the technologies themselves can influence both the adoption process and the implementation"* This is an important factor to consider with the availability of different technological models that are currently offered in voluntary sector organisations. e.g. proprietary vs. pay per use models and internet based models.

Consider for instance Google Apps for Non-profits that launched recently, which specifically enable VSOs to overcome the issues of limited funding. Also, Web 2.0 technologies are readily available and frequently used. Do the organisations that have adopted these less capital intensive technologies make effective use of them in comparison to more capital intensive technologies?

The model however does not permit us to consider the role of the individual as the key entity that is influenced by all these factors. Organisations are a collective of individuals and these factors affect them and their ability to serve within their designated roles. For example, formal and informal linkages are made by the individuals who in turn are involved in the communication process. Whilst we consider organisational and external factors it is also important to understand the dynamism of the individual and the ability to handle the influences of these factors and their ability to institutionalise the technology adopted. Institutionalisation is an act of the individuals or groups of individuals.

2.8.2 Perceived E-Readiness Model [PERM]

Molla and Licker (2005) proposed the perceived e-readiness model (Figure 2.7) as a method of explaining e-commerce adoption for businesses in the developing world. In the context of the proposed study, we found this model relevant as it explored post adoption use conceptualised as institutionalisation.
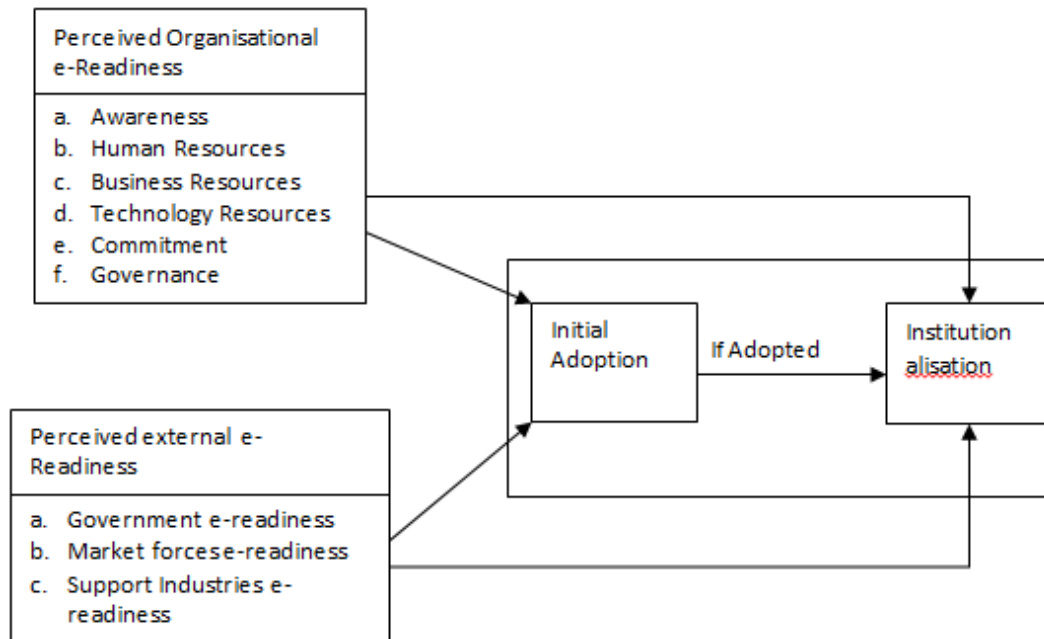
Figure 2.7   Perceived E-Readiness model. Molla and Licker (2005)

PERM separates adoption from actual use and illustrates two levels of preparedness at organisational and country level. A brief description of the model (Molla and Licker, 2005) and its applicability to this study is presented below.

At an organisational level, the authors (p. 86-89) presented awareness, resources, commitment and governance as factors that would influence individual organisations. Awareness refers to an organisation's perception and comprehension of the benefits and risks. They explain how this perception leads to investment, technology adoption and utilisation. Within resources, the authors have explored the human, technological and business resources of the firm. Human resources captures the availability of the employees with IT skills. Commitment relates to the support given by the top management team, CEO and technology champions. The commitment by the key stakeholders was considered a noteworthy factor. Governance relates to organisations ability to structure the established objectives, allocate resources and make decisions.

At a country level (external) Molla and Licker (2005, p. 89-91) explained the e-readiness of the government, market forces and support industries as important

contexts to explore e-commerce adoption and use. Government e-readiness was presented as the encouragement given by the government by providing supportive infrastructure, legal an regulatory frameworks and e-commerce use directives. Market forces e-readiness relates to the application and use of e-commerce by firm's competitors, customers, suppliers and other business partners. The influence of three primary support industries was evaluated. IT industry, affordability and the ability to provide services; financial sector, the development of the banking industry to recognise electronic payments; the transportation facilities within the country.

The key finding of this study was that institutionalisation and adoption were significantly influenced by two separate contexts.

The authors found that human resources, awareness business resources, technology resources and market forces e-readiness positively contributed to the initial adoption of technology.

However the actual use of the technology was, positively influenced by, the order of relevance, market forces e-readiness, supporting industries e-readiness, government e- readiness, governance and commitment.

The relevance of this conceptualisation of the actual use and the factors that influence use is important to this research as it provides clarity. The study illustrated that while organisational factors are more pertinent to adoption that the external environment is important to actual use. In relation to the positive influence that the government, governance and the commitment factors we are able to apply the model (Molla and Licker, 2005) in non-profit sector. However the applicability of the PERM model within this study is limited as market forces and support industries are not relevant to the sector.

The primary reason why we did not adopt the PERM model to this study is that the social actor model (Lamb and Kling, 2003) has established a strong framework to study institutionalisation of technology in an explicit manner.

2.8.3 Social Actor Model

The social actor model proposed by Lamb and Kling (2003) provides a theoretical framework to explore the use of ICTs in organisations. The authors analysed the use of online services by 26 firms in three industries: biotechnology/pharmaceuticals, law and real estate, and presented four dimensions and 16 contexts which influence the use of technology.

Further, Lamb and Kling (2002; 2003) introduced the concept of the "*social actor*" as a unit of analysis to explore ICT use in organisations. The authors (Lamb and Kling, 2003, p.218) explain "*social actor is an organisational entity whose interactions are simultaneously enabled and constrained by the socio technical affiliations and environments of the firm, its members and its industry.*" Social actor defined as a unit of analysis, consists of both elements of the organisational member and the ICTs they use. The concept of the social actor enables us to explore the dynamism of the individual and their context. In contrast to the passive individualistic user who is acted upon or influenced upon, the social actor is able to modify these influences and able to respond within these organisational and environmental factors. The social actor is represented within a socially rich interaction that enables us to consider organisational settings and relationships that influence the organisation.

Lamb and Kling (2002) illustrate these differences (Table 2.11).

	Individualistic	Socially thin interaction	Socially rich interaction
Technology Focus	Computer	Computers, Networks	Technologies of interaction
Study Participants	Individual	People performing formal task systems	Human activity systems
Contextual scope	Task/Technology	Task structures and their execution and coordination	Complex and multivalent social relationships in organisational settings that can extend outside a focal group.

Table 2.11   Socially rich interaction

The social actor model (Table 2.12) consists of four dimensions within contexts are identified as "characteristics and behaviours of connected and situated individuals". The four dimensions are *affiliations*, *environments*, *interactions* and *identities*.

Social Actor Dimensions	Characteristics and behaviours of connected and situated individuals
Affiliations (Definition: organisational and professional relationships that connect an organisation member to industry, national and international networks)	Social actor relationships are shaped by networks of organisational affiliations
	Relationships are dynamic, and related informational exchanges change with "flows" of capital, labour, and other resources
	Relationships are multi-level, multi-valent, multi-network (i.e. global/local, local/global, group, organisation, intergroup, interorganisation, culture)
	As relationships change, interaction practices migrate within and across organisations
Environments (Definition: stabilized, regulated and/or institutionalized practices, associations, and locations that circumscribe organisational action)	Organisational environments exert technical and institutional pressures on firms and their members.
	Environmental dynamics vary among industries.
	ICTs are part of the organisational environment.
	ICTs are part of the industry/national/global environment.
Interactions (Definition: information, resources, and media of exchange that organisation members mobilise as they engage with members of affiliated organisations)	Organisational individuals seek to communicate in legitimate ways .
	Organisational individuals build, design, and develop interactions that facilitate "flow" changes.
	ICTs become part of the interaction process, ("interaction technologies") as people transform and embed available informational resources into connections and interactions.
	As firm members, people perform socially embedded (role-based), highly specified actions on behalf of the organisation.
Identities (Definition: avowed presentations of the self and ascribed profiles of organisation members as individual and collective entities)	Social actor identities have an ICT use component.
	ICT-enhanced networks heighten ethnic and multiple other identities (global/local tension).
	ICT-enhanced connections among firm members transcend roles (project-based).
	Social actors use ICTs to construct identities and control perceptions.

Table 2.12   Social Actor Model. Lamb and Kling (2003)

Affiliations – are the organisational and professional relationships that an organisational member maintains with the external entities. Organisational members use ICTs to connect and maintain these relations within their prescribed roles. Lamb and Kling (2003, p.212) explain the influence of the

affiliations *"organisation members are simultaneously influenced in different ways to use ICTs because they belong to multiple, somewhat overlapping, networks, where professionals, regulators and others may differ in their view of what is legitimate."* An organisational user is perceived as a social actor who represents the organisation and exchanges capital and information with external entities and who uses ICTs to facilitate this interaction.

Environments – relate to the industry prescribed technical and financial practices and the internal and external ICT structures. Lamb and Kling (2003) explained the contexts of financial practices, ICT investment within the organisation and the ICT infrastructure within the industry that influence ICT use.

Interactions – are the information resources and the media that the organisational members utilise to maintain their relationship with the affiliated organisations. Lamb and Kling (2003, p.215) explain "interaction technologies" as fundamental to communicate with clients, regulators partners and others.

Identities – this dimension explains how the social actors use technology to create identities for themselves and others and how their use of ICTs are influenced in this process.

With relevance to this study the social actor model provides four dimensions that can be interpreted to suit contextual environment of non-profit organisations. The model while it is applicable at the organisational level also enables us to consider the individual as he/she performs their day to day activities on behalf of the organisation.

A detailed description of each of the dimensions and characteristics of the social actor model are explained within the next chapter.

Summary

While both TOE and PERM extend our understanding, the SAM model is considered more appropriate for this study. It enables consideration of

organisational technological and external contexts defined within the TOE model introduced by Tornatzky and Fleischer (1990). Chu and Tam's (1997) tailored model for IS has a stronger technological focus both within the organisational technology context and characteristics of the innovation contexts. This stronger technological focus and the factors identified within the contexts are more applicable to large commercial organisations than to voluntary sector organisations (e.g. formalisation of systems development and management). However one shortfall of the SAM model, in comparison to TOE, is the fact that technological context has been identified in two different dimensions within the model and the fact that it does not facilitate differentiation of technology and the influence of the type (e.g. capital intensive infrastructure vs pay per use and free and open source technology models).

The main strength of the PERM model which was relevant to this research is the "institutionalisation" of the adopted technology (Molla and Licker, 2005). The contextual influences that have been considered in the social actor model have been better established at an organisational level in comparison to the PERM model which considered influences at a country level. However there are several points where PERM complements the Social Actor model.

Further the context of identity is strongly represented within the SAM model in comparison to TOE and PERM, which do not consider the influence of the organisational or individual identity. Due to multiple stakeholders and the absence of profit motivations in NOPs, organisational identity and the image are central to organisations that are representative of the sector.

Chapter 3 – Social Actor Model

In comparison to the Technology, Organisation and Environment and Perceived e-readiness models (Discussed in Chapter 2) the social actor model was identified as a more appropriate model for this study. This chapter explains the integration of the social actor model to explore factors that influence the use of ICTs in non-profit organisations. This chapter consists of three sections. The first section will provide a justification for selecting the social actor model (Lamb and Kling, 2003) as the theoretical lens for this study. The second section describes the model and focus on applying it in terms of the non-profit sector literature to consider the contextual factors in the non-profit sector. Detailed research questions will be presented in final section of the chapter.

3.1   Why is the social actor model most appropriate for this study?

There are three main reasons for selecting the social actor model for this study: the ability to examine socially situated behaviour, the ability to consider the external environment of the organisation and the ability to consider the entire range of influences.

The social actor model examines the **socially situated behaviour** of the organisational members, and emphasises the institutionalisation of technology. As this study investigates the post-adoption phase of ICT use in non-profit sector organisations, the model enables us to focus beyond the adoption phase. Although non-profit sector organisations are restricted by inadequate funding and technical infrastructure, they are rich entities in terms of social capital. Use of the social actor model thus enables us to examine the socially rich exchanges prevalent in the non-profit organisations.

The importance of considering the influence of **external entities** such as the state (Hiemstra, 2002), non-profit technology providers (West and Green, 2008), (McInerney, 2007) and collaborations amongst non-profit organisations, (Guo

and Acar, 2007) has being emphasised in recent studies. The use of the social actor model enables us to examine relationships in organisational settings that can extend outside the focal group (Lamb and Kling, 2002).

The social actor model is considered the most suitable for the proposed study. In addition, there are several other advantages of the social actor model.

3.1.1 A theoretically well-grounded model

In comparison to the previously used models within the non-profit sector (Pinho and Macedo, 2006; Harrison and Murray, 2007; O'Hanlon and Chang, 2007; Zorn 2007) the social actor model is theoretically well grounded. The conceptualisation of the social actor model (Lamb, 2006) has stemmed from several studies (Lamb 1999, Lamb 2001, Lamb 2003, Lamb 2005, Lamb and Davidson 2005, Lamb et al 2003) undertaken over a decade. While the early studies present the conceptualisation, the later studies have been used to test the theory. As a well-established model it provides demonstrated methods of extensibility and information on the use and interpretation of the dimensions and characteristics of the model in data collection and analysis.

Furthermore recent studies have explained how the model can be used in various contexts. Van Akkeren and Rowlands (2007), in their study of technology assimilation in the health and radiology industry, utilised the model and demonstrated how the model can be developed using identified new contexts within dimensions (e.g. Identities dimension). Similarly, Ferneley and Light (2008) utilised the Social actor model as a conceptual lens to explain Bystanders as a unit of analysis to be considered within information systems development. Contributing to the use of model, the study by Rowlands (2008) presented challenges in applying the model and provided guidelines in using the model.

3.1.2 The ability to consider intra-organisational, inter-organisational and external factors that influence ICT use

The social actor model (Lamb and Kling, 2003) provides constructs that can be used to explore a multitude of factors both internal and external to the organisation. For instance:

The characteristic "ICTs are part of the organisational environment"	Enables us to explore the ICT investment within the organisation – Intra- organisational
The characteristic "social actor relationships are shaped by networks of organisational affiliations"	Enables us to establish the organisational level relationships – Inter-organisational
The characteristic "ICTs are part of the industry, national or global environment"	Enables us to explore the available ICTs at an industry level – External

Table 3.1   SAM characteristics and external factors

This ability to consider a wide range of factors is an important consideration in selecting a framework for the study as it enables us to examine factors beyond individual and cognitive levels (e.g. skills and capabilities of individual members) and beyond the boundary of the organisation. For instance, the use of this model enables us to examine collaborations between voluntary sector organisations. Similarly, the organisation's relationship with the state and how that relationship can also influence ICT use can be explored due to this multi-dimensional focus of the model.

The external focus of the model provides the ability to consider the unique contextual factors of the non-profit sector. Non-profit sector organisations require external funding, expertise and personnel to deliver services to the community. The internal limitations of the organisation are often overcome by use of these external resources. The ability to consider these influences using the dimensions in the model affiliations and *environments* is an important motivation. It enables us to explore inter-organisational and external contexts and not be limited to individual and internal factors.

3.1.3 The ability to consider organisational members not technical users

The concept of an organisational member refers to an individual engaged by the organisation to carry out duties and functions that relate to the organisational mission. The organisational member can be a full or part time staff member or a volunteer who provides services to the organisation.

This is a different concept from the *ICT user* as an organisational member whose *primary task* is to use ICTs within the organisation. These are technical members of staff, for instance programmers, systems administrators and other organisational members whose primary contribution to the mission of the organisation is by way of technical knowledge. The social actor model (Lamb and Kling, 2003) considers organisational members as individuals who use ICTs in their daily interactions within their prescribed roles. This distinction separates technical users and focuses on the managers, supervisors and individuals who perform a specific role in delivering organisational services and their use of ICTs in day to day operations. This study considers the staff members in non-profit organisations, and the social actor model fulfils this requirement.

3.1.4 The recent findings in the non-profit sector ICT research complement the dimensions and characteristics of the social actor model.

As stated in the introduction, the influence of the state (Hiemstra, 2002), non-profit technology providers (West and Green, 2008), (McInerney, 2007) and collaborations amongst non-profit organisations (Guo and Acar, 2007) are factors that were not able to be investigated with the previously used models in the voluntary sector. The dimensions and the characteristics of the social actor model can be applied to explore these factors in detail. This application enables a better interpretation of the model to explore the contextual factors of the voluntary sector and will facilitate wider data gathering and supports theory building by taking these factors into consideration.

3.2 Social actor model

The social actor model (Lamb and Kling, 2003) provides the theoretical framework needed to explore factors that influence the use of ICTs within organisations. The model explores how organisational members use technology for information gathering and the processing, presenting, managing, sharing and disseminating information.

The model consists of four dimensions, *affiliations*, *environments*, *interactions* and *identities*. *Affiliations* and *environments* dimensions relate the organisational member to their organisation, the environment and the industry (Lamb 2006, p.4115). *Interactions* and *identities* dimensions relate to organisational members and their use of online information to interact with others and create an identity. Each of these four dimensions consists of four "characteristics and behaviours of connected and situated individuals". These explain the theoretical model.

Lee and Baskerville (2003, p230-231) describe the distinction between "first level constructs" and "second level constructs" in the interpretivist paradigm. Accordingly, first level constructs are facts and the understandings held by the informants of the study. Second level constructs are the understandings of observing researchers. Second level constructs "are the notions used by the field worker to explain the patterning of the first order data" (Lee and Baskerville, 2003, p.231). The characteristics in the social actor model are second level constructs which describe the subjective meaning of the objective reality of the sector being examined. However perceiving these phrases as strongly defined constructs in its original context will limit how they are used within this study. In contrast, these characteristics are more loosely defined and can be interpreted to capture the contextualised understanding of the industry or sector that is been investigated.

3.3 Operationalisation of the social actor model

The first step of the operationalisation of the model will consist of understanding the model in the context of non-profit sector using available published literature.

3.3.1 Key differences

Prior to the operationalising of the model it is imperative to highlight some of the key differences between Lamb and Kling's (2003) application of the model and its application in the proposed study.

1. Industry of application

Lamb and Kling (2003) used the model to explore well defined and regulated industries that are primarily driven by profit and shareholder wealth maximisation. These commercial organisations and the non-profit sector organisations are different both in their operations and their objectives. Unique characteristics of non-profit sector are presented in chapter 2.

Previous studies of the social actor model have been primarily undertaken either in commercial organisations or in highly regulated and established industries (e.g. Pharmaceutical industry, Legal practice). The organisations in established industries are governed by clear guidelines and procedures in their organisational environments. The nature of the organisations in which the model was used provided clear definitions of the job role of the social actors within the organisation. In contrast role ambiguity is characteristic in the non-profit sector.

2. Information use

Lamb and Kling's (2003) theorising of the model and the primary explorations of the model was based upon online information use by commercial sector organisations (p.202). Within this study we scope information use across three functional areas, client management, volunteer management and fund raising. We incorporate both online and offline information use within the selected organisations in the identified functional areas. While the main emphasis

remains on the use of information, we also explore ICT use in day to day operations (e.g. preparation of work schedules, monitoring expectations and delivery of services). Every instance of ICT use will be an information activity but may not be an online information activity.

3.   Primary focus

The unit of analysis within the social actor model is the social actor, that is to say the organisational member and the ICTs they use. Lamb and Kling (2003) perceive the organisation though the realities created by the individuals and therefore the individual is central to the model. Within this study we use the social actor model to present two levels of analysis, both organisational and individual.

Due to the staff fluidity in NPOs, particularly for part-time staff and volunteers, funding and recognition is attached to the organisation. Therefore it is important to present an analysis at both the individual and organisational level. In presenting the social actor as a unit of analysis for further refining the social actor concept, Lamb (2005, p.289) illustrates that the social actor could be defined as either professional individual, project based work group, community based interest groups or organisation, within their respective work environments and ICTs in the four following ways:

a.   A professional individual + support staff + ICTs in their working environment
b.   Project based work groups using ICTs in organisational settings.
c.   Community based interest groups using ICTs in a regional setting
d.   An organisation + its industry affiliations + industry specific ICT infrastructures

Recent studies have used a group as a social actor (Lamb and Davidson, 2005; Ferneley and Light, 2008) or an organisation (Van Akkeren and Rowlands, 2007; Rowlands 2009). Van Akkeren and Rowlands (2007) explored healthcare

information use in radiology practice units and explained the how the practices of the organisation influences the assimilation an information system. In Rowlands' (2009) study of the banking sector the unit of analysis for the case study was at individual level. Rowlands (2009, p.57) explains how they used the model to provide a multilevel analysis. Within their study of ICT enactment in the banking industry the unit of analysis for the case study was at individual level. They provide an analysis of how *interactions* and *affiliations* influence new development and maintenance within projects. They also provided an analysis of how the internal culture and norms of the bank influences ICT use at an organisational level. They used the *environment* dimension to present and analyse external business and industry. This study illustrates that it is possible to provide a multilevel analysis using the social actor model.

3.4   Interpretation of the social actor model for this study

Interpretation of the social actor model (Lamb and Kling, 2003) is necessary within non-profit organisations.

Several recent publications have used the social actor model in less regulated industries. Fernley and Light (2008) study which explored the use of technology in a local community UK fire brigade, employed the social actor model for data analysis. A second study, Van Akkeren and Rowlands (2007) which analysed the ICT assimilation process of an Australian radiology practice, interpreted the social actor model using the case scenarios to an equivalent meaning applicable to the radiology sector. This interpreted model was used for their data analysis. The social actor model is yet to be used in a sector where the organisations are less regulated and where formal ICT roles are less prevalent.

Therefore in applying the model in a new context it is necessary to interpret this existing model. This interpretation will enable us to investigate the contextual factors within voluntary sector organisations in our data collection and analysis. Stillman (2006) highlights the importance of considering the context of the

voluntary sector in studies that examine ICT use. The author explains that "it is important to recognise localised and situated understandings if there is to be stronger theoretical and productive policy response to the effective use of ICTs by community-based agencies (p.5)". The extensive use of the social actor model has previously been in the context of large commercial sector organisations. The contextual factors in the non-profit organisations differ from commercial organisations. For instance large commercial organisations are characterised high ICT investments, IT departments and ICT skilled employees. In the context of the non-profit organisations these three factors are not a given.

Further the characteristics specified in the social actor model are not specific, do not provide clear factors for consideration and are open to multiple interpretations depending on the context of the study. For example the characteristic "ICTs are a part of the organisational environment" can be interpreted in multiple ways depending on the focus of the study. Factors considered within this characteristic can range from the ICT investment, skilled technical staff, ICT infrastructure (hardware and software), availability of ICT training, to the presence of a CIO as a member of the board. Depending of the context of the study each of these factors may be significant. Therefore in order to identify the initial factors that we investigate using this framework, we need to clearly provide an interpretation of the "behaviours and characteristics" in the context of NPOs.

In addition, several of the "behaviours and characteristics" that describe each of the dimensions have been interpreted to suit the context of the NPOs. This interpretation will improve our ability to apply the model to the unique contextual environment of voluntary organisations. The remainder of this chapter provides a description of the model for use in the study of the role of ICT in non-profit sector organisations. Each of the dimensions and the interpreted "characteristics and the behaviours" are presented, with discussion, below.

We have used existing literature to operationalise the social actor model. Use of literature to adapt a model to the context of the study is an accepted practice for an early career researcher. Having examined previous studies that utilised this model (Van Akkeren and Rowlands, 2007;Fernley and Light,2008; Wong, 2009) we decided to use literature to operationalise it due to following reasons,

- Ability to scope - using literature to determine the boundary of characteristics and behaviours enabled the researcher to align the scope of the study better.
- High level of applicability – this approach enabled us to underpin the findings specifically to the non-profit sector human services organisations.

In using literature we focused primarily on studies that were conducted within the context of this study, non-profit sector human services organisations. In the instances where there was a lack of studies conducted in human service organisations we used literature from other areas of the non-profit sector. Using our definition of non-profit sector (see Chapter 2) we excluded literature that examined large scale non-profit organisations such as universities and hospitals.

There are limitations in using this approach,

- it can lead to each researcher operationalising the model to cater to their own context of study.
- the selection of literature to operationalise even within the same context may differ.

For the purpose of this study and to answer the research questions we found that these could be mitigated to a certain extent by providing thick descriptions within each of the cases and in cross case analysis.

3.4.1 Affiliations

The *affiliations* dimension in the social actor model, (Lamb and Kling, 2003, p.211) has been defined as "organisational and professional relationships that

connect an organisational member to industry, national and international networks".

Affiliations consist of networks of relationships that connect organisational members with external organisations within the same industry or across different industries. The organisational members in voluntary sector organisations may be full-time, part-time and volunteer staff. In the context of non-profit organisations these affiliations consist of *public institutions*, other *non-profit organisations* and with *commercial sector organisations.*

Relationships with **public institutions** are threefold: central government institutions, the local council and quasi-state institutions (hospitals, universities). These relationships with public institutions are established due to the requirements of contracting, funding, grants, regulatory and resources requirements of voluntary organisations and public institutions. Hiemstra (2002) demonstrated that this organisational level relationship with the state requires more time and effort in terms of supplying information to the state depending on the nature (funding/contracting) of the relationship. In terms of funding and applying for grants, the organisation is required to produce aggregate information. However, those organisations that are in a contracting relationship with public institutions need to provide detailed information on how their day-to-day operations function and how many clients receive their services, etc. The level of information maintained and supplied by the voluntary organisation will differ depending on the type of relationship it holds with public institutions and this relationship influences the information gathering and processing practices of the organisation.

Local government is an important entity to community based organisations. For example many city councils in New Zealand appoint a community coordinator who is able to provide access to shared infrastructure, resources and promote awareness of the events held by community groups and voluntary organisations.

Quasi-state institutions such as hospitals and universities are perceived as important entities for networking in voluntary sector organisations. Guo and Acar (2007), in their analysis of collaborations amongst voluntary sector organisations, have identified hospitals as an important organisation for client referrals. Non-profit organisations are often contacted by hospitals when older people require support within the community.

Similarly West and Green (2008) highlight the importance of building networks with local universities or technical collages for technology assistance. This assistance enables them to overcome internal limitations such as lack of ICT skills. Within this study we examine how non-profit organisations maintain their affiliations with these institutions.

Relationships with other non-profit organisations can be diverse depending on the nature of the organisation and the services provided to the community. Collaborations amongst voluntary sector organisations are an important element amongst the organisational level relationships. Exploration of this affiliation will enable us to understand how non-profit organisations collaborate to provide services for the community, qualify for funding or share resources amongst themselves. The categorisation provided by Guo and Acar (2007) (discussed in the literature review) will enable us to identity different levels of collaborations amongst voluntary sector organisations.

There are several types of collaborative partnerships which are established. Non-profit organisations develop partnerships either with local or those outside the local area. Further partnerships may be formed with the similar or different types of voluntary sector organisations. These collaborations may be between the local branch and a national or an international office. The level of information exchanged and the level of collaboration in such situations are considerable and require investigation to enable us to understand how these voluntary sector organisations overcome resource deficiencies within their organisations by means of establishing collaborations.

Relationships with **commercial sector organisations** – Commercial sector organisations are often viewed as either donor organisations or as organisations outside the context of the voluntary sector. Contrary to this understanding, Halseth and Ryser (2007) showed how partnerships with commercial organisations were used to qualify for funding and service delivery. While this type of partnership may not be common we will consider affiliations with commercial sector organisations, both as a donor and as a partner, depending on the NPO.

Within the research we examine how these different types of affiliations can influence the use of ICTs. To do this we l focus on the isomorphic influences that each of the affiliations extend on the non-profit organisations and study the flow of capital and other resources between them. DiMaggio, P.J. & Powell, W.W. (1991) explain the concept of isomorphism, which characterises how organisations come to adopt similar practices. The authors identify two types of isomorphic influences; competitive and institutional.

Competitive isomorphic pressures were identified as market related pressures that influenced the organisation to improve efficiency or the accumulation of scarce resources, e.g. funding, volunteers. *Institutional* isomorphic pressures might come from other organisations in the environment. Three types of *institutional* pressures *were* identified (a) regulative – legally imposed (b) Cognitive -mimic leader (c) Normative - codes of conduct. Within non-profit organisations these *institutional* isomorphic pressures come from affiliated organisations such as donors, regulators and other NPOs. An example of a *normative* pressure is the need to maintain transparency and accountability in handling funds as donors provide funding.

Therefore the affiliations dimension will enable us to explore *how these isomorphic pressures influence ICT use and practices in the organisation*.

Characteristics of the *affiliations* dimension enable us to examine the relationships between the NPO and the external organisations.

Table 3.1 illustrates the affiliations dimension and the rest of the discussion provides examples of how each of the characteristics will be examined within the proposed study.

Social Actor model: characteristics and behaviours of connected and situated individuals.	Application in the non-profit sector	Specific factors for consideration
1. "Social actor relationships are shaped by networks of organisational affiliations" Lamb and Kling (2003, p 211).	Retains source description.	(a) Relationships with public institutions (Central government institutions, local council, quasi-state institutions) (Hiemstra 2002; Guo and Acar 2005; (b) Relationships with commercial sector organisations (Halseth and Ryser 2007) (c) Relationships with voluntary sector organisations (Halseth and Ryser 2007) (d) Role of the organisation (Donor, regulator, collaborator)
2. "Relationships are dynamic and related informational exchanges which change with flows of capital, labour and other resources." Lamb and Kling (2003, p 212)	Retains source description.	Load shifting arrangements between affiliations.
3. "Relationships are multilevel, multivalent and multi-network. "Lamb and Kling (2003, p.212)	Retains source description.	The level of relationship and values associated with the affiliation.
4. "As relationships change, interaction practices migrate within and across organisations". (Lamb and Kling 2003, p.212)	Retains source description.	Change in an existing relationship or an introduction of a new affiliated organisation. (Walsh and O'Shea 2008)

Table 3.2   Affiliations dimension

Characteristic 1

Lamb and Kling: "Social actor relationships are shaped by networks of organisational affiliations". Lamb and Kling (2003, p 211).

These relationships are based upon expectations of service, resources or information by the organisations within the network. Within the proposed study, the primary function of this characteristic will be used to examine the relationships voluntary sector organisations have with external organisations in their operating environment, in terms of the relationship and information requirements.

For example, the nature of these associations is determined by the services provided, resources and information exchanged between them. Voluntary sector organisations in a contracting agreement are required to produce detailed information to public sector organisations when delivering services on their behalf. This information may pertain to the number of clients the voluntary sector organisation have served, the types services provided for them, the hours spent on delivering these services, the type of labour utilised (voluntary, full time staff, associated costs etc.). In contrast, an organisation that recruits volunteers on behalf of the NPO requires a different set of information. Similarly, the regulatory organisations that recognise the "voluntary" nature of the organisations require a different set of information.

In summary, this first characteristic will examine the organisational level relationships maintained by the voluntary sector organisations and the information requirements of the affiliated organisations in maintaining this relationship. This characteristic will examine these relationships in terms of the roles (donor, regulator, recruiter, etc.) that these organisations perform within the established organisational level relationships.

Characteristic 2

Lamb and Kling (2003, p 212) "Relationships are dynamic and related to informational exchanges which change with flows of capital, labour and other resources."

In the context of non-profit organisations this characteristic enables us to examine the load shifting arrangements between organisations in terms of maintaining established relationships. There are several dimensions related to maintaining affiliations beyond the information requirement.

There are several instances of the manifestation of this characteristic. Consider the following examples:

- A non-profit organisation utilises a population statistics report produced by a commercial sector consultancy company, which indicates declining retirement income, to engage the state in a discussion on the quality of life of older people.

- A donor organisation has identified the key objective of improving inter-generational participation in the community. The organisation establishes a fund for non-profit organisations with established community networks in the region.

- Information and databases pertaining to elder abuse and neglect prevention are maintained in New Zealand. Both a public institution, The Families Commission (http://www.nzfamilies.org.nz/20080226.php) and a voluntary sector organisation, Age Concern, maintain a database and information on this cause. Although the primary responsibility for maintaining the data is on the public institution, the NPO is widely identified with provision of this information.

- A collaborative agreement between a large and a small voluntary sector organisation exists. The large organisation is qualified for government funding. The smaller organisation has a physical presence in a geographical region that the large organisation is unable to reach. The smaller

organisation, due to its collaborative agreement, is able to provide services on behalf of the large organisation.

As the first characteristic establishes the organisational level relationships and the information requirements, this characteristic will examine the load shifting arrangements prevailing in maintaining organisational level relationships.

Characteristic 3

Lamb and Kling (2003, p213), Relationships are multilevel, multivalent and multi-network.

Relationships could be formed between several layers of global, local group or organisational levels as well as within each of these layers of affiliations (multilevel). NPOs operate in a resource scarce environment. The relationships they establish may provide them access to resources but more importantly will create value for them in an implicit sense.

For an example consider Age Concern, which has a national, regional, local and an international presence. A local hospital (affiliation) will decide to engage with the local branch for a client referral. This affiliation is multi-valued for the voluntary sector organisation as now they have a relationship which provides them with client referrals and gives them implicit recognition from a quasi-state institution. This implicit recognition is associated with a value proposition.

Characteristic 4

Lamb and Kling (2003, p 214): As relationships change, interaction practices migrate within and across organisations.

Introduction of a new service or a change in an existing service may prompt the establishment of a new alliance and may change the level or the method of interaction. The relationships may change due to the nature of services delivered or due to new alliances or a change of the organisational mission (e.g. from

supporting older people to supporting older people with a specific type of personal disadvantage - Stroke club, Alzheimer's Society).

Developing new services, such as social inclusion services for older people dealing with loneliness and connectedness, as opposed to direct services, may also lead to a change in their practices. The voluntary sector literature addresses this change in relation to the migration of services concept, but the available literature does not clearly address how this results in the establishment of new information practices within the organisation.

This is evident in voluntary sector organisations in New Zealand. Following the policy directions which promote independent living amongst older people, some organisations moved from managing rest homes to provision of services in individual homes to support these new clients. Subsequently it can be assumed that the ICTs used within the organisation migrated in order to facilitate this interaction and to manage a host of caregivers working in multiple locations.

This study utilises this characteristic to examine a new service offering or an identified change within the client base, funding, or resource base and the response of the voluntary organisation to this change. It will examine an identified practice that has been established as a direct response to this change and associated information activity.

For example, the availability of a new funding source may motivate NPOs to develop new service offerings, or the loss of a funding source may inhibit their service provision and motivate them to establish new affiliations. These result in modifying the existing information flow or establishing a new information flow.

3.4.2 Environments

The *environments* dimension in the social actor model has been defined as (Lamb and Kling, 2003, p.214) "*stabilised, regulated, institutionalised practices, associations, and locations that circumscribe organisational action*" Lamb and Kling (2003) have focused on two main aspects within this dimension: (a) the

organisationally accepted financial and governance practices, and (b) the ICT infrastructure.

The environment dimension contextualises the operating environment of the NPO and its affiliations and contributes to our understanding of the first dimension. Lamb and Kling (2003) explain that all affiliations are not of the same type and that affiliations are influenced by contexts which are identified as environments. Characteristics of the environmental dimension enable us to understand the contexts within which the NPO and the affiliations operate.

One of the most noteworthy findings in the operating environment of non-profit sector organisations in New Zealand is its funding mechanism. According to the comparative analysis revenue wise, New Zealand's non-profit sector receives 55% of its money from fees, 25% from the state and 20% from philanthropy (Sanders, O'Brien, Tennant, Sokolowski and Salamon, 2008). The state's contribution is lower in New Zealand in comparison and more funding is provided from philanthropists than in most other nations that data is available for.

As non-profit sector organisations accept funding from external organisations and members of the public, the state agency that regulates the sector stipulates certain requirements that the organisation needs to adhere to. Therefore the environment dimension will be defined as the "*Regulatory and self-governing practices that define the organisational action and the availability of ICT infrastructure*". The term "regulatory" refers to the specifications that a voluntary sector organisation must adhere to in order to be recognised as such by the state. Self-governing practices refer to organisationally adopted standards and practices.

Each of the following characteristics within this dimension will be examined according to the above definition.

Social Actor model: Characteristics and behaviours of connected and situated individuals.	Application in the non-profit sector	Specific factors for consideration
1."Organisational environments exert technical and institutional pressures on the organisation and their members". (Lamb and Kling 2003, p.214)	Regulatory and organisational practices influence the organisation and its members.	**(a)** Organised - Regulatory requirements by state agency. (Tennant et al 2006) **(b)** Self Governing – internal governance (Tennant et al, 2006) **(c)** Funding mechanism. **(d)** Organisational structure (local branch /Head office)
2. "Environmental dynamics vary among industries." (Lamb and Kling, 2003, p.214)	Regulatory and organisational practices vary according to geographical location and the type of service to the community.	**(a)** Types of services provided.(Information, direct service, mix) **(b)** Geographical region(rural/ metropolitan)
3. "ICTs are part of the organisational environment." (Lamb and Kling, 2003, p.215)	Retains the source description.	**(a)** Characteristics of technology (Chau and Tam 1997; Tornatzky and Fleischer 1990). **(b)** ICT investment (Zorn, Li, and Lowry 2007) **(c)** ICT infrastructure (Burt and Taylor, 1999; Craig and Williamson 2005)
4. "ICTs are part of the industry, national and/or global environment." (Lamb and Kling, 2003, p.215)	Common ICT infrastructure, funding and knowledge base is a part of the voluntary sector.	**(a)** Technical support – Circuit Riders, Non-profit Technology Providers (McInerney, 2007; West and Green, 2008) **(b)** Shared Infrastructure (c) External ICT fund.

Table 3.3   Environments

Characteristic 1

"Organisational environments exert technical and institutional pressures on the organisation and their members" Lamb and Kling. (2003, p.214)

In the context of the non-profit organisations, we will use characteristic *"regulatory and organisational practices influence the organisation and its members"*.

The five criteria in the definition of non-profit organisations (section 2.1.1) contain two criteria that will be examined within this characteristic. The other three criteria specify the membership and profit distribution of the organisation and are not relevant in this context.

- Organised – Refers to the legal status of the organisation. This is determined by the government's policy directives to the non-profit organisation. State agencies play three distinct roles as a regulator, donor/funder and an employer to the non-profit sector organisations. The *affiliations* dimension will determine the role of the state in relation to the non-profit organisation. This first characteristic of the *environment* dimension explores the role of the regulator. This is necessary as these regulatory requirements specify the information collection, distribution and accounting practices that the non-profit organisations are expected to adopt in order to receive legally accepted status. Accounting practices of the organisations are beyond the scope pf this study.

- Self-governing – Refers to the self-governing nature of the organisation and the practices introduced by its own governing body. The self-governing nature of the organisation determines its technical, financial and procedural guidelines while adhering to the state established minimum requirements of accounting practices, information collection and distribution.

However, many of the regulations and practices that govern community-based organisations stem from a contextual understanding of their clients and their needs, and are more loosely structured than those of a commercial organisation.

Examination of institutional practices within these two criteria will enable us to determine the influence of the government policy directives and organisationally established practices on information management and communication.

The third factor to be considered under this characteristic is the established funding mechanism of the organisation. Exploring the organisation's funding

mechanism enables us to understand the level of dependency and the adherence to external organisational pressures. This determines how ICTs are used for data collection, processing and dissemination within the organisation in order to fulfil the information requirements of the funding agency.

Characteristic 2

"*Environmental dynamics vary among industries*". Lamb and Kling (2003, p.214). In the context of non-profit sector organisations we will consider the definition; "*Organisational practices vary according to the type of service provided*".

This characteristic examines how the organisational practices vary according to the type of services provided. e.g. an NPO that provides only information service employs fewer volunteers and requires less resources than an organisation that provides direct services.

Characteristic 3

This characteristic has been defined by Lamb and Kling (2003, p215) as "*ICTs are part of the organisational environment*". Two primary factors that have been considered by Lamb and Kling (2003) are staff capabilities in skills and the ICT investment of the organisation. In the context of voluntary sector organisations, ICT investment, ICT infrastructure and characteristics of technology are the factors that need to be evaluated as a part of the operational environment of the organisation.

Despite the difficulties encountered in gaining access to funding sources, many voluntary sector organisations invest significantly in ICTs. Salamon and Geller (2006), in their investigation of the ICT investment by the non-profit sector, highlighted this increased level of technology related spending. The ICT investment in a voluntary sector organisation is threefold; investment in hardware, software and training. Considering the factor of ICT investment will enable us to establish the level of ICT infrastructure and training within the organisation.

While ICT investment was a factor within this characteristic in the original model (Lamb and Kling, 2003), the availability of ICT infrastructure and technical support was not included. This may be due to the nature of organisations (commercial) studied within the contexts of the social actor model. Although technical support and ICT infrastructure can be considered as obligatory requirements within commercial organisations, non-profit organisations are deficient in both. Therefore this study includes both as factors to be examined within this characteristic.

Characteristic 4

This characteristic has been defined by Lamb and Kling as follows (2004, p. 215): "ICTs are part of the industry, national and/or global environment. In the context of the voluntary sector we will employ the definition, "Common ICT infrastructure, funding and a resource base is a part of the voluntary sector".

This characteristic examines the availability of external IT resources that contribute to the IT environment of the sector. Common ICT infrastructure, a shared skill base, shared knowledge, awareness of best practices and funding for ICT have been identified as important factors for NPOs and the prevalence of these in the sector will enable organisations to overcome their internal limitations. While the available literature in New Zealand (Williamson and Dekkers, 2005; Craig and Williamson, 2005), focuses on the lack of these factors at an organisational level, the availability of shared external resources and how they influence NPOs to overcome internal issues will be explored within this characteristic.

Commonly shared technology resources in the voluntary sector can refer to shared databases, web hosting services and other regionally available online information resources that the voluntary sector organisations access in conducting their operations. Several key organisations in New Zealand provide central databases and other resources (e.g. Age Concern- Elder Abuse and

Neglect Prevention database, Wellington ICT- provides web hosting) that are important to voluntary sector organisations

In terms of funding, the availability of a technology based fund capable of supporting ICT initiatives within non-profit organisations indicates the importance of ICT initiatives to the sector.

Lack of IT skills and lack of ICT skilled staff has been discussed as key factors that constrain ICT use in non-profit organisations. Movements such as the circuit riders and Non-profit technology Providers enable organisations to overcome this skill deficit. There are three main areas of interest within this factor. These are, (a) the non-profit technology providers, (e.g. Tech soup, Wellington ICT) (b) Circuit rider movements provide access to a commonly available resource pool (e.g. Wellington e-rider) and (c) organisations that promote recruitment of volunteers and (e.g. Volunteer Wellington). The ability of the organisation to utilise these skills is an important consideration.

3.4.3 Interactions

Lamb and Kling (2003) defined the dimension of interactions as "information, resources and media of exchange that organisational members mobilise as they engage with affiliated organisations".

The *affiliations* dimension examines organisational-level relationships relevant to non-profit organisations. The interactions *dimension* examines how these relationships are managed and the tools used to gather, craft and present the information to affiliated organisations.

Social Actor model: Characteristics and behaviours of connected and situated individuals.	Application in the non-profit sector	Specific factors for consideration
1."Organisational members seek to communicate in legitimate ways". (Lamb and Kling, 2003, p 215)	Retains source description	(a)NPO mandated information practices
2. "Organisation members build, design and develop interactions that facilitate flow changes" (Lamb and Kling, 2003, p 216)	Retains source description	**(a)** Frequency and the medium of information exchange within affiliations **(b)** Organisational members use of existing technological infrastructure for core activities
3. "ICTs become part of the interaction process,(interaction technologies) as people transform and embed available informational resources into connections and interactions."(Lamb and Kling, 2003, p 216)	Retains source description	**(a)** mechanisms used to overcome the issues in use (Chau and Tam, 1997) **(b)** NPO obtains benefits from the use of technology (Chau and Tam, 1997)
4. As Organisation members, people perform socially embedded (role based) highly specified actions on behalf of the organisation" (Lamb and Kling, 2003, p 216)	Volunteers and staff member may perform both specific and ambiguous roles as provider and the recipient of the service.	**(a)** Role ambiguity (Billis and Glennerster 1998; Mathieson 2006 ; Walsh and O'Shea 2008)

Table 3.4   Interactions

Characteristic 1

Organisational members seek to communicate in legitimate ways. (Lamb and Kling, 2003, p 215)

This characteristic explores the information requirements of the affiliated organisations and how organisational members facilitate these requirements in an organisationally prescribed manner. Previous characteristic two "type of resource exchanged" and the "organisational practices" in the *environment* dimension also inform this characteristic.

The previous scoping of organisational level relationships to commercial sector, public sector and non-profit organisations remains the same (affiliations). This characteristic explores how organisational members are required to engage with these organisations within prescribed practices and how the information exchanges occur with daily operations.

Characteristic 2

 "Organisation members build, design and develop interactions that facilitate flow changes. Lamb and Kling (2003, p.217)

Second characteristic identify how ICTs are used for collecting, processing, presenting and disseminating information within the daily operations of the organisation. The examination of this characteristic within organisations provides an answer to how their technology infrastructure is utilised to support service delivery. Detailed understanding of this will not only provide insights of how ICTs are used but will also inform the choice of ICTs employed.

Characteristic 3

Lamb and Kling (2003) define the third characteristic as *"ICTs become part of the interaction process, as people transform and embed available informational resources into connections and interactions"* (Lamb and Kling, 2003, p 217)

Central to this understanding is also identifying how they overcome issues of using technology. Within this characteristic we are interested in finding out how they gain an understanding and overcome limited use of the existing technology.

This characteristic examines how the organisational members create or use additional sources or channels to be more informed or to influence the outcome of the interaction. Further it enables us to examine both online and offline tools. One of the factors that will be examined within this characteristic is the establishment and use of communities of practice. In the non-profit sector, communities of practice exist both in online and offline forms. Exploration of this

characteristic enables us to understand how the organisational members improve their interactions with more information, expertise and insight gained through these communities of practice.

Characteristic 4

As organisational members, people perform socially embedded (role based) highly specified actions on behalf of the organisation. Lamb and Kling (2003)

This characteristic will be interpreted to add the "role ambiguity" explained below.

"Volunteers and staff members may perform both highly specified actions and ambiguous roles as provider and the recipient of the service, on behalf of the organisation". This characteristic can be used to examine the prevalent "stakeholder ambiguity" (Billis and Glennerster, 1998) in voluntary sector organisations as well as the specific roles.

3.4.4 Identities

The identities dimension in the social actor model has been defined as the "avowed presentation of the self and ascribed profiles of organisation members as individual and collective entities", Lamb and Kling (2003, p.213). The term "*avowed presentation*" refers to how the members present themselves (identity) and the term "*ascribed profiles*" refers to how outsiders perceive them (image). Dutton and Dukerich (1991) first distinguished these two as separate concepts, *identity* and *image,* and within NPOs it is important to consider both. Therefore within the *identity* dimension we use four characteristics to explore both identity and image.

As organisational identity is prominent in the non-profit sector, in interpreting this dimension for this study we recognise the "collective self" in which individuals contribute to the collective identity.

Organisational identity: Scott and Lane (2000, p43) summarise the two different approaches to organisational identity. They define organisational identity at an individual level as a "cognitive image held by a member of an organisation" and at a collective level as a "collectively held frame within which organisational participants make sense of their world". Lamb and Kling's (2003) definition is based upon well-established industries and large organisations, where the former is more applicable. However, in voluntary sector organisations Scott and Lane's collective identity is more appropriate.

In defining the concept of identity, Albert and Whetten (1985) defined organisational identity as central, distinctive and most enduring to an organisation. Young (2001, p 143) defined organisational identity in voluntary sector organisations as "a distinct yet holistic notion that integrates, supports, and indeed drives a number of operative concepts guiding the long term direction and character of an organisation". This definition illustrates the critical influence of identity on the actions of organisations.

Organisational identity and the voluntary sector: Young (2001) argues that voluntary sector organisations should have stronger identities than commercial or public sector organisations. Commercial sector organisations are driven by profit maximising objectives, while the public sector is driven by a political mandate. Billis and Glennerster (1998) also point out that while public and commercial sector organisations are driven by profit maximisation intentions, NPOs are driven by creating social value. Furthermore, NPOs are driven by multiple stakeholders with diverse interests. Therefore, creating an identity for itself determines the mission, the type of stakeholders that will drive the organisation, the funding sources they would be eligible for, and the type of volunteers they will attract. For instance, organisations that serve homeless people are usually served by faith-based organisations, while organisations that help single mothers gain employment attract women from the corporate sector as volunteers. Therefore in using the Lamb and Kling (2003) *identity* dimension

within voluntary organisations, the primary area of focus would be the investigation of the organisational identity. We will explore how this identity is developed, maintained and enacted using ICTs. In addition, perceptions of the image of the NPOs and how ICTs are used to improve and maintain the image within the external environment will also be examined within this characteristic.

The organisational identity of a voluntary sector organisation dedicated to older people may be manifested in multiple ways and is also aligned to the type of services that it provides. As an example, Age Concern has an organisational identity as a voluntary, non-faith based organisation that supports older people through creating awareness of elder abuse and neglect and also by providing its clients with information and companionship. In contrast, the organisational identity of Carers NZ is based on its role as a primary source of information to carers. Although both organisations are within the same sphere, they have distinct identities defining the services they provide.

Both image and identity are important to these organisations. In particular, as they are working in the field of human services, maintaining a positive image of trust, ethical practices of confidentiality and respecting the privacy of their clients are of utmost importance. Thus, while the two organisations may differ in their identities, the image they want to convey is fairly consistent. Both organisations want to portray the image of professionalism, transparency, effective utilisation of resources and as organisations that respect their clients' privacy. The ability to use ICTs to maintain and portray these images to the external environment influences the NPO's use of existing technology.

Drawing on Whetten (2006), we can therefore clarify the characteristics of "distinguishing, central and enduring" characteristics for the purpose of the study. The identities dimension will be defined as; "*Distinguishing, central and enduring presentation of collective self which directs long-term strategy and operative structure an organisation*".

Lamb and Kling (2003) explain that this dimension focuses on the everyday interactions that maintain and change organisational identities. This organisational identity represents collective as well as individualistic identities and how ICTs enable this process. Therefore it enables us to examine *how ICTs participate in the social construction and representation of collective self within organisational contexts.*

The first characteristic is introduced in order to ascertain the organisational identity and the perceived image of the organisation.

Social Actor model: Characteristics and behaviours of connected and situated individuals.	Application in the Voluntary sector	Specific factors for consideration
SAM focuses on the individual identity. The proposed study is at the organisational level and individual level. Therefore this definition is required	1. NPOs have a distinguishing, central and an enduring identity that informs their long term direction and guide their operations. (Young 2001)	(a) Organisational identity (Whetten 2006; Young 2001) (b) Image (Transparency, Accountability) (c) Factors determinant upon the identity.
2. "Social actor identities have an ICT use component" (Lamb and Kling 2003,p 217)	Retains source description.	Use of ICTs to construct organisational identity. (West and Green 2008).
3. "ICT enhanced networks heighten ethnic and multiple other identities." (Lamb and Kling 2003, p 217).	Retains source description.	ICTs heighten multiple other identities. (Mathieson 2006; McInerney 2007)
4. "ICT enhanced connections among organisation members transcend roles" (Lamb and Kling, 2003, p 218).	Retains source description.	(a) IT roles performed by staff and volunteers. (Schneider, 2003; Mathieson, 2006) (b) Task expansion and compression (Saidel and Cour, 2003)
5."Social actors use ICTs to construct identities and control perceptions" (Lamb and Kling 2003, p 209)	Social actors use ICTs to profile and control perceptions.	(a) Profiling (Burt and Taylor 2003; Hajnal 2002) (b) Self-monitoring (Zorn 2007)

Table 3.5   Identities –non-profit organisations

Characteristic 1: Distinguishing central identity

Voluntary sector organisations have a distinguishing, central and an enduring identity that informs their long term direction and guides their operations.

This characteristic enables us to understand how one NPO can distinguish themselves from other voluntary sector organisations in the same domain. The identification of identity will provide clarity in understanding their long term

strategy and the structural choices (e.g. technology, services) they have made in their daily operations. This characteristic will also provide insights on key factors that are determinant upon identity (e.g. funding sources, affiliations, and the type of volunteers) and the image that the organisation wishes to portray. This characteristic will help us understand how organisational identity influences the use of ICTs.

Characteristic 2: Role of ICT

Social actor identities have an ICT use component. (Lamb and Kling 2003, p 214)

This examines how social actors use ICTs to construct their organisational identity, for example, to convey a positive image of the organisation such as professionalism, effective utilisation of funds. West and Green (2008) describe how funding organisations have higher expectations of the professional presentation of grant applications and how this creates a positive impression of the organisation. As voluntary sector organisations increasingly utilise technology, they are expected to collect, analyse and present aggregate and detailed data (concerning service levels). The ability to successfully present this information itself contributes to the image they wish to convey (e.g. transparency). This characteristic will enhance our understanding of how the social actors utilise their technical mastery to construct an organisational identity in dealing with their stakeholders (e.g. donors, clients, volunteers). As voluntary sector organisations are portrayed in the literature as lacking in ICT skilled staff, this exploration is vital.

Characteristic 3: Ethnic and multiple other identities

"ICT enhanced networks heighten ethnic and multiple other identities." (Lamb and Kling, 2003, p 217).

Lamb and Kling used this characteristic to examine the presentation of the self and the individual's competence to the clients, whilst also presenting the organisational identity. e.g. As a fund manager, the individual presents the

organisational competence as well as the individual's ability to manage client portfolios.

The competitive drive to attract clients does not exist in voluntary sector organisations that support older people. Presentation of individual competence does not have the same implication in voluntary organisations as in the commercial sector. It becomes more evident in competitive applications for funding and attracting volunteers which will be examined within the first construct. However, an important element in the voluntary sector in New Zealand is the clear distinction of two separate traditions in volunteering; the organised European tradition and the Maori tradition. We will use this characteristic to examine the influence of these different ethnic and other identities on the ICT use in the NPO.

Characteristic 4: Transformation of functionalities

ICT enhanced connections among organisational members transcend roles. Lamb and Kling, (2003, p 214)

This characteristic examines how technological competency enhances the identity of the individual and transforms their role within the organisation. In the realities of voluntary sector organisations, due to staffing constraints organisational members perform multiple roles. These organisational members could be staff members or volunteers. This characteristic will serve to examine the following perspectives:

- Identification of multiple roles that the individuals perform and how technology aids in this performance.
- The role of volunteers as they create multiple identities, internal and external to organisations.

We use this characteristic to examine how the use of ICTs enhances the identity of the individual, how technology is used when performing several roles and how ICT use is dependent on the role of volunteers and staff.

The function of this characteristic will considerably vary depending on the structure of the organisation. In an organisation that is fairly well structured and resourced we may observe the transformation of the role. However, in organisations that are less well defined we examine how multiple roles and voluntary staff are used to compensate for a skill deficit within the organisation.

Characteristic 5: Profiling

Social actors use ICTs to construct identities and control perceptions. Lamb and Kling (2003, p 215)

Using this characteristic we study how ICTs are used within these organisations for profiling and controlling of the organisational image through ICT. Both of these activities, which occur at the periphery of the organisation, contribute to maintaining an organisational identity. *Profiling* refers to the collection of information about a client or an organisation which is an external entity. Burt and Taylor (2001, 2003) demonstrated how non-profit organisations used ICTs to create and aggregate profiles of environmentally polluted sites in the UK. Similarly, this study will explore the profiling of external entities by organisations (e.g. the profiling of donors and profiling of fund raising campaigns of other voluntary sector organisations.)

In the case of non-profit sector organisations, controlling of perception refers to the self-monitoring function of the publicly available information on the organisation. Zorn (2007), who conducted a study of the non-profit sector organisations of New Zealand, concluded that ICTs are influenced by the necessity of creating a "positive image" for the donors, clients, government and regulators of the sector by non-profit organisations. However, his study did not explain how organisational members are to do this. This characteristic enables us to better understand this observation.

3.5 Research questions

1. How are ICTs being used within the "common core activities" to support the information use of non-profit sector organisations?
2. How do affiliations, environments, identities and interactions (and other factors) influence use of ICTs, in non-profit sector organisations?

The study was guided by these central questions. We developed a set of interview questions for data collection and a template to facilitate discussion in this study. See appendix 2 for interview questions and template used.

Chapter Summary

Operationalisation of the social actor model for the research project was important in order to adapt the model to the context of the area studied. Each of the characteristics of the model was translated using existing literature. The behaviours and characteristics were scoped to focus on a set of factors for the study in order to answer the two main research questions. The use of social actor model is used within this study as a lens to examine the organisations in order to examine how ICT use is influenced.

Chapter 4 – Methodology

This chapter outlines the research design and methodology of the study. An interpretive case study method has been employed in conducting this research. The aim of the study is to understand how non-profit organisations use existing ICTs in the post-adoption phase. As the research is concerned with contextual factors which examine the way a certain phenomenon unfolds in the present situation and in the real world, interpretive epistemology is found to be most appropriate research method. Using the case research method as the research strategy, the research investigates multiple cases to explore the characteristics and behaviours that influence use of ICTs in non-profit organisations. The use of multiple cases to address the research questions adds value to the overall study while providing an opportunity to generalise within the studied context.

4.1 Interpretive epistemology

The interpretive perspective views reality as being created by the perception, opinions and interactions of individuals. Interpretive methods of research in Information Systems have been defined as studies which are *"aimed at producing an understanding of the context of the information system and the process where- by the information system influences and is influenced by the context"* (Walsham 1993, p. 4).

The central research question of the study focuses on identifying how non-profit organisations utilise ICTs to support service provision to older people living in the community. As the study is focused on the context of ICT use and how this use is influenced by the characteristics of *affiliations, environments, identities* and *technology*, it necessitates studying the members of the organisations, their interactions in service delivery and their use of ICTs. The information sought in relation to this research question is qualitative and therefore the study will deal

with the perceptions of the organisational members of their organisation, the routine transactions that they perform and how ICTs are incorporated in this.

On the appropriateness of the interpretive epistemology, Orlikowski and Baroudi, (1991, p. 5) explain that when the research is about studying cultural or contextual situations interpretive studies are more appropriate. Within the study we explore the use of ICTs in non-profit organisations providing services to older people who live within the community. This exploration takes into consideration the unique contextual factors within the non-profit sector and within specific organisations. The contextual information sought is twofold; partly organisational members' understanding of the organisational and sector environment, and partly the reality they create in their transactions with the use of ICTs.

This study could have been conducted using a positivist approach. By scoping the behaviour of organisational responses as constructs and dependencies it would have been possible to investigate the same phenomenon. However to answer the research questions raised in this study required an understanding of the context within which organisational members worked and its interactions with the external environment. We found articulating this behavioural context as a set of constructs diminished the understanding of environment these organisational members operated in. In addition when we examined previous positivist studies conducted in New Zealand within the non-profit sector we found that those studies lacked the ability to produce a rich set of data that explained "why" certain behaviours were present in relation to ICT use. Whilst these studies were useful to understand the challenges across a sector they failed to provide insights into how organisational members overcome constraints in their use of ICTs and responded to cues from the external environment. These reasons motivated us to adopt an interpretivist epistemology for this study.

4.2 Research Strategy

Within an interpretivist epistemology we discussed two main methodologies: case study and ethnography. Using an ethnographic strategy we would have been able to examine the ICT use in client management, fund raising or volunteer management in depth. Further we found Barley (1996) to be an exemplary ethnographic study that provided rich insights in to the types of work that technicians carried out in organisation. However two reasons persuaded us to eliminate that option. Ethnographic studies are time consuming therefore within the allocated time we would not have been able to examine ICT use in the three functional areas selected. Furthermore we were interested in external, organisational and individual facets across four different types of community care providers and therefore required careful scoping of the study. By comparison we found case research method to be more suitable for such an endeavour than ethnographic approach.

This study employs the case research method. Benbasat, Goldstein and Mead (2002, 81) define case study as a suitable method to examine a phenomenon in its natural setting, using multiple methods of data collection to gather information on people, groups or organisations. Yin (2003, p.5), identifies case research method as most appropriate when the form of the research question does not require control of events, but rather focuses on investigating the existing situation. In addition, according to Yin (2003) and Benbasat, Goldstein and Mead (2002) case research method is most useful in the study of 'why' and 'how' questions, because these deal with actions committed over a period of time rather than with frequency or incidence. Furthermore, it is appropriate to study the complexity of the selected unit intensively (Benbasat, Goldstein and Mead, 2002) as case study research accesses a range of perspectives from different levels of organisational members and combines many sources for data collection. This enables the researcher to capture rich insights pertaining to real-world context. Case study research is most appropriate for the study, as it

attempts to answer questions of contemporary phenomena set within real-life context over which the researcher has limited control. The study will use the structured case (Carroll and Swatman, 2000) approach to conduct interpretive case studies. Section 4.6 presents a detailed explanation of structured case.

Cavaye (1996) explains the strengths and weaknesses of case study research. The author identifies its ability to capture 'reality' and the fact that it allows exploration of different aspects of phenomena as strengths. Case research also permits the researchers to consider a broad range of factors not necessarily previously determined. According to Cavaye (1996), the main weakness in case research method is its inability to generalise findings. As this study is designed to gain rich insights to non-profit organisations' use of ICTs and draw specific implications for organisations that deliver services in the community, the lack of generalisability will be accepted as a method-related limitation (Cavaye, 1996, p. 229) of the research.

Yin (2009, p.14) identifies lack of rigour as the greatest concern of case study research. The author explains lack of rigour as the researcher not following systematic procedures and allowing biased views to influence the findings and conclusion of research. Within the study we employ Lincoln and Guba's (1985) recommended four measures of credibility and trustworthiness to overcome this issue.

Stake (1994) explains three main types of case study; intrinsic, instrumental and collective. When a researcher aims to gain a better understanding of unique phenomenon and when he undertakes a study to explore it, that study is identified as an *intrinsic case*. This type of case study could even be a negative case, that is, a case markedly different from the general pattern of others. An *instrumental case* is when a researcher examines a case to give insight to an issue or to refine a theory. Lee's (2002) identification of methodological problems raised a single case, (a) making controlled observations and deductions (b) allowing for reliability and generalisability. Although there have been

successful instances of study of single case research that have overcome these problems e.g. Markus (1983), for the purpose of the study the third type identified by Stake (1994), *collective,* is more appropriate. *Collective* is when the instrumental case study is extended to multiple cases in order to learn more about the phenomenon, population or a general condition. This study can be identified as *collective,* as it examines the use of ICT in multiple organisations within a single sector. A further discussion on multiple cases is provided in the next section.

Theoretical lens –Social actor model

Theory in interpretive studies can be used as an initial guide to design data collection or as part of an iterative process of data collection and analysis (Walsham, 1995, p.76). It is also the final product of the research. In examining the use of ICTs in non-profit organisations, the need to consider the influences of external factors was highlighted during the literature review. The social actor model enables us to consider the influences of both internal and external factors of ICT use within the three functional areas of client management, volunteer management and fundraising.

Within the research, the social actor model is used to define the boundary of the study, data collection and analysis. The social actor model (Lamb and Kling, 2003) is a framework originally used to investigate factors influencing online information use amongst organisational members in commercial sector organisations. Chapter 3 presents an interpretation of the model based on non-profit sector literature. The social actor model has been used to guide the research design, data collection and analysis. The use of the model to examine phenomenon of ICT use in non-profit organisations is similar to using scaffolding in constructing a building. The primary intention of using the model is to gain rich insights into increasingly ICT mediated non-profit organisations, and the intention is not to validate the social actor model in non-profit sector or to test its applicability.

Unit of analysis

The unit of analysis in case research can be an individual, entity or an event and determining the unit of analysis sets the boundary of the study (Yin, 2003). This study provides two levels of analysis, individual and organisational. As explained in chapter 3, the social actor model can be used to provide a multilevel analysis. Analysing the characteristics of the *environmental* dimension and the characteristics of the *affiliations* dimension provides us with an understanding of how regulatory practices and relationships with external entities influence ICT use at an organisational level.

The *interactions* dimension contributes to identifying both organisational level ICT infrastructure and individual use. The *identities* dimension enables us to understand how organisational members contribute to creating a central identity and how they use ICTs to profile and control the perceptions at an organisational level. At an individual level this dimension lets us explore how organisational members' identities and roles are influenced by ICT use.

4.3   Case selection criteria

This research study presents findings of four cases. Following are common characteristics of all the organisations selected as cases.

Location: All four organisations are based in New Zealand and within a single geographic region. Hilltown region represents areas that have diverse population densities (high >20%, medium 19%-16% and low<10%) of older people. This region consists of four main areas Valleytown, Beachtown, Hilltown and Ryetown within close geographical proximity. This enables better access to organisations for the researcher and minimises the influence of regional variations.

ICT use: The four organisations selected utilise ICTs in their three main functional areas client management, volunteer management and fundraising. Each organisations use of ICT was defined according to whether these organisations

fulfilled one or more of seven criteria established by Zorn (2007) in a previous study conducted in New Zealand non-profit organisations.

- Use of an organisational website
- Maintaining databases of clients, donors and resources.
- Use of word processing, spreadsheet packages and email
- Use of online funding databases for preparation of grant applications
- Use of ICT for recruitment.
- Computer based accounting functions
- Use of online resources

Voluntary staff: All four organisations selected employ a volunteer workforce. Most non-profit organisations either use volunteers to deliver services on behalf of the organisation or volunteers are at board level. This study primarily focused on organisations that use volunteers to deliver services.

Accessibility within the organisation: the ability to conduct interviews with multiple levels of organisational members was an important consideration. Access to staff and volunteers across the organisation was a primary factor in case selection.

Client base: The organisations selected provide services for older people as their **primary client** group and delivered services directly. Organisations served at least 40 clients or more were selected. A larger client base is indicative of diverse client needs and the motivation to deploy ICT to meet the demands.

Organisational Maturity: In order to ensure that the organisations had already established their ICT infrastructure, we excluded organisations that have been in operation for three years or less. This enabled us to better focus on ICT use as opposed to adoption.

All four cases fulfil the above criteria. However the individual cases vary as noted below.

The four cases are comprised of three faith-based organisations and one non faith-based organisation. As detailed in the literature review, faith-based organisations have been historically involved in this sector in New Zealand and have gone through several transformation phases. These organisations are well established, with extensive branch networks operating in multiple locations and are trusted entities within the community. Non-faith based organisation has been an advocacy organisation that is currently transforming itself as a service provider. Inclusion of both types contributed to our understanding in the identity dimension.

The nature of the services provided is the final factor to consider. In terms of service provision, expressive (recreational, sports and hobby clubs) and civic organisations (e.g. Grey power) that operate within this sector have been excluded. Research focuses exclusively on organisations providing direct services (e.g. companionship support, shopping and household assistance, personal care) to older people who live within the community.

Organisations	Type of service	No of interviews
Action for Seniors (AFS)	Information services, Companionship support, Elder protection services	12 (7 staff, 5 volunteers)
Independent Living Services (ILS)	Personal care, Home based care, Community rehabilitation services and household assistance	9 (8 staff members +1 volunteer)
Integrated Community Care (ICC)	Community care for clients with complex needs.	11 (10 staff + 2 volunteers) (one staff interview was discarded)
Tararua Hospice (TH)	End of life care	9 (7 staff + 2 volunteers)

Table 4.1   Case study organisations and types of services provides

Staff from each organisation interviewed are presented in table below.

Roles of staff members interviewed	AFS	ILS	ICC	TH
Accountant / Accounts Administrator	1	2	1	-
Administrative Secretary	1	-	-	-
Administrative Manager	-	1	1	1
Community Worker	-	-	2	-
Coordinator	2	-	-	-
Donor relationships and Database Coordinator	-	-	-	1
Volunteer Coordinator	2	1	-	-
Fundraising and Community Engagement Manager	-	-	-	1
Team Leader	-	-	3	-
Chief Executive / General Manager	1	1	1	-
Volunteer	5	1	2	2
Ward clerk	-	-	-	1
Executive Assistant	-		1	-
Marketing Coordinator	-	2	-	-
Communications and Public Relations Manager	-	-	1	-
Practice Manager	-	-	1	1
Volunteer Services Manager	-	-	-	1
IT Manager	-	1	-	-
Maintenance Manager	-	-	-	1
Totals_	12	9	12	9

Table 4.2 **Role distribution across four organisations**

As the organisations suggested staff members were interviewed according to their functionality in client management, fundraising and volunteer management there were similarities between the roles. For instance AFS's volunteer coordinators and TH's volunteer services manager performed the same functions. Although the study was scoped to exclude accounting staff, in three of the organisations accounting staff performed fundraising functions (AFS, ICC) and scheduling of community staff (ILS) and were included within the specified functionality. Interviews were conducted between 16th June 2010 and 25th January 2011.

Multiple case studies

Yin (2003) recommends the use of multiple case studies in order to overcome issues of generalisation. We have implemented this approach within the study. More importantly, as there are diverse types of organisations, these multiple cases will permit us to consider different types of services and how ICT use differentiates according to types of services. According to Stake (1995), the advantage of multiple case studies is that the contribution from each case adds to the overall study. Replication of case studies will enable us to:

- Make comparisons
- Search for patterns amongst data (e.g. voluntary staff vs paid staff)
- Identify common factors

Hakim (1987), who clarified that the largest single gain in multiple case studies occurs when moving from one to two case studies. By keeping the number of case studies low, this study has been able to achieve this in-depth analysis and to contribute better to the overall study.

4.4 Data Collection

The primary source of data collection is semi-structured interviews. Stake (1995) argues that interviews are a major tool for assessing multiple realities in case

studies. An advantage of interviews is that they are a flexible form of data gathering and enable a researcher to understand informants' perspective of phenomenon studied.

Data collection for site selection:

Prior to the selection of organisations, information available in the public domain was examined to gain a background understanding of the sector and the non-profit organisations that were operating within that space. This information is available on the organisational websites and with public agencies (e.g. Citizens Advisory Bureau, Charities Commission). The four sites were selected based on our case selection criteria outlined in section 4.3.

Familiarisation phase: Researcher spent 12-16 months volunteering at a human services non-profit organisation prior to data collection. This phase provided me with an appreciation of the information rich environment in client/volunteer, client/organisation and volunteer/organisation interactions. Main services delivered during familiarisation phase are companionship support (weekly), documenting client histories (two instance) and assisting at events (two instances).

Human Ethics Committee [HEC] approval for Data collection: Once the initial proposal of the study was presented to the School of Information Management and approved by the school, HEC approval was sought to progress data collection. See appendix A for HEC approval and interview questions used. Selected sites were provided with a copy of the HEC approval when seeking participation. At the end of each interview, consent forms were signed by the participants of the study as specified by the HEC policy. At Tararua Hospice, their internal research team requested consent forms to be signed at the beginning of each interview.

Data collection:

Within each organisation staff from three organisational tiers were interviewed in order to gain a complete perspective. The first interview was held with the manager or coordinator of the organisation in order to ascertain the level of ICT use within service delivery, to identify the primary services provided (i.e. information or direct services) and to gain an understanding of the overall organisation in terms of its internal and external operating environment. The next set of interviews was conducted with staff from client management, volunteer management and fundraising functions. Table 4.3 provides an overview of the data gathering mechanisms used when gathering information relating to each of the dimensions of the social actor model.

Affiliations		
Application in the non-profit sector	**Specific factors for consideration**	**Data Source**
1. "Social actor relationships are shaped by networks of organisational affiliations" Lamb and Kling (2003, p 211).	Relationships with public institutions, funders Central government institutions, local council, quasi- state institutions Relationships with commercial sector organisations Relationships with non-profit sector organisations, donors Role of the organisation	▪ Organisational Website ▪ Program Coordinator – Interview ▪ Staff – Interview
2. "Relationships are dynamic and related informational exchanges change with flows of capital, labour and other resources." Lamb and Kling (2003, p 212)	Load shifting arrangements between affiliations.	Staff and volunteer – Interview
3. "Relationships are multilevel, multivalent and multi-network." (Lamb and Kling 2003, p.212)	The level of relationship and values associated with the affiliation.	Staff and volunteer – Interview Program Coordinator – Interview
4. "As relationships change, interaction practices migrate within and across organisations". (Lamb and Kling 2003, p.212)	Change in an existing relationship or an introduction of a new affiliated organisation.	Staff and volunteer – Interview Program Coordinator – Interview

Environments		
Application in the voluntary sector	**Specific factors for consideration**	**Data Source**
Regulatory and organisational practices influence the organisation and its members.	(a) Organised - Regulatory requirements by state agency. (b) Self Governing – internal governance (c) Funding mechanism. (d) Organisational structure (Local/Branch /Head office)	Documentation Program Coordinator – Interview Staff – Interview

2. Regulatory and organisational practices vary according to geographical location and the type of service to the community.	(a) Types of services provided.(Information, direct service ,combined) (b) Geographical region(rural /metropolitan)	Staff and volunteer – Interview Documentation Website
3. "ICTs are part of the organisational environment." (Lamb and Kling, 2003, p.215)	(a)Characteristics of technology (b)ICT investment (c) ICT infrastructure	Documentation. IT staff - Interview Staff Interview. Manager – Interview
4. Common ICT infrastructure, funding and knowledge base is a part of the non-profit sector.	(a) Technical support – Circuit Riders , Non-profit Technology Providers (b) Shared Infrastructure (c) External ICT fund.	IT staff - Interview Manager – Interview

Interactions

Application in the non-profit sector	Specific factors for consideration	Data Source
1."Organisational members communicate in legitimate ways" (Lamb and Kling 2003, p.215)	Flow of information between affiliate organisations	Staff – Interview
3. "ICTs become part of the interaction process"(Lamb and Kling, 2003, p.216)	(a) Frequency and the medium of information exchange within affiliations. (b) mechanisms to overcome issues in ICT use (c) Organisational members use of existing technological infrastructure	Documentation Staff and volunteer – Interview
4. "Organisation members build, design and develop interactions that facilitate flow changes" (Lamb and Kling, 2003, p.216)		
4. Volunteers and staff members may perform both specific and ambiguous roles as provider and the recipient of the service	Role ambiguity	Staff and volunteer – Interview

Identities

Application in the non-profit sector	Specific factors for consideration	Data Source
1.Non-profit organisations have a distinguishing, central and an enduring identity that informs their long term direction and guides their operations. (Young 2001)	(a)Organisational identity (b)Image (Transparency, Accountability) (c)Factors determinant upon the identity –	Organisational Web site Documentation Manager – Interview Volunteer – Interview Staff - Interview

2. "Social actor identities have an ICT use component" (Lamb and Kling 2003, p. 217)	Use of ICTs to construct organisational identity.	Staff and volunteer – Interview
3. "ICT enhanced networks heighten ethnic and multiple other identities." (Lamb and Kling 2003, p.217).	ICTs heighten multiple other identities.	Staff and volunteer – Interview
4 Social actors use ICTs to profile and control perceptions.	(a) Profiling (b) Self-monitoring	Documentation Staff and volunteer – Interview Staff – Interview

Table 4.3   Data gathering mechanisms

4.5 Data Analysis

Data analysis began at the end of the first interview conducted. Iterative and immediate data analysis of the early interview data informed the data collection on the field. This research utilises "three concurrent flows of activities" defined by Miles and Huberman (1994) as:

1.   Data reduction

2.   Data display

3.   Conclusion drawing and verification

Data reduction was a two step process which started prior to data collection. The *first step* of the process of was developing a "starter list of codes" (Miles and Huberman, 1994, p. 58). Using the social actor model and literature used when operationalising the model I identified an initial set of codes (See Table 4.4) that was used in field work. Labelling of the codes was informed by Van Akkeren and Rowlands (2007). As their study abbreviated each dimension and characteristic to a two part label, as an early researcher I found that it provided better guidance in developing a set of associated codes.

Affliations	
[AFF-NW]	*Social actor relationships are shaped by networks of organisational affliations*
[AFF-NWP]	Relationships with public institutions
[AFF-NWC]	Relationships with commercial sector organisations
[AFF- NWNPO]	Relationships with other non-profit organisations

Table 4.4   **Starter list of codes – Affiliations dimension (Note: Level 1 codes are identified in italics)**

Associated with each of the starter list of codes, I also developed code definitions (Miles and Hubermann, 1994, p. 63) that specified how the starter list of code is operationalised. These code definitions were revised as data collection progressed and were useful throughout the study as they enabled me to better code interview segments. The code definitions were also shared during the code checking process.

The *second step* of the data reduction process occurred when coding interviews. As the coding of interviews progressed, more themes emerged that did not fit into the existing coding structure, and new codes (See Table 4.5) were developed to capture these themes. I used Nvivo9 to initially to code the interviews, FreeMind for site level analysis and Excel to combine site analysis and Nvivo codes.

Affliations	
[AFF-NW]	*Social actor relationships are shaped by networks of organisational affliations*
[AFF-NWF- DEFINE]	Funder defined information requirements
[AFF-NWF- VALUE]	Communicating value to funders
[AFF-NWD-VALUE]	Communicating value to donor organistaions
[AFF- NWREF]	Non-profit organistion's relationships with referal organistions
[AFF-NWEXT]	External organistaions - excluding non-profit organistions
[AFF- NWNPO]	Other non-profit organisations
[AFF-CLNT]	Information requirements of clients
AFF- NWC	Professional networks with commercial organisations

Table 4.5   **Revised list of codes – Affiliations dimension (Note: Level 1 codes are identified in italics)**

I produced site summaries and reflective memos on lessons learnt at the end of data collection and analysis for each research cycle. One of the site summaries (ICC) was presented to the case study organisation as a consultancy report to inform their information systems process re-design.

Cross case analysis occurs at the following levels of the study:

- between the similar sized organisations
- in analysing the service mix (information vs direct)

I have used tables and text for the display of data of individual organisations and matrices for cross case data displays. The purpose of data analysis is to generate theory and to gain an insight into the phenomena in action.

4.6 Type of theory

Theory in information systems has been defined in multiple ways. While authors in the positivist tradition regard theory as a relationship amongst constructs which can be tested and validated, my personal view of theory better aligns with the perspective of *"theory as statements providing a lens for viewing and explaining the world* (Gregor, 2006, p.613). In use of the social actor model to study the contextual background of the non-profit sector in order to explain how information is used within the non-profit sector, Gregor's *theory for explaining* provides the best fit for the study in terms of the five different types of theories identified by Gregor (2006). According to Gregor (2006, p. 619), theory for explaining *"provides an explanation of how, why and when things happened relying on varying views of causality and methods of argumentation. This explanation will be usually intended to promote greater understanding or insights by others into the phenomena of interest"*. The author also explains that this type of theory will provide explanations for *what is, how, why, when* and *where,* and in addition that it does not aim to predict and that there will be no testable propositions (Gregor, 2006).

Carroll and Swatman (2000) provide useful guidance for theory building within an interpretive approach using multiple case studies.

Structured case

The structured case (Carroll and Swatman, 2000) is an integrated framework on how to conduct multiple interpretive case studies by incorporating cyclic iterations of three structural components:

- A conceptual framework
- A predefined research cycle
- Literature based scrutiny of theory built

Within the study, the structured case method is used to assist the theory building.

Using the existing literature on the non-profit sector, the social actor model has been adapted. Operationalisation of the social actor model has been presented in chapter three. Use of social actor framework fulfils the criteria set out by Miles and Huberman (1994, p.18) in their explanation of a conceptual framework "*that explains, either graphically or in narrative form, the main things to be studied— the key factors, constructs or variables—and the presumed relationships between them.*" The social actor model explains in narrative form the key factors explored within this study in human services non- profit organisations.

A predefined research cycle of *plan, collect data, analyse* and *reflect* is used at each of the case instances (Figure 4.1). The case selection criteria and the identification of the informants discussed above is the preparation of the first stage of the research cycle. Data collection mechanisms and data analysis have been described above.
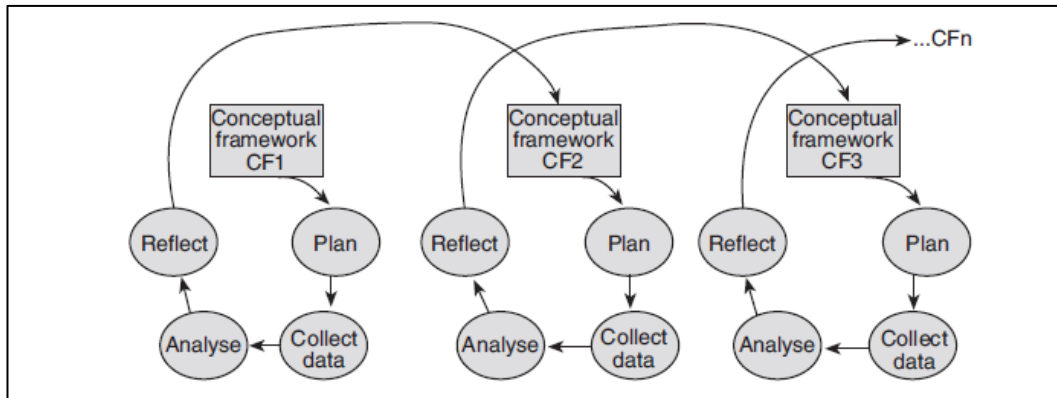
Figure 4.1   Research Cycle. Carroll and Swatman (2000)

Within the predefined research cycle, after the interviews have been conducted and the data of the non-profit organisations collated and analysed, I wrote memos (site summaries) to reflect on findings and learnings to shape the next research cycle. Examples of changes made due to iterations are listed below.

Example of change	Reasoning	Case / Iteration
Inclusion of accounting staff to be interviewed	Accounting staff performed fundraising functions (preparation of donor applications)	AFS – Iteration 1
Reduced the number of volunteer interviews	Similarities in information exchange between volunteers and the organisations.	TH – Iteration 3
Analysis - revised level 2 code affiliations [AFF-NWP] to [AFF-NWF] and introduced level 3 code [AFF-NWF-DEFINE]	Staff members defined public institutions as funders and specified information requirements associated with funders	AFS – Iteration 1

Table 4.6   Examples of changes made at each iteration

The final iteration of the cyclic structured case process involved the combined case analysis (presented in Chapter 9).
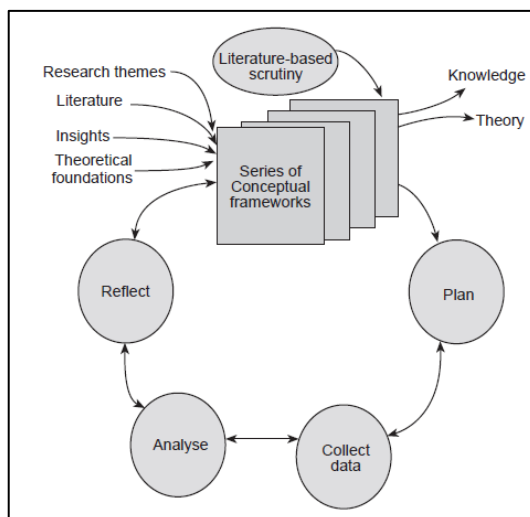
Figure 4.2   The structured case research method. Carroll and Swatman (2000)

One of the challenges in the literature based scrutiny of the theory built stage of the study (figure 4:2) is the lack of available literature in this domain at the present time. In order to overcome this limitation, this study relies on the rich insights gained in the cases and the broader theoretical foundations of ageing, community care and IS domains.

Generalisation from interpretive research

Unlike positivism, which treats generalisability as a key feature and aims to produce universal laws where theory is applicable (Lee and Baskerville, 2003), interpretivism considers generalisations as "tendencies" rather than predictions. According to Walsham (1995, p.79) "*generative mechanisms identified for phenomena in the social sciences should be viewed as 'tendencies', which are valuable in explanations of past data but are not wholly predictive for future situations".* This study does not seek to generalise findings across the non-profit sector, but to attempts to draw specific implications for organisations within the study and to contribute to the rich insights about human services non-profit organisations delivering services in the community.

This study draws implications on how the factors in the external and internal organisational environment persuade organisational members to utilise ICTs

within their functional areas. These relate to organisations that provide a specific service to older people living within the community. Observations and analysis of the case studies provide **rich insights** about human service non-profit sector organisations. As individual organisations are explored through the affiliations they form, this study provides both internal and external perspectives on their identity and their internal characteristics.

The analysis of the interpretive case studies generates a theoretical explanation on how technology is utilised to overcome the limitations in non-profit sector organisations and how it will lead to the creation of better service models in the sector. In addition we have contributed to the concept of the social actor as an individual in a non-profit sector organisation.

The knowledge gained from this study provides a platform to view the effect of technology utilisation in other community organisations inspired to help people overcome the physical or mental challenges they face in maintaining their independence.

Triangulation

Incorporating multiple forms of data collection and data analysis methods improves the soundness of case studies. Triangulation is a recommended technique to help overcome the limitations of case study research (Neuman 2000, 2003). This study triangulates data in order to overcome the research bias that occurs in using a single source of data. By including organisations in different service settings, selecting multiple participants from a single organisation, and using several data collection methods, we are able to triangulate the data to overcome these limitations.

4.7 Evaluations –trustworthiness

Lincoln and Guba (1985) recommend four measures of trustworthiness necessary to overcome validity and reliability issues in case study research method: *credibility*, *transferability*, *dependability* and *conformability*.

1. Credibility – Suggested mechanisms for establishing credibility are (Lincoln and Guba, 1985) triangulation of data, adopting appropriate interviewing techniques that minimise the researcher's bias and member checks.

2. Transferability –Transferability occurs within context of the research. (Lincoln and Guba, 1985). This refers to the extent to which the findings of the study can be applied to other situations.

3. Dependability – ascertains if the process of the study has been consistent. According to Lincoln and Guba (1985, p.317) a third party audit on codes used improves dependability of codes.

4. Confirmability – refers to the ability to demonstrate how the research results/conclusions were reached. Lincoln and Guba (1985, p.321) specifies an audit trail of raw data and analysis process.

We have employed following tactics to ensure the trustworthiness of this study.

Criteria	Meaning	Tactics employed in this study
Credibility /internal validity	Do the findings capture what is really there ? Do we have an authentic portrait of what were looking at ?	▪ Participant checks ▪ "Thick" descriptions of cases (Case study chapters) ▪ Some similar themes across cases (cross-case) ▪ Multiple informants, sources ▪ Member checks
Transferability /external validity	The extent to which the findings of the study can be applied to other situations. Schofield (1990) what is/what may be/what could be.	▪ Diversity of cases selected (methodology, cross-case,-services organisations provide)
Dependability / Reliability/Auditability	Is the process of the study consistent, reasonably stable over time and across researchers and methods?	▪ Comparable data collection protocol (HEC) ▪ Coding checks (methodology) ▪ Multiple informants in similar roles – converging accounts (case study chapters)
Confirmability	Do the conclusions depend on "the subjects and conditions of the enquiry" rather than the enquirer?	▪ A complete audit trail from proposal stage, data collection and analysis. (proposal, HEC, Methodology) ▪ Clarified work completed during familiarisation phase (methodology)

Table 4.7   Tactics for improving trustworthiness of case studies

Note- We have used Miles and Huberman(1994,p.277-p.279) as a guide to derive meaning of each criteria.

Credibility - Member checks were implemented across the four organisations by providing the transcribed interviews to interview participants for confirmation. During the study period we provided two organisations (ICC and AFS) with consultancy reports which outlined how ICTs were used within their

organisational processes when responding to environmental factors. We also conducted a member check workshop post data analysis phase. We have attached the report (see Appendix 3) on the feedback received and have revised the discussion chapter incorporating participants' comments on findings of this study.

We have also used multiple informants and sources when collecting data and have provided comprehensive case studies.

Transferability - This study provides detailed information on each of the case study organisations, client narratives and contextual information on organisational processes to enable transferability of findings within a specific context. When selecting our sample organisations we selected four different types of organisations where each provided a spectrum of services associated with a specific stage of life. Therefore the findings of this study can be applicable to organisations that provide many types of social care within the community.(e.g. service providers for people with intellectual disabilities and their families.)

Dependability – We utilised an HEC approved data collection protocol and employed coding checks using a secondary coder at the beginning of the analysis stage. We also interviewed multiple informants in similar roles (e.g. volunteers coordinators, volunteers , administrative staff) which enabled us to produce converging accounts in the case study chapters and in cross case analysis.

Confirmability – We have maintained an audit trail throughout the proposal stage, data collection and analysis. In addition we utilised reflective memos on initial findings and site summaries which outlined the context of the organisations at the time of study. During data collection phase of case 1, I outlined the work I carried out as a volunteer at AFS (section 4.4) to the supervisors to ensure that there was no personal bias.

Chapter Summary

The methodology chapter presented an outline of how the research study was deployed. This chapter provided a discussion on our case selection criteria, data collection and analysis mechanisms and role distribution across the four organisations of the study. The next four chapters will provide an in-depth understanding of ICT use in each of the organisations by using the social actor model as a theoretical lens for data collection and analysis.

Chapter 5 – Action for Seniors

This chapter provides a description of how ICTs are used in the day-to-day operations of Action for Seniors (AFS). The first section of the chapter introduces the organisation and the services they provide in the community and outlines client management, volunteer management and fundraising activities [Section 1-4]. The second section of the chapter examines ICT use in the organisation using the four dimensions of the social actor model, affiliations, environments, interactions and identities.

5.1   Organisation

Action for Seniors is a regional branch of a national organisation with number of branches across New Zealand. All branches operate independently from the national office and are separately registered as independent charities. Action for Seniors operates in four regions across Hilltown. The organisation offers three main types of services to older people who live within the community.

- Volunteer visitor service – Volunteers attached to the organisation visit their clients weekly. The organisation currently has 200 clients and 150 volunteers. Volunteers provide social contact and companionship support to their clients.

- Elder protection services – The objective of this service is to prevent neglect and elder abuse and is offered at the institutional and individual level. At an institutional level, Action for Seniors provides group training for staff at rest homes and other residential care facilities. These workshops focus on educating staff on how to recognise elder abuse and how to prevent neglect in the daily setting in caring for older people. At an individual level, the organisation provides counselling and conflict resolution services to individual older people who have had an incident related to abuse or neglect. Due to the sensitive nature of this service, the organisation does not use

volunteers at this level and the services are delivered by two Coordinators that manage each level.

- Information service – This service is offered to older people in the community and is not limited to AFS' clients. The organisation provides information and advice on various services and funding available within the region, including offering advice on services available to older people either through the government or through community organisations.

This regional organisation consists of seven paid employees. Two of the paid staff are full-time and six are part-time. The two full-time employees are the Chief Executive of the organisation and the Administrative Secretary. Coordinators for visiting service (2) and elder protection service (1) for individuals report to the Chief Executive and are part time positions. Similarly, Accounting and Elder protection Services for organisations are part time positions.

Vignette of a client

Nanette is 85 years of age and lives on her own in a central city apartment. Her family is out of the country and because of a recent fall she has become housebound. In addition her eyesight has begun to deteriorate. She is able to cook and she has a cleaner who comes to help her out with shopping and cleaning once a week. She has friends and family who phone her on a regular basis. Her family contacted us (AFS) on her behalf to arrange a weekly visitor because she was not getting out much anymore. The family was concerned that she would become lonely due to her condition. Our volunteer coordinator visited her and found out her interests and requirements. This is part of our assessment and we use this information to match the client to a volunteer. Celia reads (large print), and is interested in poetry, but one of her main requests was to assign her with a volunteer who could take her for a drive. We assigned her with Celia, (a volunteer) who started visiting her on every Wednesday afternoon. Celia's visits last about one to two hours each week. During these visits with Nanette, Celia

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helps check her email, makes her a shopping list and takes her for a drive. Activities they do are entirely up to the client and volunteer but we have a strict policy that our volunteers don't do household duties. Last time we spoke to Nanette she was very happy with this arrangement and said that she enjoys the conversations she has with Celia and that Celia has also registered Nanette with the housebound services at the Hilltown city library. Matching the correct client with the correct volunteer is important as it is a social interaction.

5.2 Volunteer management

Role of volunteer management – Action for Seniors has two part time Volunteer Visitor Service Coordinators working with volunteers across five main regions. Visitor Service Coordinators handle client recruitment for visitor services, volunteer recruitment, assigning volunteers to a client and management of volunteers.

Managing volunteer information – Visitor Service Coordinators utilise ClientX software to manage volunteer information. Coordinators enter the demographic information of volunteer visitors and the quarterly information volunteer visits. Volunteers record the date and time they visited the client and the duration of the visit. That information is then either emailed or sent by post to each of the Coordinators. Information about the volunteers is maintained at a minimal level with name, age and contact information for the volunteers. Although this volunteer profile is at a minimal level, Coordinators have a clear idea of the source of the volunteers, their capabilities and their interactions with clients. The depth of knowledge that the Coordinators have of their volunteers and client-volunteer interaction is not reflected in the information captured in the volunteer database and the visitor information.

Communicating with volunteers - The volunteers attached to this organisation display two distinct characteristics depending on geographical location.

Volunteers in Hilltown are mainly from the age range of 25-40 and are currently employed full-time in professional capacities. The volunteers from Valleytown, Ryetown, Harbourtown and Ferrytown are mainly retired older members of the community age 50-70 or female members of community who are currently unemployed. The two visitor service coordinators in these areas communicate with volunteers differently. The coordinator at Hilltown emails volunteers a Word template requesting information on their quarterly visits, while the Coordinator who managed Valleytown to Ferrytown prints multiple copies of the same Word template and posts it to volunteers.

Function	ICTs
Managing volunteer information	ClientX
Communicating with volunteers	Outlook, Excel

Table 5.1   ICTs used for volunteer management

5.3   Client management

Clients of the organisation are community dwelling older people who utilise AFS's services, Volunteer Visitor service, Elder Protection Service or Information Service.

Volunteer Visitor Service - Clients of this service are older people who have either low or medium care needs and require companionship, support and social contact, as most of them are housebound due to physical limitations. As this organisation does not provide household services or other services related to instrumental activities of daily life, this organisation is a supplementary service provider to an older person who is already receiving services from other organisations or who is in the low to medium care needs range. The organisation receives client referrals in various ways, including self-referrals and referrals by members of client's family, friends, neighbours, hospital, police, local care

coordination centre or other non- profit organisations (e.g. Women's Refuge, Wesley Care).

Elder Protection Services- When a client is referred to Elder Protection service, if the services provided to that client makes up for more than two hours of the work of the Coordinator then that client's information is entered in to the database. The two hour work limit is a criteria set up within the organisation in order to ensure that clients who simply query about information and other services may not be entered into the client database.

Information Service is provided over the phone (95% of the time), and the details of these enquiries are recorded in a call logs which does not form part of the client management as AFS. EPS Coordinators use ClientX client management software to maintain information about the client as well as follow-up information during the time that the client remains with the organisation. Basic client records consist of client name, address and contact details and where the referral came from. In addition, Coordinators maintain detailed case notes of the initial assessment with the client. As these case notes refer to some form of neglect or abuse they are confidential and can only be accessed by the coordinator.

5.4   Fundraising

Action for Seniors operates on two main types of funding; contracts and grants. Contracts are awarded through the Ministry of Social Development to the national organisation and funding is allocated to regional organisations on a yearly basis. There are two main contracts; one for Visitor Service and another for Elder Protection Service. These two contracts are the primary source of income for Action for Seniors.

Grants are applied for individually by Action for Seniors. Currently there are 17 grants that the organisation operates on in order supplement their contracting

income. The grant amounts are variable, ranging from $250 – $40,000. Their main grant is from the NZ lotteries board, which accounts for $40,000 each year, whist the rest of the grants are less than $10,000. Two of their grants are from city councils that the organisation operates in; Hilltown and Valleytown. The remaining grants are from a mix of charitable and community trust organisations and other philanthropic organisations. Some of the grant amounts are less than $500. Each grant is applied for annually and the application process for these grants is managed by the Chief Executive of Action for Seniors, the Administrative Secretary, and is supported by the Accounting staff member.

Chief Executive of Action for Seniors have over the years identified the grants that the organisation is most likely to receive, and on a yearly basis apply for the same grant thus requiring a low level of effort in terms of preparing grant applications. Due to the type of services that Action for Seniors deliver they are considered as a supplementary service and are therefore not eligible for majority of community grants as they are dedicated for essential services.

Use of online funding databases (Funding Information Service New Zealand, www.fis.org.nz) is not evident at Action for Seniors. As the type of services that Action for Seniors offers has remained the same over the years they have not found it necessary to locate new funding sources.

However, with the organisation experiencing recent funding cuts this practice is changing at Action for Seniors. Fundraising staff are currently re-assessing their existing funders and seeking online for possible grants that could supplement their existing income.

ICT use at Action for Seniors

ICT use across the functional areas has been summarised in the table below.

Client Management	Volunteer Management	Fundraising
Client X and Word documents for case notes	Client X to store volunteer and client demographics	Word and Excel documents and Organisation's website

Table 5.2   Types of software

Applications that staff frequently use are Microsoft Outlook, Microsoft Word and Client X database management system. Client X database system is custom developed for Action for Seniors records information about clients. This database is used by Elder Protection staff and Visitor services staff. Organisational members use email as their primary mode of communication. MS Word is the primary mode of documenting the activities of the organisation and this could also be because everyone knows how to use this. Monthly reports are generated by coordinators using Word documents. Coordinators Talk (CT) is an open forum Visitor Service coordinators are able to use. They are able to network with each other and exchange and comment on ideas using CT. However, the coordinators were reluctant to use CT as information was openly shared and commented on.

5.5   Affiliations

Affiliations relate to organisational and professional relationships between staff members and external organisations.

5.5.1 Social actor relationships are shaped by networks of organisational affiliations

There are two primary organisational affiliations shaping ICT use in this organisation: public sector organisations that assign contracts to this organisation and other funders that provide philanthropic funding.

The type of information required by the government departments was periodic and subject to continuous audit, as the non–profits funding was closely linked to

them. These requirements of the external organisations determined the information requirements of this organisation.

> "At the beginning of the contract year we know what reports we have to give to the department. We format those reports according their specs. The contract tells us how often this information is needed". *[Fundraising staff – AFS#6]*

> "It is about accountability, you see. We are not giving this service for free. They (funders) are paying us to give this service. So they want value for their money". *[Fundraising staff – AFS #4]*

Whist the contracts specify information requirements and are periodically evaluated, philanthropic funding may result in a single exchange of information at the application phase.

Both these affiliations influenced information behaviours of the organisational members.

In this process of data collection valuable data goes without being harvested at Visitor Services, as coordinators only collect the minimum data pertaining to each visit. Limitation of this data collection is twofold. First, as contractors they are only obliged to give the funder the number of visits each client gets and that is part of the contract. Therefore with this minimal form of data collection, the organisation actually does fulfil its immediate information requirement. The second part is that each of the volunteers contributes to their clients in a different manner at the visits, and each of these activities goes unrecorded and the value that the activities create in the client's life is not recorded and thus the organisation is unable to understand how the needs of clients differ over a period of time. In addition, the organisation misses a significant opportunity to strengthen their case in the event of funding cuts and other fundraising opportunities.

Although the database is able to capture this information, there is no pressure from the coordinators to collect this information at the coordinator level.

Information about the client is gathered by the coordinator on the first visit they make to evaluate client needs. Although the client's physical state in life may change over the years he/she remains with the organisation (for instance, loss of vision, mobility) these changes are not reflected in the database.

This shows that a singular focus on delivering the contractor information inhibits Action for Seniors from gathering information that they may need at ground level in future. In addition, it seems as if data in both systems is maintained to facilitate decision-making at the national office and branch offices do not seem to utilise the data they entered. The data entry had a lot of personalised ways of handing the work, although the requirements were organisationally mandated. This personalised ways of handling data stems from the organisation previously not having standard procedures about how client information should be handled or managed. The expectation of supplying information to the funder has overruled the examination of internal processes.

In addition staff also form professional relationships with external organisations.

Professional relationships that connect the staff members to affiliations include: Elder Protection services staff members are a part of an advisory group that has social workers, psycho-geriatricians, and quality assessment personnel. This advisory group is an external group that the coordinator exchanges information with. In contrast with the two services, Elder Protection services staff are able to utilise their professional networks in a way that could directly impact the outcome for the client. Affiliations established by Visitor services staff are primarily focused on improving the outcomes for the organisation.

Another type of affiliations that Action for Seniors have formed is their affiliation with other non-profit organisations. As Action for Seniors operates in several geographic areas and as there are other non-profit organisations operating

within the same area as a collective, these non-profits ensure that their services are complementary to each other in order to ensure that funding streams are maintained distinctly.

These several types of affiliations influence the organisation's information handling practices.

Information Service:

> "When a client comes to us we make sure that he is getting support from all the other services near his home. We tell him who else operates in that area and what he can get from them. We can only do very little but he could get a lot more from others." (Administration staff – AFS#3)

For information services, their affiliations with non-profit organisation means that Action for Seniors is informed about the services other organisations deliver in order to cater to client requests. Therefore this service maintains information about other non-profits and provides referrals to their clients.

Visitor services: As the visitor service is a contracted service, their funder specifies that the organisation maintains the number of clients, volunteers and volunteer hours that each of the clients have received. Individual client information is not communicated for this service. Information communicated is based on each of the geographic regions that coordinators are allocated to.

> "I send a summary. What they only want is numbers for Hilltown and Valleytown from me." *[Volunteer Coordinator – AFS#5]*

Elder protection services: Contractors specify narrative reports for this service for each client. Action for Seniors is expected to provide six-monthly reports for each of the clients assigned to them for the first year and ever year after that. In addition to this client reporting, funders also require the organisation to provide six-monthly narratives on service effectiveness.

"This is a thick report. They ask you things like how do you measure your effectiveness and how do you know that you are effective." *[Fundraising staff – AFS-#6]*

Relationships are dynamic and related informational exchanges change with flows of capital labour and other resources.

Staff members at Action for Seniors are expected to carry a certain "load" on behalf of the funder and this is evident in two main ways:

a.   Information carrying responsibility

Action for Seniors was now an information collector, information source and an information disseminator on behalf of the government department they were working with.

In their advocacy role, Action for Seniors has been an information source and still has the ability to be an information source for the community about the services that they offer and about the services that are available in the community.

However, now the organisation also is indirectly responsible of being an information collector and an information disseminator on behalf of the funder. Therefore, the funder's responsibility as an information disseminator and an information collector has been shifted to the organisation.

"Our six monthly report they ask us things like – what do you think are the most important thing that the government and community organisations can do to help older people- So it is not about my job now. It is bigger than that, isn't it? So we have to collect this information for them." *[Fundraising staff – AFS-#4]*

b.   Goal directed responsibility

The second type is goal directed information load shifting – what happens here is that the goals the funder needs to achieve are shifted to the non-profit, which can include very specified goals such as providing companionship support to older people through volunteer visitors, or more unspecified goals like ensuring that there are no lonely isolated deaths in the community.

"Look at the contract we have with the council. They have a mission in their portfolio to provide services to elderly. This contract we have with them is about that service. So most of the duties they say they will do in the portfolio is now on this contract" *[Fundraising staff – AFS-#4]*

However in both these types of load-shifting arrangements the reputation of the contracting organisation becomes more important as load-shifting diminishes the boundary between them. Therefore, how a non-profit carries out its designated contracts in the community has an impact on how the funder's reputation can be improved or harmed.

5.6   Environments

5.6.1 ICTs are part of the organisational environment

ICT as part of the organisational environment is explained below in terms of ICT investment, ICT training and ICT support.

ICT investment and infrastructure: ICT investment at Action for Seniors is at minimal and is less than NZ$ 10,000 per year. However the organisation has established an IT infrastructure that caters to their information needs. In addition each of the part-time paid staff have a fully functional home office equipped with a computer, printer and an internet connection. Action for Seniors provide remote access to all their paid part-time staff and therefore staff are

able to access their email and client data remotely. This enables the organisation to employ staff that reside within the communities that they work with and still employ them on a part time basis as the travel time is minimal. This has also enabled the organisation to function with a small office space within the community services cluster paid for by the community grant.

IT infrastructure for the organisation is established and managed by Action for Seniors. The organisation does not have dedicated IT staff to manage the IT operation, which is instead is managed by external staff. The organisation has an ongoing arrangement with a local "circuit riders" group to provide technical support on an incident basis. Circuit riders are a group of part-time ICT technicians attached to Hilltown ICT Services (a non-profit organisation). They provide ICT services to non-profit organisations at a nominal fee. Action for Seniors depend on their services for the day-to-day running of the IT operations both at the office and at staff home offices. Staff directly contact the circuit rider group and payments are made per each visit. Circuit riders provide technical support in managing the organisation's IT infrastructure as well as application support.

> "funders don't like us to spend a lot of money on IT things. So it is not a major priority for us." *[Fundraising staff – AFS#4]*

ICT training: Ongoing ICT training is not evident at Action for Seniors. However, when a new staff member takes over a job within the organisation then there is one-off user established request based training. The individual users assess their own ICT training needs to request the training from the organisation. These training arrangements are done in an informal manner and are often only provided at the beginning of a new person's taking over a job with the organisation.

The training is task based and conducted at an individual level by another staff member more experienced in the package. This is often based on personal

relationships and done between a more experienced user and a less experienced user.

There are a few advantages and disadvantages in this mode of training that can be observed at this organisation.

Advantages: Training is conducted on location and both trainer and trainee have a previously established relationship, so they start at a relatively comfortable level. The trainee has very specific queries and as the trainer is experienced in the same organisation they are able to answer the questions and show them how the system works. The trainee having specific queries is also related to the fact that the trainee has tried out various capabilities of the system and is more familiar with the system now. So they are not entirely unprepared for a training session.

Disadvantages

1. According to staff members these training sessions can be counterproductive or "not very useful",

    "So when I started I went to Hawkes Bay (over 200Km from office) to get training on the database because there was a younger woman up there. But she didn't show me all the parts. So when I came back I couldn't use it. She only showed me the first part of the client's record. So when I came back here and I had to enter all this data I couldn't do it. " *[EAP Coordinator – AFS#1]*

    This may be due to the informal nature of these training sessions, as they are not structured and the expectations of the trainee may not be met.

2. Incorrect practices are passed on from one employee to another

    "Person who was doing this before me had three main categories, definite abuse cases, and suspicious events cases and accused but unproven cases. I was told to categorise like that but when I got into the database I couldn't

see any of those categories. Later I was told that they were just her own categories and to ignore them." *[EAP Coordinator – AFS#1]*

Lack of ICT training in the volunteer recruitment area has resulted in staff members adopting compensatory behaviours. Hilltown and Valleytown have two local organisations maintaining online databases for volunteer recruitment. These databases are accessible to community organisations online. However, as the coordinators of visitor services has not received training in using these databases they have adopted "other ways" of overcoming this.

"No, I don't use their database. I go to their office and talk to them. I know that they have database and all." *[Volunteer Coordinator – AFS#5]*

"I have no idea about it. I don't use it. So no." *[Volunteer Coordinator-AFS#7]*

At Action for Seniors staff display "compensatory behaviour" to overcome their limitations in the use of ICTs. For instance, the Visiting Services Coordinator does not use ICTs to recruit volunteers. He however compensates for this element of non-use by extensively networking with organisations that manage volunteering databases and use ICTs to recruit volunteers. He also networks extensively with other community organisations and therefore despite his lack of ICT use in the volunteer recruitment area he does have adequate number of volunteers and does not need to advertise for volunteers. In comparison, the other Visitor Coordinator does not use ICTs for volunteer recruitment nor has she established networks with organisations that have access to ICTs or with other community organisations. Due to these limitations she has found the need to advertise for volunteers in print media and via community notice boards.

ICT support – ICT support is provided by an external group – Circuit Riders. These Circuit Riders offer non-profit sector organisations reduced rates and themselves are a non-profit sector organisation.

"It is a good set up for us. We only have to give them a call and a bloke will be here." *[Volunteer Coordinator – AFS#5]*

"So they have given David for us. He is the one who always comes for our work." *[Administration staff – AFS#3]*

Relationship with IT staff: there are a few elements to this relationship. These call outs to circuit riders are often for a "bunch" of requests and not a single request. So ICT staff at a single visit may deal with hardware, communication and software issues. In addition they also assist staff with formatting their documents and transferring files from USB sticks.

"So when David comes I have a list for him. See why he came today was because my modem was broken but I had a couple of other things that I needed help with. *[EAP Coordinator – AFS#2]*

As these are ad hoc calls, the organisation does not benefit from learning about the difficulties that their staff have with technology. Furthermore, as the staff assume IT as "don't fix it unless it is broken" staff are unable to initiate better ICT integration in their services.

5.6.2 ICTs are part of the industry, national, and /or, global environment

At Action for Seniors this characteristic is displayed in their use of circuit riders for ICT support. This group is locally established and is part of the local ICT environment. As opposed to other organisations that use sector based online databases, Action for Seniors uses a common expertise base and is completely dependent on this service for all its ICT functionality.

Unlike the other three organisations in the study, which utilise online database and online information which is part of their local/global environment, Action for Seniors do not use them for fundraising, profiling, or volunteer recruitment.

"No, I don't look at online things that much. Not at work anyway."
[Fundraising staff- AFS#4]

This exclusion of the global environment gives way to a myopic view of the organisation and its services. In comparison, Action UK, which is a global equivalent of this organisation, has completely modified its service offering by using several self-service elements. This disconnection that Action for Seniors displays from existing environment narrows the channel selection of their services and fundraising opportunities. This is evident in the comparison of the two websites for the same organisation in the UK and New Zealand.

5.7 Interactions

5.7.1 Organisational members seek to communicate in legitimate ways

There are two primary types of information that staff members need to communicate: funder-related information and client-related information.

In the funder-related information, the funder establishes the legitimate way of communicating information and the organisation uses its existing ICTs to adhere to this. In communicating client-related information this practice is different, as the organisation mandates the communication.

Communication of client related information differs between two services. For Elder Protection services, the individual client record maintained is in the database and this record is only communicated within the organisation. Within this client record there are two main parts that are communicated differently. Static information of the client (name, address, gender) is reported in terms of numbers (e.g. number of male clients or number of clients who live in Ryetown). The second part of the record, which includes background information of the client and continuous assessment of the client, is communicated via a narrative report that is submitted to the funders. This section also includes information which describes the nature of the abuse, the factors that led to incident and possible prevention mechanisms.

"our client record is extremely confidential. Because it has that abuse information. We never email or print any names. Everything is completely anonymous." *[EAP Coordinator – AFS#1]*

For visitor services only the client's static data is stored. Communication about this client is only available through numbers.

A client record of each service is maintained, communicated and accessed separately at each service and information sharing between services is non-existent. There is an understanding amongst staff about the sharing of the data and the critical nature of the data shared. The staff appreciate the level of confidentially for the data they handle and the importance of keeping the confidentially of the data. However a clear policy that outlines client data handling is not evident.

In terms of funder information, Action for Seniors hold a contract with the Hilltown city council that specifies information that the organisation should provide as part of their contract. This information is multipart and is intended to monitor the performance of the organisation. This contract specifies performance indicators that are tied to the contract and staff members ensure that this data is communicated to the city council.

"see we have to monitor the number of calls we get, the number of letters we write for each day. And things like that. We actually have an Excel sheet with for that. They even want to us record the number of meetings that we have every week." *[Administration staff –AFS#3]*

In order to provide information that is required by this contract, two staff members at Action for Seniors have set up Excel sheets and a paper-based call log. Daily calls are entered into the call log and weekly these calls are categorised and transferred onto Excel Worksheet. At the end of each contracting period, this information is communicated to the council.

5.7.2 Organisational members build, design and develop interactions that facilitate flow changes

At Action for Seniors, this practice is evident within the Elder Protection service staff members. As a part of their affiliations, a staff member is connected to an advisory group. In interacting with this advisory group coordinator the staff member crafts the existing client record to gain advice from this group.

> "I send them a client scenario. I take the client's record and case notes and write a small scenario. I only email this scenario to the advisor group and they come back within the same day with advice on how to deal with the situation. Depending on the situation that I've described they will tell me things like …. Her son's behaviour suggests that she needs a restraining order and things like that. " *[EAP Coordinator – AFS#1]*

This information that she receives then becomes part of her case notes and her action plan in the client database.

The coordinators' need to craft the existing information in the form of scenario stems from the need to reformat client records. Information pertaining to the client can be stored in multiple locations despite the existing database.

> "Our client files are huge. There are lots of notes here that you cannot export to the database directly. So I need to cut and paste sections." *[EAP Coordinator – AFS#1]*

> "These sections in the continuous assessment takes a long time to enter in the database. So they are in the case notes in the Word file." *[EAP Coordinator – AFS#1]*

> "This initial referral information came in an email, for this one but some can be also by phone. But this email is very important about this client because it tells me something very important about the case." *[EAP Coordinator – AFS#2]*

In preparing the scenario notes to be sent to the advisory group, the coordinator collects information from these multiple sources and formulates it in to a single Word document which is then emailed to the advisors. Advisors' information is emailed to her, then forms part of the client record.

5.7.3 ICTs become part of the interaction process, (interaction technologies) as people transform and embed available informational resources into connections and interactions

There were two distinctly different behaviours between the two services, Visitor service and EAP services. Volunteer visitor service reports their data mainly in a quantitative format, whilst Elder Protection services provide their case notes in a narrative format. Furthermore, the client associated with EAP services will have multiple stakeholders, which require intensive information capture, in contrast to a client associated with the Visitor service.

Volunteer visitor service - Outside the reporting that the coordinators perform, there is no element of data analysis that may require staff members to modify informational sources. Data re-crafting was at a minimal level and the coordinators explained that:

> "this is where the database is most useful for me. So we just input the details into that. So the advantage is that whereas we used to spend quite a lot of time writing up the half yearly report now it can be done quite easily." *[Volunteer Coordinator – AFS#7]*

> "I use the database every couple of days. I press the button and monthly report comes out. I only need to enter how many phone calls I made and how many client referrals I had, things like that. " *[Volunteer Coordinator – AFS#5]*

AFS has determined their reporting to suit the requirements of the funders, and that deterministic view specifies the data capture and outcomes. Although from a reporting standpoint this is an ideal situation as it reduces administrative tasks

in producing the reports, it also restricts the organisation's ability to analyse their own services and identify possible future trends.

EAP Services - Individualised use is evident within this service. Although the system currently provides for these case notes, the practice varies at the coordinator level, with some coordinators entering the case notes directly into the system and some still maintaining case notes in Word documents. There are several issues related to maintaining case notes in Word documents. When the case notes are maintained in Word documents, notes for each client is stored in folder titled by the clients' names, and these folders are located in a main folder named by year and then month. The client's record named after him/her is stored within this folder system. The key to finding a client within this system is to know either the month and year that a client was first referred to Action for Seniors or to conduct a document search by name. As these Word documents are not password protected it raises several security concerns. Case notes entered in Word documents are typed in a specific template designed by the coordinators, and this template does not correspond to the fields in the database. The coordinators' reluctance to enter case notes to the system stems from this unfamiliarity. Requirements for database system design has not originated from the coordinator levels but from the ease in reporting perspective to funders. This has created a disconnect between the users and the system.

The database is comprehensive, being capable of storing multiple facets of information about the client and providing many layers of security. When a client's basic information is entered into the system, the coordinator is then able to enter the initial contact notes and follow up notes stemming from each of her visits as well as the actions taken by coordinators and the form of neglect or abuse and notes on the potential offender themselves. Once a complete record of the client has been entered into the system, it is able to support the coordinator by alerting her and by prompting her for next actions and upcoming important dates about the client. In addition to the above mentioned level of

support, the system is also capable of providing comprehensive data analysis to the staff member by nature of abuse, geographic location and period.

However, at the coordinator level the system is used in a minimal sense and only as a way of recording the initial contact and very few ongoing case notes. There are several key reasons for this minimal level of use.

a. As the templates of the Word documents do not match the fields on the database, and as the coordinators have not received a comprehensive training on the system, their level of comfort with system use is low and this leads to minimal use.

b. The coordinators have not been instructed on the use of their own data. Therefore they perceive the system as a "black hole" into which they enter data but are not able to retrieve useful information from.

c. In addition to these two reasons it could also be that we are seeing the system at a time when it is going through a transition. There have been three previous attempts to implement client management systems at Age Concern and this present system has been in operation for less than two years. As the coordinators gain more experience in the present system and as the system becomes established it is likely that use will increase.

5.7.4 As organisational members, people perform socially embedded (role-based) highly specified actions on behalf of the organisation

In addition to delivering specific services to a client, staff members are also expected to represent the organisation in local city council and other local community meetings. AFS expects that their coordinators will participate in some of the community group meetings held within the geographical area. Coordinators select which meetings are most relevant to their role an organisation.

"we get a lot of emails about meetings from community. If I was to attend all of them I can do that every day because there is so many." *[Volunteer Coordinator – AFS#7]*

The element of representation at community group meetings is twofold at Action for Seniors. When they meet communities with the local city council, they are representing their organisation as well as acting as a service provider role within the community. In this regard the information exchange is primarily about identifying new service needs within the community or receiving feedback about the existing services. Once a specific service is identified, the organisation then pursues funding. This approach is different to that of the other three organisations, which identify their funding sources and services at the beginning of each year.

"So I went to the Hilltown state flats meeting with the city council people. At the meeting we realised that there were older men, more than we thought. See, the problem with older men is that they are not joiners. So it is useless having normal things like come to tea and biscuits. So now we are trying to start this MenZ shed thing for the blokes and see where we can get funding for it."*[Volunteer Coordinator – AFS#5]*

In this regard the staff members play the role of identifying new services on behalf of the organisation.

Their representation role in community meetings is different to what is described above, as these meetings are used to gain information and access to volunteers and clients and also to create an awareness of the organisation amongst community groups. Information exchange that results from this representation role is far more specific and related to an individual resource or a client/ volunteer referral.

From an information systems standpoint, volunteer or client referral information capture and communication is established within the organisation. However

when a new service is identified, staff members re-design information capture and information processes to facilitate new service requirements.

5.8 Identities

5.8.1 Social actor identities have an ICT use component

Three main facets of staff member identities were evident within AFS. ICT use identities are associated with previous job, strong self-identity in client facing roles and reluctance to use ICTs.

ICT use associated with previous job- Staff members' previous ICT exposure and training seems to shape their ICT use in their current jobs. The staff members who had a negative previous experience had a negative perception about their ICT related identity in their present job as well.

> "I have never liked computers. When I was a head of department I had a secretary (that was when the computers were coming in) and she did everything for me. When I asked her how to do something she used to say it is much quicker if I do it. So I never learnt or didn't have to learn".
> [*Fundraising staff interview –AFS#4*]

It is interesting to note that at AFS ICT related identities of the staff have not become stronger or more prominent despite staff members using ICTs for over a decade. A key reason for this may be due to the nature of the interactions they have with external organisations, which seem to be less ICT intense. Furthermore, as most of the AFS staff are part-time they may have not had as many opportunities as a full time staff member to self-learn ICTs.

In relation to the present job their identity with the ICT use component is loosely defined in terms of "I can use the computer well" or "I can manage the computer". Even the staff who use computers every single day have a negative self-perception of their identity in relation to technology.

"the whole technology thing is in the basket with other things that I am not able to do. I had a very bad supervisor in a previous job, who almost bullied me over this IT issue. That experience made me think I am less than able. I feel I can't do it and therefore I must be stupid and that it may be found out. I must be a failure because I got found out." (*EAP Coordinator - 2- AFS#2*)

"At my age I see it as a necessary evil. So I went to a class at Senior net. I just think that everything should be on paper for accountability reasons. As far as I am concerned I get more information by phone and using my social networks" (*Volunteer Coordinator – AFS#7*)

Strong self-identity- The personal identity of the coordinators is strong and results in each of the coordinators using ICTs differently. A coordinator who identifies herself as a "collaborator" enters more complete records in terms of data entry in the client database and produces more comprehensive client notes.

"I am a collaborator and I think other people can give me advice and I use them. So I pick their brains when I have a client issues. I need complete information of the client, as much as possible." [*EAP Coordinator – AFS#1*]

In order for the Coordinator to collaborate with professional affiliations (identified as other people in the above narrative), it is important to have a complete set of information on a client. This strong self-identity influences a more comprehensive set of notes.

The Coordinator who identifies herself as a "socialite" enters minimum details related to each of the clients onto the database and maintains sparse case notes about her clients.

"Rather than email I prefer to talk to people. So that I can understand their philosophy and where they come from. I prefer more personal contact". [*EAP Coordinator – AFS #2*]

Although at first iteration this information use seem strongly associated with self-identity, closer inspection of the two roles themselves explains that it may not be a strong association of personal identity. EAP Coordinator 1 deals with individual clients whilst EAP Coordinator 2 deals with organisations, and the focus of this role is to provide information to organisations to prevent elder abuse and neglect. Furthermore, the EAP Coordinator #2 has had a negative experience in a previous role which has influenced the present level of ICT use.

Reluctance to use ICTs- It is evident there is a reluctance to use ICTs in client communications with visitor services and EAP clients.

Visitor service: Visitor services tasks are carried out by volunteers and the interaction between clients and volunteers is a very high-touch, low-technology relationship.

> "No, I don't send emails to my client. She is about 90 and she has not worked with computers" (*Volunteer – AFS#10*)

> "Been visiting clients for about five years now. So far I've had three clients but none of them used computers. Yes, I use a computer at home." (*Volunteer – AFS #12*)

EAP Services: Coordinators that work with Elder Protection service do not use any form of ICTs in establishing and maintaining their relationship with the client.

> "These are very sensitive issues. Our clients are very often reluctant to even discuss them in the open, face to face. They are most likely to tell us things when we meet and not even over the phone sometimes and definitely not in an email or letter." (*EAP Coordinator – AFS#1*)

Identifying this behaviour as "reluctance to use ICTs" may not be accurate, as volunteers and staff members explain their use of ICTs in client communications does not necessarily enhance their ability to deliver services. The type of services

delivered crafts client communications, and therefore staff members have been able to establish what works best for their organisation.

Staff members' reluctance ICTs was also evident in the use of online forums. Visitor Talk (an online forum) has been established by the organisation in order to encourage the Co-ordinators managing the Visitor Services to exchange ideas and information. The forum is well moderated and access is limited to AFS Co-ordinators from other regions. The two volunteer coordinators explained their reluctance to use this medium.

> "Yes, I log into Visitor Talk but I don't like it very much because everyone can see what the others are saying and everyone can comment on everything. I don't like it very much." (*Volunteer Coordinator – AFS#7*)

> "When I say something there, everyone else has something to say about it and everyone can see what I've said. So I don't use it much at all. I login and check what others are saying but I don't say anything. I prefer email to that." (*Volunteer Coordinator – AFS - #5*)

Within the organisation, dislike for Visitor Talk stems from the high level of visibility it has to other members of the organisation. Despite staff being active in community external to the organisation they do not actively participate in the online forum supplied by the organisation. This may be due to lack of maturity in this form of sharing. Providing an easy to use tool has not alone encouraged participation in this forum. The organisation may have to encourage the use of this forum by other introduction methods such as introducing a topic each week or by rotating the role of the moderator amongst the coordinators in order to encourage use.

5.8.2 Social actors use ICTs to construct identities and control perceptions

At Action for Seniors this characteristic is not evident. Their staff do not use ICTs to construct identities or to control the perception of others. Although they are

aware that the image of the organisation needs to improve, they do not see that technology has a role to play in this regard.

> "People don't know about us. We tried to do street appeals a couple of times but the effort was not worth. People kept coming to us asking who are you? People on the street have no idea about who we are and what we do." (*Fundraising staff – AFS#4*)

Furthermore, the organisation does not use technology to profile other organisations or to control the perceptions of other organisations. Profiling of donors has begun only recently, due to funding cuts experienced, and has not been a function previously. The primary reason for not constructing profiles is because the same donors have remained with the organisation for over a decade. The grants awarded by these donors are mainly in the range of NZ $1000- NZ $ 5000, with only one funder donating NZ $40,000. The combination of organisations offering the same services, the donors remaining the same and the grant amounts being relatively similar has prevented the organisation from actively profiling the donors.

The staff members emphasise their need to be "visible" in the community in order to recruit volunteers as well as to receive client referrals. They supplement their lack of ICT use in creating connections by been visible in the community.

> "At Valleytown I am the face of Action for Seniors. I make sure that I am there at the important meetings representing the organisation. As far as they go I am the organisation. I only need my business card with my email address and phone number and the rest is about other people seeing us at these meetings."(*Volunteer Coordinator - #7*)

This characteristics has changed since data collection. See appendix four for AFS constructing online identities and controlling perceptions.

Transitional identity:

Staff members explain that the organisational identity is now changing from that of a non-profit organisation to a contractor or service provider identity. Due to their high dependency on government funding (over 51% of the organisation's income is from two government contracts), the organisation performs the role of contractor and is perceived to be delivering services on behalf of the state.

Staff members identify this change in their organisational identity and see the organisation moving from an advocacy role to a more information disseminator role.

> "Other group that work with the elderly are (mentions name of organisation) and they are strictly a lobby group and they get no funding from the government, so they can say what they like and they are quite outspoken." [*Fundraising staff – AFS staff interview #4*]

> "I feel that Action for Seniors should be representing the matters of elderly more to the government. I am not sure what the reason is but I think that our organisation is reactive. If there is an issue raised about elderly in the newspapers then we might make a statement but they (the organisation) are not pushing the issues of the seniors. I think it is because we get a lot of our funding from government and we (the organisation) does not want to upset the government." [*Administration staff – AFS staff interview #3*]

State funded contracts are competitive and the set of services that Action for Seniors provides do not require a specific type of expertise or equipment. Hence another non-profit organisation operating in the aged care sector with access to volunteers can replace the services provided by Action for Seniors. Therefore AFS is vulnerable in the funding environment.

This has implications on their online presence and the type of tools they use for community engagement. In terms of technology the transitional identity is evident, as the Facebook pages of the organisation are used primarily to

disseminate information and not to raise awareness of larger issues relating to older people. However, as the number of followers on Facebook increases it is likely that the community may shape the organisation's agenda by making their concerns heard.

This transitioning of identity from non-profit to contractor may have long term implications in maintaining the organisation's identity as a non-religious community organisation. If the concerns of the public remain unrepresented by this organisation long term, it could erode the trust that the community has in them and allow another non-profit to step into fill that advocacy role.

Chapter 6 – Independent Living Services

6.1 Organisation Description

Independent Living Services provides two main streams of support for older people who live within the community ; Community Support Services and Day Activity Centre. Clients who access Community Support Services receive personalised support in their own homes. This support can be in terms of :

- Personal care – (e.g. assistance with showers)
- Practical care (e.g. household assistance, meal preparation, ironing and shopping)
- Nursing care – (e.g. medications and dressing wounds)
- Rehabilitation and mobility related care (e.g. physiotherapy)

The Day Activity Centre provides a day programme, meals and outings to promote companionship amongst older people who live within the same geographic area. Community support workers and volunteers provide transport for their clients. Volunteers are also engaged in meal service and entertainment activities. The centre is open for six hours a day on all weekdays. The clients who are part of the in-home care service can also attend the day programme.

Client narrative

> "Mrs. Warring first started with us as one of our ACC clients. She had fallen in her home and we were delivering in home care for her with ACC funding. She is 78 years and lives with her niece. We had two of our Community Services staff visit her initially, one was to help her with her exercises and the second one came at a different time to help her shower and do very light household work. She didn't need any additional hours because her niece was there to do the bulk of the work. So it worked well and she went off our services. It was about 6 months after that her niece contacted us

and said that Mrs. Warring she needed more in-home support. When we discussed the needs with them she (the niece) said that she would be able to visit Mrs. Warring weekly and do the grocery shopping and take her for doctors appointments but she will not be there every day. So we did another assessment as her needs have changed this time and decided that 2 hours per day would be adequate. We got back to office and entered her into our scheduling system and allocated her a staff member.

Now we have one of our Community staff come to her place in the morning and help her shower, dress and prepare her morning meal. As the showers are every other day, our staff spend about 30 minutes straightening up the place a little, like light dusting. Mrs. Warring has meals on wheels delivered to her for lunch. We have another community worker who goes there in time for her evening meal and gets her ready for bed. Our staff do additional things while they are there, may be write a shopping list or contact the niece to confirm a doctor's appointment but they are there mainly to make sure that Mrs. Warring is eating adequately and to make sure that her medications are properly administered. Most importantly, so that she doesn't start to feel lonely and get depressed. We see that a lot of times in our work.

This arrangement was working very well until a couple of days ago when the Assessment Centre gave her a call and she told them how brilliantly she was doing and they have now cut her funding to four hours a week. What they fail to understand is that she was doing well because she was getting all this support. This is the problem with doing needs assessments over the phone, our clients think that it is a general phone call and tell them that everything is well. We now have a client who needs support to stay in her home but there is no funding to support her.

6.2 Client management

The organisation's Community Support Services team consists of Community support workers, Team leaders, Service manager and coordinators.

The organisation's Community Support Services have about 4000 clients who live in their own homes at present.

Clients are referred to the organisation either by the ACC, DHB, Needs Assessment Agency, or by their general practitioner. When a client is referred to the organisation a team leader or a coordinator will visit the client in order to assess his/her needs. The team leader, in some instances will develop an individual support plan conjunction with the community nurse in order to meet the care requirements of the client. A community support worker is then allocated to the client and the support plan is communicated to the support worker. A co-ordinator allocates tasks to support workers and supervises them on a daily basis. Co-ordinators report to service managers and handle client enquiries. The primary function of the co-ordinators is to ensure that the daily schedules are maintained and that the clients are adequately resourced.

Support workers have direct day-to-day contact with the client. Coordinators and support workers maintain contact with the client's family and friends depending on the client's requirements. Support workers allocated to clients also maintain contact with Allied Health staff if their client is using Allied Health services. The Allied health workforce consists of occupational groups: occupational therapists, needs assessors and dieticians are employed by District Health Boards. If the client is using any one of these services then the support worker is also expected to coordinate with an Allied Health worker. Support workers document details of their visit and the condition of the client in the home file, which is maintained at the client site. In addition, Support workers maintain their weekly timesheets, which detail the times they arrived and left the client site and the tasks they performed at the client site. Support workers provide a monthly exception report

to the Team Leaders. This exception report contains information on any incidents (e.g. fall) that are beyond the day to day care situations.

Community services staff use an in house developed Microsoft Access database [MsClient] to maintain information of client visits scheduled and by staff. However these records only include the actual visit times and dates and the client information is kept at a minimum. Due to the functionality of Access this database does not offer any type of auditing and security is at a minimal level, therefore not having detailed client information on this database is justifiable.

6.3   Volunteer management

Volunteers are used within the day programme activities. Volunteer management information is stored in Word and Excel documents in addition to manual work schedules. As this organisation is in the early stages of using volunteers for its services volunteer management functions are still being developed.

6.4   Fundraising

The organisation is primarily funded through the District Health Board, Ministry of Health and the Accident Compensation Corporation contracts. Fundraising staff members establish an yearly cycle of seeking funds and preparing grant applications for donor organisations. Staff members primarily use Fundraiser (application) , Funding Information Service (online database) and Microsoft office applications.

6.5   Affiliations

6.5.1 Social actor relationships are shaped by networks of organisational affiliations

There are two main types of affiliations that are evident in this organisation ; affiliations with funders and affiliations with primary and secondary healthcare providers.

a.   Funder – organisation relationship

Independent Living Services holds funding contracts that deliver community services and also works with city councils and regional councils to provide supplementary services for their clients (e.g. mobility vouchers and group exercise programmes).

Staff members perceived that the funder organisations are in a dominant position in this relationship. The funding organisation determines the level of fees that would be paid to ILS. The general manager of the organisation liaises with these external organisations and negotiates the funding contracts. He explains:

> "I am the one that works with all external agencies, that signs contracts and negotiates, if at all. Most of the time we are just price takers. That means that we take the price that is given. So there is very little negotiation". *[Staff member - ILS #1]*

The funder organisation specifies the type of information that will be communicated to them at the beginning of the contract. The format, frequency and the channel of communication is determined by the funders.

> "We know that when we get a contract we need to give them a quarterly report and we know exactly what we have to include in that report. We look at our systems and figure out how we can get this information."
> *[Coordinator – ILS#7]*

In exchange for the funding that the organisation receives, ILS needs to provide services on behalf of the funding organisation and provide information about this service delivery to their funders. This information exchange is part of ILS's currency in working with their funders.

> "all of us get in gear to give them[funders] information. Our service contract depends on that. Of course that and the number of complaints." *[Coordinator – ILS #7]*

ILS at present maintains all complaint information against each of their contracts. This information is currently stored on the organisation's intranet (secured by network login and controlled access folders) and the organisation is beginning to maintain a complaints management system. Each of the complaints and documents associated with the complaint action that the organisation has taken is recorded. Staff also maintain follow-up information on each of the complaints.

b.   *Relationships with primary and secondary healthcare organisations*

ILS staff members work with a cross section of clients that have acute healthcare needs and are required to liaise with primary and secondary care organisations that cater to the clinical needs of their clients. The information exchange between ILS, primary and secondary care organisations is based on the clients' requirements and varies from one client to another. Staff members explain the challenges in managing information about their client's transitions:

> "Every week we face this problem. Say our client is hospitalised, we have no idea that it has happened till our community support worker calls us. They go to the client's house to do the work and they call us to tell us that the client is not there. So then we need to adjust all our schedules for that client and community worker" *[Accounting Administrator – ILS#2]*

> "See, when a client goes back to the community it is not as simple as us updating our schedule and sending a community worker. We need to know

what has changed. Has the hospital stay impaired our client's mobility? Do they need additional assistance?" *[Coordinator ILS#7]*

ILS clients transfer between community care, hospitals, rehabilitation and to respite care facilities. Staff members identify these transitions as a part of delivering community care to an increasingly older population with acute healthcare needs. Managing client related information between these transition points is difficult as each of the organisations within the information exchange have their own information systems, guidelines and practices for information exchange and compliance issues pertaining to clients' privacy.

The influence of the funders is more evident in ILS information systems practices than the influence of other affiliations (e.g. primary care organisations, other non-profit organisations). As a service provider to older people who live within the community, the client is central to the organisation. However this emphasis of the client is not evident in the information systems of the organisation.

> "Yes, we have IT in our operation but that is to meet our contractual obligations for information with funders. It is also where the IT department sits under the CFO (Chief Financial Officer). So he makes sure that he is happy with the information. If it sat in our community services we can probably be more client focused and not so much contract (funder) focused." *[Staff member – ILS#1]*

This influence of the funders in day-to-day operations of client management is further discussed in the interactions section.

6.6 Environment

6.6.1 Organisational environments exert technical and institutional pressures on firms and their members

Two main issues related to staffing and information capture are evident in this organisation.

Staffing

There are two staffing issues at ILS; the age of the care givers and the inability to recruit high quality care givers due to funding constraints. At present the average age of the care givers at ILS is 55 years of age. Although the majority of them are able to carry out their tasks, some of the care givers are beginning to find it difficult to do more strenuous tasks (e.g. lifting) associated with some of the clients. The possibility of replacing an older workforce with newer/ younger member of staff does not exist at present because the sector is finding it difficult to attract younger members of staff due to challenges associated with the work.

The ILS's inability to recruit high quality staff stems from the issue of payments made to staff members. As the funders are reluctant to increase the fees paid to the non-profit organisation, ILS in turn is only able to pay the minimum wage to its staff. This results in multiple issues according to staff. They explain,

> "because our funding is so low we pay barely above the minimum wage. So there is two issues there, the calibre of staff that we attract may not be the ones that we want looking after our most vulnerable in our society. And the other issue is our ability to recruit, because we are not paying the money. It is really hard to recruit." *[IT Manager – ILS#1]*

Although ILS perceives this as a staffing issue, this also reflects in their use of ICTs in information collection point. As some of the staff perceive themselves to be close to retirement age they are reluctant to learn the ICT skills required to capture information at the point of interaction using ICTs. Therefore the

information capture happens on paper which is then entered in to their information system by community coordinators. However as the coordinators have to enter multiple sets of information (for each support worker) they have reconfigured their processes to collect a minimum of essential information directly related to financial and funder reporting requirements. This results in two primary issues

- Not capturing the information at the point of contact
- Not capturing sufficient client information

These two issues are discussed in detail in the interactions (6.1) section

All this information is captured on paper and the organisation is not able to get any trends or overall demographic information of their client base. Staff member explains,

> "When I want specific information about our client services I do what is called a file audit. That actually means I physically move the hard files of our clients into my office and go over each of these files looking for what I need. I then put everything into a report. And if I want another piece of information across our client base I have to do it again. The information we get from these file audits are very, very useful because that gives us an overall picture of what our client base is about. But the problem is that we can't do it often as it is very time consuming." *[General Manager - ILS#1]*

Difficulties in serving both primary and secondary care needs

At present ILS has a varying degree of clients that are either in primary care or in secondary care. Their clients have increasing care needs but the organisation itself is identified primarily as a service provider for older people who live within their homes and not as a clinical care provider. Although the clients have acute care needs the ILS does not have the ability / capacity to provide these clinical care needs and is dependent upon the primary care providers. ILS is required to works in close partnership with Primary and secondary care providers. The

information exchange in these care situations is paper based as ILS client information is not computerised.

Policy of policy changes in primary and secondary care sectors

Although the organisation is funded with multiple contracts from funders, as these contracts are at a minimum level of funding the organisation does not have the ability to absorb changes in their operating environment.

Due to their client base ILS are influenced by a broad range of public policy changes. For example a policy change in the KiwiSaver scheme that influences their clients will have an impact on the organisation as it directly impacts their clients ability to co-pay for services. Similarly a policy change to the Nursing Council will also impact them, as they are dependent on community nurses to deliver care to their clients. Although ILS is influenced by a broad range of policy implications, they do not have the funding capacity to absorb these changes and continue providing the same level of service to their clients.

6.6.2 ICTs are part of the organisational environment

Staff members from the organisation are reluctant to discuss ICT investment cost. However, they outlined that most costs are associated with staffing (2 full time IT staff members) and managing their IT infrastructure. At present the organisations network environment is managed by an external organisation. ILS maintains an end user support desk to facilitate IT support issues of their staff members. In addition IT staff support functionality of the in-house developed MsClient application that maintains client information.

6.7   Interactions

6.7.1 Organisation members build, design and develop interactions that facilitate flow changes

Information reshaping behaviours

ILS community support staff act as an interface in connecting disconnected information systems and reshaping information to suit different audiences.

Community support coordinators are the first link in the information reshaping chain as they convert the paper- based time and schedule information into MsClient and enter the time sheets of the community support workers. The community care coordinators begin the information reshaping behaviours with this conversion. Client and time information is converted to financial data into the financial software. The internal IT team has built a data extraction interface to facilitate this transfer. The usability of this information to be used as client information ends and this information becomes financial data which is re-crafted to suit the funder requirements.

Information shaping behaviour of the managers differs from the information behaviour of the community support coordinators. ILS managers are information seekers who attempt to compare and seek answers as to why the comparisons fail or succeed. In their information seeking role they attempt to connect client related information and financial information to form a cohesive picture of their service to the community.

6.7.2 ICTs become part of the interactions process, (interaction technologies) as people transform and embed available informational resources into connections and interactions

Managing client transitions

Clients that are with ILS can move on from community care or to temporary respite care in a residential home or to hospitals. At present managing these

transitions are difficult as the existing information system does not cater to these requirements and also there is no connectivity outside the organisational boundary.

Staff at present manage these transitions by using a mix of manual and IT solutions. When a client moves from community care to a hospital and then when the client is discharged again to the community care, the community care staff need to be informed about the type of medication that the client is receiving as well details of the client's overall care plan. This information is maintained at present in the discharge notes that are made by the hospital staff. However this information flow is at present is not adequate to the needs of ILS staff.

> "Sometimes we even have to call them (the hospital) and ask "what new medications they (client) are on?" *[Coordinator – ILS #7]*

> "Most information is on the discharge notes but we have cases where we have called the hospital to clarify details. If we can get this on to our systems then we can communicate the changes very easily to our staff." *[Account Administrator – ILS#2]*

ILS at present is in the process of transferring case notes in-to Word documents in order to facilitate this process. Once the case notes are available to community care coordinators they are able to manage these transitions with the community support team members. Managing these transitions are important to ILS for a couple of reasons, as a staff member explains;

> "Let's say one of clients who went in to hospital is now coming in to community care, we need to know when it is going to happen and also what the conditions of the client is. For one thing it has an impact on our staff scheduling. In some instances when the client comes back they have limited mobility so we have to make sure that we have the correct environment at home to receive them. When we know in advance, we can

go in and fix hand rails, we can put in a ramp things like that. Also we may have to change the staff too to suit the client. So this information is critical to us." *[Coordinator – ILS#7]*

ILS at present has a disconnected/disjointed process of gaining access to this information.

Maintaining client information – at the point of interaction

Client information is at present maintained on paper at ILS. When a client is allocated to ILS an assessment is conducted and a support plan is developed for each client. This information, along with client information, is maintained in a manual file at ILS. In addition to this information there are two main types of information that ILS maintains about its clients

1. Scheduling information – This information contains details about how often an ILS staff member will be allocated /visited to the client and the type of work carried out. The time of arrival and time of departure from the client's site. This information is collected in a form of a timesheet (paper) and entered in to their scheduling system. The primary purpose of the scheduling system is to ensure that the organisation is able to track the proper number of hours contracted for and to extract this information into their financial system.

2. Periodic client information - Community support workers who visit the client maintain a record of the client visit via a book kept on the site. This log contains information about the client including whether any exceptional circumstances have occurred since the last visit and any incidents that may have occurred during the visit.

ILS realises the importance of maintaining up to date client information, however it is not able to do this effectively due to a following reasons:

a.   Lack of a suitable device for data capture

ILS has a large mobile workforce and it is impractical to use a device that is not mobile to capture the information. However ILS is not able to equip all their staff with currently available mobile devices due to prohibitive costs. ILS is reluctant to use text as a form of capturing and sharing this information as that can lead to issues with client's privacy and confidentiality;

> "we need client information but we also have to very careful about how we collect it. And how we share it. Some of our clients are very vulnerable. It is our responsibility to ensure their privacy." *[IT Manager – ILS#5]*

b.   Staff training issues

Staff members that deliver client related services in the community, are reluctant to learn new technologies. Part of the reason is that they do not see it as directly related to their work and some of the staff, according to ILS staff members, may have a fear of technology. Furthermore, ILS also employs a large population of staff who use English as second language. These issues are perceived as barriers to capture this information at the point of interaction. Although ILS has the time capacity to train their staff, lack of funding prevents them.

c.   Funding issues

Funding issues are two-fold; ILS will have to find funding for devices when they select and they will have to provide funding for additional staff time that would be needed to train staff and also to provide time for staff to use these devices – e.g. say if ILS were to use computers instead of a mobile device then they will have to provide a staff member travel time to come to the head office and to enter data. With the current funding climate this is not possible.

One solution that ILS has considered is that this information could be entered by coordinators, however this would place a huge workload on the coordinators and they have ruled that out.

Staff explain the challenges faced by them;

> "Our staff get paid minimum wage, and that too with the hours being cut now, we cannot simply expect them to put in extra hours to do data entry on their own time." *[Coordinator – ILS #7]*

> "we don't get any funding to buy any mobile devices for our community staff. So this is the best we can do. We are barely funded as it is." *[Marketing Coordinator -#4]*

> "I think we have an ageing workforce with us who will walk out if we tell them enter data into a computer and tell them that they are not getting paid to do it. They don't see it as a part of their job at all. Plus we will have to also train our English as a second language staff. More than anything I think what is stopping us using technology at the point of interaction is our inability to get funded for something like that and then to train our staff and to convince them to use it on their own time. We just don't have the money for it." *[IT Manager – ILS#5]*

6.8 Identity

There are two main elements to the identify dimension, organisational identity and individual identity.

6.8.1 Balancing the organisational identity

Although the organisation is associated with a religious body, ILS has re-branded itself as a non-religious service provider when they are providing community services. The necessity for rebranding has risen from two main influences; clients and funders. As the organisation is a community services provider and as

the funders are primarily from the government, it has become important to be seen as a non-religious organisation to both clients and funders to ensure that the clients are not discriminated against and also to ensure that the organisation is not discriminated against in the funding process.

In addition, the organisation has had to balance its identity between its role a residential care provider and a community care provider as the overall organisation is still recognised as a residential care provider. For example, the community care general manager is on the board of the New Zealand Council of Christian Social Services, which covers residential service providers and for organisations which have a religious affiliation.

Balancing these multiple organisational identities and creating a distinct organisational identity is a challenge to ILS.

ILS has used their organisational website to create a "non-religious" impression to their community and donors. The website is considered as an information dissemination point and the objective of the site is to promote awareness of the broader services of the organisation amongst the community.

Staff members explained that they find their website to be far more static than they would like it to be. The website at present is used as a tool to inform the public of their services and there is no interaction with the client.

More importantly, the issue is that the website is viewed as an information dissemination tool and to raise funds. The way it is used raise funds is not by adding more information on the site but by replicating the same information they use in traditional media.

Although the organisation intends to use social media in future there is no allocated budget for it and the organisation fears that there could be privacy issues associated with its use. *[Refer Appendix 1 for organisation's use of social media]*

a.   Impression of the organisation

The staff members explained that some of the funders are not able to distinguish between ILS and other organisations that primarily provide residential care services to clients. According to staff members, the organisations that provide residential care services to clients come from a background of large real estate and property developers and have large streams of income that come from reselling and renting those properties. Due to the impression of ILS being associated with the same type of organisation as a large residential care provider the organisation is not able increase their fees and is perceived negatively when they want to increase their fees.

> "what they [funder] see in the paper is that one property developer selling rest homes to over 140 million dollars but that is not us. We are barely managing as it is". [*Staff member – ILS#1*]

Staff members explain that presenting a cohesive identity of the organisation to funders and donor organisations is important to create a positive perception. The challenge that ILS faces in this capacity is that they need to present their identity distanced from both a religious affiliation as well as the residential care sector. However, as some of their individual donors traditionally associate the organisation with religious care sector, ILS staff members explain that this positioning is a balancing act.

> "we have to be careful. There are some donors that donate to us specifically because of our religious background" [*Marketing coordinator – ILS#4*]

The organisational members interact with the funders in two main ways. One type of interaction is direct in terms of dealing with the day-to- day work of the organisation ; providing reports, managing funder information. The other is more indirect, and in that way, the organisation may be able to influence the impression of the funders. For example, the general manager of the organisation

is a board member of several other organisations and is considered to be influential in the sector.

The use of ICT in this indirect interaction seem to be less significant than in the direct interaction.

6.8.2 Disassociation of ICT in the role of community support workers

Community support workers do not associate ICT as part of their job/role. They associate ICTs with the record keeping function but not with their primary function of client support. Due to this disassociation they do not perceive ICTs to be part of their day- to- day interaction with the client.

A support worker explains, "We are there to help our clients. Not to faff about with computers or mobiles."

Support workers are not non-users of technology as most of them have computers in their homes and have access to internet in their home environments. It is their perception of the work they do at the client site and the perception if how technology could interfere with that role makes then hesitant in using ICTs.

Across ILS the role of a Community Support worker is associated with a low technology perception and this is the same in the self-identity of the community care worker. They associate themselves with the client support and do not consider themselves as an information gatherer role.

Within in ILS these information roles or ICT associated identities change across a range from client to funder. ILS staff who work at more funder facing interfaces consider themselves to be information processors and information collectors. Staff who work at more client facing interfaces consider themselves to be less information focused. This creates an imbalance in the organisation and creates an extensive workload for the middle layer [Community care coordinators] who need to act as an interface between these two sects of ILS.

Community care coordinator explains; "I actually feel like I have to do everything. I have to schedule staff, make sure they are there on time, get all their papers across, enter them into the system and then make sure that the information we enter is correct."

Chapter 7 – Integrated Community Care

7.1 Organisation

Integrated Community Care (ICC) provides community support services for older people. Beachtown branch has seven full time staff, 43 volunteers and 101 clients. Their niche is in high and complex needs older people who live in the community and who are socially isolated. These older people may have multiple needs regarding their finances, health and housing. The organisation has five main departments: Finance and Administration; Community Services; Communications and Fundraising; Residential Care Services; and Practice. Their Community Services department is the primary service provider for older people. Within this department three main teams are allocated for each geographic location that they operate in. Each of the teams are headed by a team leader and community workers are connected to each team as team members.

7.1.1 Services provided

Clients associated with these organisations can fall into three main categories of low, medium and high care needs. However, as the organisation has decided to work in the niche area of "socially isolated, complex needs", the clients are increasingly of the medium and high needs categories. Clients are classed as high needs, low needs and medium needs depending on the complexity of support required. The high needs clients have up to four visits by the community worker, the medium needs clients have fortnightly visits from the community worker, and the low needs clients have a monthly visit from the care coordinator. Older people who receive the services of the branch get four contacts per week from ICC. These are caring caller volunteers who give a phone call to the client every morning, and volunteer visitors who visit the client once a week or once every fortnight. In addition there are volunteer support workers who assist the community workers by taking the clients for doctor appointments etc.

A vignette of a high needs client.

> "Steve is one of our clients and he has had a history of alcohol and other substance abuse. His family has disengaged with him due to his behaviour and he also has several on-going health issues. He does not communicate with his neighbours and he has no friends. He does live in isolation. When we first started with him he had several issues going from managing his finances to severe depression. We even had to clean up his house to a level where home support people were able to visit. Our community worker arranged to get his bills paid, liaised with WINZ to get his entitlements. His depression was severe and he was not one of those people who would join a group for activities. Our challenge was to reconnect him with the community and to provide a set of meaningful activities for him. He was not a person who would go out at all. He has been an artist a while back. We are now wondering if we could send a volunteer in to sit and paint with him and how he would react to that situation."

There are four primary areas of information management of interest at this organisation. Each area is briefly described below and examples from these areas will be used in the case description.

7.2   Client management

Client management process is fragmented and data is maintained in multiple locations and in multiple formats. Clients are referred to ICC by the Care Coordination Centre (previously known as Nurse Maude). A referral of client is faxed from an assessment agency to ICC and this will be the beginning of the client management process. The team leader receives the referral and a community worker is allocated as a primary contact to the client. Initial referral information is entered into an Excel sheet by the team member and a hard copy of the referral is passed to the team member who creates a hard copy file for the assigned client. These two initial entries are the basis of the client management

system at ICC. The Excel sheet maintained by the team member is a consolidated list of all the clients that they serve from each location and that contains basic information about the client (name, address), the start date of the client with ICC and progress status of each client. This Excel sheet is considered to have the complete client list of ICC and is only accessed by the team leaders. This list is maintained purely to provide a count and a quick snapshot of the overall client base. Due to the format of the data in this sheet the team leaders cannot run a query function on the data.

The hard copy file that the team member opened for the client is considered as the primary source of data of each client. It is the responsibility of the community worker to keep this file up-to-date. After a client has been assigned, the community worker visits the client for an initial assessment. The case notes of this visit and each subsequent visit are entered in to a Word file that forms the basis of the case notes for each client. ICC provides a template for case notes, however, this template is modified by each team member. In addition when the team member liaises with external organisations on behalf of the client or when client information is shared with other team members for an intervention, information about that event is communicated via email. This information is then either entered as case notes to the Word file or is printed and filed in the hard copy. The hard copy is expected to have the most updated and the current version.

In addition to case notes for each of the clients, client outcomes are measured and that information is entered into a database (AssessClient). Client outcomes refer to a set of practices that are implemented by ICC to measure the effectiveness of their interactions with the client. Due to this fragmented approach to managing client data, getting summary information, analysing trends of clients or identifying best practices, that work is a labour intensive task.

Reporting: When a new client is assigned to ICC, ICC needs to send a report on the client at the end of the first six weeks. During these six weeks the community

worker will visit the client weekly. At the end of the six weeks ICC sends a report and then every six months ICC sends a narrative report about the client to Care Coordination Centre.

ICC has adopted a client guided outcome measurement philosophy into their practice. The objective of this programme is to build in the client's preferences/voice to their interventions as a feedback mechanism. Client guided outcome based practice enables the organisation to measure the effectiveness of their initiatives. There are two forms of measurement in this regard:

a. ORS – Outcome Rating Scale – where a client rates their wellbeing over a one week period in five main categories: of personal wellbeing, ability to maintain interpersonal relationships (with family), social wellbeing (interactions with friends, work) and overall wellbeing. This information is monitored over 10 sessions to assess the effectiveness of the interventions that staff set in place for their clients.

b. SRS – Session Rating Scale – where a client rates their interaction with the community worker based on three broad categories of relationship, goals and approach.

Community workers collect ORS and SRS scales when they visit their clients and that information is entered into an AssessClient database which is primarily accessed by the Practice Manager. The AssessClient software provides individual client trajectories and analysis of data across the client base. ICC does not use full functionality of this software, at present.

7.3 Fundraising

The Communications and Fundraising department manages fundraising activities within the organisation. ICC is funded 70% by government contracts and 30% by philanthropic donors. This organisation holds three main community based contracts, from local DHBs within the three geographic locations they operate in.

The Fundraising department also prepares applications for funding of projects and maintains existing funder relationships. In maintaining these relationships they provide both statistical data and narratives to support and strengthen their case. In addition this department also maintains the website and its content.

This department manages the donor database and manages donor profiles. The donor database contains information on individual donors who donate either time or money to the organisation. Donor profiles are maintained for philanthropic organisations. Donors are kept up-to-date about the activities of the organisation by providing them with newsletters. This department has also profiled a group of people as "most valuable people". On a periodic basis they ensure that success stories of the organisation are read by these MVPs.

7.4 Volunteer management

The 43 volunteers are maintained in a volunteer pool with each community worker having access to all of them. Volunteer management at ICC is managed across two functional roles; recruitment at Hilltown office, and day-to-day management of volunteers within community locations, Beachtown. The Team Leader – Volunteers, recruits volunteers for the organisation and volunteers are then managed by team leaders at specific locations. Information management on volunteers is handled at each of these levels separately. Initial information about the volunteers captured at recruitment stage is managed by the Team Leader – Volunteers on a database application that resides in a standalone machine. Team leaders in the community have read-only access to this database. Information pertaining to ongoing activities of the volunteers in service delivery is managed by community workers and team leaders at specific locations on paper, Excel documents and Word files. Team leaders do not even have shared email distribution lists for volunteers. This level of fragmented information management practices prevents the organisation from realising the value that the volunteers add to their operation.

7.5 Affiliations

7.5.1 Social actor relationships are shaped by networks of organisational affiliations

There are four types of organisational affiliations that are evident at ICC. The first type of affiliation is where staff members connect with external organisations in the form of funders or philanthropic donors. Funders are contract awarding organisations that provide contracts to ICC to deliver services in their community on their behalf (e.g. local DHBs, MOH, MSD). Philanthropic donors consist of specialised organisations that provide funding for non-profit organisations (e.g. Tindall Foundation, Todd Foundation). The second type of affiliation is where staff connect with external organisations for client and volunteer referrals (e.g. Care Coordination Centre, Volunteer Hilltown). The third type of relationship is connections that community workers build with external organisations in carrying out services on behalf of their clients (e.g. WINZ, IRD, banks). The fourth type of relationship is primarily established by team leaders (and by some community workers). These are the connections that they establish in order to ensure that service delivery across a geographic location is maintained smoothly. These connections are established with other non-profit organisations, hospitals and city councils (e.g. Aged Care Network).

Funders and philanthropic organisations: ICC receives 60–70% of the entire organisation's funds through government agencies (funders). This funding is awarded to the organisation by way of contracts for delivering services in the community. These contracts specify the information exchange that will take place between the funder and the organisation.

> "For this contract funders want three reports. See, this is about the service. About how well we deliver it. One report we give right at the beginning, sort of within first two or three weeks, the next one is in six months and one in December. Sort of end of the year." *[Practice manager – ICC#8]*

"It is not a two-way communication. They tell us what they want (information) and we give it to them. And on time." *[Team Leader – ICC#4]*

"Service contract is our main document. That is what funders want and it is very clear." *[Fundraising staff – ICC#9]*

Funders specify the type of information they require, format and sometimes how it should be communicated, e.g. Programme for the Integration of Mental Health Data (PRIMHD). For the clients that are on the mental health contract with the Ministry of Health, PRIMHD is utilised to communicate information. For each client the contract specifies them to provide information about the team that is assigned to the client and detailed information about the service activity with the client (e.g. visits to a client, appointments).

Staff members are aware of how their organisation is perceived by the funders, in terms of complete and timely delivery of information.

"Funders want value for their money. And we make sure that we provide that value to the client" *[Community worker – ICC#6]*

Staff members explain the importance of providing a complete set of information to the funders. Communicating the "value" of their service to the funder is handled in two ways by presenting a mix of quantitative and qualitative data. The quantitative component focuses on the number of visits that a client receives from ICC. Each paid visit is supplemented by three visits by volunteers, thus ensuring that the funders receive the most value out of their funding. The qualitative component is presented in the narratives that are communicated to the funder. Detailed case notes taken by the community workers compile these narratives about the quality of care that the clients receive.

Information pertaining to service contracts are managed by team leaders. Each service contract determines how the information about the clients and volunteers will be maintained within the organisations. As funders specify a standard set of information and as the organisation uses those specifications to

tailor their own information management practices some of the information that adds value to the organisation is not captured at the ground level. For example, with three different types of volunteer roles the value of support and care that the volunteers of ICC provide to the client is only captured by way of number of visits and types of activities. However, in reporting this information to the funder the emphasis is on the number of visits that the volunteers provide and not on the value of activities that create a benefit to the client.

Staff are aware of this gap in reporting and the inability to capture the true value that they provide to the clients.

> "I know we do a lot more for our clients than what we report." *[Community worker – ICC#2]*

> "I think we only report about 60-70% of what we do for the client. I am sure we do much more than what we are paid for." *[Fundraising staff – CE – ICC#5]*

There is data at ground level that is not captured as the organisation looks at funder requirements as a primary guideline to capturing their organisational data.

ICC funds about 30–40% of their work though philanthropic organisations. Philanthropic organisations receive applications from a multitude of community and non-profit organisations and funds are awarded on a competitive basis. Manager communications and fundraising establishes organisational level relationships with these philanthropic organisations.

> "We don't treat each application as a one-off, we treat each application as a start of a relationship, a long term relationship. So with all our funders our success rate is very good and we have retained them for three years. We make sure that we report and meet our obligations during each period." *[Fundraising staff – ICC#9]*

> "We keep a close track of the reports that they want and when they want. I make sure that we give them all the information on time. That is how we create a positive impression in their (donors) minds." *[Team leader – ICC#4]*

Information exchange between staff members and these organisations (funders and philanthropic organisations) are primarily specified by the external organisations and information is in summarised form pertaining to each of the services.

Organisations that provide client and volunteer referrals: Clients are assigned to ICC through the Care Coordination Centre. The Care Coordination Centre conducts an initial assessment of the client and ICC is provided with that information as a client referral. This referral is treated within ICC as an initial assessment of the client and it initiates the client management processes. Community workers at ICC conduct a detailed assessment within a six week period and that information is sent from the Care Coordination Centre.

> "Our six weekly assessment is far more detailed than the initial assessment we get. The clients don't tell everything to them (Care Coordination Centre) because they have only met them once. By the time we send our six weekly reports to them we have met the client six times. So we have a complete idea about all their (client's) requirements" *[Community worker – ICC#2]*

In addition to the six weekly report ICC is also required to provide detailed narratives of all their clients every six months. These reporting requirements of the funders are set out as part of the contract that is awarded to ICC and the organisation structures their information based on these funder information requirements. However, the information exchange between the Care Coordination Centre and the community workers is information pertaining to individual clients at each geographic location and is not about the entire service.

Information exchanges in these relationships are primarily between the community workers and case officers at the Care Coordination Centre.

Similarly, team leaders that manage volunteers have an ongoing relationship with organisations that provide volunteers.

> "I talk to them quite often. When we want volunteers we have conversations over the phone. I tell them what sort of people we need or I might email them. After they advertise I get their CVs." *[Team leader – ICC#3]*

The information exchange in this relationship is not as intense as the organisations that provide client referrals. However this is an important relationship as it generates a valuable resource to the organisation.

Community worker connections with external organisations: The community workers maintain these relationships with external organisations on behalf of the client and they also result in exchange of information and resources. Community workers initiate this information exchange and it does not have a specified set of requirements as in the information exchange with funders or with referral organisations.

Team leaders' networks: The primary role of this type of relationship is to ensure that there are no overlapping services in a single geographic location. Information exchanges between these connections are informal and are determined by each of the connections. As part of a service delivery community this is a pre-emptive way of making sure that they are not competing for the same types of funding by offering the same types of services. In addition these exchanges ensure that clients at a single geographic location are served in a holistic manner by accessing many services from different organisations.

7.5.2 Relationships are dynamic and related informational exchanges changes with flows of capital, labour and other resources

Information exchange between the external organisation and the non-profit organisation is handled by the community workers. Once a client has been assigned to the organisation the responsibility of the client's wellbeing is the responsibility of the community workers. Community workers monitor all the status/movements of the clients once a client is assigned to them. As their clients are at a complex and high needs category hospitalisations are a common occurrence and the information exchange between the wards, social workers at the hospitals and the ICC community workers are an important element. In the event of a hospitalisation community workers liaise with the ward to inform them that the client is assigned to ICC at community level. During the ongoing conversations the community worker will have conversations with the ward and the hospital social workers and will be involved in discharge planning and ensuring what level of support is further available when the client returns home.

> "In terms of the information exchange, if a client is admitted to hospital we contact them and let them (hospital) know that we are involved. So it is important to let them know what support they (client) already has in the community so that if they need additional support after they are discharged they can manage at home. We also try to be involved in discharge planning. We usually telephone the ward and the social worker and we exchange notes and record the conversations and the actions that they have taken." *[Community worker – ICC#2]*

Within these informational exchanges the primary responsibility of the client shifts between organisations. Whilst this is done at a single client level it is also evident at a regional level.

Team leaders at ICC coordinate the Elder Support Network. This is in the form of either a monthly or a fortnightly meeting held between local community organisations, city councils, volunteers and other members of the community

who provide services for older people. There are several objectives in participating at these meetings. Community workers learn about the type of services that their clients are able to access within each of these communities, they also build professional relationships with other community groups and inform other groups of the services they provide in the community. Attending these community group meetings provides the community workers the ability to build a resource base within each community on behalf of their clients. As most of the community organisations do not have a strong online presence these meetings are an essential component. Information exchanges at these meetings are rich and comprehensive. Within these meetings the team leaders ensure that every service that their client requires is available within the community and the city councils ensure that their clients do not "slip through the cracks".

> "We do a lot of preparation work for this meeting. It is where we meet everyone. So it is up to us to get the most. See, the whole thing is about how can we best manage our clients and what is available for us out there." *[Team leader – ICC#4]*

7.5.3 Relationships are multilevel, multivalent, multi-network (i.e. global/local, group, intergroup, interorganisation, culture)

Community workers are the primary contact of older people who are supported by ICC. Community workers liaise with a multitude of organisations on behalf of their client. They have over the years established professional relationships with these individuals in these organisations.

Community workers at ICC liaise with Work and Income, Housing New Zealand, City Housing, Medical Alarms, Wellington City Mission, Compassion Centre, Home Support Coordinators, Capital and Coast Community Team, banks, legal aid, Kapiti Coast Health Group, staff at hospital wards and rehabilitation wards.

> "Our practises extend a lot with each client depending on what their needs are. They help us develop our network. So we have all got our own

individual networks out there in those organisations by now." *[Community worker - ICC#2]*

Community workers exchange information with these external organisations primarily by phone and email. This information exchange is relevant to a single scenario or incident and the objective is to gain access to a resource on behalf of their client. Community workers understand the need to communicate a complete set of information about the event to the external organisation and a record of each of these communications is held in the hard copy file of the client.

Depending on the complexity of the need (client's) community workers leverage their professional relationships across the organisation both internally and externally. Community workers at the first instance talk to their counterparts in the external organisation and then they talk to their colleagues within the same geographical location to see if they have their networks with the external organisation. Based on the response, they also escalate the issue to their team members who will in turn leverage their networks in the external organisation. It is also common for community workers in one geographical location to contact the community workers that are closest to the client's location to see if they have a contact in the external organisation.

7.5.4 As relationships change, interaction practices migrate within and across organisations

Relationship change was observed in two main areas at ICC; changing of the client types and change of funding.

At ICC community workers are required to build a rapport with clients who are "difficult to reach". Building a relationship with these clients takes more than one session and this is reflected in the practice in more than one way. Community workers find initial assessment notes to be inadequate as the client has not expressed the full set of requirements to this person whom they met just one. This requires community workers to have more sessions with the client in

order to get a clearer picture. In addition, each interaction becomes more time consuming than that of a client who is not "hard to reach". Therefore the number of hours that these social workers tend to spend with the client initially in establishing a rapport tends to increase and this has a negative implication in terms of managing funding.

> "We move very much at the pace of the client. These are clients who have more than just one issue. We don't go in there with all guns blazing. They (client) can tell us to get lost if we do that" *[Community worker – ICC#6]*

In addition, case loads that each community worker is able to handle has become different too.

> "Because the needs have really increased the caseloads have come down. I used to have 16 or 17 clients with a mix of high, medium and low needs but now even managing 13 clients is a huge work load. One person can take a fair bit of time now. Once a colleague in the Hutt spent a whole week with one client." *[Community worker – ICC#2]*

Due to these "hard to reach clients" it becomes easier for community workers to ignore the client's voice in their interactions and take a course of action that they think is best. The organisation recognises this issue and has introduced a process that primarily provides the client a voice in their interactions. This has changed the practises at ICC, significantly increasing the work load of the community workers. Now, in addition to client notes, community workers need to carry out an extra set of interviews quarterly in order to capture the client's satisfaction with the progress.

In addition, as these clients have complex support needs and complex health needs the types of relationships that the community workers now need to establish differs. Community workers now need to increasingly liaise with the two local hospitals' rehabilitation centres and with community healthcare providers. Information exchange with these services is mostly by using the phone

and information capture in these exchanges are resulted as status updates in the patient case notes by the community workers. The work is becoming more "high touch" and the information that the staff need to maintain about the client is becoming richer. This includes maintaining some level of clinical information about the client thus changing the information requirements of the organisation.

In recent years there has been funding cuts across the sector. In addition to the funding cuts there have also been an increasing number of older people in the community and therefore an increasing demand for the services of ICC.

ICC has responded to this change by (a) recruiting more volunteers – ICC started recruiting an increased number of volunteers and also increased the level of work that the volunteers did. e.g. instead of community workers taking the clients for doctor appointments, volunteers take them for doctor appointments. However as the information storage of volunteers is scattered this increases the administration workload. (b) Creating a niche for themselves. Their niche of "socially isolated and complex health needs clients" makes the organisation and its services unique. This re-branding gives them access to specialised funding sources (e.g. mental health contract) that other standard organisations that provide services for older people do not have access to.

7.6   Environment

7.6.1 Organisational environments exert technical and institutional pressures on firms and their members

Staff members explain that they experience two main pressures at present: funding cuts and roll-out of new assessment mechanisms. Funding cuts are relevant to the home help that older people have received. These home help services allocated funds to support home cleaning and to ensure that the clients have a good living environment. However, these services were only available to clients who had undergone an operation or had an accident and were meant to

assist them over the transitional period. Due to lack of reassessment of the older persons who received these services, these services continued further than the original intended time period and with recent DHB funding cuts cost allocation for these services has been reduced to a minimum. This has created an additional constraint on ICC as most of their clients are in situations where they require home help services.

A new assessment mechanism, InterRAI (International Resident Assessment Instrument) is currently being rolled out to all DHBs. This is an assessment process that contains a contact assessment and a home care comprehensive geriatric assessment. Contact assessment is a screening tool and the primary purpose of this tool is to differentiate between clients who have complex needs and those who do not. However, as this screening is often conducted over the phone, there have been several issues associated with this form of assessment. (e.g. clients often do not report the true circumstances, difficulties over a phone conversation). Comprehensive geriatric assessment is conducted face-to-face and covers health and support services. ICC has clients who were not correctly assessed in the contact assessment tool.

> "Two of my clients told them that everything is ok. They thought they were
> being polite. Next thing we know they were reassessed as low needs. These
> were two high needs clients and the reassessment cut the funding."
> *[Community worker – ICC#6]*

7.6.2 ICTs are part of the organisational environment

ICT investment: Account staff were reluctant to discuss specific details of ICT expenditure.

> "We don't have a category called IT expenses. If we buy hardware it is part
> of our capital, what we spend on contractors is part of personnel expense."
> *[Accounting staff – ICC#1]*

It is roughly estimated that ICT expenditure is over NZ$100,000 and the majority of the spending is at personnel level. The external IT contractors are hired at an annual cost of NZ$80,000 and the remaining costs are associated with licensing fees and hardware costs.

Staff members explained that accounting staff are reluctant to share IT expenses as the organisation can be perceived negatively.

> "I think it is because they don't know what the 'normal' amount for an organisation of our size should spend on IT. There is nothing to compare against. So they are cautious about sharing that kind of information. They don't want to convey a wrong impression." *[Fundraising staff – CE- ICC#5]*

ICT support: ICT support is expected to be provided by the external IT contractor. However, as the relationship between them and staff members has deteriorated there are three different informal and formal mechanisms of providing support.

Informal user support clusters: Staff at Integrated Community Services identify two levels of informal support clusters for ICT support:

Staff at a single geographic location have formed into informal user support clusters in order to support each other in ICT related issues. At each geographic location users have an informal network with their peers in order to help each other in ICT related difficulties. Each of these informal clusters consist of community workers, team leaders and volunteers. They are parallel to the formal relationships that operate there, however, in terms of the relationships that are related ICT support, the informal relationship overrides the formal relationship.

> "We just help each other. When Sophie has a problem with email she asks me. I am good with it but I have problems with printers, network, things like that, she helps me with those." *[Community worker – ICC#2]*

> "Kelvin helps me. He is a volunteer here. He has shown me how to do mail merge and things like that." *[Team leader – ICC#4]*

These clusters are not based around an identified expert user, rather they are based around mutual exchanges and realising the limitations that each have with technology.

- In addition team leaders have their own informal support clusters, however, these are not based on geographic locations and these support networks can feed the lower level. The team leader support clusters can access people from different geographical locations and they are able to access those persons who are perceived as expert users.

  "Whenever I have a problem I ring Bret. He is with the Harbourtown team and he works with reformed gang members and things like that, not from our team. He is really good with IT and happy to help." *[Team leader - ICC #10]*

These relationships are based on a perceived expert user and are outside of their normal team and geographic location and could also be outside of the common area (e.g. older people vs foster care). The perceived expert users do not get any form of remuneration for assisting with these tasks, nor is it part of their job description or part of the organisational expectations.

  "I talk to Mackenzi. He is with the Valleytown team. He has worked as an IT person in someplace before here, so he knows when I explain things what I am on about. And what I want to do." *[Team leader – ICC#4]*

Providing this kind of support is viewed positively by the people who are providing support because they are often not at the team leader level and providing ICT support to team leaders gives them visibility within the organisation. The team leaders make these contacts at the organisation's leadership huis (monthly meetings).

Formal non-ICT staff support:

At ICC there is formal support provided to all staff by a non-ICT staff member at the organisation. The executive assistant performs a formal support desk function. The staff at ICC first contact this person before contacting the external contractors. If this person cannot solve the problem that the staff have then they may contact the external contractors. Although this arrangement functions as a formal help desk the executive assistant does not record statistics related to this job.

> "I don't do anything special. They (end users) call me when they get stuck with something or when they have question. It is mostly questions about Word, Excel, email. Sometimes if they can't print, I help them if I can. If I can't, I contact our contractors and talk to them about it." *[Executive assistant – ICC#7]*

Although this can be perceived as an unusual arrangement for an executive assistant to act as an IT support desk the end users prefer this arrangement as opposed to contacting the external contractors directly.

> "I get all my technical support from Joanne. She is so good with it. She is very calm and explains things over the phone really well. Sometimes she even calls back to see how I am going in a couple of days. It's wonderful to have her." *[Community worker – ICC#6]*

> "When I get stuck I call Joanne. She is my helpline. So the answer to your question is very simple. We go to Joanne and she sorts it out." *[Team leader – ICC#3]*

> "We have had issues with our IT people (external contractors). Let me put it this way, they are not the friendliest. This arrangement with Joanne (executive assistant) works much better." *[Practice manager – ICC#8]*

Despite the uniqueness of this arrangement it seem to works well for ICC at present as the executive assistant,

- has a detailed understanding of the business processes.
- is able to relate to the urgency of each situation and clearly understands how it would impact the task of the staff member.
- staff members consider the executive assistant to be flexible and friendly when assisting them with their application problems.

This level of application support (help desk) is usually provided by the IT department in other organisations.

Business unit owners provide technical support:

Staff have identified certain business unit owners as responsible for certain applications. For example, the practice manager of the organisation is associated with the AssessClient software. As the implementation of the program has been an initiative of the practice manager, the associated software is also identified as an indirect responsibility of the practice manager. There is no formal requirement for the practice manager to provide support; the users expect the practice manager to help them in issues related to the AssessClient software.

> "Yes, they (end users) call me. I think partly because they don't like talking to our IT people (external contractors). Also Joanne (executive assistant) don't know anything about AssessClient. It is quite normal for them to call me when they need help." *[Practice manager – ICC#8]*

Similarly the Manager Communications and Fundraising is associated with setting up the organisational intranet. This intranet hosts documents that are commonly used across the organisation and accessed by most of the staff members. Staff associate the intranet with the fundraising manager and expect the fundraising manager to help them with ICT issues pertaining to the intranet. This results in the business unit owners providing ICT support for users and also

interacting with external IT contractors on behalf of the users to assist them in their ICT related problems.

> "They (end users) call me directly. Not so often anymore because now the calls go to Joanne (executive assistant) but it is normal for her to either call me and ask about something or someone in a team to call me directly."
> *[Fundraising staff – ICC#9]*

In addition, some of the business unit owners look after the entire IT needs of their department and this goes beyond providing support to the department as they also identify the suitable applications for the department and integrate ICTs into their operations. At ICC both the practice manager and the fundraising manager are examples of where the business unit owners have made decisions about software selection.

7.6.3 ICTs are part of the industry, national and/or global environment

This characteristic explains the level of infrastructural richness within an industry and how that affects the use of ICTs by the organisations. In the environment that ICC operates in there is a mix of information and skill resources that are available to the organisation at a local or industry level. Although ICC has not invested in developing these resources ICC uses them for an annual fee. Integrated Community Services uses ICTs that are part of the industry, local and global environments in their volunteer recruitment, client management, fundraising and communications.

Volunteer recruitment: This organisation uses the local volunteering database Volunteer Hilltown and Volunteer Now, a national database to recruit volunteers. This is the only organisation in the study that uses both local and national volunteer resource centres for recruitment. Although the organisation's own website maintains a basic webpage for potential volunteers (name, address, phone, email) staff have informed that they receive most of their volunteers through the Volunteer Hilltown database. In addition, the recent funding cuts in

the sector have also resulted in staff recruiting more volunteers to fill the gaps in service delivery and thus promoting the use of both sites.

> "We advertise volunteer roles with them (Volunteer Hilltown) and we access them quite a lot. That is how our volunteering inquiries come though. We have a section on our website called volunteers but I don't think that many come from our website." *[Team leader – ICC#3]*

> "I was only using Volunteer Hilltown last year. But this year the funding cuts are fierce. We had to get more volunteers in for older clients. We had to even do a special volunteer drive for the Beachtown branch. I use both now, that way we get a steady stream of them (volunteers)." *[Team leader – ICC#3]*

These organisations that maintain the local and national databases also provide a referral service to Integrated Community Services by short listing potential volunteers and also by redirecting suitable candidates to this organisation.

> "I have a very good relationship with them. I have explained to them what sort of people we need. They may get an application for a different role but if that person is not suitable there, say to do accounting, but is keen to volunteer, Sarah (staff at Volunteer Hilltown) may tell them, why don't you try volunteering as an admin person, and send them to us." *[Team leader – ICC#3]*

Use of these established databases for volunteer recruitment has worked successfully within this organisation and it has enabled team leaders to plan better for fluctuations in funding.

Client Management: ICC has adopted a strength based practice within the organisation in managing their clients. This practice places emphasis on the client's ability to "be their own agents of change by creating conditions that enable them to control and direct the process of change" *[Practice Manager-ICC #8]*. Therefore, consideration for clients' preference is essential in all interactions

that staff have with clients assigned to the organisation. In order to ensure this process the organisation has adopted a client feedback mechanism and uses AssessClient software. This software is part of the aged care industry and users of this software connect the organisation to the global environment as it enables comparisons between ICC clients and clients of other similar organisations.

Fundraising: Funding Information Service (fis.org.nz) is an online information service used by this organisation extensively. Funding Information Service provides a searchable database of government and philanthropic funding sources for non-profit organisations. Integrated Community Services is a budget driven organisation that focuses on establishing their funding sources at the beginning of each financial year. At the beginning of each financial year ICC plans on the types of service offerings that they would offer and the funding sources that they already have and then utilise the Funding Information Service to search for additional funders to fill the gaps.

> "FIS is quite useful for us. We pay an annual subscription to use it. I look for funders that are most likely to fund our projects. All the information about the funders are there; profile, the type of funding, key contacts, what time of the year to apply. Like a one stop shop, usually the first place to start anyway." *[Fundraising staff – ICC#9]*

Use of open source software: In addition to the multiple newsletters, the organisation also uses their website to communicate the role of the organisation and its successes to the community. The organisational website has been developed on an open source platform that is predominantly contributed to by developers in Hilltown.

> "Our first website had a team of developers and it was very clunky. So I started looking for alternatives. I wanted something that was free and open source and also something that had a community of users around it. So Weka software was the only Hilltown based open source community. So

I asked around about them and went with one of their developers. That has been very successful." *[Fundraising staff – ICC#9]*

In comparison to the other three organisations, ICC is the only organisation that has made use of this local community of developers. Due to the successful nature of this relationship (as both organisations share the ethos of the non-profit sector), ICC staff have received training to update and maintain the website on their own reducing their ongoing maintenance costs. This has resulted in the ICC website containing more up-to-date information as their internal staff are able to update the website regularly. Further, this successful partnership has resulted in free hosting of the ICC website.

7.7 Interactions

7.7.1 Organisation members seek to communicate in legitimate ways

The primary set of information that is communicated is client information. Expectations of this information exchange are that ICC will deliver information in a timely manner and that they would make recommendations about each of their clients. Community workers generate this information upon visiting each of their clients.

> "When I see a client I write up case notes, I have seen them, what we talked about, what tasks we have come away with. That is important with the clients, that is what generates our work. So we need to see what needs doing, any concerns or issues that they have got and then we will go away and make the next phone calls or do referrals." *[Community worker – ICC#2]*

Each interaction with the clients generates two main types of information: present client status and tasks that need to be done in order to improve the present status. Community workers capture this information as part of their case notes about each of the clients maintained in Word files. In addition,

conversations or exchanges they've had on behalf of the client are recorded either as emails or phone conversations. Communicating this information to external organisations is bound by a set of organisationally established protocols pertaining to time.

Monthly reports from each of the community workers are sent to the ICC board. These reports are a summarised status update of all the clients that are attached to each of the community workers. Community workers also need to prepare monthly reports about each of their mental health patients and submit these reports every quarter to their funders. In addition, narrative updates for each of their clients are submitted to the Care Coordination Centre once every six months. If a client's life stages are changing rapidly then these narratives are done as quarterly reports and the case manager at the Care Coordination Centre is also updated.

In each of these reports community workers are expected to perform a function of setting goals for their clients at each reporting period and make recommendations based on the current status of the client.

> "I have set goals with my clients and I report progress on them. Then there are areas that need to be further addressed and also our recommendation. Clients can stay with us, come off us, or move to higher needs. They can move to high, medium or low needs depending on our recommendation." [Community worker – ICC#2]

> "Our recommendations are very important. That is how a client is going to be managed. In the report that is the most important thing for them (funders)." [Practice manager – ICC#8]

When community workers make recommendations about their clients (e.g. moving to high needs), status changes are communicated to their team leaders and team leaders review the entire client portfolio in each of their teams to ensure that these recommendations are in line.

All communications relating to client information is considered confidential. Therefore community workers are only expected to relay information about their assigned clients to their team leaders. However, the client confidentially between community workers cannot be easily managed due to the present way that ICC manages client information. As the client information is kept in Word files (these files are not password protected) and as the files are named by client names, community workers have access to each other's clients. Further, the hard copies of the client file (which is considered as the primary information source) is accessible by all community workers in a single geographical location. Therefore whilst time and recommendations are established requirements in communicating client information, confidentiality of client information within each team is far less defined.

Similar to client information exchange, fundraising information exchange is also tied with time. Philanthropic funders establish reporting requirements at the beginning of each funding cycle.

> "With funders it is usually six months, at least annually, some would require monthly but that is very rare. Most of the ones we try go on for three years, renewable every year." *[Fundraising staff – ICC#9]*

> "It is set out in the conditions that we agree to at the beginning. We want money and they will give us money and they will say at the beginning this is what we want, at the end of 12 months we want a report that covers x, y and z and if I cover x, y and z on time, then they renew and that is generally the way." *[Team leader – ICC#4]*

Information exchange with philanthropic funders is well defined within the organisation. Philanthropic funders do not receive any information about individual clients. All client information that is communicated to them is in a summarised form and is quantifiable information. Whilst the information requirements of these funders are shared amongst staff and reports are prepared by members of staff each of these reports are then scrutinised by the

fundraising manager. The fundraising manager is assigned with the primary responsibility of communicating with philanthropic funders. ICC considers these funders to be significant (30% of the funding comes from philanthropic organisations) to their ability to deliver services to the community as these funders fill the funding gaps that exist beyond the organisation's contracts. Therefore all communications with philanthropic funders are conducted via a single source; manager fundraising. Retaining each of the philanthropic funders long term is an important element of this information exchange at ICC.

7.7.2 Organisation members build, design and develop interactions that facilitate flow changes

ICC works with as many as 15–20 philanthropic donor organisations each year. In addition to the initial application that secures funding ICC needs to maintain the relationship by providing ongoing information. The type of information each donor requires varies.

> "Every donor (organisation) is different. Say for example some want receipts pertaining to purchases but we may also give them statistics say from our food bank, statistics on who is using the food bank and why they are using it and just general trends, like a graph. In other areas where things are not quantifiable we will present the information by storytelling, case studies and things like that." *[Fundraising staff – ICC#9]*

The monthly reporting structure that is established across the organisation is the key source for harvesting information by the fundraising department. The statistics that the team leaders report on their client base is reformatted at Fundraising to reflect the efficient delivery of each of their services. Information on how each of the services are being used at present and trends on how these services have been used over a period of time is presented to donors. Further ICC will also present success stories of how these services have made an impact on a particular client's life.

In addition to philanthropic donors, ICC has also identified key personnel within each of the communities that they operate. e.g. Within Hilltown they have identified about 400 people whom they classify as MVPs (most valuable persons). They are a mix of key politicians, people connected to government departments and key staff members at philanthropic organisations. ICC keeps these MVPs updated about the activities of their organisation by way of newsletters and focused emails. The content for these newsletters is harvested though the team leaders' reports that are communicated to the management and also by direct communication with staff.

> "When I am preparing these communications, I will ask team leaders if they have heard of any good stories in their meetings. Some of the team leaders haven't got skills to bring out stories themselves, so I will interview them and draft the story. Then they will go in the email to MVPs." *[Fundraising staff – ICC#9]*

> "I think the more we can create good stories about what we are doing the more people will want to be a part of our community. And that can be done by donations or by volunteers." *[Fundraising staff – CE – ICC#5]*

Identification of MVPs and communicating information about ICC's activities to them is an important element of ICC's interactions. By communicating information to this audience ICC creates an awareness about their organisation in key decision makers of the community and also ICC re-shapes its existing information to suit multiple diverse audiences.

ICTs become part of the interaction process (interaction technologies) as people transform and embed available informational resources into connections and interactions

At ICC there is a clear need for database applications that can provide a wide range of information to all their staff members. The existing applications are not able to cater to the information requirements of the staff and this is evident by

the number of interactions that the staff members design and build in order to provide information at various levels.

Volunteer management information is at present divided and managed in two places. Volunteer recruitment is done at Hilltown branch and volunteers are then allocated to each of the other locations. In communicating this volunteer information to team leaders of each of the other locations team leaders are given read only access to the database. Team leaders at each of the locations maintain information on Word documents about the volunteers assigned to them. The volunteer database is not accessible to team leaders and this results in them having to re-enter information at each of their locations.

> "This is the volunteer list but I cannot do anything with them. I can see them but nothing else. So I can't add anything, I can't change addresses, I can use them to send emails. I can see who they are that is all." *[Team leader – ICC#10]*

> "I am a team leader but I can only see the volunteer database. I get a list in the email. I can't do anything with it. So I need to enter all the details again in this Word document." *[Team leader – ICC#4]*

Not having this initial information in a form that can be easily managed creates more issues in managing volunteers at each location. Team leaders at each location manage separate email distribution lists for their own set of volunteers. As these are simple location-based lists, team leaders do not have additional email distribution lists that are based on volunteer roles.

> "We can't swap email distribution lists of volunteers. So I can only get a printout of volunteer emails from Hilltown. Then I have got to enter email addresses of our volunteers in to an email distribution list separately." *[Team leader – ICC#10]*

> "When I want to email a set of volunteers it is such a hassle. Say I want to only email the drivers, I need to pick each of them from the main list that I

have. I don't have separate lists. Just coordinating with the Hilltown list itself takes time." *[Team leader – ICC#4]*

Volunteer information on the day-to-day activities are at present managed on paper. Volunteers record the number of hours they spent with their clients, associated mileage and the activities they performed and this information is communicated to each of the community workers that they are attached to or the team leader of each location. This paper-based information is then collated by the team leaders and is submitted electronically in their monthly and weekly reports to their direct managers.

This transformation of information from paper-based to electronic sources and the collating of information from multiple sources is also evident in client data management. Team leaders are the primary actors who transform and embed information into interactions.

Teams leaders are expected to maintain a location-based client portfolio. This information is central to the reporting of ICC as the team leaders are expected to have the correct information with regard to the total number of clients at their locations at any one time as well as the need levels of the clients. This information is then supplemented by information that is maintained on each client by community workers and paper-based files.

"I keep the most up-to-date client list. It is our absolute bedrock of information. I keep it on Excel." *[Team leader – ICC#4]*

"I know that I can only keep very basic details because I am using Excel to keep client records. We keep paper records to supplement. So for instance all the referral information we get will be in the file (hard copy). What we are trying to do is get this electronically but that has not happened yet." *[Team leader – ICC#4]*

"If we have to get a complete record of a client, a report, since their referral to us, that would be difficult. Client information, referral

information and notes are in three different places for us." *[Team leader – ICC#10]*

"I am a team leader but I am not supported by data. For example, if I want to get a report now, I need to go looking for all the information and then reformat data to what I want." *[Team leader – ICC#4]*

Due to this need to assemble information from multiple formats and multiple sources the team leaders perform extensively labour intensive tasks to support the day-to-day operation with data. The data intensive nature of the team leaders role may transform to data processing as opposed to an information informed role. With an increased number of clients these transformations that the team leaders need to do increases the administrative layer of the organisation. Within non-profit organisations, increasing the administrative layers is viewed negatively by the funders. Therefore the level of information embedding that needs to be done should be reviewed by staff as they improve their information systems. As the staff time is used in transformation of basic data the organisation has not been able to identify service trends due to the heavy transformations that are required to obtain information at this level.

- The team leaders submit summarised monthly reports to the management. Team leaders wade through extensive amounts of data and in different formats in order to prepare these reports. Volunteers present information about their visits to community workers on paper. Community workers record detailed information about clients on Word documents, Excel sheets, on email and on paper. Team leaders maintain key information (pertaining to the client) on Excel sheets. Team leaders process all the above information in order to provide a snapshot of the service provision to the management.
- The volunteer management database is maintained in a single PC at head office and only the team leader has access to that information. Team leaders at other locations who directly deal with the volunteers maintain

their own set of information about the volunteers on Excel templates as they do not have access to the volunteer database.

- In addition, across ICC there are templates that have been built by staff for managing resources (e.g. vehicles) and expenses related to events. These templates are used to manage information about events such as fundraising, increasing community awareness and such. This information is them communicated to accounts for record keeping and managing of profit and loss.

In contrast staff members at the Fundraising and Communications department have used the fundraiser database in a very effective manner to harvest information about donors who are most likely to donate.

> "We used to send 8000 mailers before. That is one mailer for every single donor on our database. This was an expense and we were not getting value for this activity. We brought this number down just to 400 donors by querying how many donors have donated twice within the last 10 years. By targeting this small number of donors we now get about 30,000 dollars as donations a year which is about four times than before." *[Fundraising staff – ICC#9]*

By reshaping this information the Fundraising department has managed to bring down their advertising budget significantly (one third of previous year). The staff's ability to embed and transform information to interactions has proved to be a positive result in this case. This is because they had the basic information and available tools to manipulate the information.

7.7.3 As organisational members, people perform socially embedded (role based), highly specified actions on behalf of the organisation

Clients associated with ICC are identified as having complex health needs and are often socially isolated. Therefore staff that manage clients have a varying degree of "specified actions" that they perform on behalf of the client. Whilst the

organisation has specified a set of actions that the staff would perform the actual service provision is determined by the client needs.

A community worker is the primary contact to a client and provides the same level of support that a family member would on behalf of their client. Whilst most of the services that are required are common to all clients (e.g. liaising with Work and Income on behalf of the client), most have specific needs that cannot be anticipated by the organisation. As clients associated with this organisation move across life stages, it is difficult to determine where the responsibility of the organisation ends as the edges of responsibility of handing over from one organisation to another remain grey with these types of complexities. Community workers provide scenarios:

> "One was a client and she has come off (terminated services of ICC) and gone into a higher needs complex situation due to incidents of domestic violence. And no other organisation was prepared to take her on. So we have taken her back on. And the organisation is prepared to help her get social justice in this situation. So we are prepared to do that without being paid." *[Team leader – ICC#4]*

> "The other one is a son of a client who died and he (son) has got Asperger's and has fallen through every imaginable crack in the service provision. So he is very high needs but nobody is there providing for him because he is quite hard to reach, to engage, so we have that person too now."
> *[Community worker – ICC#6]*

> "And at the moment we have a lady who had gone into hospital level care, she had a stroke and she was not expected to live, she got put into a hospital in a rest home. She has made a miraculous recovery and wants to go back home, but a friend had disposed of all her furniture, cancelled her tenancy on the property, and all her possessions are gone so she is actually a non-identity. And she has been trying to get out of the rest home. She wants to desperately get out of there. So we are working with her to help

her. It is right back from the beginning for her now." *[Community worker – ICC#2]*

In each of the above mentioned cases, community workers associated with the client had to perform many actions on behalf of the client that were not specified with in their role. As the role of the community worker in the client's life is broader than a service provider, ICC can only provide a set of broad contexts within which community workers can work.

Actions taken by each of the community workers in each of these situations are reflected in their client management system. Staff update the new service requirements and the changes in the client's stage of life in their case notes. However, as the information exchange primarily takes place over the phone and through emails with external service providers, the case notes only reflect the outcome and not the process undertaken by the staff in order to achieve that outcome. This results in each of the staff members not sharing their learning experiences with each other in an electronic medium or not having sufficient information about the process for another staff member who would be taking over the client. Staff at present depend on their huis (meetings) and their informal contacts to supplement this lack of information at ICC.

In addition to the community workers, volunteers too may perform loosely based roles on behalf of the organisation. With ICC the roles of the volunteers are not strongly scripted. The organisation has a few specific volunteering roles (e.g. caring callers, community support volunteers, admin volunteers). However, a volunteer may perform more than one role within the organisation and may also perform duties which are not specified within their volunteering role (e.g. representing the organisation in quality assurance and accreditation processes).

> "I am usually an admin volunteer. I manage the front desk here. Sometimes help with mail outs. They have other community support volunteers to drive. I don't drive, usually. But this week I had to take two clients to

urgent doctor's appointments. Community support volunteers work full time, some of them. So they can't come just like that." *[Volunteer – ICC#11]*

"I am a caller. That is how I volunteer here. Mostly it is a couple of phone calls every day, especially in winter. I call some clients twice, once in the morning and once in the evening. But that is not all that I do. If they don't have someone to manage the front desk I go in and help out. Last year I was in their audit panel too." *[Volunteer – ICC#12]*

As the roles of the volunteers move, the information they exchange with the organisation differs. Whilst administrative volunteers are expected to record the number of calls they receive, the type of query and the walk-ins they assisted, the drivers are expected to record mileage. When a volunteer moves across the roles this information at present is captured at each of the service points. However, when volunteers perform duties that are outside their scope, the contribution by the volunteers is not recorded. There are two elements in this – if the volunteer was part of a panel representing the organisation then it is perceived as an effort by the organisation; if the volunteer performed an additional task then that is considered an ad hoc event and information about that task is not captured. This results in ICC under-reporting the number of hours they have invested on a client.

"We have just worked out that effectively for five clients we have been getting about \$2 for every hour due to the high number of hours that was needed by those clients. But that is also one of our strengths that we are able to support people in a crisis but that needs to then reflect in our funding. So that data is very important to us." *[Fundraising staff – CE – ICC#5]*

7.8   Identities

7.8.1 Social actor identities have an ICT use component

There are two different layers where staff member identities had an ICT use component.

Information gatherer identity: Staff members who worked directly with the clients did not have an "ICT use" component as part of their identities. Community workers have a strong identity of themselves as the primary connection of their client to the community. Community workers perceived themselves as less than average users of ICTs.

> "I mostly use Word and a little bit of Excel but I am not very computer literate." *[Community worker – ICC#6]*

> "I am not very good at computers. But that is ok. My role is to look after my clients. I don't have to be really good with computers but I can do all my reports." *[Community worker – ICC#2]*

These staff members perceived ICTs they used as tools primarily used for record keeping purposes and some community workers did not use the full functionality of the tools available to them.

> "I don't know how we use ORS and SRS data. I don't know what happens to it after we enter it to the computer. All we do is enter the data."
> *[Community worker – ICC#2]*

The reason why these community workers did not have strong ICT use identities may be more linked to the way their role is defined by the organisation than their lack of ICT skills. As these community workers used software applications everyday (e.g. email and Word) they are average ICT users according to their frequency of use. However, in terms of the breadth of use their use is limited. As their role within the organisation is that of an information gatherer and not an

information user they have not had a clear need to strengthen their ICT use. It is interesting to note that they do not consume the information that they gather.

> "No, I don't know if I can do anything with the scales. I know that we can get graphs and things like that. But I haven't used them. I don't think I know how to. I think we can get the trends. Getting trends will be quite useful. So, no I don't really know much about that." *[Community worker – ICC#6]*

Information processor identity: Staff members who worked one level above these community workers are team leaders. They are not directly connected to the client. They connect the front line to the management layer of the organisation. These team leaders perceive themselves as average users of ICTs and they use a combination of software applications. As the data collected at ground level is in multiple formats (Word, email, phone conversations) and as the team leaders are required to formulate reports to the management, team leaders have a strong information processing role.

> "If I want to get a new report now I need to go looking for all the information and then reformat the data to get what I want." *[Team leader – ICC#4]*

In their role as an information processor they convert the data that is gathered at ground level into acceptable formats by the management and funders. It is the responsibility of the team leaders that funder information is supplied in acceptable formats.

There are staff members who display both information gatherer and processor identities. These staff members in the Fundraising and Communications department perform both these roles marginally but are not strongly typed as either role.

7.8.2 ICT enhanced connections among organisation members transcend role (project based)

Some of the staff members at ICC have higher levels of lCT competency than others and these staff members perform hybrid roles within the organisation. There were two instances of these roles observed within this organisation.

The Manager, Fundraising and Communications, performs two technology related roles as a webmaster and the person managing the company intranet. As the webmaster Adrian (not true name) is in charge of managing all the content of the website and has been responsible in selecting a web development tool and exploring hosting options. The role of webmaster complements his communications role within the organisation. Managing the organisation's intranet is limited to setting up folders and providing access to selected staff members. Staff members control the content of the intranet as opposed to the content of the website. In performing these hybrid roles Adrian established connections with organisational members that he may not have done within his role as a manager.

> "I honestly don't see Adrian as a manager. He is more like our website guy, our intranet guy. Maybe because those are the things that I talk to him about." *[Community worker – ICC#6]*

Similarly, the Executive Assistant to the Managing Director also performs the role of an ICT help desk across the organisation. In addition, due to her ICT support role she is also a member of the IT steering committee. Through these two roles she is able to connect to staff members across the organisation more than her role as an executive assistant.

One of the key reasons that these hybrid roles are necessary at ICC may be due to the relationship that staff have with their external ICT team. As this relationship is strained staff members have taken on more technology related roles than otherwise.

"I just quietly go about getting my IT work done on my own." *[Team leader – ICC#10]*

"A lot I have done is outside the current IT structure because I sort of work around it. For example because of our inability to share documents and things like that I started an intranet, this has been going on for about a year and I know that our team leaders really like that. That intranet was done without our IT people (external contractor). I keep them well away from them. I find them very hard to work with." *[Fundraising staff – ICC#9]*

"He (Adrian) doesn't talk to to me as if I am an idiot. He is really nice and tells me what to do." *[Team leader – ICC#4]*

It is also interesting to note that both these people are not extremely technical (IT experts) but are competent users of ICT and are seen as approachable by the staff members. Both staff members who perform these dual roles have not had specialised ICT training, but have used technologies in their previous job roles and are able to connect with others when additional technology expertise is required.

"I come from an advertising background. I have good networks from that time on. I am used to working with creative people. It always comes down to a clear written brief whether it is a press campaign or a website. That way we are in agreement even before we proceed. Time, budget, everything. They might be nerds but they really appreciate that."
[Fundraising staff – ICC#9]

Staff at ICC that perform hybrid roles have access to a broader range of information than other staff. For example as the person who manages the intranet, Adrian is able to have access to information that would support his role as the Fundraising and Communication manager. His role as a webmaster determines how this information would be presented to create positive information about the organisation.

7.8.3 Social actors use ICTs to construct identities and control perceptions

At present the ICC website is the main tool that is used to create an identity of the organisation and also communicate the main information to the public. The website has been in operation since 2008 and has had steady growth of visitors since its inception. This is the main tool that has been used to create public awareness. The content of the website is updated weekly and the stories on the website focus on presenting success stories primarily as opposed to requests for help. The focus of the website is to communicate the things that the organisation does and their success stories. Communication is one-way with minimum interactions with their audience. Although there are several forum topics even the staff interaction seems to be at a minimum level or non-existent.

However, the ICC's identity is promoted through their website as a broad-based organisation, rather than a niche organisation that works with complex community issues. This could be to attract donors from the community who would most likely support a broad-based organisation. ICC's identity as an organisation that has a religious affiliation is also not communicated via their website.

In addition to using information provided by Funding Information Service (FIS), ICC also maintains information on all of their funders. These funder profiles relate to philanthropic organisations (e.g. Todd Foundation, Tindall Foundation JR McKenzie Trust). These profiles are a comprehensive set of information managed on Word and Excel files that detail the preferences of the funders as to what types of projects they are most likely to support as well as information about the projects that they have funded within ICC previously. In addition, they also contain information about the types of information the funders prefer and how they perceive different formats of information.

ICC has adopted 'client directed outcome' practices in dealing with their clients. Community workers conduct two main measures, i.e. outcome ratings scale and session rating scale to measure the quality of the interaction they have with their

client. These scales are then entered into AssessClient software. In addition to monitoring the client's individual outcomes this software also enables ICC to compare national samples of other organisations. ICC uses this to compare their organisation with other similar organisations. However this comparison is not done at the community worker level but at the practice manager level.

> "We can compare a client in our service to a standard set of measures. It is like comparing how good we are with another organisation. How good or bad, of course. We can then see where we are doing well and where we need to improve. Put more effort." *[Practice manager – ICC#8]*

Chapter 8 – Tararua Hospice

This chapter provides a description of ICTs used in the day to day operations of Tararua Hospice. The first section of the chapter provides an introduction to the organisation outlining the services they provide [Sections 1-4]. The second section of the chapter explains how client management, volunteer management and fundraising functions are actioned at Tararua. The rest of chapter has been segmented into four subsections, affiliations, environments, interactions and identities examining how each of these dimensions influence the use of ICTs within this organisation.

8.1   Organisation

This organisation provides services for people who have a terminal illness and have less than one year of life expectancy. Out of their client's 75% are older people and 95% of their clients live in their own homes, as the organisation extends their services to the community. The services they provide include

- In house care – The organisation has 18 in-house care beds for those clients that can no longer be cared for in the community. These are usually clients that require a high level of clinical care.
- Community care - The hospice has 200 clients in the community. These clients are located across four main regions in Hilltown. In addition to providing care for these clients the hospice also maintains a Day programme and provides bereavement support for families.

The hospice is staffed by a mix of full time staff, part time staff and volunteers. The organisation employs full time staff in the roles of volunteer coordination, fund raising, practice and clinical care and administrative positions.

Vignette of a client, below provides an insight into a clients' interactions with this the hospice.

Vignette of a client

Mathew came here because we took care of his sister during her last stages. He was here almost every evening to spend time with his sister and he had a very good idea of what we were doing for her. She passed away while she was in our care and Mathew underwent our grief counselling with us at the time. That was about eight years ago, I think. He helped us a couple of times during Christmas when we had our gift wrapping table near the Toy Factory to raise funds but not a regular volunteer. Unfortunately Mathew was diagnosed with an inoperable brain tumour last year. It disfigured his features and he became very conscious of it. He was never married but he had a lot of friends and some family, mostly cousins. He contacted us when he was told that he didn't have much time. He was also referred to us directly through the hospital because he has been with their team for a long time as an outpatient. Lindsey (Care Coordinator) visited him after he told us that the hospital can do no more for him. We carried out three visits with him to understand all his requirements. He gave us very strict instructions about his visitors, actually it was just one. He did not want any visitors at his house. Sometimes we see this in our clients, some of them want all their family and friends to surround them but others only want their privacy. Mathew for some reason chose privacy and we respected that. Lindsey completed the assessment and at this point he was able to talk and move with a little assistance. So she spent time with him and put together a comprehensive care plan to manage his needs. We coordinated between his community nursing team and his specialist at the hospital. We handled all of his medication including pain management. Three of our staff visited him for regular intervals so that his care needs were met. We provided for all his needs for about eight weeks at his own home because he wished to remain there for as long as he could. His condition deteriorated to the extent where he needed 24 hour care and a lot of input from our clinical team. It was at this stage that we moved him to our in home care. Lindsey had the possibility of this event with Mathew before and he knew that it was only a matter of time. And with the strict instructions that he

had given us we had to explain everything to him fairly upfront. So when he came in to our in home care it was still a part of his care plan and was not a surprise. He was in our in house care for less than ten days and he passed away. I know that he had a biographer from our organisation that was one of the last services he used.

8.2 Volunteer Management

The organisation has 500 regular core volunteers. In addition another 500 volunteers participate in three yearly fundraising events (Lavender Festival, Street Appeal and Gift Wrapping at the Toy factory).

Out of the 500 regular core volunteers, 200 of them are attached to the Opshops (shops that sell donated books, clothing etc.) that are managed in order to raise funds for the organisation. The volunteers that are attached to the Opshops are managed by a part time paid coordinator at each Opshop. The rest of the volunteers are involved in delivery of services at the hospice and also at the day programme. Volunteers who work at Opshops are not regular volunteers within the hospice.(i.e. are treated separately, outside scope of this research) the and within the community care programme

Those who volunteer at the hospice consist of volunteers who serve meals to clients and those who perform some of the below mentioned work. Regular volunteers perform multiple roles at Tararua Hospice.

- Biography service: volunteers record the life of the patient using interviews and transcribing those interviews and the client receives it as a bound book.
- Volunteers help families and clients with reading, writing letters or carer relief duties.
- Volunteers provide a transportation service for clients to the day units.

- Volunteers also provide support in the fundraising events of the organisation. These include the lavender festival and the street appeals that the organisation holds each year.

The day programme of the hospice is a community extension programme, located at a regional site which offers a limited set of activities for clients. The objective of the day programme is to provide the hospice's regional clients with an opportunity for social interaction. In addition this programme is also a mechanism to provide access to Tararua's occupational therapists for their regional clients. The day programme is conducted twice a week for four hours and clients are able to participate in activities conducted by the volunteers. The programme is managed by one paid employee with a host of volunteers providing services. Volunteers provide transportation to clients from their homes, cook and serve meals, provide entertainment and activities within the day. As the hospice itself can only accommodate a limited number of clients due to space restrictions the day programme is used to serve more clients and the staff anticipate the day programme expanding more and to other regions.

In addition to volunteers who are attached to the above programme, the hospice also has a limited number of volunteers who provide bereavement support to families. The volunteers are as well supported as the paid staff and they have access to counsellors to support them cope with the loss of their clients.

Tararua encourages sporadic volunteering in the community. Sporadic volunteers may volunteer for as little as one hour per whole year if they only have that time to volunteer. Providing these sporadic volunteering opportunities enables the organisation to engage a set of people who may not be able to volunteer otherwise.

A snap shot of how volunteers are commonly used at Tararua:

Activity	Day Programme	Biography service	Fundraising events
Regular volunteers	X	X	X
Sporadic volunteers			X

Table 8.1 **Volunteer activities**

Role of volunteer management - At Tararua the Volunteer Coordinator role is a full time position that covers,

- Special events management,
- Daily activities management - volunteer groups are established for each of the functions (e.g. Inhouse, Day programme)
- Volunteer selection, recruitment and training

Volunteer recruitment is mainly done through their website and via a referral agency. This organisation has a waiting list to become a volunteer and often refers volunteers to other non-profit organisations that require them urgently (e.g. hospital, Blood and Cancer units at the hospital). In the discussions with the volunteer management staff and volunteers several reasons as to why Tararua is more attractive to volunteers than similar organisations were highlighted.

Introduction to the organisation	The majority of the volunteers have had a personal introduction to the organisation at a difficult time for them. Therefore the volunteers have already forged a bond with the organisation and their volunteering role becomes an emotional response associated with returning a favour, instead of a purely volunteering commitment.
Diversity of roles on offer	Volunteering roles that are offered at Tararua hospice are diverse. People can volunteer for a range of tasks from providing transport to cooking of meals, organizing activities to arranging flowers and running activities of the day centres. This offers volunteers a choice of roles that they can volunteer for. This diversity of the roles offers a better utilisation of skills to the organisation.
Perception of volunteering hours as a currency	Coordinators of the organisation view volunteering hours as a form of currency. In every function of the day to day running of the organisation coordinators try to utilise this currency in order to drive their costs down. In comparison to the other three organisations this unique mind set enables them to utilise volunteers in positions that may not traditionally be used. e.g. car cleaning volunteers.
Well Defined roles	Volunteering roles are well defined. Each role is associated with primary skill of a volunteer. Each of the volunteering roles has a specific role description and a measurable outcome associated with it. This provides volunteers with a clear set of expectations and information on how their role will add value to the organisation's objectives. This clear role definition is another reason that motivates people to volunteer for this organisation.
Two modes of volunteering	Tararua Hospice caters for both regular and sporadic volunteering. Regular volunteers volunteer either weekly or monthly depending on their desired schedule. The sporadic volunteers can volunteer as less as one hour per year if they so wish. (e.g. one hour of time for the street appeal)

Table 8.2   Attracting volunteers to Tararua

ICT use in Volunteer Management: Tararua uses a combination of ICTs in volunteer management.

ICTs	Primary Use
Volsoft software	Managing volunteer information
Microsoft Outlook	Manage client and staff interactions
Microsoft Excel	Managing volunteer schedule

Table 8.3   ICT use in volunteer management

Managing volunteer information – Volsoft software is primarily used to manage information about regular and sporadic volunteers. Tararua maintains basic information about their volunteers, name, address age, next of kin, emergency contact information etc. In addition staff also maintain a list of the different skills and hobbies that the volunteers have. This enables the staff to search on particular skill that is required at the hospice. The number of hours that each of the volunteers contribute is also recorded as part of volunteer information.

Scheduling volunteers – The Volunteer Coordinator maintains the volunteer schedule of the organisation. This schedule is communicated to other departments that utilise volunteers in their functions. Each department will indicate to the volunteer coordinator how many volunteering hours would be required on a monthly basis, activity and an indicative time scale (e.g. 200 volunteer hours for 5th-10th March, Street Appeal). The volunteer coordinator emails the volunteers that there will be 100 slots and 200 people required and the volunteers register for the slots via email. Sporadic volunteering slots are allocated in a time table attached either to a particular event or to the regular activities. This information is shared with the potential volunteer pool simply using emails and stating the number of slots that are available.

Communicating with volunteers. Coordinator maintains several email distribution lists to segment the volunteer groups and uses email communications as a way of generating interest in other ongoing volunteering activities.

ICTs are used in a complementary manner – e.g. Volunteer Coordinator will use VolSoft to identify all the volunteers that have a full driving license, create a

distribution list in Outlook for those and email them when the day programme requires additional drivers. The driving slots will be recorded in Excel as each of the volunteers respond and the Excel sheet is communicated to rest of departments to indicate how the driving roster is filled. The number of hours each volunteer contributed will be entered in VolSoft.

In comparison to the other organisations in the study there are two key differences in the way Tararua utilises ICTs within volunteer management function. As they utilise an information system to maintain volunteer information they are able to identify the changing trends in volunteering early. The volunteer coordinator explains,

> "for example we can clearly see that the traditional profile of the volunteer is now shifting. Ten years ago it may have been a newly retired woman in their mid 60s but as the age boomers age, they are now on a cruise seeing the world. Now our standard profile is a mid 40s woman or a mid 20s man, it is shifting, but it is someone who is managing their career and family and wants to contribute to the society. They may not even be able to volunteer regularly. This is why we offer different options." *[volunteer services staff - TH #4]*

The existing volunteer information management system plays a vital role in facilitating this sporadic volunteering. Tararua has manages a large number of sporadic volunteers and they have been able to do so without adding a multiple volunteer administrators.

8.3 Client Management

Client Management in Tararua Hospice has moved from a paper based system to a client Information management system. The primary motivation for upgrading to a client management information system was to ensure that care plans can be updated in a timely manner. Prior to implementation of the information system,

staff had to invest time and effort to retrieve information about their clients as information was held in forms of physical files and paper. Some of the challenges that staff explained with their manual system,

- A single physical file was organised with all records of the client. Each document was organised in chronological order. In order to get an overview of the client staff had to review the entire file which was time consuming.
- When a care plan was updated it was time consuming to trace back information history.
- Administrative efforts had to be duplicated although two clients may require the same support.
- Communicating client history to the hospital was difficult.

Client management software implementation was completed over a one year period. Selecting a cloud based information system (HospiceClient) fast-tracked the implementation process and ensured that the organisation was still able to implement an information system without full time IT staff. HospiceClient also enables the organisation to share data about their clients with GPs, District nurses and hospitals without developing an additional interface for data sharing. Having a single client record ensures that staff members uploads all scanned documents to the electronic client record maintaining a most updated version. Staff training and ensuring that staff use the information system as part of their daily work has been one of the key challenges in their implementation. In order to meet this challenge the organisation identified and trained a set of super users and the super users in turn trained other users. The fully live system went ahead for new patients ;older patients were entered into the system afterwards.

8.4 Fundraising

Fundraising function at Tararua is managed across two distinct roles, Community Engagement coordinator and Donor relationships Database Coordinator.

Fundraising staff utilise Microsoft Outlook, Word and Excel and the Fundraiser database. Fundraising staff also use a range of social media Facebook, Linked in and meetups to gain access to possible donors. Fundraising staff use other organisational websites to promote awareness of their funding needs. Staff provide their website address to other organisations to hyperlink so that they can promote the Tarura website. Staff also use Hilltown events website EventZ to promote the Lavender festival.

Operational Area	ICTs used	Key functionality
Client Management	HospiceClient	Managing client information, maintaining an updated care plan
Volunteer Management	Volsoft MS Excel	Maintaining volunteer information, scheduling
Fundraising	Fundraiser Pro,	Maintaining donor information, Donor analysis

Table 8.4   Operational areas and ICTs used

Microsoft Outlook email distribution lists are established and used by staff at the hospice.

Refer Appendix 1 on how the organisation utilises social media and their website in fundraising efforts.

8.5   Affiliations

There are three main types of external affiliations that are evident in this organisation, affiliations with other non-profit organisations, relationships with organisations that are within the same geographical proximity and affiliations with professional organisations

8.5.1 Social actor relationships are shaped by networks of organisational affiliations

a.   Affiliations with other non-profit organisations

Hospice staff maintain strong relationships with other non-profit organisations across the sector. This is evident in the volunteer management, fundraising and client management areas of this organisation.

Staff at Tararua perceive these external relationships to be of value in multiple ways. These relationships add direct value by way of providing a service that their clients may access or they may provide an indirect value by way of comparison of services. This interaction results in a communication either to clients or to the rest of the staff by way of explaining a new service offering from another organisation or by assessing if a similar service should be offered at Tararua.

The information flows between Tararua and these organisations are not prescribed by either of the organisations but occur in a sporadic manner depending on a client, incident or service. The initiator and responder in these affiliations seem to be inter-changeable depending on the need and the channel of information exchange is primarily via email. As interview participants explain the initial contact is always a face to face contact or a telephone call to establish a working relationship and then emails are used to exchange information as it provides an audit trail and enables another staff member to be invited to the discussion.

Further Tararua is a member of the hospice group (Hospice New Zealand) and staff maintain connections with other hospices through monthly meetings. The Tararua administrator explains,

> "when I go to these meetings yes, it is mainly to talk about common issues that we have about hospices. But sometimes other administrators might also tell me something like, ah, one of our clients are thinking about

moving to your area cause you are closer to their doctor. So it's like a heads up." *[Administration staff– TH #9]*

Similarly the practice manager at Tararua has strong relationships with other hospice organisations within the country. She explains

"for us to operate in the way that we need to it is very important to have a very good understanding with other people who work in the same sector. Mainly because our clients will come into contact with them at some point or another. So I make sure that I know these people". *[Practice Manager - TH#1]*

The Practice manager at Tararua also attends monthly community meetings where other non-profits meet in Hilltown and maintains up to date information on what services these organisations provide.

At Tararua hospice has a large section of their clients who live within the community with advanced needs. Therefore it is important for the organisation to be aware of other services that their clients can access in order to ensure that Tararua is not duplicating the same services and to ensure that their clients are receiving an expected level of service.

Staff at Tararua understand that technology used in other non–profit organisations may be a limitation for exchanging information about services they offer in the community. Tararua staff use community meetings and face to face interactions as a way of supplementing this information requirement. Their motivation for maintaining this high level of interaction with these affiliations is to ensure that they are able to service their clients in an efficient manner.

"we have emails. I know that they (other non-profits) have emails too but some of the people in these organisations work better when you meet them face-to-face. For example they may not have someone to update their website regularly. I know that we don't. So they may have started offering this service that would be beneficial to our clients but that it not

listed on their website. But if I meet them that will be the first thing that they will tell me". (*TH- Staff #3*) [*AFF-PROF*]

b.   Affiliations with professional organisations

Staff at Tararua maintain a network of affiliations with professional organisations that are directly related to their job at the Tararua. For example the volunteer manager is a member of the board at Manage Volunteers. This is an umbrella organisation that recruits volunteers on behalf of all non-profit organisations in the Hilltown region. Other non-profit organisations inform Manage Volunteers when they have vacancies for volunteers and Manage Volunteers advertises these positions on their website. When volunteers apply this organisation makes the initial contact and provides them with information about the role. In addition this organisation maintains an online database of volunteering opportunities for potential volunteers. Being a board member at Manage Volunteers provides insights into volunteer management for this volunteer coordinator and also enables her to maintain a network in the non-profit community. Although Tararua has volunteers waiting on their waiting list, these activities are done mainly to ensure that the visibility of the organisation remains with potential volunteers. As the volunteer manager explains,

"the success we currently have with attracting volunteers is because of the work we have put in over the years. I can see this society changing and their thinking changing, now most people want to travel, or work part time. Retired people are not guaranteed to volunteer anymore." [TH – Staff #4]

Despite not having a professional forum for fundraising group they maintain a set of professional affiliations through other professional organisations that have an established forum. Staff member explains,

"We don't have a dedicated group as such but what we do is try and to go to the meetings that have a professional link. See every month there is monthly breakfast meeting for real estate people but anyone can go

provided they register on their website. So our fundraising staff make sure that they go to that. We go mainly to share stories." [TH- Staff#3]

Staff at Tararua emphasise the importance of these professional affiliations as a way of maintain contact with external organisations which are not within the same sector [hospice/non-profit] as they are in. These interactions provide staff to engage in ICTs that are out of the direct responsibility of their organisation.

c. *Affiliations with organisations within the same geographical proximity*

The volunteer Coordinator at Tararua also acts as a volunteer provider for other non-profit organisations in the area. As Tararua have a wait list of volunteers who are waiting for permanent volunteering roles, the coordinator liaises with other organisations that require volunteers and are within the same geographic region as the organisation.

Similarly fundraising staff have well established connections with Rotary Clubs, Lions club and other community organisations that operate within Hilltown. Fundraising staff explain,

> "I go to some of their meetings. Most of the time it is to get contacts and not actual money itself. And also it gives us visibility in the community without spending a lot of money."
> [*TH-Staff#5*]

(d) Value of affiliations

Within Tararua the value established through affiliations are multifaceted. Staff maintain a flexible perceptive of how each of the established relationships may become valuable. Fundraising staff explain,

> "I know that they can't give us money. Not all of them can. So for me, I look at it more broadly, can they give me a volunteer for one of our events, can they give something for our OP shop, can they put a link of our website in

their website ?. The way I see it each contact can do something for us so it is not just about donations for us." (TH- Staff#5)

Staff explain that they perceive value of these affiliations beyond an immediate monetary value. At Tararua affiliations are perceived as a means of accessing a service, as a way of increasing their visibility within Hilltown and also as a way of promoting a positive image of their organisation and also as a way of gaining access to a second or third level contact. Often staff use these affiliations to compare their services or practice to that of an external organisation. Staff understand that the nature of these relationships would not immediately result in a donation or a service but they envisage more long term benefits in establishing these relationships.

It is interesting to note the comprehensive understanding that the staff have in the way of assessing the value of a relationship which is not common to other organisations of the study. However some of the staff were keen to explain that there is a negative element to this level of value association.

> "see, we want everything for free. That is a problem for me. I think we should be ready to pay for professional level services. I will give you a good example. I found a professional web designer to update our website. He is also a photographer so I got a deal where he takes photos and also spruces up our website for a fee. When I sent the proposal through one of our directors said that he has a nephew who is doing a computer course at the polytechnic but can do it for free for us. Did it happen, no because he is student he is very busy and can only do it at the end of the year during his break. So we have to wait because it can be done for free." *[Administrative staff – TH#9]*

e.   *Use of external affiliations to modify ICT use behaviours*

Tararua has an external view to using their ICTs and use affiliations as a point of comparison to how they use the same piece of software differently. Tararua used

one of the non-profit organisations that they work with to compare their use of the client management system and its processes.

Practice Manager's use their professional affiliations within these organisations to establish the contact person. The value of this affiliation to Tararua is that they will be able to compare their processes to that of a similar organisation. There are two elements to this comparative behaviour within non-profit affiliations one is to understand the differences and the other is to use the affiliation to correct internal ICT use practices or ICT user behaviours. For an example at Tararua they identified a hospice that delivers services up north that manage to enter all complete client information to the system in a timely manner and to have a complete client record of their clients on an on-going basis. Not having a data entry backlog is important to the organisation and so is maintaining a complete set of client notes in a timely manner as the condition of the clients attached to Tararua can fluctuate within a week and a client may transition to a primary care provider. If there is a backlog in this data entry during these transition periods the client information remain incomplete and the staff have to refer back to hard copy files and have incomplete information in the client's care plan.

One of the issues in updating these information is that the nursing staff say that it takes a longer period of time to do them. By comparing themselves to another practice they are able to understand how this practice can be improved.

> "I spoke to my staff and they told me that it takes them about one and half hours for them to update a client record correctly. I spoke to this woman up north, she works in a hospice, and she said bollocks, if they are taking more than 25 minutes they are wasting their time. So I am brining her in next week for a talk with our staff. She is going to tell them, not in a bad way but she will laugh and say am doing the same job as you and here is how I do it." (*TH- Staff #1*) [*AFF-PROF*]

Using an affiliation to benchmark themselves against ICT use and then using that affiliation to modify ICT use practices gives the organisation an external orientation. This approach is also considered more receptive to some of the staff who may be have issues in using technology. Further the manager distances herself from the perception of a directive in correcting user behaviour as this is correcting user behaviour by comparison. She explains

> "If I tell them, then I am the baddie. I don't mind being the baddie sometimes but not all the time. "

The value of this affiliation is to compare themselves against another non-profit that offer similar services and to use that affiliation to correct user behaviours.

8.6   Environments

8.6.1 ICTs are part of the organisational environment.

At Tararua hospice ICTs are a part of the organisational environment as technology is an integrated part of their client management, volunteer management and fundraising activities. Following section explains how ICT investment and ICT support enhance ICT use.

ICT investment: There are three main components of the ICT investment, investment in hardware, software and ICT support. The initial ICT investment in hardware in the organisation comprises of the setup costs for networking infrastructure and computers. However these cost are not visible as it is included as part of their assets in the property, plant and equipment in the financial reports. Staff interviewed provided a rough estimate of less than 5%-10% of the total revenue in three consecutive years has been spent on IT infrastructure costs. In the year 2005-2006 the organisation has collaborated with another hospice in the region to share a file server in order to keep IT costs down.

Cost of software comprises of licensed software products and the costs that the organisation pays per client in their client management system. Charges for HospiceClient software is a set monthly amount per patient record per month.

In addition to the ICT investment in hardware and software the hospice also spends its revenue on ICT related personnel expenses. An external organisation maintains the network infrastructure of the organisation and provides helpdesk support to its users for a yearly flat fee contract.

Exact figures with relation to ICT expenses were not shared with the researcher.

ICT support:

Both formal and informal ICT support structures are evident within the organisation.

Type of support	Provider
Formal ICT support	
1. Network and IT infrastructure	External contractors
2. Applications	Software vendor
Informal ICT support	
3. Expert users	Internal organisation staff
4. Service champions	Internal organisation staff

Table 8.5   Types of ICT support

1. Network and IT infrastructure support – A local IT services organisation has been contracted to provide technical support. Their services include maintaining the servers, backups and ensuring that the organisation's network is running without downtime. The local contactors provide user support for printers, computers and some applications. Staff directly contact the contractors or they may first contact the hospice staff and clarify their ICT issue prior to contacting external provider. The external contractors maintain a helpdesk support external to the organisation and also provide onsite support depending on the nature of the call.

"If the printer is down I call them and they are helpful."

"When I can't connect to the network, I just ring them and they fix it."

Staff explained that this arrangement works at a relatively satisfactory level.

The hospice has provided the contractors with a clear boundary of responsibility. The contractors only deal with day to day support issues and ensuring that the network has a minimum downtime. The contractors are not obligated to guide the ICT directives of the organisation and neither are the expected to provide support to achieve organisational goals and objectives.

2 .Application support – within the three main functional areas of the organisation there are information systems associated with each component, client, volunteer and donors. These information systems are supported by external vendors and key staff members act as a buffer between staff members and vendors.

Informal ICT support roles are evident within the organisation.

3. Expert users – There are several staff members at the hospice that have IT expertise and knowledge. These users assist other staff members when the local contractor is unable to help or when the staff contact them prior to contacting the assigned helpdesk. For example Lauren is an expert IT user and has been with the organisation for 12 years and staff members contact her when they cannot resolve an IT problem prior to contacting an external service provider. Lauren explains,

> "They (contractor) are good but they are Linux boys. It is a Linux shop. We
> use Microsoft. Sometimes they can't quite figure out what is wrong. Take
> the printer problem we had. They spent about 4 hours with Roy and still
> couldn't get it to work. I just changed the font on the Word document and
> it worked." *[Fundraising staff - TH#3]*

These expert users act as a buffer between the external contractors (and software vendors) and ICT users. They carry troubleshooting on behalf of staff

members prior to contacting external organisations. At this organisation expert user support is a secondary level of support that connects the users and the contractors. Contractors benefit from this relationship as often the expert users are onsite and this prevents them from making unnecessary site visits which are costly to them. Therefore the contactors have an informal arrangement with the expert users and use them as indirect problem solvers and also use them in isolating and diagnosing a problem.

> "Let's say they are getting a lot of calls from our people saying the network is down. They (contractors) will call me and ask me if my workstation is connected. They will get me to run some ping commands to see where the problem is. If I am not busy I am happy to help. I usually learn something from them." *[Fundraising staff -TH#3]*

In addition to this secondary level of relationship business unit owners (service champions) provide ICT support to end users.

4. Service champions – are Business unit owners that provide ICT support for each of the applications that is associated with their functional departments. Three business unit owners have championed three separate applications client management, volunteer management and fundraising.

Kate is the head of practice and has championed the use of client management system with the organisation. Whenever users have a problem with the client management system they contact Kate directly. Kate explains,

> "they (staff members) know that it is my area and they directly come to me. I think that they also know that if they contact the helpdesk (software vendor helpdesk) that the help desk people too will first come to me to find out what is wrong. So they figure that it is easier to ask me." *[Practice manager – TH#1]*

These business unit owners do not receive any additional pay for providing this level of support for the users. However they provide that support because they understand that it is crucial in order for the users continue using the system.

> "see the way I see it I'd rather they come to me and get it sorted quickly than they spend half a day either trying to do it themselves or by getting frustrated because "the system doesn't work". *[Practice manager – TH#1]*

Service champions in this instance act as a buffer between the end users and the vendors. Whilst supporting end users with their queries the business unit owners also provide feedback to the vendors on increasing the usability of the software and provide an important user's perspective on what works and what does not. This interaction between the service champions and vendors has become beneficial to the organisation. Currently the vendors support the service champions extensively by helping them create new reports for the changes in funding requirements as well as by seeking their feedback on revising software.

Overall the end users are supported by an interconnecting mesh of external (formal) and internal (informal) support structures. When the users are aware where they should go to get assistance particularly at multiple levels it seems that when they are better supported and are more likely to view technology positively. Primary reason for this is the availability of staff who are capable and willing to support users who are attempting to manage technology. Business unit owners have extended their leadership functions to provide leadership in IT support area in order to ensure that the staff are able to perform their job functions. This extension of leadership is unique in Tararua hospice and was only seen previously at a single department at Integrated Community Services.

It is interesting to note that the users have not been officially informed of these various support levels. They are only aware of a direct support level with the external contractors but the other two secondary support levels are established via informal connections and now have become institutionalised. Business unit owners and expert users have become informal leaders in introducing

technology to the organisation and supporting users is their way of making sure that the users keep using ICTs in their job functions.

8.6.2 ICTs are part of the industry, national, and/or global environment

ICTs are part of the non-profit sector environment and staff at actively seek these sector wide ICTs (accessible to the whole sector) to integrate them into their ICT use practices. Following are several instances of how Tararua hospice has utilised ICTs that are available external to the organisation.

- *Free software updates* – all non-profit are able to get licensed Microsoft products through a local non-profit that connects licensed proprietary software. Tararua staff utilise this facility to update their software and to trial different packages. The expert users trial software that they are interested in and may or may not be directly related to their job functions. The expert users also decide which software they would get at a reduced rate. Expert users manage this relationship with these external organisations. Acquisition and allocation of this software is dependent upon expert users.

- *Use of free webhosting* – organisation's website is currently hosted without charge by a for-profit organisation. There are two elements to this a. the organisation has been offered to use about 40MB and due to the existing web infrastructure it only uses about 4-6MB at a maximum, underutilising this facility [this again goes against the principles of non-profit] b. This arrangement is similar to that Integrated Community Services have set up.

- *Shares server capacity with another hospice* – Tararua at present shares server space with another hospice in order to keep their costs down. The arrangement works well because it enables this organisation to share both the server as well as the service provider with another hospice. It is interesting to note that out of the four organisations in the study that this is the only organisation that has done that. Although we expected more

organisations to be having strong ICT sharing relationships we have not seen it.

- *Use of funding Information Service* – funding information service is a national database that is available for non-profits. This database maintains grants offered to non-profit organisations. Tararua staff utilise this database primarily in seeking funding. Their use of this database is different to that of Integrated Community Services. Whilst ICS uses this database to plan their funding requirements on an annual basis, the staff at Tararua scan this database during the entire year looking for whatever grants and funds that may be applicable to them. Having this resource as part of their external ICT environment enables them to seek ad hoc funding.

- *Use trademe accounts to raise funds* – this is unique to Tararua hospice. There are hospice shops associated with this organisation and those shops sell donated goods to raise money towards the daily operations. At Tararua they use an online auction site, trademe.co.nz to gain a higher price for some of their more valuable donations. A dedicated full time person travels from throughout all their opshops identifying items that may be collectibles or items that can be sold online for a higher price than what they may get in their shops. These items are then photographed and details are added to the auction site. There are two elements of interest associated with their use of trademe. 1. This organisation has created a full time position that will focus on using an external ICT infrastructure. Whilst the to the other organisations in this study too has access to this site this is the only organisation that fully utilises this facility. 2. The expert users within the organisation is aware of the trademe account and often place bids on items they wish to purchase. These experts users communicate their interests to the person who manages the account who in turn alerts them when an item of interest is added to the auction.

- *Uses commercial /organisational websites for their fundraising efforts* – The fundraising team at Tararua conduct fundraising events throughout the year. In order to give publicity to these events and to promote them in the for-profit organisations staff at Tararua utilise websites of for-profit organisations. Tararua staff utilise two different types of websites to promote their events, public sites and for profit sites. When the funding staff approach for-profit organisations to promote fundraising events they expect the organisations to either provide a monetary or a non- monetary contribution. Staff suggest promoting the event on their website complete with content and a URL to the Tararua hospice.

- *Public sites* – they utilise public websites similar to eventfinder.co.nz and scoop.co.nz to promote their events. As the hospice is a charitable organisation and as these fundraising events do not charge entry these public websites promote their event without a cost.

This cross promotion of events in other websites is unique to Tararua hospice. The other three organisations despite having similar levels of access to these external events do not use external ICTs to their best advantage.

8.7 Interactions

The interactions are governed by the needs of the client and the organisation.

8.7.1 ICTs become part of the interaction process, (interaction technologies) as people transform and embed available informational resources into connections and interactions

Individual users transforming existing informational resources are evident in this organisation. This is done as a part of using existing ICTs for their core activities (volunteer management) and also to overcome issues in use (fund raising).

Volunteer management:

This organisation uses Volsoft as their primary tool for managing volunteer information. Volsoft software has a functionality that enables volunteers to enter the number of hours that they have completed and accept new hours online (using the Web Assistant function). However this organisation at present does not use this function.

In place of using the Web Assistant function the volunteer coordinator has set in place a process that captures the same information via emails from volunteers. Organisation prefers emails as that is a singular format that all volunteer find easy to work with. It eliminates the need to train volunteers on using Web Assistant and overcomes the issue with volunteers not having proper internet access (e.g. slow connections). Email is also identified as fast response channel that enables the volunteer coordinator to harvest the required hours quickly. The volunteer coordinator explains that that an email template can be modified to communicate future events and can be personalised with ease. These emails communicate information about the upcoming events, dates and vacancies available at each slot/hour and the specific skill/task.

The Coordinator harvests the information sent via the volunteer emails to update a roster (an Excel sheet) maintained outside of VolSoft. This roster is communicated to other departments within the organisation and the finalised roster is entered into Volsoft. Despite Volsoft having the functionality to perform all of these functions this organisations' use of the software itself and the associated informational resources has been transformed to suit their requirements.

Using existing ICTs as a combination of information resources and interactions is also common within this organisation. Existing information within VolSoft is harvested to create email lists that can be used to access different types of volunteers (e.g. geographical proximity, skills - driving)

In order to facilitate time critical requests the Coordinator maintains an email mail list of a second group of volunteers who are on call and who live within close proximity to the organisation. These volunteers receive emails from the Coordinator that needs to be filled within hours of notice.

> "Because of the severe vulnerabilities of our clients we really encourage volunteers who do not feel well to keep away. So sometimes there can be quite a shortfall if a couple of the allocated ones have a cold or a flu and if they are needed within hours. I do have volunteers who live close by and are on call so I email them at times like that to get then quickly" *[volunteer services manager – TH#4]*

In maintaining this email list the volunteer coordinator uses the information that volunteers provides as part of their basic information and stored within VolSoft. When a volunteer takes up one of these emergency slots, the hours they contributed is updated within VolSoft by the volunteer coordinator.

Use of emails to communicate with volunteer is becoming a standard practice within this organisation and is embedded to the practice of volunteer management. The volunteer coordinator explains,

> "Actually the whole of last year I have not posted more than a single paper form. And with the last intake of volunteers we only had one person who did not have internet access. So I am now tempted to tell them (potential volunteers) that you have to have internet access to volunteer cause it is so easy to flick out an email to them. So whenever I email something to this group I have to remember to post something for this one woman volunteer."

Fundraising – At present there are two components to the fundraising department's functions. One, the actual fundraising and its associated set of activities, two, recoding of the donations received. Fundraising staff use Fundraiser to maintain information about both these functions. However this is

not a satisfactory arrangement as every donor entered into the database does not result in a donation. This creates a set of issues for both teams

a. Fundraising team needs to maintain their set of contacts as they may result in a future donation or a contact

b. "Fund recording team" (TH staff concept) analyses their data in a period manner to see what their donor characterises and this does not reflect a correct picture as potential donors are within the same database.

In the information reshaping behaviours the fundraising team manages their set of contacts separately in Excel sheets and once they have resulted as an actual donation they move the donor information to the database. Within this interaction both set of users reconcile their data to ensure that a correct funding profile is generated

Ginny explains "I take a Excel sheet from our records and Simone takes a printout from Fundraiser and we manually go over to check if there are overlaps. It is not a good system because all the effort that we put into get a donation is not there. Say for example, we have spoken to Mr. Peterson 5 months ago and he is only giving a donation this month. So his name comes as a new donation but unless one person in our team remembers that we spoke to him 5 months ago our effort is not shown. Basically we need something that ties these two processes together. For that right now we use Excel spread sheets and reports." *[Fundraising staff – TH#3]*

Donor analysis – Although the organisation has a donor database, analysis of donors need to be undertaken in a period basis.

> "honestly, we can do with a age analysis of our donors. We have had some donors that have given us just 5 dollars in the last five years." *[Fundraising staff – TH#5]*

Staff member working with donor database explain that there need to be an analysis and identification of different mechanisms for donors.

"we keep sending the new letter to everyone. Sometimes I do wonder if they even read it." *[Fundraising staff – TH#5]*

Identifying and categorising donors as frequently donate or by the actual amounts they donate does not seem a possibility at this stage due to several reasons.

- Donors make both monetary and non-monetary donations and both types of donations are valued by the organisation.
- Some of the donors are also volunteers and exist in both donor and volunteer databases.
- Organisation values long term relationships with donors and although some donors have been inactive for a long period, fund raising staff are reluctant to categorise them as they may have donated good to op-shops. Op-shops do not keep track of donations they receive in terms of donors.

Client Management - There is one exception to this type of relationships where staff members have to re-craft information and that is in client management. As the clients of this organisation can be in transition between hospital and the client's home the information exchange between the hospital and Tararua is pivotal. At present the organisation has attempted to provide an interface to hospital staff, where when a client of Tararua is admitted to the hospital there is a user interface flag to indicate that this client has received services from Tararua. Similarly when the client is in the community general practitioners have access to their client records, intervention by non-profit organisation staff at information exchange.

8.8 Identities

8.8.1 Social actor identities have an ICT use component

Organisational members have strong identities both in terms of their ICT use and their association with clients. These identities can be identified as client facing

users, organisation facing users, external facing users by their association of ICT related identity.

Type of user	Level of comfort with ICTs used	Self-identity
Client facing users	Low to medium	Associated with the client interaction.
Organisation facing users	Medium to high	Takes on an information provider identity.
External facing users	High	

Table 8.6   Identity and ICT use

Client facing users – These users can be primarily identified in client facing roles. The majority of these perform client facing interactions and their identity is closely tied to that of a "carer" or "care provider" role. Staff member explains,

> "I can honestly say that am a very low level IT user. The only thing that I do, is enter case notes of the clients. I use the two finger typing method to get it done. I think it is because am more interested in the client. I work with them and I know everything about them. So I don't really see need for me to up-skill". *[Ward clerk – TH#6]*

Client facing users' identity has a stronger association with the care for client than an association to ICT. They perceive their role as a "high touch" role and view ICTs as a barrier rather than an enabler to perform that role. They perceive ICTs that they are required to use for their role as an add-on and not an integral part of their work. When implementing Tararua's client management system these users were identified as most resistant to use ICTs. The impact of technology in improving the level of care to their client's needs to be clearly demonstrated in order for these users to embrace ICTs within their role.

Organisation facing users –These users work mainly in organisation facing roles and understand the use of ICTs in their work. These users use technology in an organisational prescribed manner and their use of ICTs is linked to the role that they perform. Staff member,

"I only use Word and Email. That is all that I need. I type all my reports in Word and save them and mail them. So I am very good at those two but not so much in others". *[Administrative manager – TH #9]*

These users interact with external organisations in an organisationally prescribed manner and within their job role. Their interactions with external organisations is limited to already established relationships.(e.g. – funder). When they interact with specific external organisations they serve an information provider role. Client facing users rely on these users to interact with external organisations on their behalf or may have limited interactions with them. Organisation facing users have stronger association of ICTs use as part of their identity.

External facing users – external facing users displayed the strongest ICT use identities in comparison to the two previous types of users. External facing users in this organisation did not have daily interactions with clients and were either one or two steps removed from a daily client interaction. One key difference between these users and others is that they extended their job role to provide ICT support to other users. One of the external facing users explain,

"oh, yes, I help everyone with their IT problems here. When something is wrong, instead of trying to get it done themselves they will give me a ring and tell me that it is not working. Sometimes it is as simple as mail merge. I don't mind, I know that they need a bit of IT help. Not all of us have the same skills level anyway. " *[staff member – TH#3]*

In comparison these users when interacting with external organisations play a negotiator, information gather role as opposed to an information provider role. In addition to above role based identities, three ICT related identities below were evident, expert user identity, identity related to a previous job and ICTs extending the organisation member role.

Expert user identities

Some of the external facing users and organisation facing users are expert users. Expert user identity is strongly related to ICT use and these users are identified by both external and internal staff members.

For example Volsoft has an online support group in which Erin is a member and she plays an active role in that online community. Volsoft the software company identifies her as an expert user as she has been using their software for a long time and as she is an active contributor. This expert user facet of her identity is enables her to gain organisational value.

Similarly for HospiceClient and Fundraiser software company contact the practice manager and fundraising person. They are identified as "most valuable person" by HospiceClient and her opinion is often sought after Emma explains

> "let's say that they are thinking about adding a new feature they may either give me a call or may ask me to test their beta version. The way I see it, it is personally beneficial to me but also to the organisation. I may checkout the feature but in exchange they may accelerate a report for me. So it is a win –win for both parties." *[Practice manager – TH #1]*

In certain instance these super users are sought after for their technical expertise but in relation to the other organisations. For example Fundraiser (software vendor) often contacts Jenny if there is a problem with their software in other organisations to check with Jenny as to if she has encountered the same problem.

Expert user identity extends across the borders of their own organisation to a sector wide identity. Their opinion of the software is sought after and in exchange they are able to gain an advantage to their organisation. Often these advantages are linked to an organisational task e.g. creating a new report, accelerating a service level request. Staff members "trade" their opinions and build informal relationships that have organisational benefits.

Identity related to previous job

Some staff members were able to trace their ICT related identities to a previous job held at a different organisation. When they have been introduced to ICTs within a similar role they were able to identify the most suitable application for their information requirements. Volunteer Manager explains,

> "Before I was here I worked at another hospice for three years in Rotorua and the CEO there was heavily in to computers and he did research to find the best database. He introduced Volcare to me. So that database worked really well. When I came here they had the volunteers on Fundraiser. We have used it in Rotorua as well, so I have experienced both (software) and I knew how different they were. So within a week they (Tararua Hospice) agreed to buy Volcare programme. Now I have it and it has just been great." *[Volunteer services manager – TH#4]*

Users also explained how a previous role needed to be changed in order to progress with ICT use within their role. Most common example iterated were the narrations of how ICT use was limited by the person who held their job previously.

> "The woman whom I took over from she had been in the role for 20 years and she did not know how to use a computer. So I took over the role with little bits if cards with green, yellow stickers on people's card but there was no corresponding thing to tell me what the stickers meant. So I took over from that and I was her manager. And so we got this database and she would not use it. That is a stunning example of where a person who has everything in her head can hold the organisation for ransom. So when she left we could change things."*[Volunteer services manager – TH#4]*

ICTs extending role of organisation member

It was evident that ICT use has extended the role of staff members in some instances.

For example Alison's identity (Volunteer manager) has also changed from the person in charge of the volunteers to person who is facilitating the services. As the volunteers of the organisation has become a component of every activity in the organisation and she has facilitated by providing the processes that enable the organisation to utilise volunteers. Her role has "transcended" to look at each project now as opposed to managing volunteers as a job. She now perceives her role not as managing volunteers but as facilitating events across the organisation in which volunteers is one of the resources.

8.9 Implication findings

We have used the social actor model to analyse ICT use behaviours of Tararua Hospice and there are several implications of these findings for the organisation.

Environments – Having a multilayered ICT support structure has enabled Tararua to ensure that their staff are adequately supported in using ICTs in their functional areas. The support that internal staff provide is directly applicable to the work that the end users do and addresses a difficulty or a barrier that they have encountered thus enabling them to move forward. In the absence of an in-house IT department or an ICT training budget these staff members who provide ICT support, play a vital role in integrating ICTs in the organisation and encourage ICT use. However the negative aspect of proving this type of informal ICT support is that those users who provide support can be overwhelmed by requests and may not perceive the role that they play in a positive light when considering their work load. As the organisation does not reward these staff members in monetary terms, the support that they provide can erode with time. These users expect that, with time the level of support they provide will become less as end users get more used to ICTS they may require less support. However as a sector, these organisations experience high staff turnover and it may prove to be difficult to sustain a high level of informal ICT support in the long run.

Identities – One of the key implications at Tararua is introducing the perception of value of ICT use, for client facing users. The role of ICTs need to positioned as a tool that improves quality of care and the value that it contributes to clients, need to be highlighted to ensure that client facing users continue to integrate ICTs in their daily work. As the staff members become more mobile and distanced from the organisation, in future this may become a challenge.

Affiliations – When viewed as a whole, the interconnecting affiliations that the organisation maintains is a set of connections to the external environment. However as these connections are held at individual staff member level the actual value that these connections derive cannot be ascertained easily. Tararua at present has identified that each of the affiliations has more than a single value associated with it and this is a significant realisation in a non-profit organisation where a single affiliation can play more than one role. Using ICTs to maintain the value association is a challenge as each affiliation is maintained within a separate entity/ system. E.g. Organisation A – within Volunteer management perspective is a non-entity but may be a donor within the Fundraising entity.

One of the key implications for Tararua is handling succession of expert users and service champions. As they are pivotal to enhancing ICT use within the organisation Tararua need to ensure staff members have been developed for these leadership positions and facilitate knowledge transfer.

Chapter 9 – Cross-case Analysis

9.1 Affiliations

9.1.1 Social actor relationships are shaped by networks of organisational affiliations

Organisational affiliations – Within the non-profit organisations of this study there are four main organisational affiliations that influence the staff members and their use of ICTs.

Type of organisation	Relevance to non-profit organisation
Funders (section1.1.a)	Funders are external organisations that provide primary funding for the non-profit. Associated with regulative powers within the sector (e.g. MSD, ACC, DHB)
Client and volunteer referral organisations (section 1.1.b)	These organisations refer clients and volunteers
External organisations (1.1.c)	Staff members interact with these organisations on behalf of their clients. (e.g. WINZ, IRD, Banks)
Donors or philanthropic organisations (1.1.d)	These organisations provide a secondary layer of funding for the non-profit organisation. (e.g. Tindall Foundation, Todd Foundation, Lions)
Other non-profit organisations (1.1.e)	Staff members build relationships with other non-profit organisations that are situated within the geographical proximity (e.g. hospital, city council)

Table 9.1   Types of organisational affiliations

1.1.a Funders

Clients attached to non-profit organisations in this study are funded by government organisations (e.g. MSD, DHB and ACC). State organisations provide contracts to deliver services on their behalf and contracts are the primary source of income for these organisations. Managing these funder relationships is an important part of the staff members' day to day operations. Two main themes

emerged in our findings are adhering to a funder imposed view of information and communicating value to funders.

Adhering to an imposed view of information

In maintaining these funder relationships, the four organisations adhere to a prescribed view of information. Funders specify the format, type of information, date of information exchanges and the medium of information exchange within the service contracts awarded. Non-profit organisations use these specifications to modify their information flows and ICT use behaviours.

Across the four organisations is evident that funder specified information is a primary set of information collected by their staff members. However the extent to which this defines the organisation's perception of its own information flows differs from one organisation to another.

At AFS this prescribed view is strictly adhered to and their information flows are primarily designed to cater for funder requirements. In contrast, Tararua Hospice uses this prescribed view as a basic set of information it must provide, but has an overall "beyond the funder view" of its own organisation's information needs and does not primarily adjust Tararua's information capture to only capture the funder requirements.

At both ILS and ICC these funder influences are less dominant in their information gathering practices. Whilst both organisations recognise the funder as their primary source of income, these organisations are motivated to present themselves differently to funders. In the case of ILS, it is to establish their identity in the community services area. Staff members at ILS explained that they are highly aware of the fact that they could be perceived in the same light as residential service providers. In their endeavour to distinguish themselves from residential service providers these staff members understand that they would be required to build additional information flows to capture their community

focused services. ILS understands the risk associated with adhering only to the prescribed view of information by funders.

Similarly ICC endeavours to differentiate themselves from residential service providers but has a further motivation to be identified as a "niche" service provider, which deals with clients with complex issues (e.g. long-term substance abuse, gambling issues). ICC is also aware some of the more conservative donors may not always view them positively. In order ensure that they are able to address these differentiating elements of the organisation, they too do not allow the funders' information requirements to dominate and supplement additional sources of information to the required information.

Communicating Value

Non-profit organisations communicate value to their funders by detailing how they add value to the funded client services. Some examples of how these organisations capture and communicate value are in Table 9.2.

Organisation	Examples from cases
Integrated Community Care (ICC)	Communicating the additional number of hours that their client may receive. For instance, staff explain that for one paid hour that is paid for by the funders if they are able to complement that with three additional hours by volunteers, the funders would positively value that as a positive contribution.
Tararua Hospice (TH)	Information on number of hours (client related and non-client related) and activities that volunteers provide.
Action for Seniors (AFS)	Primarily focus only on the actual number of hours and not on the activities that volunteers perform.

Table 9.2   Communicating value to funders

At AFS, defining this value component has been a challenge to their staff as their volunteers deliver companionship support to their clients. Although their service improves the quality of life for their clients they are not able to quantify this as a value.

Across the four organisations staff members continuously attempt to define and communicate this value component to the funders that they are affiliated with. Whilst each of the organisations define value component, the information that is required to communicate this value is not prescribed by the funders. Depending on how each of the non-profit organisations defines "value" each of them modify their information gathering requirements to collect additional information that communicates this component.

Perception of the value that is associated with the information exchange at this level defines how the organisations will attempt to capture this interaction. Depending on how each of the organisations perceive the value of their information, their effort in collecting the information and the ICTs used differs. Refer table 9.3.

Value perception of the organisation	Characteristics	Examples from cases
Value associated with information is low	-Information capture is designed narrowly. -Information is identified within a single interaction e.g. Client Volunteer	Action for Seniors – Volunteer visits information
Value associated with this information is moderate	-Information capture is designed broadly. - information is identified within several points of interaction e.g. – Client- volunteer, Volunteer – Volunteer, Client -Staff - multiple tools are used to capture information, an attempt is made to gather both qualitative and quantitative information, communications channels may not be clearly defined or organisation may not have capacity to assign staff members for this role.	Integrated Community Care – Client Management Information
Value associated with this information is very high.	Multiple tools are used to capture this information, communications channels are clearly defined and the staff members seek information proactively, communication channels and recipients are identified and organisation is able to use this information to differentiate themselves from the other competing organisations for both funders, donors and volunteers.	Tararua Hospice – volunteer information , ICC – client profiles

Table 9.3   Value perception and information capture

1.1.b Client and volunteer referral organisations

All organisations of the study work with client and volunteer referral organisations. Client referral organisations (e.g. Care Coordination and Community Healthcare centres, Service Coordination Centres) provide an initial needs assessment of the clients and refer them to a service provider in the same geographic location as the client. Information exchange between client referral

organisations and the non-profit organisation happen via fax, email or phone. Initial needs assessment information of the client is communicated from the client referral organisation to the non-profit organisation and this initiates the non-profit organisation to create a first manual file for a client that has been referred to them. All organisations of the study conduct their own initial assessments of clients in addition to the assessment information they receive from the client referral organisation. Staff members at ICC and TH explained that they often find the initial assessment they receive from the referral organisation to be either incomplete or not to provide a comprehensive picture of the client's requirements. As the staff members explain, the primary reason for this may be that the client is reluctant to discuss all their requirements with a care person whom they have only met once. In addition if there is either a time delay or a change of life circumstance that has happened since the first assessment was done then it is also likely that the assessment information will not have captured this new change for the service provider. The referral organisations are aware of the need to conduct a second assessment by the service provider organisations and allow them a set number of weeks to submit this. (e.g. before end of six weeks since the client was assigned). The initial assessment contains detailed information about the client's condition, their service level requirements, funding that would be available for the client and an estimated number of hours that the organisation is expected to deliver. Non-profit organisations treat this information as baseline information in conducting their own assessment.

Managing assessment gap

Staff at Tararua Hospice and Integrated Community Care explained that managing the assessment gaps was vital to their client. Both organisations explained that they often find that their client's requirements differ from the initial assessment conducted by the referral organisation. As both TH and ICC deliver services to clients that are in the complex needs spectrum their staff experience this issue more than ILS. At ILS and at AFS this assessment gap is

related to the type of client. AFS staff explained that a majority of the time although their own assessment includes more detailed information it does not change the service delivery drastically as their organisation delivers a more streamlined set of set of services. In the event that their staff identify that a client requires additional services they inform the referral organisation who would then refer the client to another organisation to receive those services. At TH and at ICC staff members complete a detailed assessment that is sent to the referral organisation detailing the service requirements of the client and requesting for additional hours to be delivered when necessary. Staff members explained that a request for additional hours needs to be accompanied by evidence to explain why it is different from the recommended hours. Presenting this information in a convincing and a complete manner is vital to ensure that the client receives their required level of services. Staff explained that the information collection at this client interaction is carefully planned and prescribed by each of their organisations.

Within all four organisations, there are prescribed methods to conduct the initial assessment and the staff members are expected to adhere to this. All four organisations produce a detailed template to capture a complete set of information about the client and to ascertain the level of service the client would require. This form in all four organisations was available as a Word document and as hard copy. Staff members of all four organisations explained that they prefer to use the hard copy as that would enable them to maintain a better interaction with their clients as opposed to using a laptop. Staff at TH and ICC explained that they spend time at the office typing up the information and completing their case notes for the assessment. At ICC, this information is maintained in Word documents and at TH some of the assessment information is held within their client management software. Staff at ICC explain that as the assessment information they have collected is in Word documents stored within their desktop, sharing this information comes with a set of challenges. Staff members are reluctant to email this information to their colleagues for two main

reasons. They are concerned about their client's privacy (primary) and they would like to ensure that client information is updated by the same person who interacted with the client (secondary).

Managing the assessment gap involves staff members doing the second assessment, communicating that to the referral organisation, seeking approval for the additional hours and updating the client's records to reflect the additional hours that would be delivered. At AFS managing this gap is less challenging as most of the time the additional hours allocated to the client will be delivered by a secondary organisation and not by the AFS staff themselves. Profile of the clients associated with AFS it is not often that this assessment gap is identified. At both ICC and TH staff members rely on the completeness of their information to manage this gap successfully. At ICC staff members explained that they have had instances where due to information not being complete, they had situations where they have delivered additional hours of services but to realise that it was not approved by the referral organisation. TH overcomes this situation by conducting file audits where they audit the client information files to check if the service levels are delivered as agreed. ILS staff explained that they find it more and more difficult to get approval for the additional hours that they identify and sometimes they require their clients to pay for those hours by themselves. ILS has established a middle layer of administrative coordinators to manage these differences.

This information flow between these referral organisations and the non-profit organisations are prescribed by both organisations. The individual staff member attached to the non-profit organisation adheres to these prescribed behaviours and does not have personal preferences as to the ICTs that can be used in the information exchange. As the information is client related both referral organisations and non-profit organisations are governed by institutional pressures to adhere to a certain code of conduct in collecting this information and communicating this information.

All four organisations in the study work with volunteer referral organisations. Although the non-profit organisations have specific volunteer recruitment processes, the information exchange between the organisation and volunteer referral organisations are a more negotiated form of communication. Non- profit organisations communicate their volunteer requirements to referral organisations and volunteer referral organisations advertise and provide the referrals to the non-profit organisation. The information exchange in this affiliation is limited to the non-profit organisation providing a brief that the referral organisation would advertise on their website and referral organisation providing the non-profit organisation with CVs of their clients. For Tararua Hospice which is in a unique position where they have more volunteers than they require, the information exchange with referral organisations was not as important as to AFS and ICC. As ILS are currently in the process of introducing volunteers to their service they at present adhere to the established route of advertising, referral organisation conduct initial assessments, receive CVs process. Both AFS and ICC who are in need of volunteers form a closer relationship with the volunteer referral organisations. ICC staff members explained that they would not only provide the brief to be advertised on the website, but they would also inform the staff at the referral organisation about the "volunteer profile" they would prefer. This additional information, they have found, enables the referral organisation staff to direct volunteers to them when the volunteers themselves have not directly responded to the advertisement. For example when a volunteer applies to work with organisation A but organisation A does not think that the volunteer is suitable for their needs, at which point the staff would check the profile and refer the volunteer to ICC if the profile matches. ICC staff explain that they get an equal number of volunteers through the direct advertisement and indirect profiles.

Both AFS staff and ICC staff explained that they maintain regular phone contact with referral organisations as one of the things they do to ensure that their organisation stays within the recent memory of the referral organisation staff.

The information exchange between the non-profit and referral organisation is primarily via email and is one of the relationships where staff are able to collaboratively build the information with an external organisation. It is also one of the few that are initiated from the non-profit organisation's end.

1.1.c External organisations

Staff members of the non-profit organisations form relationships with external organisations such as WINZ, IRD, banks in managing their clients' day to day requirements. The primary difference between these and other affiliations are that these relationships are initiated by the staff member of the non-profit organisations on behalf of their client. Although the non-profit organisation specifies how staff can maintain contact with external organisations, staff members have the ability to modify this exchange depending on the requirements of their client. Another significant factor is that each of the information exchanges between the non-profit organisation and the external organisation is primarily focused on achieving a specific outcome for the client. The staff members of the non-profit organisation exchange information in order to gain access to a resource or for more information. This exchange is a "negotiated view" of client information. According to staff members, they negotiate with the external organisation as to how much information they would share, the format of the information and the timeline.

Staff members at ICC highlighted that this is one of the areas where information capture does not fully explain the efforts that they have gone to on behalf of their client. Staff at TH also explained that it is difficult to capture the "effort" that has gone into maintaining these relationships with the external organisations. In the ICC case, they provided the scenario of social workers attempting to advocate on behalf of their client with WINZ to explain that their client may qualify for more funding. Social workers would spend hours packaging information to suit IRD's information requirements, follow-up and liaise with IRD staff on multiple occasions. The end result captured is that the client now

receives an additional benefit, but the effort that has gone into getting it for them is not captured.

Challenges in managing information exchanges with external organisations : Staff of all four organisations explained that there are several challenges in maintaining these information exchanges. These issues are associated with the individual practices of staff members or the non-profit organisations.

- *Identifying reasons for the decisions* – Staff members document their final decision but the reasoning for that decision or the alternatives suggested are not captured for example why a client has been directed to a specific rehabilitation centre is not documented. Staff members explained the need to capture complete information, so that in the absence of one social worker another should be able to deal with the client. Therefore social workers need to document what their decisions and reasoning, requiring more time and effort.

- *Incomplete information* – Staff members highlighted that it is easy to print out information but often there may have been a subsequent phone conversation or emails that may not have been recorded – the issue is that there are multiple mediums of communication about a single event and some may not be recorded thus leading to incomplete information.

- Staff members explained that each of the affiliations would require a different set of information, (e.g. Bank vs IRD) and it is a challenge to maintain these multiple requirements. Further liaising with the clients to obtain information from them can be time consuming as some clients are more organised than others in terms of managing documentation.

At ICC staff considered using single service specialisations, where a single staff member of the organisation would be allocated to managing a specialised external service (e.g. WINZ) for all their clients. The objective was to streamline information processes associated with external organisations

and to build expertise and relationships more effectively. However this was not successful as it proved to be an issue for their client as multiple social workers would contact them for different information.

Managing these relationships with external organisations requires social workers to become an information processor where they gather and disseminate information on behalf of a single client with multiple external organisations.

Existing client management information systems that are available within the non-profit organisations are not designed to manage these external relationships, nor are designed to reduce the complexity in managing the client requirements. Instead staff members are expected to use multiple resources to capture these information exchanges. For example, client requirements are managed within client or case notes and the contact information of the networks are managed within a software application that best suits the individual. Some staff members utilise Microsoft Outlook whilst others use Excel spreadsheets. One of the significant issues is that in the event of the staff member leaving the organisation these contacts are lost as they are perceived by the staff as their contacts and not those of the organisation. When analysing organisationally mandated use of information systems this is one of the areas where the non-profit organisations have left the decision to be one of personal choice.

1.1.d Donors – philanthropic organisations

The value of affiliations: Staff at Tararua Hospice and Integrated Community Care remain flexible in the way they can establish a value in their affiliation. Staff at ICC and Tararua explain that in the event a donor is not able to provide a monetary value they would see if the donor is able to provide a non-monetary value (e.g. provide a link from the donor's organisation website, donate an item to their opshop, nominate an employee as a volunteer for a fundraising event). By comparison, this flexible value association with their donors is not evident at AFS and ILS. At AFS this could be due to the limited view the organisation has of the "value " contribution that donors can provide. Thus in the four organisations

it is clear that the more flexible the organisation is in defining "value" from donors the more donor organisations are able to add value to the non-profit affiliation. However in order to extract this "multi-value" association organisational processes and information flows need to be modified, for example TH is able to request a volunteer for an event from a donor as they support sporadic volunteering. AFS is not able to do the same as their service provision is unable to cater to sporadic volunteering.

The second element is the "long view" of the affiliations with donors, are as ICC explains, to "treat every donor interaction as if it would be a long term relationship". Both ICC and TH staff members explain that their affiliations with donors extend to maintaining a long term relationship with donors. A unique factor in the way that TH and ICC manage information pertaining to donors is that they attribute the same level of importance to them as they would to their funders. Donor requirements for information are clearly mapped out along with funder requirements at ICC and tracked closely, with delivery dates and persons accountable for delivering information. Both ICC and TH explained that they manage to successfully retain most of their donors as they are able to create a positive impression in the donor's minds by delivering complete information in a timely manner and also by supplementing information with additional information that communicates value to the donor.

1.1.e Other non-profit organisations

Staff members establish on going connections with other non-profit organisations that operate within the same geographical area. Each of the organisations have a different drivers and focus on a different type of non-profit organisation in building these relationships.

Organisation	Driver	Types of organisations in focus
Action for Seniors (AFS)	For client and volunteer referrals.	Community and Voluntary organisations, Non-profit organisations
Independent Living Services (ILS)	Information on service offerings, manage client transitions.	Community and Voluntary organisations, Non- profit organisations, Hospitals
Tararua Hospice (TH)	Sharing similar practices, manage client transitions, volunteer placements.	Hospitals , Hospices , Cancer Society , Blood bank
Integrated Community Care (ICC)	Information on service offerings, manage client transitions, For client and volunteer referrals	Community and Voluntary organisations, Non-profit organisations, Hospitals

Table 9.4   Relationship with other non-profit organisations

Four main themes emerged within this dimension.

Managing client transition : Three organisations that provided care services in the community highlighted the importance of building a close relationship with the local hospitals, particularly the rehabilitation units. When the clients of ILS, TH and ICC transit into and out of local hospitals the non-profit organisation needs to be includes within the information flow of the client and hospital as community services are delivered by the non-profit organisation. Staff members highlighted that increasingly managing this transition is critical to their seamless service delivery in the community. The importance of this connection has become more evident due to the changes in the client demographic and is further discussed in section 1.4

Information on service offerings: All four organisations maintain on going relationships with community and voluntary sector organisations and other non-profit organisations that operate within the same geographic locations. Information about service offerings by other organisations form a part of their client management and fundraising activities. Within client management this

information is used to inform their clients of other services that are available within the region and have to gain access to them.

> "It can come as a client enquiry, sometimes. But generally we like to tell our clients what other services are there in their area". (ILS staff interview)

> "See, they may not know. We may be their first contact and it is our responsibility to have that information". (ICC - staff interview)

Within the fundraising function this information is utilised to ensure that when positioning funding applications that service overlaps are minimised. Fundraising staff explain,

> "We need to be aware of this at all times. There is no point in our organisation trying to offer a service that someone else (another organisation) already offers in the community. That is a waste of resources. When we apply for specific projects we need to make sure that we position our services correctly." (Fundraising staff – ICC)

9.1.2 Relationships are dynamic, and related informational exchanges change with flows of capital, labour, and other resources

Funders and donors utilise non-profit organisations' information flows to gain an in-depth understanding of the client or the community that they fund. Both AFS and ICC have experienced additional information requirements in working with specific funding sources.

> "we know, they(donor/funder) are interested how we deliver client outcomes, how we use their funding, that is normal. The problem is when they want more information than what we already have" [*AFS – Fundraising staff #6*]

> "we have to give them (donor/funder) more information just so that they can publish a story about how good they are" [*AFS – Fundraising staff #4*]

Non-profit organisations explained that their experience with "load-shifting " information flows is that the donors have an obligation towards the client and they are unable to fulfil this obligation due to resourcing difficulties or due to lack of expertise. As a way of ensuring that this obligation is fulfilled they create a fund that can be granted to a non-profit organisation that delivers services within the community and "hand over" the obligation to the non-profit organisation.

Our data analysis outlined two themes that create information related issues for the non-profit organisations that encounter load-shifting arrangements:

▪ Creating additional information capture points
▪ Conflicts between non-profit and funders' information requirements

These issues are explained with reference to a scenario which AFS experienced with one of their donors.

	Action for Seniors	Donor
Objective	Provide companionship support in the community.	Reduce isolated, lonely deaths in the community. Utilise AFS as a service provider to enhance community connections of older people who live within community to improve outcome.
Service delivery expectation	Once a week phone call or a visit by a volunteer per client.	Two phone calls per day , one in the morning and one at night, one weekly visit by a volunteer.
Expected information	Volunteer visitor report that contains information and duration of the number of visits – volunteers submitted quarterly	▪ Detailed log of clients' activities in the community ▪ Number of phone calls made per client ▪ Number of visits by the volunteer ▪ Submitted weekly, monthly and quarterly.

Table 9.5   Load shifting information – Funder vs non-profit organisation

Creating additional information capture points – requires the organisation to capture client interactions either with staff members or volunteers, which are

different from their existing mechanisms. In the AFS scenario, volunteers now would have to be in contact with the client more often, impacting on their ability to volunteer and also capture a richer set of information. This requirement modified the interaction between the client and volunteer both in the sense of information and frequency of contact. However as the non-profit organisation identified that this would have a negative impact on their volunteers, they used an internal administrative staff member instead. This impacted on the role of the internal staff member (refer to Interaction section).

Conflicts between donor and non-profit organisations' information requirements – As the donors are keen to gain a telescopic view of clients' positive outcomes and ensure that their funding has resulted in improving community outcomes, their information requirements are broader than information collected by the non-profit organisation. In the AFS scenario illustrated above, AFS highlighted that providing a detailed log of client's activities in the community can be perceived as an invasion of client's privacy.

As ICC's example of donor organisation's information requirements were similar. ICC staff members explained that whilst their information requirements are focused on improving positive outcomes for a single client or a group of clients, donors may require information that presents positive outcomes for an entire community.

Although the information requirements pertaining to "load-shifting "arrangements can be identified as part of the fundraising activities, the information capture it imposes influences the client and /or volunteer information systems. Though within AFS and ICC, client and volunteer information is stored and captured differently, the response to additional information capture was similar. Both organisations were compelled to build additional interactions (outside of their existing client and volunteer information systems) to capture and communicate these information sources to funders. This results in organisations responding to donors using different information

sources, which creates additional work and difficulties in analysing trends in non-profit organisations.

9.1.3 Relationships are multilevel, multivalent, multinetwork

As the staff members in these organisations dealt with multiple affiliations it was challenging to analyse data within this characteristic. It was further made difficult by the number of staff members who belonged to several categories, fundraising, client management, volunteer management staff. In order to present a better analysis within this characteristic we categorised staff members into several distinct categories.

Category	Description	Examples from cases
Client facing staff	Staff members who predominantly worked to deliver client outcomes.	Social workers, volunteers, Care workers
Organisation facing staff	Staff who predominantly worked to deliver organisational outcomes for the non-profit.	Team Leaders, Administrative staff
External facing staff	Staff who worked to deliver either client or organisation outcomes but had an external interface.	Fund raising staff, some Social workers, Practice Managers, Volunteer Managers

Table 9.6   Categories of staff members

Within these categories it was evident that staff members in four organisations simultaneously operated within several networks.

Client facing staff – These staff members (social workers) belong to professional affiliations within the sector and exchange information on how best to improve client outcomes. However non-profit organisations studied have extremely stringent guidelines on sharing client information without client consent. In some of the complicated cases, which involve multiple stakeholders, social workers needed to evaluate if they have presented the best possible alternatives to their client. Although social workers are constrained by the organisation's view of

sharing client details, they understand that their client could benefit from their professional affiliations. Staff members overcome this issue by creating a set of completely anonymous multiple cases, by extracting the client data. This set of anonymous cases are then presented to another social worker to determine if all identifiable information is removed and then emailed to a selected professional affiliation to evaluate alternatives suggested. Although this behaviour differs from the organisation's view of what is legitimate, social workers benefit from the output of their affiliations and are able to present the best possible alternatives to their clients.

Organisation facing staff – Team Leaders and administrative staff encounter information requests from regulators when they are interacting as funders with the organisation. They explained that some of the information requests need to be analysed in order to understand if they could encounter a regulatory issue by providing that information within a funder context.

9.1.4 As relationships change, interaction practices migrate within and across organisations

Five themes emerged from data analysis within this characteristic (See table below). Staff members in these organisations identified two main changes that have resulted in them adapting their practices.

Change	Themes
Client demographic changes	Capturing client's view of services delivered
	Dealing with technical affiliations
Responding to changes in the funding environment	Modifying volunteering roles
	Redefining types of donations
	Re-assessing funders

Table 9.7   Responding to changes

1.4.a Client demographic changes

Staff members of all four organisations explained that they are dealing with clients who have more complex service needs than those of five or even two years ago. Several factors have contributed to this change, increase in life expectancy, clients' motivations to age within the community and geographical distancing of family and friends who are able to advocate on behalf of the client.

Capturing client's view of the services delivered – Staff members emphasised that the ability of clients to articulate their requirements has become an important element in delivering services to clients with complex needs. Staff clarified it is sometimes "harder" to reach their clients and the "clients' voice" can be lost in the interactions that they perform on behalf of the client. Although this issue was more commonly associated with the residential care sector in the past, now as the clients' requirements become increasingly complex this is becoming evident in the community care sector.

This change has resulted in non-profit organisations introducing an additional information layer to capture clients' view of services delivered. One of the key challenges that staff encounter is that information collection at each of these layers is currently (see Table 9.8).

Information Layers	Type of information	Information capture
3	Client's view of services delivered	- Maintained within a separate information system (ICC, ILS) - Maintained in Excel (AFS) - Maintained within an existing client management system (TH)
2	On- going service delivery information , client-volunteer, staff interactions, periodic assessment data	- Maintained within client management system (TH, AFS) - Maintained in Word documents (ICC, ILS, AFS)
1	Initial assessment and service requirement information	- Partially maintained within client management system (TH, AFS, ILS) - Maintained in Word documents and paper (ICC, ILS)
Base layer of information	Client profile, contact and emergency information	- Maintained within an existing client management system (AFS, ILS, TH) - Maintained in Word and Excel documents (ICC)

Table 9.8   Client related information categories

Staff members who collect and distribute this information find that they need to adjust from one format to another for the same client. In order to provide a complete view of a service or client they often need to move between paper format, Microsoft Word and a specific database. Further as each of the layers is in different format organisations themselves find it a challenge to use this information in an effective manner. (Refer interactions for a more detailed discussion)

Staff at both ILS and ICC elaborate they are not able to see the usefulness of new information (Layer 3) at an organisational level or across a period of time for their organisation. They clarify adding,

> "We know it is important to collect it but when we take action based on their (client's) feedback, that action is written someplace else. So this software, all it does is record what the client said" [ICC- Interview 8]

"We are doing the same thing but in two places. We are doing it twice and getting two separate printouts and then putting them both in one file (hardcopy)." [*ILS – Interview 6*]

Staff members struggle to reconcile and make use of information they have captured. Both organisations (ILS and ICC) explained that as they move more towards a practice led approach their organisations would need to reconsider how information capture could be simplified in order to identify trends across their organisations.

Dealing with technical affiliations – Another key theme that emerges is the change in the type of affiliations. Increasingly staff interact with hospitals, blood banks, terminal illness units (e.g. cancer). Unlike staff at Tararua Hospice who have always liaised closely with hospital staff, the same has not been a common practice at ILS and ICC. Staff at both organisations explained that the types of organisations that they deal with have changed due to client demography. They explained that they are increasingly dealing with more hospitals and rehabilitation units than they traditionally had. This has led some of the staff members to maintain a level of clinical information as part of their case notes. Clients stage of life changes influence the types of organisations that the staff members maintain relationships with thus changing the information they store about their clients. This is mostly evident in the second layer of client information (see table 9.8). Social workers at ICC articulated difficulties they have in collecting and maintaining this information,

"We talk to ward staff over the phone and update our case notes (Word documents). Sometimes they can use clinical terms because that is how they talk. I usually ask for clarifications when that happens." (*ICC – Community Worker*)

"No, it is not possible to ask them(rehabilitation ward) to email us because it is additional work for them. They barely have enough staff there to answer our questions, let alone email."

"It is a real problem, [the] hospital has no idea that he is one of our clients. So we don't know that he is in hospital. The only way we know is when our staff go to [the] client's house. "(*ILS – Administrative staff*)

As there has not been an overall assessment of these information layers and how they have grown with time, these non-profit organisations find it an uphill task to articulate all their information requirements and to find a single ICT solution to address of them. This has resulted in them addressing and implementing partial ICT solutions to address specific requirements.

From an information systems perspective these challenges are common in other organisations. These two specific issues discussed in the above section are either end of the spectrum in managing a client information system. Whilst the first theme relates to capturing a new requirement in an information system the second theme relates to a seamless integration of a client record between hospitals and organisations which is a far wider discussion.

1.4.b Changes in funding

Staff members highlighted the variability of funding levels that they encounter. Across the sector there has been a re-evaluation of the funds that are available to community care. Three main themes, modifying volunteering roles, redefining types of donations, re-assessing funders (from an information requirement perspective) were identified as key responses to these changes. Although the organisations may have had a mixed response in terms of fundraising and volunteer management, from the perception of the staff these responses were more evident. Below is a summarised view.

Organisation	Response	Theme
Tararua Hospice	▪ Broadening their reach for donations. ▪ Diversifying fund raising efforts (non-monetary donations, volunteers for fundraising efforts, URL in a corporate website"	Redefining types of donations
ICC	▪ Increase volunteer base. ▪ Identify and offload activities to volunteers that do not require specialised knowledge. ▪ Move social workers into a "protective" mode ("to save the most specialised resource for specific requests"). ▪ Identifying new funding sources (niche).	Modifying volunteering roles. Re-assessing funders.
ILS	▪ Evaluating non-periodic funding sources for specific projects	Re-assessing funders
AFS	▪ Evaluating non-periodic funding sources for specific projects	Re-assessing funders

Table 9.9   Responses to change in funding

Organisations' response to the changes in funding is evident at fundraising and volunteer management functional areas.

ILS and AFS value donors who fund periodically (e.g. three year contracts, renewed yearly) and have in the past, steered away from donors who do not. Fundraising staff commented that this re-assessment of funders translate to organisation taking on more donor organisations than they can handle.

> "It is good that we get more funding but there is a cost to get that money. We have to submit all that documentation just to get it (grant) for one year" [*ILS– Interview 9 – Staff*]

> "This documentation (points at a stack of paper) is to get funded just for (mentions amount). When we add the time we spent getting all of this information they (donor) want, am not sure if it is worth our effort" [*AFS – Interview 6 – Staff*]

Although some fundraising documentation can be re-used, depending on the type of the grant applied for, there is still an effort by staff members in re-formatting documentation, crafting success stories to address their impact in the community and collecting information from staff across the organisation. In most instances information collected from other staff arrive in multiple formats (Word, Excel) and fundraising staff collate and produce summarised views resulting in time and effort.

Similarly ICC's response (Table 9.9) to increase more volunteers, to enhance the organisation's ability to respond to this change, also imposes a constrain on their volunteer management system. As ICC maintains their day to day volunteering information on Excel spread sheets managing this information has now become more time consuming. It is important to note whilst non-profit organisations are able to respond to these changes by implementing solutions, their information systems have not been designed to absorb these change and facilitate an enhancement in fact they currently act as a restraint.

As the organisations are not able to provide an information systems response as a result of them adjusting to their environment places a work load on a set of employees, thus constraining the organisation further and promoting the non-profit to increase their admin staff, a response that the donors do not perceive as positive.

9.2 Environments

9.2.1 Organisational environments exert technical and institutional pressures on firms and their members

Two themes that emerged within this characteristic were the funding pressures and increase in service demands due to population ageing in the community. These two themes, the way the influence information flows and use are

continuously articulated and presented within this study. (Introduction, Literature Review, Case findings, Affiliations.)

9.2.2 Environmental dynamics vary among industries

This study focused on organisations within a single sector and the most evident variation was the level of client requirements and associated information practices.

Organisation	Action for Seniors	Independent Living services	Integrated Community Care	Tararua Hospice
Type of services provided	- Companionship support - Elder abuse and neglect prevention	- Instrumental activities of daily living - Rehabilitation	- Instrumental activities of daily living	- End of life care
Complexity of client requirements	Low to medium	Low to medium	Medium to high	High
Client Management	Word documents for client case notes +Client Management software (ClientX)	Dedicated client management software(MSClient based) +Word and Excel documents	Word and Excel documents for client notes + dedicated software for maintaining client outcomes (AssessClient)	Dedicated client management software. (HospiceClient)

Table 9.10   Client requirements and associated information record

As the clients' information requirements heighten client information system is not able to provide a complete picture of client interaction within a single information system When analysed as a set of client requirements, although a simplistic view AFS and ILS fall within a category of organisations that service clients, that have low to medium service requirements. (Client profiles are maintained within each case study). However within this analysis, both organisations have clients, that have complex service and information requirements. For instance clients in ILS that are receiving rehabilitative care

have a detailed set of notes that are associated with their care. Further if the client has been with the organisation on several occasions, the interactions of the staff members, assessment details and notes associated with care and create a complex information requirement of a client. The limitation of the ILS and AFS client information systems is that whilst they cater to a majority of clients who require a single level of services, when the level of services grow and the information intensity increases, staff members utlise Word to capture information that cannot be stored within the client information system. This is particularly evident in the client management system at ILS which heavily focuses on capturing scheduling information which leads to staff members using Word documents and paper files associated with clients to store information.

The difference between the client information systems in Tararua and Integrated Community Care were more noticeable. Although both operated in a highly information intensive environment, Tararua staff members were able to view information about their client within a single system, whilst staff at ICC had to combine paper files, Word documents (case notes), Excel spreadsheets (volunteer scheduling information), emails (conversations with external organisations captured but transferred to case notes) and information from AssessClient (client's assessment of services delivered) in order to gain a complete understanding of the organisation's interactions with the client.

One of the unique strengths of the social actor model is its ability to explain how characteristics within different dimensions inform each other and provide explains for certain behaviours. Understanding how client management software is used within each of these organisations offered explanations about the information crafting behaviours of these organisations as they try to reconcile information requirements within the client management area.

9.2.3 ICTs are part of the organisational environment

Lamb and Kling (2003) contextualise this characteristic as ICT investments that organisations need to undertake in order to support their operations. The ICT

investment in organisations includes the investment in personnel as well as the investment in infrastructure. ("firms must invest in new ICTs, such as sophisticated legal documents management systems, to maintain a viable environment". p.214, p.206). Informed by the literature review, this study was scoped to examine three main characteristics within the organisational environment, ICT Investment, ICT Applications and ICT support.

ICT investment – Quantifying ICT investment in the four organisations was not possible. The intention of the data collection was to identify yearly ICT investment either as a percentage of the organisation's total funds received or as an absolute value for comparison.

Definition of ICT investment was different across the four organisations – Initial definition of ICT investment as the yearly investment in hardware (purchase, upgrade, maintenance), software(purchase, licencing, upgrades) and ICT support expenses was not supported at data collection. Staff of the four organisations explained that they do not have a yearly investment in software or upgrading hardware. They explained that the hardware is replaced or upgraded on a "needs to be done" basis. At Tararua, Integrated Community Care and Independent Living Services staff explained that each of their IT projects proposed would have an IT investment component in hardware and software but each project is financed differently. Action for Seniors explained that when an ICT investment is required they would seek that investment as a part of a project expense.

Staff members in the four organisations explained that their donors and funders perceived ICT investment as part of administrative cost that the non-profit organisation should own as opposed to using money collected by fundraising or donations. All four organisations were in agreement that the donors and funders preferred their donations to be used for direct client related activities and considered ICT as part of organisation's responsibility. The initial aim of defining the ICT cost as a percentage of total funds raised was not therefore successful.

Avoiding negative perception of individual donors – Staff elaborated that identifying costs as an absolute value can have a negative impact on the organisation as they can be perceived as having a high administrative overhead by individual donors (Refer ICC, ILS and TH case findings). Donors' perception of ICTs was associated with administrative functions. Staff explained that the donors are unable to perceive software licence fees, payments made to external contractors to maintain ICT infrastructure or ICT personnel expenses as a direct contributor to improving client outcomes. As the study explored four organisations, staff members were hesitant to be compared in relation to ICT spending as donors may perceive high spending in ICT is high spending in administrative areas which could lead to a negative perception.

> "Some of them understand why it is [ICTs] important. Most of the "young-ones" do [Referring to Baby boomers] because they are still working. But not the over 80s group, not so much. And they are some of our most important donors." *[Staff interview – AFS#4]*

Lack of benchmarks in ICT investment – T he service champions at Integrated Community Care and Tararua clarified that part of the reason that staff may be reluctant to share ICT investment in dollar amounts is that there is no bench mark in the sector as to how much a medium sized non-profit organisation is expected to spend on their ICTs annually. Having a bench mark enables an organisation to compare and justify their ICT spending in relation to other organisations (Refer ICC, ILS and TH case findings). This minimises an organisation's reluctance to share information about ICT expenditure to avoid the negative perception of donors.

Stewardship values – Further ICC, staff highlighted that they are governed by "stewardship values", values that are associated with maximising their resources, minimising waste and sharing best practices. They perceived that their existing ICT use practices may not be in alignment with their stewardship values (Refer

ICC and ILS case findings). This concern is partially due to lack of ICT investment benchmarks in the sector.

> "See, this is a real problem for us. We know that some part of our IT are working correctly and some are not. But we don't know how the others (referring to other non-profit organisations) are measuring their return on investment in IT." *[Fundraising staff – CE- ILS#3]*

It was interesting to note the almost stigma like idea associated with ICT investment in these non-profit organisations. The non-profit organisations do not want to be perceived as having a high administrative cost as it portrays a negative image to their funders and donors. The staff members interviewed explained that one of the primary factors that would contribute to them handling the increased future demand for their services, is the use of ICTs. Therefore incurring ICT spending is these organisations is inevitable. However as the donors and funders associate these spending in a negative light the non-profit organisations are constrained in raising funds directly associated with ICTs. Reluctance to quantify ICT investment is associated with the image that the non-profit organisations would like to convey to donors and funders.

The social actor model enables a researcher to identify factors that may limit or enhance an organisation's ICT use and this is a clear example of where it is applicable in these organisations. Whilst ICTs used in fundraising initiatives enhances the visibility of the organisation and increases the demand for their services, the organisations' inability utlise the same funds to improve their ICT operations limit their ability to serve the community more effectively.

Although the organisations share volunteer management practices and have a clear understanding of best practices in client management and funder management the same type of sharing was not evident in ICT use practices. As the non-profit organisations grow and become more proficient in ICT use this gap may become more evident in the sector.

ICT Applications

As the primary focus of the study was to understand how ICTs are used in client management, volunteer management and fundraising, we examined applications and information systems that were utilised in these functional areas.

Non-profit	Client Management	Volunteer Management	Fundraising
Action For Seniors	Word documents for client case notes +Client Management software (ClientX)	Word documents, Excel +CelintX to store volunteer demographics	Word and Excel documents, Organisation's website
Integrated Community Care	Word and Excel documents for client notes + dedicated software for maintaining client outcomes (AssessClient)	Word and Excel documents + Volsoft	Fundraiser +Microsoft Office Funding Information Service, Fundview, Organisation's website , Donor database
Tararua Hospice	Dedicated client management software. (HospiceClient)	Volsoft +Excel documents	Fundraiser + Microsoft office Funding Information Service, Fundview, Organisation's website, donor database
Independent Living Services	Dedicated client management software(MSClient based) +Word and Excel documents	Word and Excel documents	Fundraiser + Microsoft office Funding Information Service, Fundview, Organisation's website, donor database

Table 9.11   Summary of Applications used in functional areas

Client management – Staff members in all four non-profit organisations emphasised the difficulties they have in managing client information. Client management within this sector has been traditionally, developed to manage client information in a residential setting. Managing client information in a community setting is still in its early stages in New Zealand. These organisations are expected to manage several categories of client related information, client's demographic information, assessment information, periodic service information, scheduling information and case notes. Managing each of these categories in a single information system has been a challenge for these organisations as the information systems used do not fully cater for these requirements at present.

By analysing how client information is stored and managed, a moving window of improvement across the four organisations is evident.

Organisation	Integrated Community Care and Independent Living Services (ICC/ILS)	Action for Seniors (AFS)	Tararua Hospice (TH)
Stage	1	2	3
Characteristics	Basic client data (Personal Information, Contact details) is managed within an information system whilst majority of the information remains outside of the IS.	Basic client data and some case notes are captured within the IS.	Basic client data and case notes and assessment details are captured within the IS.

Table 9.12   Stages of client information capture

At ICC their client outcome measurement system captures minimum client demographics (Name, Date of birth, Date registered in organisation) whilst maintaining all other information on Microsoft Word documents as case notes. At ILS all clients' demographic information and scheduling is captured within their in- house developed IS whilst all other information is managed in Excel spreadsheets and Word documents. At AFS this moving window is most evident as most of their staff are attempting to capture every category of information within an IS but failing either due to having to "play catch up " with some information and with user's having to get used to the information system.

Whilst outside of the scope of this study, from the analysis of several interviews it was evident that that information system implementation at AFS and Tararua were different, explaining the difficulties that the end users experienced. From the end user perspective AFS has employed a "build and they shall use philosophy" resulting in minimum user training and integration of organisational practices in managing clients and volunteers to the information system. In contrast Tararua has utilised service champions (Practice Managers) to analyse different categories of information they would be required to capture and had integrated the client information system to organisational level practices. Further

Tararua has identified and trained a set of staff members initially as competent IT users and when deploying their client management system has utilised those users as super users to train other organisation members.

The challenge that these non-profit organisations face is not just associated with implementing an Information System but also analysing their client information categories and ensuring that the selected information system is able to cater to their requirements. Staff members at AFS explained that they have experienced three previous information system failures within their organisation due to not identifying requirements correctly.

Volunteer management – Two of the non-profit organisations use Volsoft, a standard volunteer management software in the sector. This software was used in Tararua extensively, their coordinator using it capture the demographic information and periodic scheduling information of the volunteers. In contrast ICC uses a single feature of the software, to capture demographic information (Name, Contact details) of the volunteers by the volunteer coordinator. The function of volunteer recruitment and volunteer scheduling is divided in ICC, Team Leaders managing volunteer schedules. As Team Leaders are located in a separate location, ICC uses Excel to maintain their volunteer schedules which creates an administrative overhead on the team leaders as they need to process scheduling information as well as reporting information using Excel sheets.

Fundraising

As the table 9.11 explains Fundraiser software has become standard across the organisations, apart from AFS. Fundraising effort is at AFS is less diverse than the other three organisations in comparison.(See section 2.4 for further discussion). Further AFS's fundraising role is spilt across two administrators who also work in other administrative functions. In contrast the other three organisations' fundraising is a full time role and it may explain AFS lack of use in a specialised software.

Use of Microsoft applications

A characteristic common across these organisations their extensive use of Microsoft Office applications. Selection of Microsoft Office has been based on the ease of learning the applications and familiarity that the end users have with the software. As these organisations do not have ICT training budgets, end user familiarly has been a key element in their selection of software.

From our study it is evident that the excessive use of MS Word and Excel contribute to the information issues of the organisations. They are used in primarily by end users when the existing information system is unable to cater to their requirements (e.g. client notes), as a way of summarising information (e.g. volunteer hours) or to replace manual documents. Although these practices makes it more difficult for the end users to extract information, manage version control, analyse trends and predict possible issues, at present end users perceive that it is better than using manual documents as Word and Excel documents can be communicated easily across the organisation.

Analysing the processes associated with client management, volunteer management and fund raising presents that many practices are standard across the four organisations with minor variations. In addition best practices in volunteer management and client management are shared between these organisations. The missing component in sharing this information is the best practices associated with ICT use and information processing best practices. Central to this issue may be the fact that staff at these organisations consider services as central to their organisation but not information. Staff members relate to practice, service and information in isolation and not view them as interlinked concepts that are woven in to their organisation practices. This view does not enable them to perceive and share information use practices effectively. Lack of an information ecology supports this isolation as each organisation struggles to make sense of the information challenges they face on their own as opposed to addressing them as a unified sector.

ICT Support

ICT support is an important element that influences ICT use in non-profit sector organisations. From the perspective of ICT support there were two main differences these organisations:

- Organisations that have full time ICT staff (Independent Living Services)
- Organisations that do not have full time ICT staff (Action for Seniors, Tararua Hospice,, Integrated Community Care)

Full time ICT staff provide, application and hardware support that the users require and act as a buffer between the end users and IT vendors. Staff members at ILS contacted their ICT staff directly for technical difficulties (applications and hardware) as well as new service requests. These service requests comprised of new functionality requests for the software in use and requests for hardware. As far as the end users at ILS were concerned their IT staff was a "one stop shop".

Action for Seniors has a contract with a non-profit sector ICT support services provider, where their staff contact contractors when required. As some of their staff had home offices this suited their support requirements. However staff members located at office used end user support clusters (described below) as an informal support mechanism.

Although ICC has employed external contractors to maintain the ICT infrastructure and provide end user support, staff depended on the informal structures for their ICT support as the contractors were not based on site and were not perceived to be approachable (Refer – ICC case – Environments).

Informal ICT support structures

Following are main informal ICT support structures evident in Tararua, Integrated Community Care and AFS.

Type of informal support	Tararua	ICC	AFS	ILS
End user support clusters	-	Yes	Yes (limited)	-
Service Champions	Yes	Yes	-	-
Expert users	Yes	-	-	-

Table 9.13   Types of informal ICT support across four organisations

These informal support behaviours were not limited to a single functional area or an application. Staff members required assistance in using client management applications whilst others required assistance in using a printer. These informal support enhanced ICT use behaviours of the staff members (refer case findings, Tararua and ICC).

End user support clusters – These were predominantly evident in Integrated Community Services. Staff based within the same geographical location formed clusters to "help each other". Unlike the expert users and service champions, where an experienced ICT user provides support, these clusters did not identify ICT expertise within a single user in their cluster.

Expert users providing support – Within the four organisation staff identified certain users as key users that provided ICT support. Their expertise is identified with a specific task application or function for instance "Cameron can handle printers" or "Richard is the person to ask about Excel". Similarly end users identified certain staff members as specialised in multiple areas, "Karen knows everything about IT so I go to her". These expert users provided support across multiple functional areas and handled both hardware and software issues of staff members.

Service champions / Business unit owners providing support – This level of support was most evident in two organisations, Tararua Hospice and Integrated Community Care. These service champions are not primary users of ICT and are not identified as expert users across the organisation. However they are pivotal

to modifying user behaviours in ICT use as they seek to integrate ICTs in order to improve service delivery. Service champions are associated with an application in their functional area and end users seek their support in using that application. They are key, as they act as first line of support between the vendors and users within the organisation and almost audit the use of software. These service champions are identified with a particular service, e.g. fund raising, volunteer recruitment or client management and they at both organisation decided which software or application was most suitable and strive to integrate that software to the organisation. They provided several types of support to the end users.

Types of support provided

Types of support	End user cluster	Service champions	Expert users
Introduction to Applications / Information systems		X	
End user confidence building	X	X	
Application walkthroughs / mini training sessions	X	X	
Application level support	X	X	X
Application troubleshooting		X	X
A buffer between a ICT vendor and end user		X	X
Hardware troubleshooting			X
Issue Isolation /escalation			X

Table 9.14   Informal ICT support – Types of support provided

End user clusters functioned in locations that a service champion or an expert user was not evident. There were several instances where a service champion was also an expert user. However there were several distinctions between these two roles. Service champions were singularly aligned within an application that was directly related to their area of practice (e.g. Communications manager, fundraising application) whereas the expert users were identified as supporting multiple areas. Further the expert users were also associated with providing both

hardware and software related support as opposed to the service managers. These service champions were similar to subject matter experts (SMEs) used in for-profit sector organisations.

One of the key implications to these non-profit is to ensure that there is adequate amount of support internally available for these end users, specifically if the organisation is outsourcing their ICT service provision. In the absences of formal training programs, Wikis, FAQs, user guides and training manuals that are associated with ICT implementations, these informal ICT roles play a pivotal role in integrating ICT use in non-profit organisations.

9.2.4 ICTs are part of the industry, national, and/or global environment

Analysis of staff member interviews, presented a set of ICT tools that are part of the non-profit sector environment in New Zealand.

Functional area	Application and use
Volunteer management	Advertising volunteering positions – http://www.volunteerhilltown.org.nz (Local) http://www.volunteeringnz.org.nz (National)
Fundraising	Searching for available funds – http://fis.org.nz, Fundview
Other	ICT support services, non-profit licenses for Microsoft applications, ICT funding for non-profit sector, Non-profit trust to promote ICT use in community organisations- http://www.hilltownict.org.nz/ (Local), Non-profit trust to promote regional programmes - http://2020.org.nz/

Table 9.15   ICTs that are part of the national environment

Volunteer management – Two volunteer advertising websites were used extensively by staff at Integrated Community Care as opposed to the other three organisations. ICC has experienced severe funding cuts and were in the process of re-designing volunteer (See Affiliations section 4) roles to reduce dependency on their critical resource, social workers. Independent Living services were starting introduce volunteers in their community service roles and as they already at volunteers in the residential settings, organisations expectation was that the same volunteers may extend to the community sector. Tararua's use of

the services was limited as their volunteering roles were already filled. Although the usage was different, across the four organisations staff members were utilising this service.

Fundraising – At ILS, ICC and TH fundraising staff utilise funding databases extensively and explained how the use of these grants supplement their normal funding sources. Their use of funding databases seem to be associated with their management practices. Integrated Community Care constantly seeks project based funding. Staff at ICC articulated that they can scale their services easily at a project level and their staff have been given project management and leadership expertise, therefore project based funding suited their requirements. Tararua is less discriminate and seeks any type of grant that will supplement their existing funding contracts. Independent Living Services is cautious in identifying grants that best align with their services and highlight that they have several facets to consider in applying for grants as the image associated with the grant is important to them. They explain,

> "We have more than one identity, some donors see us as a religious organisation, but we are an inclusive organisation with a religious affiliation. We have to project a clear image. We may not apply for some grants if they don't align with our principles" (*ILS – Interview 3 – Staff*)

Although these databases were extensively used by three of the organisations, it was interesting to notice that the staff at Action for Senior adopted a different behaviour. As the services provided of their organisation has not changed over a decade, and as the services they supply do not qualify for most grants, each year AFS applies for the same set of grants they have applied the year before.

> "We know that we can only get some of them, so we don't waste time every day, looking for new grants. Am not sure it is worth for us to pay the subscription any more" (*AFS – Interview 4 – Staff*).

"If we hear of a new grant, we look it up. Usually have to do a new project to get that money. That means, a lot more work than a simple grant application. Our staff are most part time. So we have to balance everything carefully." *[Fundraising staff – AFS #6]*

Overall fundraising displayed the most rapidly evolving ICT use practices. Using commercial organisations' websites to link to fundraising events, using commercial platforms to generate additional revenue, (e.g. Tararua's use of Trade Me) and evaluating social media for fundraising events displayed that these organisations were using technology to improve their visibility in the community.

Use of social media for fundraising was not evident at this time of the study. Staff explained that although the medium was attractive and familiar that it is another platform that they would have to maintain. The perception of how much time would be required and if there could be privacy issues prevented them from using it at present. Both Tararua and ICC fundraising staff explained that they would consider their donors as the primary audience if they were to use social media and would evaluate what information donors would most like to heard of the non-profit.

At the time of finalising this cross-case analysis, AFS, ICC and Tararua were considering the use of social media (Facebook and Twitter) to create awareness of their fundraising events.(Refer Appendix 2 for a brief analysis of their social media use)

Other – Across the four organisations only one organisation, a non-profit specific ICT support service, Circuit Riders. This service is specifically catered for non-profit organisations and offers ICT expertise at a reduced price than the industry standard hourly rate. The advantage of this model is that it caters to ad hoc service requests and offers a range of expertise from installing software/hardware to troubleshooting applications and training. Action for Seniors utilised this service as some of their staff worked from home. Other

three organisations did not use the circuit riders as they had their own service arrangements and were thought that the circuit riders were not suitable to their organisations as their staff required a dedicated level of ICT support and not on the level of ad hoc support that the circuit riders provided. This behaviour demonstrated that the organisations were mature in their approach to selecting the most suitable level of support that was most appropriate for their needs.

Although there are two ICT trusts set up to support ICT use in the region, the non-profit organisations did not perceive the agenda of the trusts aligning with them.

> "We got a computer from them just once and it was an old computer, used in a bank or someplace else before. It was very slow and we just couldn't use it." (*AFS – Interview 5- Volunteer Coordinator*)

> "They have no IT funding to give us. They also have to apply for their own funding" (*ICC – Interview 8 – Staff*)

> "No, we haven't used them at all. Mainly because they have their own projects that they support, they are more about giving computers to the community. Not for community organisations" (*Tararua – Interview 8 – fundraising staff*)

It was interesting to note that these trusts were not perceived to be of use, in terms of ICT funding or expertise.

9.3   Interactions

9.3.1 Organisational members seek to communicate in legitimate ways (Lamb and Kling, 2003)

Staff members communicate information in a manner that has been established by their organisation. From a staff members' point of view there are two layers of legitimacy that informs their communications. The first layer is the

expectations of affiliations, either a prescribed or a negotiated view of information on the non-profit organisation. The second layer is the organisations' own established communication practices. Staff members' legitimate ways in communicating information is defined by both layers. These two layers determine how the staff communicate client, volunteer and fundraising information.

Client Information	Volunteer Information	Fundraising information
Demographic information	Demographic information	Potential Donors
Assessment details	Volunteering schedules	Existing Donors
Service details	Volunteer communications	Service contract information

Table 9.16   Types of information

Communicating client information – In communicating client information, protecting the privacy of the client and ensuring that the correct recipient receives the correct package of information is a priority with all four organisations of the study. Within each of the organisations three defined types of client information, client's demographic details, assessment details and ongoing service information. For each of these types of information organisations mandate the media of exchange, how the information should be packaged and who can receive it.

Communicating clients' demographic information and assessment information to an affiliated organisation is established at organisational level and the staff members ensure that they adhere strictly by the rules. Across the four organisations informants expressed their desire to communicate in the established manner as it will ensure that the client's privacy is protected and their client would not become vulnerable due to an incorrect information exchange.

> "Our clients are vulnerable; for us, protecting their privacy is a priority in everything we do. That is number one." *[Staff member - AFS#5]*

"We are very aware of how much we share about the client and with whom. They [Clients] place their trust in us and so we have to make sure that we protect their privacy." *[Community worker – ICC #3]*

"We have started looking at mobile solutions but we haven't found a mobile app that we can say with 100% assurance doesn't compromise our clients' privacy." *[IT staff – ILS#2]*

Staff members create information packages when dealing with affiliated organisations to ensure that the client is not identifiable. For instance when communicating with volunteer referral organisations [e.g. Volunteer Hilltown] staff members create information packages that capture a cluster of client needs to communicate the role of volunteers to the organisation.

Protocols on communicating clients' ongoing service information are less structured. This information (e.g. scheduling information) is shared between staff members within the organisation as well as with location based service teams of other organisations (e.g. community nurses, hospital staff). In communicating this information organisationally established normative practices seem to be more evident than the enforced rules.

Client information storage – One unexpected finding was that the rules that defined information exchange and how an information package needs to be crafted and communicated, does not extend to information storage. Of the four organisations in the study staff members of three organisations (Action for Seniors, Integrated Community Care and Independent Living Services) saved their client information (demographic, assessment and service) in Word documents in the folders of the local computer of the individual staff member. It was not evident that this information was password protected at document level. Each of the staff members had a network sign on and folders allocated in the network but were reluctant to store information on the network for two reasons, (a) they were not sure *who* would have access to their folder when it

was on the network, and (b) they wanted to ensure that they could access the information even if the network was inaccessible.

Lack of organisationally established rules on how client information should be stored raises the question of whether internal layer of practices is only adapted to suit that external layer of legitimacy. For instance the information storage practices may be less defined as the non-profit organisation uses the external organisations' communications practices to determine their own, and it is likely that the external parties practices do not extend to information storage.

Information storage is one of the areas where staff members were able to exercise a personal preference. Individual staff members decided the folder structure, naming of folders, to password protect or not at document level and whether to save on a network drive or not. Within the organisational boundary of "client information is confidential" staff members exercised their personal preferences in client information storage.

All four organisation maintained hard copy files of their clients and it was not evident that these files were stored using a procedure that was meant to keep them confidential. However multiple other existing procedures may have been in place. For instance these organisations have thorough screening processes in their recruitment of staff and also have secure office facilities that limit the access of other outsiders. It is most likely that physical access guidelines supplement the accessibility to client information in hard copy. Within all four non-profit organisations these hard copy files are considered the most complete information of their clients (apart from Tararua who are in the process of establishing complete information in their client record) and have sensitive information in hard copy format. Access to these hard copy files is clearly controlled through their physical location, for instance they are stored within an office which has no access to outsiders including their own volunteers. However locked cabinets were not evident in any of the organisations for storage of these files and ICC and AFS stored theirs on open shelving with staff members

explaining that some of their more sensitive files were stored in locked cabinets. The sheer size of these hard copy files make it a challenge when considering appropriate storage.

As client information is communicated as part of funder communication, protocols surrounding communicating client information seem well developed and communicated across the organisation. The same level of definition was not evident in communicating volunteer information.

Volunteer information – Organisational level practices (2nd layer) were more prominent than the 1st layer of legitimacy in communicating volunteer information. There are several components of volunteer information that organisations communicate, volunteering hours, volunteering schedules, volunteer demographic information. Volunteering hours form a part of funder communications and is prescribed how it would be communicated to the funders and is governed by the first layer described. Communicating volunteering schedules and volunteer demographics form a part of the internal structure and each non-profit is able to have their own normative practices. Collecting volunteer demographics is considered a part of the volunteer recruitment process. The volunteer recruitment process itself is one of the highly specified processes of these organisations. Volunteer demographics are collected within the recruitment process when a volunteer is selected to work in the organisation. As the non-profit organisations themselves determine the information capture, storage, volunteer demographics vary from one organisation to another. See table below, (All four organisations capture basic information, Name, address (work and home), date of birth, gender, contact information (work and home), next of kin).

AFS	Basic information + available hours
ILS	Basic information + hobbies and skills
TH	Basic information + hobbies and skills + alignment with existing volunteering roles
ICC	Basic information + hobbies and skills +

Table 9.17   Volunteer information

Scheduling information – Organisations establish their own mechanisms for communicating scheduling information and the influence of the external organisations (Layer 1) is minimal. Volunteer schedules are prepared by the coordinators and communicated across the organisations (ICC and TH). This is one area where the coordinators have been able to exercise personal preference in the ICTs they utilise. Coordinators in the four organisations explained that they prefer to use email with their volunteers as there is a record of the conversation within emails. However at AFS and ICC the coordinators explained that some of their volunteers may prefer phone communication as opposed to using email.

As the volunteer coordinators decide how schedules are prepared Excel at present is the tool of choice. Coordinators explained that Excel is used as it enables them to communicate volunteer hours easily across their organisation.

Although the type of software used is standardised across the four organisations in volunteer management, coordinators had the ability to exercise personal preference in how it is used. At Tararua and AFS the coordinators used their existing volunteer management software to capture volunteer hours utilised and produce standard summary reports. Whilst ICC used the same software as Tararua their volunteer hours utilised were captured using Excel sheets. Similarly although the software was able to let volunteers login and define their own hours, volunteer coordinator Tararua decided that she would rather let volunteers email her their available hours than give volunteers access to the software.

9.3.2 Organisational members build, design and develop interactions that facilitate flow changes (Lamb and Kling, 2003)

This characteristic explores how organisational members need to re-shape information to accomplish a goal. Information re-crafting is evident within the

organisations of this study. Three main themes emerged from analysing interview data. Staff members re-shape information

- to protect the privacy of their client;
- to communicate value to existing funders and donor organisations;
- to engage potential individual donors and donor organisations;
- to facilitate organisation's service requirements.

Protecting client privacy – Staff members re-craft client information when they are required to seek input from their professional affiliations. For instance at Action For Seniors, staff members in their elder abuse and neglect prevention services, reshaped their existing information packages to gain expertise from an advisory panel. Due to the complexities that are associated with situation leading to abuse and neglect, AFS staff have access to an advisory group that the co-ordinators use in specific instances. As the advisory group is an external body and not governed by the same rules, the staff members re-craft the case scenario to ensure that the client is not identifiable. They also ensure that the facts pertaining to the case remain so that the advisory committee can provide them with the best course of action. In creating this information package the main objective of the staff member is to ensure that the advisory panel has adequate information to advise the best outcomes for the non-profit organisation's clients.

To communicate value to existing funders and donor organisations – Although the funder and donor organisations specify a set of information they wish to receive non-profit organisations supplement information that communicates value to their funders and donors. Staff members in fundraising liaise with Team Leaders to capture success stories related to each specific funded project and re-package information to suit funder and donor consumption. For instance at ICC, fundraising staff members supplement the information that is required by their funders to communicate better value for the funding they receive. ICC staff members similarly craft information packages for their donors and supplement

the required information with positive stories and also provide donors with information about their future projects. ICC staff members explain that this approach has been successful with their donors and has helped them to convert "one time project specific" donors to "periodic" donors who engage with the organisation long term.

Engaging potential individual donors and donor organisations – Fund raising staff in Independent Living Services, Integrated Community Care and Tararua seek to occupy the mind space of their individual and organisational donors. In engaging potential donors it is evident that both the frequency and the content of the information communicated is important.

> "People think it is easy. It is not. We can't send them [individual donors] flyers every week. No, that annoys them. We can't just send them a newsletter once a year and expect them to remember us. There is a balance and most people forget that. There are only so many times that we can go them with requests." *[Fund raising staff - TH#3]*

Staff members at ICC explain that simply collecting success stories and adding them in a newsletter may not successfully engage potential donor organisations. ICC when engaging with potential donor organisations, re-shape the information package to highlight themes that align with the donor's specific set of values.

> "We collect the stories from our teams, then the stories need to be re-packaged. Most site staff just give the story to us in a raw form or sometimes we interview the clients. But we always think about how best we can re-package this and also who would be most receptive to this story." *[Fund raising staff –ICC#9]*

Facilitating organisation's service requirements – Across the four organisations of the study, staff members re-shaped summary information for their internal service requirements. This was evident in all three functional areas. Staff members explained that external funders and donor organisation required

information about their specific clients. However as a non-profit organisation internal staff members and management were also interested in how each of their services performed.

> "It is more or less the same information but the focus is different. Take our community outreach, we want to analyse how many clients accessed it, and where did they travel from and what services did they want but we couldn't offer. That is for our planning. Donors may want part of that information, like how many clients but we need to about the actual service." *[client management staff – TH#1]*

Ability to exercise personal preferences- Staff members' ability to exercise personal selection of ICT tools and their use was an interesting finding. Within the organisation boundaries staff members exercised their personal choice in how ICTs are used in three functional areas of the study. Staff members selected how they stored client information, how they communicated with volunteers and how they stored donor information. This ability to exercise personal preference raises questions about the loss of information within these personal selections. Evidence from fundraising area how staff members nurtured a potential donor to a donor stage was highly personalised and associated information practices are up to personal selection.

Staff members at Tararua explained that as the demand for their services increase funding in the community has not increased at the same rate. Therefore fundraising staff constantly need to evaluate new funding sources and donors that can contribute to their organisation. Fundraising staff highlighted that it is not possible to capture all of the information within their role. Table below outline identified possible loss of information associated in managing donor relationships.

Possible loss of information	Examples from cases
Details of potential donors.	"Entering them (donors) in the donor database is the last step. The work that I do to get them to that (donor) stage is not in the database. " [TH- Staff interview - #5]
Effort in converting a donor, best practices in donor engagement.	"There is so much we do to identify donors, engage them and to get them interested in what we do. It is not as simple as sending a newsletter or flyers. Everything we do is not in the donor database, especially with new donors". [ILS – Staff Interview -#6]
The ability to follow up potential donors in consecutive years or when a staff member leave the organisation.	"See that (pointing to a stack of business cards), I collected them at a corporate breakfast this week. Now, they are not all going to becoming donors ,some of them will. But I can't give them Stewart yet (staff managing the donor data). They (donors) are still at a stage where they only know me."

Table 9.18   Donor Information loss

9.3.3 ICTs become part of the interaction process, (interaction technologies) as people transform and embed available informational resources into connections and interactions (Lamb and Kling, 2003)

Although the organisations had a set of ICT applications for their main functional areas, staff members consistently improvised information flows or created new interactions to facilitate communications. Our data analysis produced a set of reasons that contributed to these behaviours.

a. *Lack of a suitable tool for data capture* – This has resulted in staff working in the client management area having to re-format information or enter information into multiple applications. A client record consists of demographic data, assessment, service information and the client's feedback on services received. Staff members of Action for Seniors, Independent Living Services and Integrated Community care explained that using a single tool to capture each of these client information components has been a challenge. As each component is captured using different tools staff members are required to build interfaces between them.

"See, we can only enter scheduling information in our client database, that is just the person, date and hours. The work that we do with the client is in our case notes. And the assessments are in the client file (hard copy file). When we have to answer a phone call, even internally, we have to go to three places to find the complete picture" *[ILS - Staff member -8]*

b. *Mobility of staff and volunteers* – As these four organisations deliver services to clients that live within the community, staff and volunteers are highly mobile in all four organisations. In order for the information captured at the point of interactions (staff-client, client – volunteer) organisations require staff equipped with mobile devices and applications that can extract data from mobile devices. Lack of such a tool results in constraining organisation's data capture.

Mobile workforce has several implications,

▪ Although it would be ideal to provide staff with smart devices to record the interactions they have with the clients they are not able to do so due to funding limitations. Therefore the organisations depend primarily on paper based systems and staff making case notes when they arrive at the office.

▪ *Privacy issues* – Although there are inexpensive options like texting to overcome the funding issues the organisations are sensitive to the impact these would have on clients' privacy and does not use any online or free applications that are not secure.

▪ *Funding issues* – Although applicable to a single organisation (Independent Living Services), some of the staff members are paid an hourly rate for services they deliver within the community. These staff members receive an allowance as their travel cost and they do not want to spend their own time recoding the interaction between them and the client and prefer a paper format that they can easily fill in.

c. *Data capture from paper* – Organisation members outlined instances where data capture at the point of interaction is on paper. Some staff

members, volunteers or clients may fill paper formats and submit them to the organisation and staff will encounter data entry from paper to an application.

"I don't think it can be avoided. We do have paper based forms so they [staff] will fill a form and then expect us to enter everything into the system. That is quite normal." *[ILS -Staff member]*

"We do have volunteers that send us their quarterly hours on paper. Some of them prefer that. Not a whole lot but there are still few of them" *[Volunteer coordinator – AFS#7]*

d. *Necessity to extract information from multiple sources* – Staff members are required to extract information from multiple sources and collate in to a single report. This was evident in the interviews conducted with the Team Leaders at Integrated Community Care and administrative staff members at Independent Living Services.

"I get information from all sorts. It can be an email, Word or Excel documents or just a form. I need to get all this information into the format I want and summarise. When am sending back the summary I need to send it in PDF for internal staff and in three separate versions of Word for our community staff." *[Team Leader – ICC#4]*

In addition to the funder requirements, staff members also prepare information summaries to present to their own management. Although this is a standard information requirement and a set of Excel templates have been developed, preparation of these summaries is data driven and manual.

e. *Necessity to translate* – Information that the organisations wish to communicate and the information that the funders wish to hear are not the same. Funders wish to hear quantitative information that would facilitate their decision making processes whilst the non-profit

organisations wish to communicate the quality of care they deliver and the impact it makes on their client's life. Although in the prescribed view this information is less pertinent, staff at these non-profit organisations re-craft their information to capture and translate in order to convey value of their service.

f.   *Building interfaces between systems* – Staff members needed to re-enter data into multiple systems as system interfaces could not handle data import and exports. This was evident in Integrated Community Care, where client information had to be recorded in three separate applications (AssessClient – for client feedback; Word documents – Case notes, Excel – client hours). As Independent Living Services had a full time IT team, the organisation was able to build an interface between their scheduling system and their accounting system to minimise data entry.

g.   *Analysing service data* – Within AFS, ICC and ILS analysing their service trends, identifying new services and predicting service demands were heavily dependent on the ability and the availability of staff members to convert data from multiple sources.

"When we want to find something, let's say a demand for a new service, sometimes it is just easier to get the hard copies of the client files and enter everything I want in to an Excel sheet. I know that it will be much easier in the future but right now, I think that maybe the fastest way to find out something." *[ILS – Staff member]*

Although the majority of the existing organisational information requirements are defined as a set of reports when staff members wish to analyse other facets of their service provision, defining and identifying information sources and seeking that information within the existing data set seems to be a time consuming activity.

Within three of the organisations of the study, excluding Tararua, there is a high level of bridging activity to generate useable information from data. Tools that the organisations use are not ideal to what reports they want to produce. Coupled with this is also the fact that most of the data the organisations collect are in paper based format due to mobility of staff and due to other issues mentioned in the above section.

What this means is that at each of these organisations there are middle level workers who act as an interface to convert all this data into information into the format that is required. There is lot of multiple handling of data, re-entry into different systems or manage data to get their information.

These middle tier staff members spend 50–60% of their work re-crafting information into different formats, extracting information using Excel and creating a layer of data between applications to get information out to the desired audiences.

However what this entails is that there is a high element of workers crafting information and this leads to them spend most of their work time doing that instead of using the information to add value to the organisation. A team leader at ICC summarises aptly their issue,

> "I have so many contacts in the community. I should be out there getting more services, clients for us. Instead I spend my time trying to get the reports to people on time. This should not take all my time." *[Team leader – ICC#4]*

9.3.4 As organisational members, people perform socially embedded (role based) highly specified actions on behalf of the organisation (Lamb and Kling, 2003)

A set of specified actions associated with each of the functional areas were evident within these organisations. However in discussions with the staff members it was apparent that some were operating in areas that have extended

beyond the initial specifications of their roles. This was primarily visible with staff in the client management fundraising areas. Client management staff who work with clients that have high needs constantly work on the edges of their specified role and find it harder to capture and communicate this information.

Client management – Staff members highlighted that specific actions or roles adequately defined for them, align with the requirements of their clients at an initial stage of the client engagement. However as the clients' transition or have stage of life changes, these specified actions have not been realigned to capture the clients' requirements.

> "This week I have to meet with a furniture mover, therapist and a GP. That is just for one of our clients. This woman (client) is now in a home, temporarily. She desperately wants to move back to her own place. And because she was with us when she was in the community, she got in touch with us. We are helping her with this transition. My job description doesn't say anything about furniture, but that is what the client needs to move back home. So that is what I do. " *[ICC – Staff interview – community worker]*

> "When there are transitions we don't know the exact requirements ahead. I know some, but even that can change. Take a simple example, a fall, and everything changes. And it is not straightforward. What type of modifications will they need to return to community? Do they have steps in their entry way? Do they have stairs in their house? Are they renting? It is not straightforward." *[ILS – staff interview]*

Role extension – Interviews from staff highlighted that there are a number of situations which may extend clients' requirements - changes in the client's stage of life, mobility, vision, or cognitive impairments, resulting in either a permanent or temporary change request. During temporary change requests, staff extend their role to cater to the requirements of their client. The area identified with the double arrow heads in diagram X indicates those extensions. Within these areas

staff members work within a set of broad guidelines outlined by the organisations but not specified for their role.

When change requests can be captured using periodic assessments, the organisation is better able define the role of the staff member. Staff highlighted that there are instances where clients' requirements change between periodic assessments. As this role extension is more visible at a staff level, the information capture resulting from role extension is dependent upon the staff member.

Role extension

Extension to role specification

Role /Action specified by the organisation
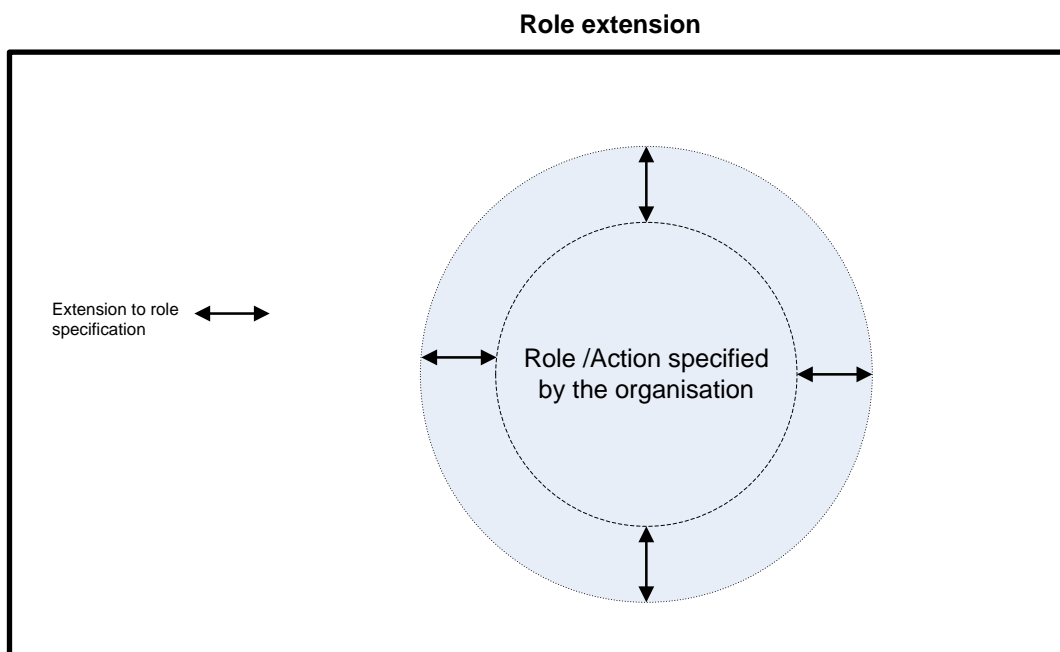
Figure 9.1   Role extension

This information is captured in Word documents and communicated via email. However as the capture is dependent upon the staff member and as the case notes are in narrative form, these organisations experience following issues due to role extension-:

- Although the staff are aware that they are constantly working beyond the specifications they find it difficult quantify their effort to gain access to more funding and communicate value.

- Information captured need to be re-crafted in order to analyse the service requirements, predict trends, and to communicate value they deliver in the community.

This is particularly evident in two of the organisations, Integrated Community Care and Independent Living Services. The ICT implication of "role extension" contributes to both individualised use and information re-crafting.

9.4 Identities

9.4.1 Social Actor identities have an ICT use component

The three main categories of social actor identities were prevalent across all four organisations in the study. The extent of the ICT use component differed on three different aspects.

a.   Client facing staff members

b.   Organisation facing staff members

c.   External facing staff members

(This categorisation of staff members was introduced in Affiliations – see section 9.1.3)

a.   *Client facing staff – Staff members who primarily work with clients*

These staff members interact with clients more frequently than the other two categories and often do not identify technology as part of their job or work. In addition they require informal ICT support to facilitate their use of ICTs that the organisation has mandated. Their use of ICTs is scoped by the organisation and in some organisations (e.g. Tararua Hospice) the information they enter is periodically "audited" to ensure that they are recording correct information.

Across the four organisations, client facing workers struggled most with reconciling their ICT use with their client care. They primarily identify their role as carers and have to be convinced of the role that technology played in their

work. The client facing staff perceive that technology can create a distance between them and the clients. This is particularly an issue when introducing ICTs to staff that are mobile. Although Tararua Hospice and Integrated Community Care has provided laptops to their client staff they are reluctant to use them during their visit to a client's home as they fear that it could create a barrier between them and their clients. Currently staff visit the client and then type up the notes at the office after their visit.

Staff members in client facing roles explain that ICTs can take time away from their clients. This issue was most evident at Independent Living Services as they have a large cohort of hourly paid staff members. ILS staff explained that clients expect them to be performing a set of duties during the time allocated to them. As the staff members are paid an hourly rate they do not view favourably the extra non-paid time they would have to put in order to provide a more detailed set of interaction notes. At Integrated Community Care client facing staff struggle with the issue of capturing data at the point of interaction, as they have clients who have complex needs and their time spent with the clients and their time documenting the issues relevant to the client needs to be balanced. Although the organisation favours using ICTs to capture this interaction this issue constrains their ability to collect a more comprehensive set of information.

It was evident that the client facing staff did not perceive ICTs themselves in a negative light. They explained their use of ICTs at home in detail and spoke favourably how it has enabled them save costs. They outlined commonly used applications at home and the utility value associated with them, see table 9.18.

Commonly used applications	Utility value identified
1. Skype, Viber (communications)	Cost savings
2. Groupy, Trademe, GroupOn (entertainment discounts)	Cost savings
3. Online banking, online bill payments	Cost and time savings, ease of access
4. Consumer survey engines	Store points, cost savings

Table 9.19   Commonly used applications at home

It was evident that the actual ICTs themselves were not the problem but reconciling their job role as client facing staff with the ICT use component was the pivotal point for these staff members. Communicating the utility value of the applications, and understanding how it made a difference in client's care may enhance ICT use with this group of staff.

Service managers explain that this practice creates more work for their staff. They also state that the clients are also used to technology as they use ICTs in their daily lives, (specially the baby boomers) and would be happy to see their medical reports on the computer screens as the visibility options can be adjusted to suit to clients' needs. The perspective of the service managers is that the staff can use technology to communicate more information to clients and to have a more comprehensive set of client notes. Service managers, are organisation facing staff members and associate technology as part of their work identity.

b.   Organisation facing staff

These staff members primarily work with internal processes, administrative staff, team leaders, service managers. Their client interaction was limited to exceptional situations and 80–90% of their time they work with internal organisational members or with external organisations, facilitating a specific internal process.

Of the three categories of staff these staff members by comparison, performed a data processing role. They worked with multiple forms of data (e.g. Excel

spreadsheets, data bases, manual records) and were intense users of ICTs. They also did the most information extracting and summarising (Information Processor roles); they used most of the organisationally prescribed software and identified strongly with their ICT use identities. These staff members explained that their job could not be performed without the use of ICTs and this group of informants had the most insights in to how best their organisations could integrate ICTs to their day to day operations. These staff members were primarily concerned about the integrity of data and identified their role as an information processing role. They valued the role of ICTs as a way to hold staff accountable and explained the importance of ICTs in a record keeping function.

Of the three categories of staff these staff members were most aware of the pressures faced by the organisation and how ICTs they used were "limited" in their functionalities. Due to the high level of information processing these staff members understood how ICTs could be better integrated to their organisational practices. Staff members explained that they are able to facilitate majority of the information requirements of the organisation however due to high level of information processing they are required to do, they are not able to facilitate additional information requirements that would enable the organisations to perform better. For example this category of staff at Independent Living Services and at Integrated Community Care explained that both their organisations could benefit immensely by an in-depth analysis of the client demographic over the last 10 years to identify how the demand for their services has changed. They also explained doing such a trend analysis would enable their services staff to identify new services, predict the future trends and use data to successfully present/present their increased funding needs to donors. They emphasised that they are unable to conduct this level of work at present as most their client records are in manual form and it would take both time and effort for such an endeavour as the two organisations' client management systems are not able to facilitate these requirements.

Of the three categories, these staff members are the most critical of how their organisations' choice of ICTs has limited them. This is most relevant in client management systems at ICC and ILS. The primary difference between these staff members and the other two categories is that these staff members are highly aware of the limitations of organisationally mandated ICTs as they perform a bridging role and craft information to facilitate information flow exchanges.

c.   External facing staff

These are staff members who primarily deal with external organisations. Their roles were more evident in fundraising, donor management, and some in volunteer management. They can also be involved in client management roles but would have a more external focus than staff in internal facing roles. These users use multiple types of ICTs and use ICTs in a more "adventurous" manner than the previous two categories. A key distinction is that they do not wait till the organisation mandates the use of a particular technology and are the first to trial new ICTs. Their external focus enables them to understand very clearly the need for different technologies to connect with different communities. These users look at the value of information in two primary ways,

- How do we best present this information?
- How best do we reach our target audience with this information?

They shape information intensively to suit their primary goal of "getting our [organistion's] story out". This group of users are far more innovative in their use of ICTs and will identify the target audience and see how each element of information can be reshaped to reach their target in a different manner.

Across the organisations these were the users that had greatest breadth of use and they had strong ideas about how technology should be used in the organisation. These users had the strongest ICT use identities and were more willing to diverge from the organisation's prescribed way of using technology. These users used their external contacts to compare themselves with others and

modified their organisation's ICT use behaviours. Their key motivation for using technology was to extend the reach of their organisation.

9.4.2 Social actors use ICTs to construct identities and control perceptions

Organisational identity issues –Organisations in the study described the "balancing act" that they need to perform in maintaining their organisational identity. Staff at Action for Seniors explained that their organisational identity is changing from that of pure non-profit organisation to a contractor / service provider as their main funding is now from the government. They explained that although they were previously perceived as an organisation that is able to lobby on behalf of their clients this image now has changed as they are dependent on the government for their funding. Their organisational identity is now changed to become an information disseminator and an educator role than an advocacy role. Projecting this transitive identity is an issue for the organisation as they realise their role in advocacy has changed.

Similarly Taraua Hospice, Integrated Community Care and Independent Living Services staff explained that they need to perform a balancing act in projecting the correct organisational identity to the correct audience. As all three organisations have religious affiliations they have donors who are closely connected to religious institutions. Staff associate their value systems with the religious institute and separating the organisation completely from the religion is impossible.

However as these organisations are funded by the government and are expected to deliver services in the community, projecting a religious identity does not portray an inclusive organisation image to their clients and donors. At IIC (limited) and ILS this issue is more prominent as they have residential care facilities attached to them and they are strongly connected to a religious institution. Further these organisations realise that their community services have the largest growth potential in comparison to the residential care sector and are clear that they want to be perceived as inclusive in the community.

This balancing of identities is evident in their use of ICTs to create an organisational identity. The three organisations ILS, TH and ICC do not have any religious symbolism in their websites apart from a single page or two. These organisations use their websites to promote their inclusive image with ILS even rebranding its community care services to be different to their residential care services.

Chapter 10 – Discussion

This research study is guided by two key questions: how ICTs are being used within three core activities of non-profit organisations; and how affiliations, environments, identities and interactions influence the use of ICTs in these organisations. Within this chapter we reflect on the findings of the research and identify theoretical themes of the study.

10.1 Affiliations

The influence of the funders is evident in information behaviours of these organisations. Our findings are similar to Cutt et al (1996), Hiemstra, (2002) and Ebrahim (2002), who explain how information requirements of the funders influence non-profit organisations. The requirements of the funders can be perceived either as competing or complementary (see table 10.1) to an organisation's information requirements. Our findings concur with Ebrahim's (2002) study of non-profit organisations, which presented a detailed analysis of how competing requirements influence organisations. We were able to further identify how a complementary perspective of funder requirements limits the constraint of competing donor requirements.

Competing perspective	Complementary perspective
Organisation uses funders' information requirements to determine their own information capture requirements.	Organisation considers information requirements of the funders as one of components of their information requirements.
Funder requirements are narrowly defined, in the context of information outcomes (e.g. client visit report)	Funder requirements are defined within organisations' central information components (e.g. improving client outcomes)
Creates a narrow perspective of organisations own information collection, summarising and reporting.	Organisation aligns their information collection, summarising and reporting to identified central information components.
When the funder requirements change these organisations' encounter most impact managing that change.	Further as the requirements of the funders change , they are able to better handle these changes and identify value points of that information

Table 10.1   Funder information perspective

Within the complementary perspective, the non-profit organisation is able to articulate their information requirements to encapsulate both their own and their funders' information requirements. Non-profit organisations identify central components for improvement (e.g. improving the quality of care) which enables the organisation to better define their information systems requirements in order to capture a richer set of information. This improves the organisation's ability to analyse their own service trends and communicate "value" components to their funders and the community.

In contrast, non-profit organisations that adhere to a competing view (see table 10.1) encounter several challenges. As the funder information is given priority, information requirements are narrowly defined and this limits the organisation's ability to capture a well-defined set of data. Although the organisation facilitates funder requirements, the limited data captured constrains the organisations' ability to analyse their service trends. This leads to organisations either redefining their information systems or building manual processes. As an example; at Action for Seniors, client information systems required four attempts

to implement with each attempt redefining their information flows. Integrated Community Care and Independent Living Services provided examples of where they harvest data using hard copies when necessary to analyse their own service trends and ascertain their progress in specific service areas.

This has a long term impact on the organisation, as they struggle to communicate the "value" proposition of their services. Although staff members are acutely aware that they deliver far more value and services than they capture, they do not have data or information in order to establish this or to communicate their importance to the community.

Findings within the four organisations suggest that data capture issues contribute to the organisations' struggle with analysing trends, identifying new services and their ability to analyse the impact they have in the community. As funder requirements take priority, information flows that enable the organisation to analyse its own services have not been identified or planned. Often individuals take it upon themselves to craft these information flows and build interactions with existing software. This behaviour is similar to that outlined in Ebrahim (2002) study, which identified individual users creating information flows. As the value of this information gains recognition within the organisation, individual user acts as a gate keeper to this information. In addition existing information structures are not built to interface with this information as it has been created by an individual user. This creates a further issue with staff, as they now find themselves entering the same information into two different systems, or importing and exporting data using Excel sheets, or having to build an interface to extract data. Sun (2012) provides an analysis of this behaviour and theorises that users adjust their use of information systems when faced with discrepancies "such as misalignments between an information system and the local conditions" p.461. We will discuss these individualised use practises in the Interactions section.

Lamb and Kling's (2003) analysis explains how the influence of the affiliations can be identified using Scott's (1995) Institutional Pillars and DiMaggio and Powell's (1991) isomorphic pressures. The findings of this research in funder- non-profit information relationship, confirms Lamb and Kling's theorisation of affiliations. The influence of funders is clear, as there is no negotiation on the level of information required or the medium of communication or the deadlines on what it is required. Non-profit organisations' inability to provide information in a timely manner is detrimental to their ability to qualify for subsequent funding and providing this information becomes a critical part of the organisations' information environment. These behaviours align with the descriptions of Scott's (1991) regulative pillar which emphasised the role of "mandates, sanctions and coercion" (p38) to maintain formal behaviours.

10.1.1 Communicating value

Communicating value to funders was identified as one of the information challenges across all four organisations in this study. Even the organisations that adopted a complementary perspective on funder requirements found it difficult to communicate the value they delivered to their client and community successfully. Value and associations with value in the non-profit sector are common. In defining how values determine non-profit organisations' culture and actions Chen et al (2013) explained that values shape organisational practices. Findings of this study were narrower than those of Chen et al (2013) as we focused on specific areas of operation. Our findings suggest that non-profit organisations find it challenging to communicate the value they add to their clients and community. However the findings of Cordery, Proctor-Thomson and Smith (2013) help us understand how issues beyond information use and ICTs contribute to challenges in quantifying volunteer value, as they explain the role of the volunteer managers and their ability to engage in the process of quantifying volunteer value.

Using the Affiliations dimension we identified how non-profit organisations added value in their client life-cycle and further identified two main information challenges that contribute to organisations' ability to communicate their value effectively, (a) maintaining a complete client record, and (b) managing the assessments gap.
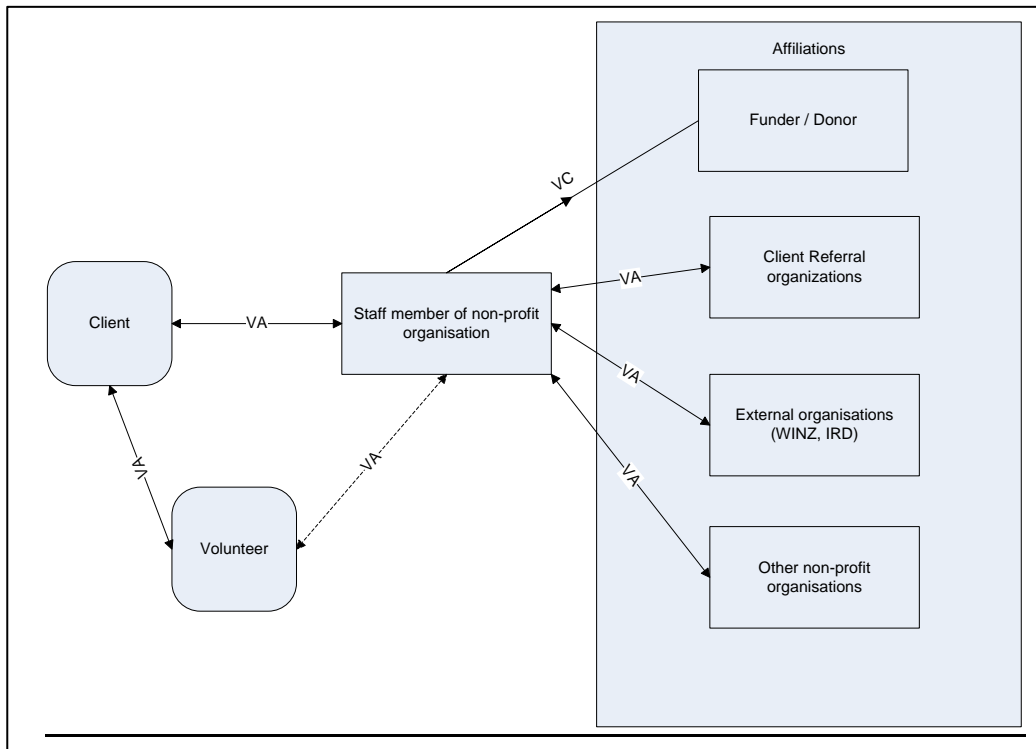
Figure 10.1   Information flows that contribute to adding and communicating value

Analysis of information flows between the non-profit organisations examined in this study and affiliations presented us with an understanding of two distinct information flows that staff members identified: 'value adding (VA) information flows' and 'value communicating (VC)' information flows. Staff members perceived specific information flows between non-profit organisation and external organisations as adding value to their clients (see diagram 10.1).

In communicating value to funders, staff members had to successfully capture information within these interactions. This presented challenges, as capturing the information-intensive interaction between staff members and clients

exposed limitations in the existing information system and its information capture mechanisms.

Workshop participants responded to this finding. Whilst confirming the value adding and value communicating information flows they made two suggestions to modify the existing conceptualisation (figure 10.1)

1. Add a value-adding information flow between volunteer and staff member
2. Add the concept of the informal carer

Value adding information flow between volunteer and staff member – Participants explained that although an informal flow exists between client and staff member, it may not fully communicate clients' needs. They provided examples in which volunteers may notice changes in client behaviour such as the progression of an illness or a hazard in home, information which the client themselves may not communicate to staff members. We have modified the figure 10.1 to reflect this discussion.

Concept of the informal carer – Workshop participants highlighted that they have frequent connections with the informal carers of their clients and they should be part of the conceptualisation. As the concept of the informal carer was excluded when scoping this study, we have not collected adequate data on informal carers and their interactions with staff and volunteers. Furthermore, on reflection we can comment that this may be more relevant to one organisation studied (Tararua Hospice) and not to the other three organisations. As the hospice provides 'end of life care' services to their clients, interactions between staff, volunteers and informal carers may be more prevalent than in other organisations.

a.   *Maintaining a complete client record*

The findings of this study suggest that maintaining a complete client record is challenging for these organisations. Although the influence of clients is not directly evident in the ICT practices of these organisations, clients' information

requirements indirectly shape the information behaviours of staff members. Staff members that work with clients identify multiple information requirements (see table 10.2) and explain how they capture information relevant to each layer (see table 10.3). In addition to delivering the services of the organisations, clients now expect staff members to provide them with information and access to additional services and funding. Client's Information requirements can be categorised across four layers.

Layer	Description	Client access	Information intensity
Layer 1	Information and access to services provided by the non-profit.	All clients access this layer of services.	Moderate information intensive.
Layer 2	Information on services and funding available within a geographic region.		Less information intensive.
Layer 3	Advocate on behalf of client to access service/funding outside of the non-profit.	Some clients access this layer of services.	Most information intensive.
Layer 4	Facilitate client in selecting options making decisions, relocation. (playing the role of a friend, confidante)	Few clients access this layer services.	Most information intensive.

Table 10.2   Layers of client requirements

Layer 1 – Services – This is the standard set of services that non-profit organisations provide. Staff members have a client management system or a standard set of tools to record clients' requirements and access to these services. Client information systems primarily focus on capturing information at this level.

Layer 2 – Information – Clients expect staff members to connect them to additional services and funding within their geographic region. Non-profit staff view it as part of their responsibility to connect their client to additional services as their organisation is not able to cater to all the requirements of the client.

Non-profit organisations struggle to communicate the value of this information capture to their staff members. Frontline staff perceive this layer purely as

"providing information to client" and do not see the direct value of recording information they have provided. Information supplied at this layer is invaluable to the non-profit organisations as they start to analyse additional services that they may provide within the community.

Layer 3 – Advocate on behalf of the client – Staff members may be required to advocate on behalf their client with IRD, WINZ and other affiliations. Once the second layer (see table 10.2) of information requirements are met, clients may extend their requirements to this layer. Information capture within this layer is limited to detailed notes by staff members. For example, if a client is eligible for a different funding type, staff members advocate their client's case with WINZ to facilitate additional funding for their client.

Layer 4 – Play the role of a "confidante" or a "friend" – In rare occasions staff members find that they are expected to play a role of confidante with their clients. In the instances when clients that have cognitive difficulties, andrelatives active in caring remotely, staff members become the primary source of support to their clients.

There are several information challenges associated with these layers in non-profit organisations within this study. Each of the organisations maintains this information in separate formats and formats within the layer can differ.

Layer	Integrated Community Care	Tararua Hospice	Independent Living Services	Action for Seniors
Layer 1	Maintained within Word and Excel documents.	Maintained within a client information system.	Maintained within a client information system.	Maintained within a client information system.
Layer 2	Maintained within details case notes (Word), associated with specific client and social worker.	Depends on the individual, considered community service. Not associated with specific client.	Depends on the individual user, can be maintained as a note for a specific client.	Maintained within a call log, hard copy format, not associated with a specific client but with a time period.
Layer 3		Maintained within a client information system.	Staff have not encountered 3rd and 4th layers.	Maintained partially within the client management system and detailed case notes.
Layer 4				Detailed case notes, Word documents, emails.

Table 10.3   ICT use in managing client requirements

Within each of these layers staff members captured the information differently, which led to information not being correctly extracted and summarised. This contributed to non-profit organisations' inability to successfully communicate the value they added towards positive client outcomes.

b.   Managing the assessments gap

Communicating and managing an assessment gap is an information intensive activity. This involves staff members of the non-profit conducting an assessment, comparing it to the initial assessment (conducted by the referral organisation), identifying additional hours or services that the client requires, seeking approval for these additional services and updating the client's record to reflect the additional services or hours delivered. Due to the number of interactions with

referral organisations, funder, client and other non-profit organisations, capturing this information correctly is critical to the non-profit organisation. Although this interaction is standard practice of non-profit organisations, information capture tends to be individualised, as the number of interactions and the method of communications (email, phone, fax) cannot be effectively prescribed by the non-profit organisation. (Refer to Cross case analysis – section managing assessment gap.) This leads to individualised practices by staff members in capturing information exchanges, making it difficult to analyse service trends and communicate their value to funders.

DiMaggio and Powell (1991) explain how organisations adopt similar standards and how they define legitimate forms of interactions between organisations. It is evident that within non-profit organisations, they display regulative institutional isomorphism rather than a competitive isomorphism in dealing with these client referral organisations. However, one key difference is that although the type of information itself is prescribed by the referral organisations, the ICTs used to collect this information are not. The non-profit organisations are at liberty to select their own ICTs for managing and communicating client information. The level of influence that theseclient referral organisations yield is over the actual information exchanged and does not extend to the tools selected by the non-profit organisation.

10.1.2 Load shifting arrangements

Load-shifting arrangements between funders and non-profit organisations have been well documented in the area of human services non-profit organisations. Our study confirms these findings and further presents an analysis of how these arrangements constrain non-profit organisations by placing additional information demands on them. From a funder's perspective, they view the information collected by the non-profit organisation as a way of looking at their clients, who live within the community, from a distance. (Refer to Cross case analysis). Therefore, funders require additional information to assure that their

client outcomes are delivered. In these obligatory load–shifting arrangements (refer detailed description in Action for Seniors – Affiliations section) funder require an additional set of information that needs to be collected by the non-profit organisation in addition to the services they deliver. Non-profit organisations do not recognise the value in collecting this additional layer of information in order to provide a telescopic view of the client to the funder.

As the non-profit organisations try to cope with these intensive information requirements, they are beginning to analyse the funds allocated to them and the associated information requirements. As the non-profit organisations experience constraints in capturing additional information, they are reluctant to strengthen their administration layer in order to facilitate this data capture.

Within this load-shifting environment, when collecting information required by the funders, non-profit organisations question how this impacts advocacy values that they stand for. Studies suggest that the reducing the distance of funder and non-profit organisations does not dilute the advocacy services of non-profit organisations. However, two of the organisations we studied strongly commented that the funder-required information (in load-shifting relationships) can weaken their positions in advocacy. As our study did not focus on advocacy practices of these non-profit organisations, our dataset was limited in this area.

10.1.3 Professional affiliations

The professional affiliations of staff members enhanced ICT use practices as they enabled staff members to compare ICT use within their own organisation and others. Although the practitioner level differs (e.g. fundraising vs volunteer management) they offer a platform to discuss common practices which contribute to the understanding of staff members in ICTs used in other organisations, which types of applications work better, and how best applications can be deployed.

It is interesting to note the difference between professional relationships with different sectors (e.g. with for profit) and within the same sector. Staff members that had professional connections with different sectors contributed to the understanding of how the ICT use in their organisation can be improved in terms of the functionality of the application (e.g. 'the look and feel of our website needs to be improved '). Staff members with professional relationships within the same sector explained how the operational use of ICTs can be improved (e.g. 'we should share more of our volunteer stories on the website').

These professional affiliations are an important facet, as they bring in people from various sectors and are able to provide more insights in to using ICTs. It was interesting to note that several of the people who were service champions and staff members who created interfaces were those who had professional affiliations in the ICT industry. These external affiliations enable staff members to have a comparative view of ICT use and provide opportunities to enhance ICT use within their own organisations.

This comparative view does not extend to some of their practices. Three of the non-profit organisations expressed concern over how the stewardship values that govern their organisations do not extend to ICT use practices in their organisations. From our analysis this constrains ICT use in non-profit organisations, as they are unable to actively compare between their own organisations' ICT investment and that of others. Although the professional affiliations present how ICTs can be used, most ICT use practices and investments associated with ICTs are not shared. DiMaggio and Powell (1991) describe mimetic isomorphic pressures that influence an organisation to adopt the practises of similar organisations within an environment. Although we were able to identify these influences in fundraising and volunteer management areas (e.g. use of volunteer referral organisations), within ICT use these mimetic influences were not evident. Enhancing an IT ecology would enable these organisations to

better compare their ICT investments and ICT use practices and tools, enabling them to realise how their stewardship values can extend to ICT use practices.

10.2 Environments

Findings within this dimension primarily revealed the importance of ICT support roles within organisations and how complex client requirements highlight the deficiencies in client information systems.

10.2.1 Informal ICT support roles

A key finding of the analysis in this dimension is the importance of informal ICT support roles that enhance ICT use. Lamb and Kling (2003) theorise that social actors are not primarily users of ICTs, but utilise ICTs as part of their job to deliver services within an organisation. Similarly, staff members within these organisations use ICTs in their efforts to produce client or organisational outcomes and to connect with external organisations to facilitate these outcomes. Within the organisations studied it was evident that the staff members did not consider themselves as primarily ICT users. Their role was to manage information flows to deliver positive outcomes to their clients. Within this context, staff members identified informal ICT support roles as an important element that enabled their ICT use.

Analysis of the four organisations suggests that informal ICT support roles emerged as a response to the lack of formal training and full-time IT staff on sites. Within the single organisation of the study (ILS) that had full-time ICT staff members on site, these support structures were not evident, as they had a single point of contact for support on site. In the absence of full-time ICT staff, strengthening these informal support structures in organisations enables staff to overcome limitations in their ICT use and enhance ICT use.

Nature of informal ICT support:

Seeking informal support was an individual act. Staff members seeking support determined that they were at the stage where they could not progress further without the intervention of an experienced ICT user, and sought support from an identified individual. One key characteristic of this engagement was the frequency of the interactions. The experienced users received support requests daily, sometimes weekly. Experienced users indicated that while some staff members only required "a bit of self-confidence", the others required more structured knowledge or expertise. These informal support interactions were some of the key ICT learning mechanisms of staff members. As these organisations did not have training manuals, a documented set of frequently asked questions, online learning tools, training guides or structured ICT training, these interactions provided staff members an opportune learning experience. As these organisations are minimally funded in terms of ICTs, the cost associated with producing these learning materials is not identified as a justifiable expense.

Three main informal support structures were evident; end user clusters, expert users and service champions. (Refer to Cross-case chapter – section 9.2.3 for detailed characteristics.) Associated with each of these informal ICT support structures was an individual or several individuals who provided informal ICT support. They articulated their role clearly and understood the importance of this informal function. Staff members who provided this informal ICT support were not working within the formal structures of the organisation in their role of supporting other users. They were not remunerated for these activities and were not given additional benefits (e.g. time off) in lieu of the services they provided. Although not formally compensated, the staff members who had these roles had a sense of value associated with working in a non-profit organisation. They associated providing this support with the non-profit ethos of supporting each other. This behaviour aligns with the altruistic values identified within employees in the non-profit sector. Guy and Patton (1989) explained that employees in non-

profit organisations are motivated by altruistic values, and their findings help us understand why this behaviour extends to ICT use practices.

As the examples from this study display, supporting staff members to use ICTs is an important function. Our findings correspond with other studies (Sykes et al 2009; Kane and Labianca 2011), which investigated the importance of seeking support from team members in improving information systems proficiency. Informal support behaviours identified in this study – end user support clusters, service champions and expert users – resonate with the findings of studies in the IS proficiency area which identified peer-to-peer support as a critical element to enhance information systems use within organisations. By examining how ICT peer support is enacted in a social network setting, Kane and Borgatti (2011) and Sykes et al (2009) showed that the ability to access users highly proficient in information systems is an important element for users who require support. Within this study, expert users and service champions were identified by staff members as "approachable and able to understand the end user problems/difficulties".

Although these help-seeking behaviours in staff members can be perceived as a dependence on individuals, that is a characteristic of a peer support role and is critical in promoting ICT use in organisations that do not have formal training programmes or ICT staff on-site.

When examining the Environments dimension, it would be worthwhile to either examine ICT support roles within the characteristic "ICTs are part of the organisational environments" or translate the characteristic to reflect "ICT support structures (i.e. formal/informal) are a part of the organisational environment". In the context of non-profit sector organisations it may produce results that explain how ICT use practices assimilate within organisations.

10.2.2 Complexity of client requirements and Information intensity

Analysing the client information systems use across the four types of the organisations provided an in-depth understanding of the client requirements and associated ICT use practices. (See Cross case section 2.2 for more details.)

Organisation	Action for Seniors	Independent Living services	Integrated Community Care	Tararua Hospice
Type of services provided	- Companionship support - Elder abuse and neglect prevention	- Instrumental activities of daily living - Rehabilitation	- Instrumental activities of daily living	- End of life care
Complexity of client requirements	Low to medium	Low to medium	Medium to high	High
Information intensive	Least information intensive.	Average information intensive	More information intensive	Most information intensive
Client Information system	In house developed, client information partially stored	In house developed. Client information partially stored.	Client information stored in Word and Excel.	Outsourced, cloud based solution, client record fully captured.

Table 10.4   Complexity of client requirements and information intensity

This led to finding that the lack of a client management system able to capture a comprehensive data set of the client – staff interactions – constrains an organisation's ability to deliver services to a wider community more effectively. Servicing clients within complex care situations enhances the organisations' ability to qualify for more funding and deploy a full range of services to support clients in the community. However increasing the number of complex care clients results in an increase in information intensiveness in these organisations (see table 10.4); without the use of a client management system that is able to capture these interactions, it creates a vast workload for administrative staff and increases costs for the organisations. As most of the associated workload is in extracting data from different formats and summarising information into a single

format, administrative staff perceive these activities as non-value added tasks that an information system should be able to handle.

This was evident in AFS, ILS and particularly ICC, which resorted to storing additional information in Word and Excel documents when their existing information system was unable to capture the complex interactions between clients and staff members. (Refer Cases ICC, Cross case 2.2 for a detailed analysis.)

As these organisations respond to changes, noted in Affiliations (1.4), the ability to respond to challenges in changing client demographic factors and the funding environment will depend on these organisations' ability to contain and harvest information from a client management system that captures the layers of services they deliver.

Other findings within the environment dimension identify ICT use in the volunteer management area as the most standardised aspect across the four organisations. Further organisations' perceptions of ICT investments and the ICT maturity of organisations in their ability to select ICT tools and services most appropriate for their use are discussed below.

Standardised ICT use practices in volunteer management – Findings in ICT use practices in client, volunteer management and fundraising areas suggest that practices in volunteer management are adopted in a similar way across organisations. Smith, Cordery, and Dutton (2010), in their study of volunteer managers, recount that volunteer management has become an emerging career in New Zealand, and that it could be enhanced by sharing the best practices. One explanation for this similarity in ICT use can be explained by way of professional affiliations. Volunteer coordinators of non-profit organisations participate in a regular professional forum geared towards the professional development of members. It is likely that this forum enables staff to compare their ICT use practices.

Diversification of volunteering and fundraising mechanisms – It is evident that fundraising mechanisms are undergoing a diversification within the sector. Both the definition of contributions themselves and the methods of contributions are undergoing change with the influence of ICTs.

ICT maturity of the organisations – In analysing the ICT environment within the sector and internal to the organisation (in terms of infrastructure richness) it was evident that the organisations displayed maturity in their selections of ICT tools and service providers. Overall these organisations display a high level of expertise in making their decisions and identifying what is most suited for them.

10.3 Interactions

Findings within this dimension explain how information roles are enacted within the organisations of the study and how they construct information flows. Further individualised use practices, the ability of staff members to exercise personal selection in ICTs and the importance of mobile applications in the context of information capture were evident.

10.3.1 *Individualised use practices*

Findings within this dimension also highlight individualised use, where two users may use the same information systems features differently. Feature use is associated with post-adoptive user behaviours and has been studied extensively (Orlikowski (2000), Edmondson et al. (2001), Boudreau and Robey (2005), Sun (2012), Leonardi (2013)) within the information systems discipline.

Our analysis explains several reasons that lead to individualised use within these organisations.

- Different levels of expertise – Depending on their previous employment, if the user has been using the same application in the previous organisation

they tended to display a higher level of expertise. This related their familiarity with the application.

- Separation of process from information flows – Although these organisations have standard operating procedures outlining their work processes, they do not adequately cover information flows within each process. Staff members understand the process associated with each entity, but how they capture information is individualised.

For example, Integrated Community Care client case notes are managed on Word documents, and although a standard template is available each social worker has a different version of the template. One of the options that the Team Leaders were considering at the time of the study was to store a single version of the template on their intranet and adopt the same template across the organisation. However, staff members explained that it would require sustained effort on the part of Team Leaders, as they would have to collect each of the templates within the organisation and incorporate the features into a single template, and get buy-in from staff members for using the same.

At Action for Seniors, which has a database for client management, several fields in the clients' record are interpreted differently according to the personal preference of the coordinator. Each of the coordinators explained how they use the same field in two different ways and interpret the fields according to their previous experiences. (An associated help functionality that explained the feature was not evident.)

Whilst these individual use practices provide valuable information to the staff members it is not evident that these practices add value across the organisation, as collating and combining this information cannot be done easily.

Existing work handover practises from one staff member to another also contributed to feature use. Lack of documentation at this point turns the handing over procedure more into the handing over of a set of documents as

opposed to transferring a set of good practices. Staff members explained that during the handover only the several most utilised functions of the software applications are explained. This led to new staff members underutilising the applications and "discovering" new functionality that is relevant to their work several months later.

Huuskonen and Vakkari (2013) analysed feature use in social workers, the workarounds and associated consequences. Their study explains how the individualised practices lead to organisational level consequences. Although our findings are similar, a detailed analysis of each workaround and associated consequences is lacking in this study.

There are three other factors that explain feature use within this study:

- Lack of IT training – None of the organisations had a standard IT training programme for existing or new staff. Having an applications training programme may upskill those staff members who are unable to use certain features of the application due to lack of knowledge. Although there are multiple layers of informal ICT support, they cannot replace standard application training programmes. Within the informal ICT support roles users support each other and deal with each question in isolation. As individual staff members assist each other, it does lead to feature use to some extent.

- System in transition – Some of the individualised practises in these organisations may have been observed when their systems were still in transition. When an existing process is moving from a manual environment to an information system, the entire system is in transition, and at that point what we see is a system in flux in which different users adopt different practices. However, as the system stabilises, the organisation can adopt similar practices across it.

Among the four organisations, implementation of client management system at Action for Seniors has been in a state of transition for the last two years. Tararua implemented their client management and it has been in use for over a year. Both ILS and ICC were in the process of evaluating their systems as they were experiencing their inability to cater to an increased demand without significantly increasing their administrative layer of staff for information processing work.

- Role extension – Within the four non-profit organisations, it is evident that the prescribed roles of the staff members in client management and fundraising extend beyond the initial specification. As their role extends, the information requirements of the role changes as well (explained within identities dimension). At present, this is responded to at an individual level by the staff member/s modifying their information use practices, leading to an identifiable individualised use of information systems.

We found that individualised practices were evident in dealing with client management and volunteer management systems. Whilst this is an acceptable practice in non-profit organisations, this also leads to different levels of service provision and information availability within the organisation. The interesting point was that some of the individualised practices were better than the organisationally accepted standards, but were only limited to one or two users, thereby not adding value to the organisation as a whole. Although staff members worked collaboratively and provided IT support to each other, it was not evident that these practices were shared. This could be due to the type of ICT support they provided for each other being incident based. It could also be that these individualised practices were not perceived as "important" or "value adding" by the staff members themselves, and were therefore not seen worthy of sharing within their microenvironments.

Information roles – Information behaviour of staff members within these organisations can be categorised into three main information roles. These roles

are evident in their ICT use behaviours, and identifying these roles enables us to understand how information flow is facilitated.

Findings of this study suggest that there are information roles in data capture and information processing (see Table 10.5 below).

Information role	Characteristics/ behaviours	Examples from interviews	Staff role
Data capture	Level 1 These users capture data of their interaction in hard copy format or an email.	"I fill a form and give to admin people" "I send an email to the coordinator"	Volunteers, ILS staff that interface with clients Volunteers
	Level 2 These users enter data into an information system. They enter data of clients allocated to them.	"I enter the client information in to our database" "I type up the client notes in Word"	Client management staff, Volunteer coordinators Social workers
	Level 3 These are the end users that enter Level 1 users data into the system.	"Other people give me their forms and I enter them into a database/information system/excel sheet"	Admin staff, Fundraising staff (donor databases), Team Leaders
Information creator	These users create information using data captured by level 1-3 users.	"I get information from various people and summarise them into a single report"	Team Leaders, Fund raising staff, Admin staff
Information consumer	Information consumer	"I get a report" / "Team Leaders give me a report" / "I generate a report from the information system"	Practice manager

Table 10.5   Information roles within non-profit organisations

a.   Data capture

Information capture occurs subsequent to the interaction of clients and volunteers (or staff members). The role of these users is to capture information about this interaction in an organisationally prescribed

manner. There are three levels of data capture and they have been outlined in the table 10.5 above.

The differentiating element between these three levels is their use of ICTs and the volume of data. Level 1 users deal with the lowest level of volume and may have a single interaction with ICTs or none. They essentially capture the data directly related to their entity (client /volunteer) using a paper format or a format about a step away from the prescribed information system. Level 1 users have a single step distance away from ICTs. There is an expectation that "someone else" will manage their data for them using an information system. Within the information roles, Level 1 and Information Consumers can be external entities (i.e. Volunteer within client management functionality or a funder).

Level 2 users are similar to Level 1 users in terms of volume but their use of ICTs differentiates them from Level 1 users. They enter data using an organisationally mandated ICT tool (Word document, client information system) and their data can be directly used by Information Creators.

Level 3 users are an essential category for an organisation that has Level 1 users. Level 3 users use the organisation's ICTs to create the data on behalf of the Level 1 users. Information Creators would not be able to use the data from Level 1 users without the intervention of the Level 3 users.

b.   *Information Creator*

These users are pivotal to non-profit human service organisations. They collate data from multiple sources, in multiple formats, and create a single layer of information that can be communicated across the organisation or with external parties. The overlap of roles is most evident within this role. The Information Creator role overlaps with the Level 3 data capture role most often. Their behaviours are explained within the Interactions Cross-case section 3.3.

The Information Creator role becomes more complex when data capture users use different software for information gathering, different formats of software (e.g. different versions of Word, Excel) and multiple database versions. Information Creators attempt to communicate with each other and create an end-to-end information flow for a single entity. However as the information relating to each element (client, volunteer, fund) is stored in different systems, obtaining a complete view is a difficult task. In an analogy when two different systems need to pass information to each, it is possible to create an interface to import data from one system and export data into another with minimal intervention by end users. The role of information creators is similar within these organisations, and they are the interface between the information capture and information consumer roles.

c.   *Information Consumer*

This role is evident both internally and externally in regards to the non-profit organisation. Information Consumers' most prominent relationship is with Information Creators. Within the organisations, these two roles can overlap and when they do overlap, this is one of the key points where staff say they are unable to add value to the service, as their Information Creator role takes up more time and effort.

The significance of these information roles is discussed below.

▪   These roles or a variation of these roles are identifiable in every organisation and all staff members interviewed can be categorised using either one or two of these roles.

▪   In analysing the information flows it was evident that in organisations with a very high number of data capture roles at Level 1 (e.g. ICC, ILS) the Information Creator role is more complex than in organisations with a higher number of Level 2 and 3 roles. This explains why certain

organisations are required to strengthen their administrative layer when responding to increased service demands.

- The findings of this study suggest that the Information Creator role and Level 3 information capture role is combined (held by the same person/s) in organisations. In this event, the Information Creator role becomes highly data intensive, and facets of value addition that can be done in an Information Creator role are missed due to the focus on data. This constrains an organisation's ability to communicate value in the services they deliver.

- Similarly, in instances when the Information Creator role and Information Consumer role are overlapped without the presence of a Level 3 data capture role, the Information Consumer role becomes a data intensive role, and the ability of that person to add value to an organisation by way of creating new affiliations and making informed decisions is diminished (e.g. refer case study ICC).

Ability to exercise personal preferences – Staff members' ability to exercise personal selection of ICT tools and their use was an interesting finding. Within the organisation boundaries, staff members exercised their personal preferences of ICT use in three functional areas of the study. Staff members selected how they stored client and donor information and how they communicated with volunteers. This ability to exercise personal preference raises questions about the loss of information within these personal selections. For example, evidence from the fundraising area about how staff members nurtured a 'potential' donor to an 'actual' donor was highly personalised and associated information practices were left to personal selection.

From the staff interviews, it is evident that capturing information at fundraising activities pertaining to donors remains within a set of individualised practices (e.g. identifying a potential donor, cultivating a donor, converting a donor from a potential donor to an actual donor). Staff members who engage corporate

donors explain that relationships are specialised and, in terms of evaluating how the donor would engage with their organisation, cannot be easily defined. Practices within these engagements are captured in Word documents and emails. This can be perceived as an information loss from the organisations' point of view as potential donor/organisation staff member exchanges cannot be easily communicated from one staff member to another.

Lack of mobile applications – It was evident that the lack of mobile applications constrained the organisations' ability to capture data at the point of interaction. Although selecting a suitable application that would protect the client's privacy was central to organisations' hesitation to adopt mobile technologies, staff also outlined a set of issues, including training and lack of funding. However, as our study focused on post adoption behaviours, findings in this area were not relevant to this study.

10.4 Identities

Lamb and Kling (2003) explained the social actor model could be extended using work done by Barley (1996). Barley's work focused on answering two central questions: what do technicians do and what do they know? One of the aspects that we found relevant to this study is that it categorises technicians as buffers and brokers. Buffers are technicians that work closely with professionals and provide data to support the decision making process of that professional (e.g. an EMT technician working with a doctor in an emergency ward). Brokers are technicians that primarily maintain technical infrastructures enabling other people to do their work (e.g. computer technicians, network administrators).

Similarly, within the four cases analysed we found three main categories of social actors. As Lamb and Kling (2003) described, social actors are organisational members that use ICTs in their day-to-day work. However, the enactment of ICT use component in social actor identities differs from one category of social actor to another. (Refer categories of staff members Cross case analysis – Identities.)

Findings within this study explain how the client facing staff, organisation facing staff and external facing staff differ in their ICT use. Staff members who primarily worked with clients struggled to reconcile the use of technology with their individual identities. In comparison, organisation and external facing staff members better associated ICT use with their individual identities.

Furthermore, the value associated with technology differs at each level of social actors. Staff at the front line need to be convinced that the role of ICTs in their work would enable them to spend more time with the client and also to provide the client with an increased level of care. When they perceive technology as a way to limit the time they have with the client they are reluctant to use ICTs. In addition, client-facing staff needed to be convinced of the value of ICTs in their job/role and found it most difficult to articulate the value of ICT use in their work. For internal organisation-facing staff members, their value of technology was associated with cost saving, time saving and they are the category who are more focused on the effectiveness of ICTs. For staff working with donors/external organisations, the value of technology is measured by the funds raised and the exposure created for the organisation. The value associated is different at each level and the staff in client facing roles have not yet associated that increase in quality of care with a quantifiable measure.

10.4.1 *Service provider vs non-profit organisation identity*

Managing a service provider or contractor identity and a non-profit identity has been an issue for non-profit sector organisations across the sector. Mosley (2013) identify that this is particularly significant in human service agencies, as these non-profit organisations serve vulnerable populations and are expected to advocate on their behalf. Findings of our study similarly identify organisations' struggle to differentiate between several identities (religious, advocacy, service provider). Non-profit organisations utilise their websites to highlight and differentiate these identities to their individual donors and community.

10.4.2 Individual identity associated with previous work experience

One of the themes that emerged within the identities dimension is the influence of previous work experience on the staff members' use of ICTs within the organisation. Staff members who have had negative experiences in their previous work continued to portray their experiences with ICTs negatively. (See example in AFS case.) Similarly, staff members who had positive exposure to ICTs in their previous job were instrumental in introducing new ICT practices in non-profit organisations (see example in ICC and TH case) and provided informal ICT support to other staff members. Van Akkeren and Rowlands (2007, p.701) stated "Age, gender and geographic placement will impact on ICT acceptance and use". From our study it is evident that previous work experience influences ICT use.

10.5 Post- adoptive ICT use

Most post-adoption studies define behaviour in the context of the organisation or the individual. This study, whilst contributing to the understanding of the individual and organisation, explains how external factors influence ICT use in the post-adoption phase. This study frames post-adoptive ICT use behaviours as a response to organisational and external environments and argues that the individual within an organisation displays task directed information behaviours.

Our conceptualisation of how external factors influence organisational and individual information behaviours is as below.
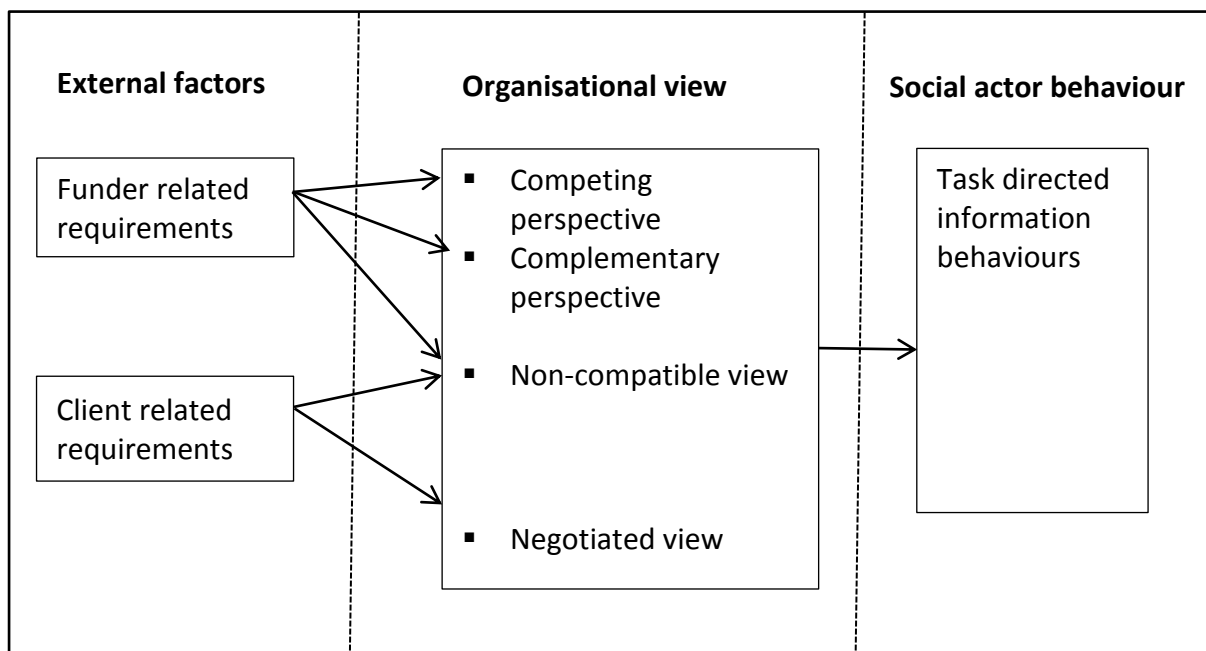
Figure 10.2   Post-adoptive ICT use-external factors influencing organisational and individual behaviours

We have analysed external cues and mapped organisational responses to them. In identifying social actor behaviours we have presented a three tier typology of social-actor information roles (Figure 10.3). Our conceptualisation explains post-adoptive ICT use as a product of external cues and organisational responses influencing the individual.

External factors

We have identified two primary categories of external factors that influence post adoption user behaviours and have articulated organisations' responses and social actor behaviour to each. Following (table 10.6a) presents the summary of types of influences from the external environment.

Funder influences	Client influences
- Information requirements at the initial bid and maintenance phase. - Change in funder requirements - Organisational donor or funder load shifting arrangements	- Client initial and ongoing assessments - Client transitions - Client requirements changing due to stage of life - Client service delivery

Table 10.6a   Environmental factors

We have discussed these influences in detail in each of the case study chapters and cross-case analysis. Table 10.6b provides examples of the external cues that are most frequently evident in these organisations. Whilst operating within the boundary of organisationally specified responses, social actors in each of these examples respond to cues by modifying their post adoption use.

Influence	Example
Change in funder requirements	The frequency of communicating client outcomes has changed from twice a year to four times a year. Team leaders create new information flows to interact with their clients. They are also required to change the frequency of their data capture and processing practices.
Organisational donor or funder load shifting arrangements	Non-profit organisation provides weekly volunteer visits to clients. However the donor requires volunteers to make a daily phone call to avoid lonely deaths in community which is identified as an objective of the donor organisation. Team leaders are required to assign volunteers, make introductions to clients, update information collection templates and create new interactions to capture volunteer-client phone interactions.

Client transitions	Client transitions from hospital to home requires initiating visits from volunteers, an assessment for in-home care and possible modifications to the home environment. Client transitions from home to hospital requires volunteer visits and home care services to be discontinued for the period of stay.
Client requirements changing due to stage of life	Volunteers, staff members or the client communicates the change in requirement due to stage of life (e.g. loss of eyesight). A team leader would conduct an in-house assessment to assess the impact of change, support services required, apply for additional contract, seek approval, assign staff and communicate change. Further additional visits will be scheduled for assessment during the new contract period, if a change in contract has been set in place.

Table 10.7b   Environmental factors

These examples highlight how cues from the external environment influence ICT use. The need to respond to external influences becomes a central behaviour of these end users as it determines their organisation's sustainability within a competitive environment. Therefore end user habits, attitudes towards ICTs, and cognitive behaviours such as perceived usefulness are less evident in these examples. Whilst they may be important in ICT adoption decisions, post-adoption behaviours are enacted in response to external cues.

These are the primary external factors that influence the post-adoptive ICT use in the non-profit organisations of the study. By identifying specific external cues and associated organisational responses, our data supports the task directed user behaviour (Oritiz de Guinea and Markus, 2009; Baki et al 2007) in ICT continuance. Our findings contrast with post-adoption studies that primarily explain habit (Limayem et al. 2003) and internal cognitive functions of individuals (Venkatesh and Davis, 2000) as the main influences for ICT use. Our findings articulate how the environmental cues are enacted in organisational and individual behaviour, contributing to knowledge in considering external environment in post-adoption studies.

Organisational view

We have articulated each of the organisational responses in relation to their external cues. By explaining how external requirements are enacted in the organisational environment, we have substantiated the importance of studying the external context in post-adoption studies.

Competing and complementary perspectives explain how organisations institutionalise their responses to funder requirements (table 10.1). We have presented a detailed discussion on these two perspectives in section 10.1.

Organisations adopt a negotiated view when dealing with client requirements and liaising with external organisations on behalf of the client. Within the cross case chapter we have presented how the complexity of client requirements relates to information intensity, identified layers of client requirements and ICTs in managing requirements. We have also explained how non-profit organisations adopt a negotiated view of information when liaising with external organisations to facilitate these client requirements. We have articulated how information flows between the non-profit staff member and the external organisations can be identified as value adding and value communicating flows. We have also explained how the staff member's role extends to cater to new information requirements. .

A non-compatible view is an organisational response when a client or funder's requirements are rejected or not currently accepted by the organisation. Our data is limited in this area. When we conducted the member check workshop we explored this area further in the discussion session. Participants explained that the non-compatible response within an organisation is less defined than the other three responses. However, the information exchange within the non-compatible view is one of the important elements that define organisations' future responses to environmental cues. See examples from the workshop discussion below.

"Say for instance three of our clients have wanted a particular service that we don't offer right now. We may have given them details of someone who does. But we still need to capture that information, because towards the end of the year we may have 20 clients who have called us about that service. At that stage we will have to consider if that is one of the services we should offer. We don't collect that information right now, well not very well but we should."

"Yes, this is something we don't do really well. Specially in terms of organisational donors. They may have fund that we don't qualify for this year but we still need to capture that. It is likely three years down the line we do qualify for it "

One of the limitations of our study is not investigating this perspective further at the data collection and analysis stage.

Social actor behaviour

External factors and organisational responses (figure 10.2) influence ICT use behaviours. These behaviour can be further analysed as type of social actor and the associate information role they perform (figure 10.3). Extending the understanding of the social actor we have presented a three tier typology of social actor -information roles. This categorisation of the social actors is significant, as we are able to identify how their behaviours are shaped by external influences and how their information behaviours differentiate them from one another.
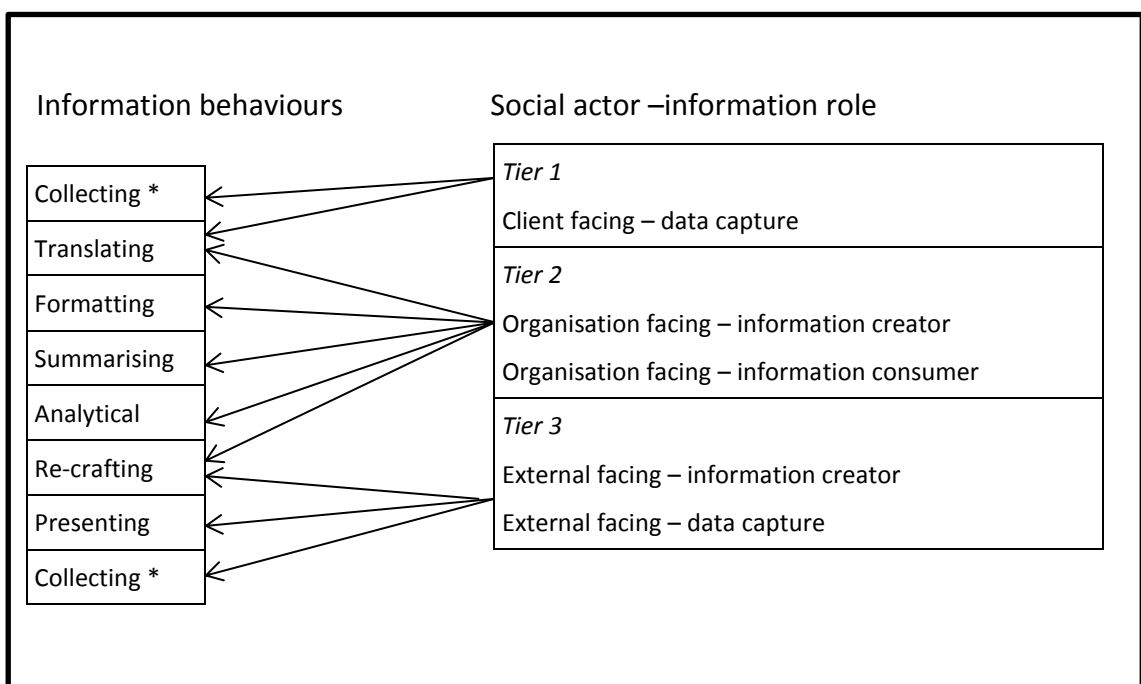
Figure 10.3   Three tier typology of social actor-information roles and behaviours

Note- Information collecting* is repeated to avoid the arrows crossing in the diagram.

The three tier typology presents types of social actors in relation to their information role and the primary entity that they interact with. Each tier is associated with a set of information behaviours. This three tier typology presents an alternative view to the user and extends the social actor concept. Within the user concept the end user is conceptualised in isolation and ICT behaviours are associated with cognitive functions such as habit, intention and perceived use. The social actor concept presents an alternative view the concept of the user explaining that the user cannot be narrowly perceived. The three tier typology extends the understanding of the social actor and explains that social actors are associated with a central information entity and an information role, within the organisation. It also explains the individuals within each tier display different information behaviours.

Social actor roles in tier one interact with clients, whilst tier two and tier three interact with the organisation and external environment respectively. Associated information roles are in relation to their primary information behaviours. Within our study we have identified five social actor information roles across three tiers.

This categorisation is similar to Barley's (1996) classification of technicians as buffers and brokers. Their study explained how technicians that work within the same organisation and perform similar roles can be distinct according to their expertise. Similarly, this three tier typology explains that within non-profit organisations ICT use differs according to the information role performed by staff members.

Each social actor- information role is associated with a set of behaviours.

Information collecting

Information collecting behaviours are primarily associated with data capture roles. Most volunteers and staff members demonstrate information collecting behaviours when gathering basic information on their key entities (e.g. client, funder).

Information translating

Across the four organisations, there are multiple instances where information collection is a paper based process (see section Cross case – 9.3.3). This information is translated into an electronic format. Information translating behaviours require data entry skills, either in the form of a designated information system (e.g. client information system) or an application (e.g. MS Word).

Member check workshop participants responded to these two information behaviours and associated roles. They explained that information loss is a significant issue in tier 1 roles, which impacts the ability of the organisation to correctly analyse the information. Furthermore this influences the analytical behaviour of tier 2 roles.

Formatting or converting information

There are several instances where an organisation and its associated multiple locations have not standardised applications. Staff members in tier 2 require skills to format documents from one format to another (e.g. Word 97). Further information creator roles are required to convert information from emails to either Excel or Word documents.

Information summarising behaviours

Organisation facing – information creator roles are required to provide information summaries that can be communicated across the organisation. They use the data gathered by data capture roles to produce these summaries. Information summaries are entity related and have a defined information template that is communicated across the organisation.

Workshop participants clarified that the summaries are primarily produced either across a service or a location. They explained that the service or location summaries form part of organisational level analysis. For example, instead of summarising how a day programme has improved health outcomes for a particular client, they would produce a summary of the day programme in Sea Town.

Analytical behaviours

Across the four organisations this was identified as one of the most important skills and one of the most time-consuming behaviours associated with the organisation facing information creator. (see cross-case – section 9.3.3)

Workshop participants provided feedback stating that the staff members found it challenging when analysing location based services to facilitate building business cases to qualify for new funding.

Information re-crafting

Information re-crafting and motivation for re-crafting information has been discussed across the four organisations (see 9.3.2). Our study primarily identified organisation facing and external facing social actors with the information creator role. These roles require information recrafting skills primarily in order to protect the privacy of their clients and facilitate organisation's service requirements.

Information presenting behaviours

These behaviours are primarily associated with external facing – information roles. These staff members present information to either funders or donors on services that the organisation provides. These staff members also provide web content on the corporate site.

Workshop participants commented on the fluidity of two particular roles: client facing – data capture and external facing – data capture role. They explained that as they are modifying some of the existing volunteer roles, the organisation envisages that some volunteers would perform these two roles relating to two different entities. See example below for a single organisational member:

Social actor - information role	Entity	Narrative
Client facing – data capture	Client	"Our volunteers will collect data about what they do with clients"
External facing – data capture	Donor	"We need couple of printers and computers. Because we done have money we are using a volunteers to contact commercial organisations to ask if they can donate some"

Table 10.8   Composite roles

The theme of composite roles was evident in two of the interviews we conducted at ICC. They were specific to certain projects, indicating that within a short time period organisational members will return to their original role. We discussed this perspective with workshop participants and they explained that although our understanding is correct, if a staff member performs composite roles twice or thrice a year it should still considered as part of the role they perform within the organisation. We have revised our conclusion chapter, directions for further research section to reflect this feedback.

Limitations

> (a)Post-adoptive ICT use-external factors influencing organisational and individual behaviours - One set of external factors that we have not been able to substantiate with our data is the influence of regulatory and government agencies. There are two reasons why our data has not been sufficient in this area. Primarily, the non-residential care providers are loosely regulated in New Zealand. The governance rules that apply to the residential care sector do not apply to organisations that provide services to people who live within the community. Furthermore some of the funders themselves play an indirect regulatory role. Therefore, funder information requirements can be used for regulatory purposes. However, if a similar study was replicated in a heavily regulated sector (e.g. Residential) regulatory requirements may play a stronger role.

Furthermore, when this finding was presented at the member check workshop, participants responded that the informal carer requirements should form part of the external environment. They explained that non-profit organisations that provide services within the community often interact with informal carers and the requirements of informal carers can shape information exchanges. We have identified this omission as a limitation of the model.

(b) Three tier typology – Following social actor-information roles were less evident within the four organisations studied.

- Tier 1 - Client facing – information creator, client facing - information consumer
- Tier 2 -Organisation facing – data capture
- Tier 3- External facing - information consumer

 The tier 1 roles above were less evident due to paper based systems and issues relating to mobility of staff, shifting that work to tier 2. This created additional work pressures in tier 2 roles and motivation to move most data capture roles into tier 1. In an environment where information systems better facilitated a

mobile workforce, tier 1 information creator and consumer roles may have been more evident.

At the member check workshop participants raised queries on the information challenges associated with each tier and how it impacts the other tiers. See appendix three for a detailed discussion.

Chapter summary

The discussion chapter presented the two key findings within this study, the post –adoptive ICT use frame work and the three-tier typology of social actor-information roles. By explaining how the external environment is enacted in organisational and individual ICT use behaviours, it claimed that user behaviour is task related and is a response to the external environment.

Chapter 11 – Conclusion

The objective of this research was to understand how ICTs are used within human services non-profit organisations. We examined ICT use in three functions, viz., volunteer management, client management and fundraising, in organisations that provided services for older people in the community. Utilising the social actor model as a theoretical lens, the influence of ICT use has been presented in the discussion chapter. This chapter presents the summary of findings, contributions to knowledge, limitations of the study and further directions for research.

11.1 Summary of findings

In examining the influence of the external factors, we found that social actor behaviours were task directed and informed by organisations' responses to external cues. We found four information perspectives that an organisation adopts in response to their external influences: complementary, competing, negotiated and non-compatible view. Identifying these four concepts enabled us to explain how external influences are enacted in individual ICT use behaviours in the post-adoptive phase. Our findings show that external factors influence task directed information behaviours in individuals. These findings provide a contrasting view to studies that depict user behaviours in relation to habit, intention, perceived usefulness and cognitive functions as factors that influence individual behaviours.

By analysing information behaviours of organisational members we explained the three tier typology of social actor - information roles and behaviours. In identifying the three tier typology, we explain that organisation member information behaviours are related to their information role and their primary connection with an organisation entity (e.g. client, organisation, funder). Within each tier information behaviours varied from data collection to presenting

information. Identification of social actor- information behaviours explains that individual use behaviours are dissimilar and the user cannot be studied as a uniform entity.

Affiliations relate to organisational and professional relationships that staff members have with their external environment. In examining the influence of the funders, we found that organisations adopted either a complementary or a competing perspective in managing the information requirements of these funders. Organisations with a competing perspective struggled to capture information exchanges that added value to their organisations. It was evident that a funder's load-shifting requirements influenced the non-profit organisations to create additional data capture and information flows. The influence of external organisations was evident, as the staff members of the non-profit organisations liaised with them on behalf of their clients. Analysis of these information relationships enabled us to understand that these organisations increasingly worked with a complex set of client requirements. ICTs used to capture these information exchanges contributed to information challenges identified within the organisations. Professional affiliations of staff members enhanced ICT use within these organisations by providing a comparative view of how ICTs are enacted in similar settings.

We found several environmental factors that enabled and constrained ICT use within these organisations. Distinct informal ICT support roles, end-user support clusters, service champions and expert users enhanced ICT use. We also identified that information intensive behaviour in the organisations was different according to the types of service delivered. Organisations that delivered information services were the least information intensive, whilst organisations that delivered services were the most information intensive. However, within each of the organisations, depending on the level of services accessed by clients, their information intensity changed from low, to moderate, to high. Even within

organisations that delivered information services there were clients that were high information intensive.

Using the interactions dimension we identified individualised use practices and information roles associated with their functions. In an environment where the information systems are fragmented we developed the concept of three information roles viz., data capture, information creator and information consumer.

Using the identities dimension we explain how the non-profit organisations' identity changes and the challenges they encounter in balancing a transitional identity. We also present three types of social actor identities defined by ICT use and characteristics associated with them.

11.2 Contributions

The objective of research is to contribute to theory and practice. This study has extended the understanding of ICT use in human services non-profit organisations in New Zealand and contributed to knowledge in the development of the social actor model within specific contexts.

11.2.1 Post-adoptive information behaviours

This study explained how external influences are enacted in organisational and individual behaviours by conceptualising organisational responses and individual information behaviours. The three tier typology of social actor- information roles highlighted the necessity of studying post-adoptive behaviours as a response to the external environment rather than in isolation. Our findings align with post - adoptive studies, which explain end user behaviour as a task or goal related function (Fine 2006b; Markus and Ortiz de Guinea 2009). This study also questions the validity of using models that depict post-adoptive ICT use as a function of habitual behaviour in isolation, when studying non-profit sector organisations. As these organisations are strongly situated in their external

environment using such models does not fully depict the reality in the operating environment.

11.2.2 Influences that enhance and constrain ICT use in human services non-profit organisations

This research has provided new insights into ICT use and extended the concepts of funder influence, informal ICT support roles and information reshaping behaviours. We have provided rich insights into how information contexts enhance and constrain ICT use and have contributed to the limited knowledge of ICT use contexts in New Zealand non-profit organisations.

11.2.3 Information challenges

This study has presented a detailed analysis of information challenges that non-profit organisations encounter in their day-to-day operations. We identified information roles that constrain an organisation's ability to communicate the value of its services to their funders and donors. We developed the concepts of three information roles; data capture, information creator and information consumer, evident in the context of non-profit organisations that have fragmented information systems.

11.2.4 Distinction of social actor vs user

We have presented new perspectives to support this distinction and have extended the understanding of the types of social actors. The research findings of this study explain that types of social actors can be differentiated within the contexts of ICT use. We have categorised staff members as client facing, organisation facing and external facing social actors, and have identified distinct characteristics between these categories of users. These findings reinforce the limitations of the individualistic user concept in examining contextual understandings of ICT use.

11.2.5 Improving the granularity of the dimensions and characteristics

One of the key contributions of this study has been to further develop the granularity of the dimensions of the social actor model. Whilst these findings increase our understanding of the organisations studied, they also provide guidance in applying the model in other contexts.

11.2.6 Separation of information and process flows

Although the organisations understand information as central to their main processes, they have barriers in articulating the importance of ICTs in enhancing the information flow. This has resulted in functional process and information flows being developed as two separate components instead of complementing each other within the central component identified for improvement. This study illustrates that continuing to improve these processes and information flows in separation constrains the ability of information creators to add value. Their role now becomes that of the creator of new workflows to facilitate information requirements needed because of the improved process change. This results in constraining the organisation and its abilities, as opposed to enhancing them and making them more flexible and agile. One theme that emerges from all of the staff members that hold leadership positions is the "effort" that it takes within their organisations to offer a new service, predict trends over years and have data to justify their decisions. The disconnect between information flows and processes was evident and organisations' processes are better developed than the associated information flows.

11.3 Contribution to practice

11.3.1 Identification of informal ICT support roles

This study identified three informal ICT support roles; end user clusters, service champions and expert users. These roles enhanced ICT use within the organisations. As most non-profit sector organisations outsource their IT service

provision, these informal roles are required to act as a buffer between the service provider and non-profit organisation's staff members.

11.3.2 Relevance of information roles and how it impacts the organisation

In presenting the three tier typology of social actor/information roles, one of the key findings was the drip down effect of having far too many client facing data capture roles. As the number of these roles increase, if their behaviour is limited to information collecting, this adds extra pressure on tier 2 organisation facing - information creator roles. From an organisational perspective, client facing -data capture roles should perform information collecting as well as translating activities.

11.3.3 Components of value

This study presented a conceptualisation of value-adding and communicating information flows. Identification of value as a set of information flows enables the organisations to better analyse their data capture, translating and information presenting practices to ensure that they are able to communicate the value of their service delivery in the communities effectively to funders and donors.

11.3.4 Managing client information requirements

We presented an in-depth analysis of client information requirements and how ICTs are used to capture client information layers. As the role of the staff member extends due the to information requirements of clients, this conceptualisation enables the organisations to analyse their client information systems and identify how best staff members can be supported when operating in an information intense environment.

11.3.5 Information loss

Information loss to the organisation was evident at data collecting and translating behaviours as well as in donor information storage. Due to

individualised practices, organisations' ability to accurately analyse service trends is constrained by information loss.

11.4 Limitations

11.4.1 Informal carer role

In our conceptualisation of the value associated information flows (section 10.1.1), we have only considered the interactions between client, volunteers and staff members. In presenting our findings at a workshop to participants of the study, we received feedback on the importance of the informal carer role. Furthermore, the role of the informal carer is increasingly evident in community care literature. Within the New Zealand context, informal carer organisations have been established and currently discussions are underway to compensate informal carers who deliver full time care in the community. We have not explored the role of the informal carer within this study. One of the key limitations of our conceptualisation is examining the role of informal carer as an external influence and identifying information flows between the informal carer and organisation entities (e.g. staff, volunteer and client).

11.4.2 Lack of data on regulatory influences

This study has not considered the influence of regulatory organisations and their information requirements as part of the external environment. As the community care sector is less regulated than the residential care sector, regulatory influences were not evident as information requirements within the four organisations. Furthermore, some of the regulatory organisations manifest themselves as funders within the community care sector (e.g. District Health Boards). However, when using the conceptualisation of post adoptive behaviours within a residential care setting, regulatory influences need to be considered.

11.4.3 Lack of data in the non-compatible view

In our conceptualisation of organisational responses to external influences we have presented the 'non-compatible view' as one of the responses. However, our data is too limited to explore this concept in depth. When findings were presented at a participant workshop, organisation members provided feedback on the importance of identifying social actor behaviours associated with the non-compatible view. See Appendix 3 – Workshop report.

11.4.4 Limited development of model

The social actor model has previously been used as a research instrument in a limited number of studies. Whilst those studies were instrumental in shaping this research, the limitations of the model's development and maturity had a follow-on impact in our study. For example, one of the findings that permeated our study was the organisations' limited ability to support ICT use for an increasingly mobile workforce. Although the spatiality dimension may have offered us solutions, as this dimension is not fully developed and not integrated to the social actor model, we were not able to utilise it.

11.4.5 Lack of generalisation

The lack of generalisability is accepted as a method-related limitation of this research. The findings of this study cannot be generated across the non-profit sector organisations without specific implications.

11.5 Directions for further research

11.5.1 Extending the external factors that influence post-adoptive ICT use

Investigating the influence of the informal carers and the regulatory environment will enable richer conceptualisation of external factors. This may lead to extending the post-adoptive information behaviours, such as comparisons and benchmarking, that are absent from the existing model.

11.5.2 Inclusion of social media

This study presented how post-adoptive behaviours are enacted when using the information systems of the non-profit organisations. Due to the organisations' limited use of social media, we have not identified post-adoptive behaviours that may be directly relevant within a social media context. It would be beneficial to identify and compare information behaviours in post-adoptive use of information systems to those specific to social media.

11.5.3 Extending three-tier typology of social actor- information roles

Within the three- tier framework our data supported five of the nine possible social actor-information roles. In extending the typology it would be useful to conceptualise the four roles not defined by this study. Furthermore, we have not explored the composite information roles in depth. It would be an exciting addition to develop the composite roles that relate to more than one entity as part of this typology.

11.5.4 Extending ICT use in human services non-profit organisations

This study has focused on a single type of organisation in human services non-profit organisations. A key contribution of our work is adding granularity to each of the characteristics and dimensions of this study. One way to further improve the social actor model would be to analyse similar non-profit organisations that provide services within the community to different sets of clients. For instance, there are several non-profit organisations that support foster parents, and community organisations that provide services for young adults with cognitive issues to live within the community. In exploring ICT use within these organisations, we could better understand the use of ICTs in social services non-profit organisations in New Zealand.

11.5.5 Exploring information sharing challenges in client transitions

One of the key information challenges within these organisations was their inability to seamlessly manage client transition information. This challenge is present in other human services organisations with an active long term client that has life- stage transitions, such as youth services and childcare organisations. Extending an investigation into this context will further develop our understanding of the human services sector.

11.5.6 Incorporating work from information eco-systems

Some of the information behaviours identified in this study resonate with concepts in information eco-systems; for example, the limitations of sharing best practices, the inability to identify commonly used approaches to IT implementations, the lack of a shared understanding of ICT investment, etc. This creates the perception of a steep learning curve in relation to ICT use, as non-profit organisations lack the capability to learn from each other. An information eco-system framework would help identify best practices at a sector level. Lack of such an eco-system perspective isolates organisations in the non-profit sector in their ability to support each other as a community in practice.

11.5.7 Information intensity

Within our study we found that the organisations differentiated from one another in their intensity and associated information behaviours. As it was beyond the scope of research we did not explore how the information intensity of organisations contributed to ICT use practices of social actor-information roles (for instance, two client facing-data capture roles from organisations with different information intensity). A comparison of their behaviours would extend the understanding of how the three-tier typology can be used across organisations .

11.5.8 Selection of organisations

In selecting organisations for the study, our rationale was to include four organisations that provided services at different stages of life, varying from supported independent living to hospice care. This selection enabled us to understand how the information intensity differs across services and clients' information requirements. Selecting organisations within the same stage of care (e.g. hospice care) would enable future research to examine the policies governing organisations in more depth.

11.5.9 Use of multiple information systems

This study focused on understanding how ICTs are used in three functional areas of non-profit organisations. This provided rich insight and enabled us to understand information challenges within these organisations. However, this approach meant it was not possible to develop transferable contributions to the model. Therefore, it is recommended that future research be conducted to examine a single information system within organisations.

This exploratory study was guided by a central research question how do human services non-profit organisations use ICTs when delivering services within the community. Using four comprehensive case studies, we explored how ICTs are used within the common core activities of these organisations. We have utilised four main criteria of credibility, transferability, dependability and confirmability to evaluate the trustworthiness of the case study approach. In analysing post-adoptive ICT use, we articulated the role of the external environment and identified four organisational information responses that defined individual behaviours. In studying individual behaviours, we found that they were task related and conceptualised post-adoptive use in a three-tier framework that describes information roles and associated behaviours. Out study contributed to the information systems post-adoptive ICT use knowledge by articulating how external cues are enacted within organisational and individual ICT use behaviours.

Chapter summary

This chapter highlighted the contributions that this study has made to information systems theory and practice. It also discussed limitations of the work and presented directions for further research. This study also highlighted the limitations of using frameworks that excluded conceptualisation of the external environment in studying ICT use practices in non-profit sector organisations.

References

Abuhamdieh, A. & Kendall, J. (2007). E-Commerce opportunities in the nonprofit sector: The case of New York theatre group. *International Journal of Cases on Electronic Commerce,* 3(1), 28-47.

Albert, S. & Whetten, D.A. (1985). Organizational identity. In L.L Cummings & B.M. Straw (Eds.) *Research in organizational behaviour: Vol 8.* (pp.263-295), Greenwich, CT: JAI Press.

Anheier, H. K., Rudney, G., & Salamon, L. M. (1992). The nonprofit sector in the united nations system of accounts: Definition, treatment and practice. Baltimore: Johns Hopkins University, Institute for Policy Studies.

Anthony, R. N., & Young, D. W. (1990). Characteristics of nonprofit organizations. In D. L. Gies, J. S. Ott & J. M. Shafritz (Eds.), The nonprofit organization: Essential readings. Pacific Grove, CA: Brooks/Cole.

Avgerou, C. (2000). IT and organizational change: An institutionalist perspective. *Information Technology & People*, 13(4), 234 - 262.

Avgerou, C. (2005). Doing critical research in information systems: some further thoughts. *Information Systems Journal*, 15(2), 103-109.

Barki,H.,Titah, R., and Boffo, C.(2007). Information systems use related activity: An expanded behavioural conceptualisation of individual level information systems use. *Information Systems Research*, 18(2),pp.173-192.

Benbasat, I. Goldstein, D.K. & Mead, M. (2002). The case research strategy in studies of information systems. In Myers, M. & Avison, D. (Eds.), *Qualitative research in Information Systems –A reader*, (pp. 79-100), London:SAGE publications

Berlinger, L., & Te'eni, D.(1999). Leaders' attitudes and computer use in religious congregations. *Nonprofit Management Leadership,* 9(4), 399-412.

Billis, D. & Glennerster, H. (1998). Human services and the voluntary sector: Towards a theory of comparative advantage. *Journal of Social Policy*, 27(1), 79-98.

Blackman, T., Brodhurst, S. & Convery, J. (2001). *Social care and social exclusion: A comparative study of older people's care in Europe.* UK: Palgrave.

Boston, J., & Davey, J. (2006). Conclusion :Opportunities and risks. In J.Boston & J. Davey (Eds.), *Implications of population ageing:Opportunities and risks* (pp. 275-307). Wellington: Institute of Policy Studies.

Brainard, L., & Brinkerhoff, J.(2004). Lost in cyberspace: shedding light on the dark matter of grassroots organizations. *Nonprofit and voluntary sector quarterly*, 33(3), 32S-53S.

Brosnahan, N.(1997). Conflicts and challenges :an exploration of the board/manager relationships in small community organizations. *Social Work Review*, 9, 27-30.

Burt, E., & Taylor, J. (1999). *Information and communication technologies: Reshaping the voluntary sector in the information age.* UK: Centre for Study of Telematics and Government, Available at http://virtualsociety.sbs.ox.ac.uk/projects/burt.htm.

Burt, E. & Taylor, J. (2001). Advanced network technologies in the UK voluntary sector. *Voluntas: International journal of Voluntary and non profit organizations,* 12(4), 313-325.

Burt, E. & Taylor, J. (2003). New technologies, embedded values and Strategic change: evidence from the U.K voluntary sector. *Nonprofit and Voluntary sector quarterly*, 32, 115-127.

Burton-Jones, A. & Gallivan, M.(2007). Toward a deeper understanding of systems usage in organizations: a multilevel perspective. *MIS Quarterly*. 31(4), 657-679.

Cammaerts, B., & Audenhove, L.(2003). *ICT- usage amongst transnational social movements in the networked society: To organise, to mediate and to influence.* The European media and technology in everyday life network, 2000- 2003, Available at www.lse.ac.uk/collections/EMTEL/reports/cammaerts_2003_emtel.pdf.

Carrol, J.M. & Swatman,P. (2000). Structured case: a methodological framework for building theory information systems research. *European Journal of Information Systems*, 9(4), 235-242.

Cavaye, A.L.M. (1996). Case study research: A multi-faceted research approach for IS. *Information Systems Journal* , 6(3), 227-242.

Chau, P.Y.K. & Tam, K.Y. (1997). Factors affecting the adoption of open systems: an exploratory study, *MIS Quarterly,* 21(1), 1-24.

Clerkin, R. & Gronbjerg, K. (2007). Infrastructure and activities: Relating ICT to work of non profit organizations. In M. Cortes & K.P. Rafter (Eds.), *Non profits and Technology: Emerging Research for usable knowledge* (pp.3-21). USA: Lyceum.

Community Employment Group (2002). *Connecting communities : A strategy for government support of community access to information and communication technology.* Department of Labour, Available at http://www.community.net.nz/NR/rdonlyres/152CC6B8-8736-47F4-B24B-09FCEB0CEF2E/19376/cegBooklet2004.pdf

Corder, K. (2001). Acquiring new technology :comparing nonprofit and public-sector agencies. *Administration & society*, (33), 194-219.

Cordery, C.J. (2012). Funding social services: An historical analysis of responsibility for citizens' welfare in New Zealand. *Accounting History.* 17(3-4), 463–480**.** DOI: 10.1177/1032373212443532

Cordery, C.J., Proctor-Thomson, S., and Smith, K.A. (2013) 'Towards communicating the value of volunteers: lessons from the field' Public Money and Management, 33(1), 47-54

Craig, B., & Williamson, A. (2004). *Survey of New Zealand community ICT organizations and projects.* Available online http://www.community.net.nz/hottopics/digital-strategy/publicationsresources/connecting-communities-downloads.htm

Cutt, J., Bragg, D., Balfour,K., Murray,V., Tassie,W. (1996). *Nonprofits accommodate the information demands of Public and Private funders*. Nonprofit Management & Leadership, 7 (1) , 45-67.

Darke, P., Shanks, G. & Broadbent, M. (1998). Successfully completing case study research:combining rigour, relevance and pragmatism. *Information Systems Journa* , 8, 273-289.

Davey, J.A & Keeling, S.(2004).*Combining work and elder care: A study of employees in two city councils who provide informal care for older people*, New Zealand: Department of Labour.

Dederich, L., Hausman, T., & Maxwell, S. (2006) *Online technology for social change: From struggle to strategy*. Available at http://www.dotorganize.net/report.

Department of Communications, Information Technology and Arts, (2005) , *Information and communication technology transforming the nonprofit sector*. DCITA: Canberra. Available at http://www.dbcde.gov.au/__data/assets/pdf_file/0018/23751/ICT_Transforming_the_Non-profit_sector.pdf

DePietro, R. E., Wiarda, M. & Fleischer. (1990). The context for change: organization, technology and environment. In L. G. Tornatzky, M. Fleischer, (Eds.), *The Process of Technological Innovation* (pp.151–175).Lexington, MA: Lexington Books.

Dilevko, J.(2002).The working life of Southern NGOs: Juggling the promise of Information and Communications Technologies and the perils of relationships with international NGOs.In P.Hajnal (Eds.), *Civil Society in the Information Age* (pp. 19-37). UK: Ashgate.

DiMaggio, P.J. & Powell, W.W. (1991). Introduction. In DiMaggio, P.J. & Powell, W.W (Eds.), *The new institutionalism in organizational analysis* .Chicago: University of Chicago Press

Dwyer, M. (2006). Communities and volunteering. In Boston, J. & Davey, J. A. (Eds.), *Implications of population ageing: Opportunities and risks* (pp. 275-307). Wellington: Institute of Policy Studies.

Dwyer, M., Gray, A., Renwick, M. (2000). *Factors affecting the ability of older people to live independently*. Wellington : Ministry of Social Policy. Available at www.osc.govt.nz/.../factors-affecting-ability-of-older-people-research-report.pdf

Dyson, R.(2008) *$5.8 million for innovative ,grassroots ICT projects.* Beehive: New Zealand. Available at http://www.beehive.govt.nz/release/58+million+innovative+grassroots+ict+projects

Ebrahim, A.(2002). Information struggles: *The role of information in the reproduction of NGO-funder relationships*. Nonprofit and Voluntary Sector Quarterly, 31(1), 84-114.

Flanagin, A.J. (2000). Social pressures on organizational website adoption. *Human Communication Research*, 26(4), 618-646.

Febbraro, A.R., Hall, M.H., & Parmegianni, M. (1999) *The Voluntary health sector in Canada: Developing a typology—definition and classification issues*. Ottawa: Canadian Centre for Philanthropy.

Fernley, E. & Light, B. (2008). Unpacking user relations in an emerging ubiquitous computing environment :introducing the bystander. *Journal of Information Technology*, 23(3), 163-175.

Fine, H.A. (2006)a. *Momentum* : *Igniting social change in a connected age*. San Francisco, CA:Jossey –Bass.

Fine,C.(2006)b. *A mind of its own: how your brain distorts and deceives.* New York: W.W. Norton & Company Ltd.

Fine, M. & Glendinning, C. (2005). Dependence, independence or inter-dependence ? revisiting the concepts of 'care' and 'dependency'. *Ageing and Society,* 25, 601-621.

Fine, M. (2007). A Caring Society? Care and the Dilemmas of Human Services in the 21st Century, Australia:Palgrave/MacMillan, Houndmills.

Foster, M. (2002). Social work with older people. In R.Truell & L. Nowland (Eds.), *Reflections on current social work practice* (pp. 228-241). New Zealand: Dunmore Press.

Frumkin, F. (2005). *On being non profit: a conceptual and policy primer.* Harvard University Press.

Gregor, S. (2006). The nature of theory in information systems. *MIS quarterly*, 30(3), 611-642.

Guo, C. & Acar, M. (2005). Understanding collaboration among nonprofit organizations: combining resource dependency, institutional and network perspectives. *Nonprofit and Voluntary Sector Quarterly*, 34, 340-361.

Gurstein, S. (2003). Effective use: A community informatics strategy beyond the digital divide. *First Monday*, 8(12), 1-18.

Gutierrez, O. & Zhang, W. (2007). Information systems research in the nonprofit context: A new frontier. *Proceedings of the Thirteenth Americas Conference on Information Systems (AMCIS).*

Hackler, D. & Saxton, G. (2007). The strategic use of information technology by nonprofit organizations: increasing capacity and untapped potential. *Public Administration Review,* 67(3**),** 474 **–** 487**.**

Hagen, P. (2006). *Creating the relationship-centric organization*: Nonprofit CRM, Available at http://www.idealware.org/articles/relationship_centric_org_CRM.php.

Hajnal, P. (2002). Oxfam International. In P. Hajnal (Eds.), *Civil society in the information age.* (pp. 19-37). USA: Ashgate.

Hakim, C. (1987). Research design: Strategies and choices in the design of social research*,* London: Allen & Unwin.

Hall, P. D. (1987). A historical overview of the private nonprofit sector. In W. W. Powell (Eds.), The nonprofit sector: A research handbook (pp. 3-26). New Haven, CT: Yale University.

Halseth, G. & Ryser, L.M. (2007). The deployment of partnerships by the voluntary sector to address service needs in rural small town Canada. *Voluntas*, 18(3), 241-265.

Harrison, Y. & Murray, V. (2007). Bridging the effectiveness divide in ICT use: The case of volunteer recruitment in Canada. In M. Cortes & K. Rafter (eds.), *Non profits and technology: emerging research for usable knowledge* (pp.69-83). Illinois: Lyceum Books.

Hansmann, H. (1987). Economic theories of nonprofit organization. In W. W. Powell (Eds.),The nonprofit sector: A research handbook (pp.27-42). New Haven, CT: Yale University.

Hedstrom, K.(2007). The values of IT in elderly care. *Information technology and people,* 20(1), 72-84.

Hiemstra, J.L. (2002).Government relations with faith-based non-profit social agencies in Alberta. *Journal of Church and State*, 44(1), 19-44.

Hurrell, H.J. (2000). *The use and management of volunteers in public libraries in the Manawatu-Wanganui region*, Unpublished Masters thesis, School of Communications and Information Management, Victoria University of Wellington.

Jasperson, J. Carter, P.E. & Zmud, R. (2005). A comprehensive conceptualization of post-adoptive behaviours associated with information technology enabled work systems. *MIS Quarterly,* 29(3), 525-557.

Koopman-Boyden, P, Cameron, M P, Davey, J, Richardson, M. (2014). Making Active Ageing a Reality: Maximising participation and contribution by older people, Waikato University.

Karahanna, E. Straub, D. & Chervany, N.(2005). Information technology adoption across time: across sectional comparison of pre-adoption and post adoption beliefs. *MIS Quarterly,* 29(3), 183-213.

Kendall, J., Knapp, M. & Forder. J. (2006). Social care and the non profit sector in the western developed world. In Powell, W. & Steinberg, R. (Eds.), *The non profit sector : A research handbook* (pp.415- 431). New Haven: Yale University Press.

Klein, H. & Myers, M. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly*, 23(1), 67-93.

Kvale (1996). *Interviews- An introduction to qualitative research interviewing*, (First ed), Thousand Oak: Sage Publications.

Lamb, R. (1999). Using intranets: Preliminary results from a socio-technical field study, *32nd Hawaii International Conference on Systems Sciences*.

Lamb, R. (2001). Tracing influence through intranets of compliance, *34th Hawaii International Conference on Systems Sciences.*

Lamb, R. (2003). Intranet boundaries as guidelines for systems integration*, International Journal of Electronic Commerce*, 7(4). 9-35.

Lamb, R. & Kling, R. (2003). Reconceptualising users as social actors in information systems research. *MIS Quarterly*, 27(2), 197-235.

Lamb, R., King, J. L. & Kling, R. (2003). Informational environments: Organizational contexts of online information use. *Journal of the American Society for Information Science and Technology*, 54(2), 97– 114.

Lamb, R. & Davidson, E. (2005). Information and communication technology challenges to scientific professional Identity. *The Information Society*, 21(1) 1-24.

Lamb, R. (2005). Social actor modeling in ICT research. *Proceedings of the 12th European Conference on Information Technology Evaluation (ECITE)* Finland: Turku, UK: Reading Academic Conferences Ltd, 287-296.

Lamb, R. (2006). Alternative paths towards the social actor concept. In *Proceedings of the Twelfth Americas conference on Information Systems*. Rodriguez-Abita, (Ed.), Association for Information Systems, Mexico: Acapulco, 4113-4123.

Lamb, R. & Karsten, H. (2006). Hybrid R&D forms of the innovation enterprise. In *Proceedings of the International ProACT Conference On Innovation Pressure* – Tampere: Finland

Lanfranco, S. (2008). Information and communication technology (ICT): In the service of human services. Currents, 7(2) Retrieved from http://search.proquest.com/docview/1431990874?accountid=14782

Lebert, J. (2002). Information and communication technologies and human rights advocacy : The case of Amnesty International, (2002). In P. Hajnal (Eds.), *Civil Society in the Information Age*(pp.19-36), USA:Ashgate.

Lee, S.(2002). A scientific methodology for MIS case studies. In Myers, M. & Avison, D. (Ed.), *Qualitative research in Information Systems –A reader*, (pp. 147-168), London: SAGE publications.

Lee, S. & Baskerville, R.L. (2003). Generalising generalizability in information systems research. *Information Systems Research*, 14(3), 221-243.

Levy, Y. & Ellis, T.J. (2006). A systems approach to conduct an effective literature review in support of information systems research. *Informing Science Journal*, 9, 181-212.

Limayem,M., Cheung, C.M.K., and Chan, G.W.W.(2003). Explaining information systems adoption and post-adoption. In Proceedings of the 24th International Conference on Information Systems.Seattle.USA.

Lincoln, Y. and Guba, E. (1985). *Naturalistic Inquiry*. USA, CA: Sage Publications.

Lohmann, R.(2001). Editors Notes. *Nonprofit Management and Leadership*, 12,1-5.

Markus, M.L. (1983). Power, politics and MIS implementation. *Communications of the ACM*, 26(6), 430-444.

Mathieson, K. (2006). Using volunteers for IT work :research questions, *ACM SIGMIS-CPR, 2006 conference,* Claremont, CA: USA.

McInerney, P.(2007). Geeks for good: Technology evangelism and the role of circuit riders in IT adoption among nonprofits. In M. Cortes and K. Rafter. (Eds.), *Non profits and Technology: Emerging research for usable knowledge* (pp.148-162). Illinois: Lyceum Books.

McPherson, M. (2003). *The nature and the role of the extended family in New Zealand.* Social Policy research centre, Massey University, New Zealand. Available at www.msd.govt.nz/.../21-cohort-vulnerability-to-lack-of-extended-family-support-pages160-177.html

Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks: Sage Publications.

Milligan, C. (2006). Caring for older people in the 21st century: notes from a small island. *Health and place*, 12, 320-331.

Ministry of Social Development.(2001). *The New Zealand Positive ageing Strategy*. Wellington: Senior Citizens Unit. Available at http://www.osc.govt.nz/positive-ageing-strategy/index.html.

Ministry of Social Development.(2014). 2014 Report on the positive ageing strategy. Wellington: Office of the Senior Citizens. Retrieved from http://www.msd.govt.nz/documents/what-we-can-do/seniorcitizens/positive-ageing/msd-17470-2014-ageing-strategy-report-final.pdf

Ministry of Economic Development, (2008). *The Digital Strategy 2.0*. Wellington: Ministry of Economic Development. Available at http://www.digitalstrategy.govt.nz.

Molla, A. & Licker, P.S. (2005). Perceived e-readiness factors in e-commerce adoption: an empirical investigation in a developing country. *International Journal of Electronic Commerce,* 10(1), 83-110.

Moore, M.(2000). Managing for value: Organizational strategy in for-profit, nonprofit and governmental organizations. *Nonprofit and Voluntary sector Quarterly*, 29(1), 183-208.

New Zealand Council of Christian Social Services. (2000). *Trends in and health of the not for profit services for older people sector.* Wellington.

New Zealand Council of Christian Social Services. (2004). *Health of the sector :Services for the older people survey.* Wellington.

Norris-Tirrell, D. (2014). The changing role of private,non-profit organizations in the development and delivery of human services in the united states. *Journal of Health and Human Services Administration*, 37(3), 304-326. Retrieved from http://search.proquest.com/docview/1644728239?accountid=14782

Nunn, S. (1999). The role of information technologies in community development organizations. *Journal of Urban Technology*, 6(2), 13-37.

O'Hanlon, R. & Chang, V. (2007). Towards a model of internet technology adoption for not-for-profit organisations. *18th Australasian Conference on Information Systems. 7.* Available at http://www.acis2007.usq.edu.au/assets/papers/52.pdf

Orbinski, J. (2002). Medicines Sans Frontiers. In P. Hajnal (Eds.), *Civil society in the information age* (pp. 19-37). USA: Ashgate.

Orlikowski, W.J. (2000). Using technology and constituting structures: a practice lens for studying technology in organizations. *Organization Science,* 11(4), 404-428.

Orlikowski, W.J. & Baroudi, J. (1991). Studying information technology in organizations: research approaches and assumptions. *Information Systems Research*, 2 (1), 1-28.

Ortiz de Guinea, A & Markus, M. L. (2009). Why break the habit of a lifetime? rethinking the roles of intention, habit and emotion in continuing information technology use. *MIS Quarterly*, 33(3), 433-444.

Phillips, S. (2000).*Renewing governance: Voluntary sector network support program (VolNet): Citizen engagement through information and communication*, Technology Report prepared for Industry Canada: Ottawa.

Phillips, S. & Laforest, R.(2000). Expanding the technology capacity of the voluntary sector :A Canadian experiment in government sector collaboration, *ARNOVA Conference*.

Pinho, J. & Macedo, I. (2006). The benefits and barriers associated with the use of the internet within the non-profit sector. *Journal of Nonprofit & Public sector Marketing,* 16(1/2), 171- 193.

Pratt,M.G. (2009). For the lack of a boilerplate: tips on writing up (and reviewing) qualitative research. *Academy of Management Journal*, 52(5),856-862.

Renold, C., Meronk, C. & Kelly, C. (2005). Technology in community based organizations that serve older people: High tech meets high touch*. Educational Gerontology*, 31, 235-245.

Reilly, C. (2005). Evaluation of frameworks for knowledge management in the third sector. *16th Australasian Conference on Information Systems*.

Rowlands, B.(2008). An Institutional account of systems developers as social actors. *Scandinavian Journal of Information Systems*, 20(2), 21-48.

Rowlands, B.(2009). A social actor understanding of the institutional structures at play in information systems development. *Information Technology & People,* 22(1), 51-62.

Saidel, R. & Cour, S. (2003). Information technology and the voluntary sector workplace.*Non profit and voluntary sector quarterly*, 32(1), 5-24.

Salamon, L. & Anheier, H. (1992). *In search of the non profit sector 1: The question of definition* . Working paper No 2, The Johns Hopkins University Institute for Policy Studies. Available at http://www.springerlink.com/index/M463X7K2835R7604.pdf

Salamon, L. & Anheier, H. (1997). *Defining the non profit sector*. Manchester: Manchester University Press.

Salamon, L. & Anheier, H. (2004). Civil Society in a comparative perceptive. In
L. Salamon, H. Anheier, R. List, S. Toeplar, & W. Sokolowski, (Eds.), *Global civil society: Dimensions of the non profit sector : Vol 2* (pp.3-40), Bloomfield CT: Kumarian Press.

Salamon L. & Geller S.(2006). *Investment capital: The challenge for American non profits.* Communiqué No:5, Listening Post Project, Centre for Civil Society Studies, John Hopkins University. Available at http://www.ccss.jhu.edu/pdfs/LP.../LP_Communique5_InvestmentCapital_2006.pdf

Salamon,L., Sokolowski, S.W., & List, R. (2003). *Global civil society: An overview*. The Johns Hopkins Comparative Nonprofit Sector Project, Institute for Policy Studies,

Centre for Civil Society Studies. Available at
www.ngo.ee/orb.aw/class=file/action=preview/id.../sokolowski.pdf

Sanders, J., O'Brien, M., Tennant, M., Sokolowski, S., & Salamon, L.(2008). *The New Zealand non-profit sector in comparative perspective*. Wellington :Office for the Community and Voluntary sector. Available at http://www.ocvs.govt.nz/...of...non-profit-sector/faqs-comparative-report.doc

Sarker, S., Sarker, S. & Sidorova, A. (2006). Actor-networks and business process change failure: An interpretive case study. *Journal of Management Information Systems,* 23(1), 51-86.

Schneider, J. (2003). Small, minority-based nonprofits in the information age. *Nonprofit Management and Leadership,* 13(4), 383 – 399.

Scott, S. & Lane, V. (2000). A stakeholder approach to organizational identity. *Academy of management review*, 25(1), 43-62.

Scott, W.R. (2008). *Institutions and organizations: Ideas and interests* . (2ed) Thousand Oaks, CA: Sage Publications.

Skate, R. E. (1994). Case studies. In Denzin, N.K & Lincoln, Y.S. (Eds.,) *Handbook of Qualitative Research*. (pp. 236-47), Thousand Oaks, CA:Sage..

Smith, D. H. (2000) *Grassroots Associations*. Thousand Oaks, CA.: Sage Publications.

Statistics Canada (2005). *Cornerstones of community: Highlights of the National Survey of Nonprofit and voluntary organizations*. Available at www.statcan.gc.ca/pub/61-533-x/61-533-x2004001-eng.htm

Statistics New Zealand (2007). Non –profit Institutions Satellite Account: 2004. Wellington: Statistics New Zealand. Retrieved from http://www.stats.govt.nz/.../non-profit-institutions-satellite-account-2004.aspx.

Statistics New Zealand (2014*). Projected population of New Zealand by age and sex, 2014(base)–2068*. Wellington: Statistics New Zealand. Retrieved from http://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7514

Statistics New Zealand (2013). *Loneliness in New Zealand: Findings from the 2010 NZ General Social Survey*. Available from www.stats.govt.nz.

Statistics New Zealand (2007). *New Zealand's 65+ Population: A statistical volume(2007)*, ISBN 978-0-478-31500-4, 2007. Available at http://www2.stats.govt.nz.

Statistics New Zealand (2009). *The impact of structural population change.* Wellington: Statistics New Zealand. Available at www.stats.govt.nz/~/.../population/impactofstructuralpopulationchange.aspx

Stillman, L (2006). *Understandings of Technology in Community-Based*

Organisations: A Structurational Analysis. Unpublished PhD thesis, Monash University, Australia.

Sun, H (2012). *Understanding user revisions when using information systems features: Adaptive systems use and triggers*.MIS Quarterly, 36(2), 453-478.

Tennant .M, Sanders .J, O'Brien .M and Castle, .C (2006). *Defining the non-profit sector :New Zealand*, Working papers of the Johns Hopkins Comparative Nonprofit Sector Project, No 45, Baltimore: The Johns Hopkins Centre for Civil Society Studies. Available at http://www.ocvs.govt.nz/.../defining-the-nonprofit-sector-new-zealand-6-sept-06.pdf

Tennant, M. (2007). *The Fabric of Welfare: Voluntary Organization, Government and Welfare in New Zealand*, *1840–2005.* Wellington: Bridget Williams Books.

Te'eni, D., & Speltz, N. (1993). Management information systems in the cultural institutions. In R. Hollister, D. Young & V.Hodgkinson (Eds.), *Good Leadership and Management Practice for Nonprofit organizations: Essays by researchers and practitioners*. San Francisco:Jossey-Bass.

Thatcher, J., Brower R., & Mason, R. (2006). Organizational fields and the diffusion of information technologies within and across the non profit and public sectors : a preliminary theory. *The American Review of Public Administration*, 36(4), 437- 454.

Tornatzky, L.G. & Fleischer, M. (1990). *The Processes of technological innovation*.: Lexington, Massachusetts: Lexington Books.

Ulhøi, J. P. (2004). Open source development: A hybrid in innovation and management theory. *Management Decision*, 42(9),1095.

United Nations (2003). *Handbook on Non Profit Institutions in the System of national Accounts*. United Nations: Department of Economic and Social Affairs. Available at http://unstats.un.org/unsd/publication/SeriesF/SeriesF_91E.pdf.

Valentine, K.(1991). Comprehensive assessment of caring and its relationship to outcome measures. *Journal of Nursing Care Quality,* 5 (2), 59-68

Van Akkeren,J. & Rowlands,B. (2007). An epidemic of pain in an Australian radiology practice. *European Journal of Information Systems*, 16, 695-711

Venkatesh,V., & Davis, F.D. (2007). A theoretical extension of the technology acceptance model: four longitudinal field studies. *Management Science* 46(2), pp.186-204

Voida, A., Harmon, M.E. & Al-Ani, B. (2011). Homebrew databases: Complexities of everyday information management in nonprofit organizations. Proc. of the 2011 conference on human factors in Computing Systems, Vancouver, BC, Canada, May 7-12, 2011.

Voida, A. (2014). A case for philanthropic informatics . In S. Saeed (Eds.), *User-Centric Technology Design for Nonprofit and Civic Engagements*, Public Administration and Information Technology Volume 9, 2014, pp 3-13

Walker, A. (2006). *Understanding Quality of Life in Old Age.* Buckingham: Open University Press.

Walsham, G. (1993). *Interpreting information systems in organizations*. Chichester, UK: WileyPublications.

Walsham, G. (1995). Interpretive case studies in IS research: nature and method. *European Journal in Information Systems*, 4(2), 74-81.

Walsham, G. (2005). Learning about being critical. *Information Systems Journal*, 15(2) , 111-117.

Walsham, G. (2006). Doing interpretive research. *European Journal of Information Systems*, 15(3), 320-330.

Walsh, K. & O'Shea, E. (2008). Responding to rural social care needs: older people empowering themselves, others and their community. *Health and Place*, 14, 795-805.

Weber, R.(2004).The rhetoric of positivism vs. inpterpretivism: A personal view.*MIS Quarterly*, 28(1), iii-xii.

Webster, J., & Watson, R. (2002). Analysing the past to prepare for the future :writing a literature review. *MIS Quarterly*, 26(2), xiii-xxiii.

Weil, P. & Aral, S. (2005). *IT savvy pays off: How top performers match IT portfolios and organizational practices*. Working paper No 353, MIT Sloan Center for Information Systems Research. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=779345

Wellington City Council, (2006). Information and Communications Technology Policy. Wellington. Available at www.wellington.govt.nz/plans/policies/ict/pdfs/ictpolicy.pdf

West, H. & Green, G. (2008). Because excel will mind me ! the state of constituent data management in small nonprofit organizations. *Proceedings of the fourteenth Americas Conference on Information Systems*, Toronto :Canada.

Whetten, D. A. (2006). Albert and Whetten revisited :strengthening the concept of organizational identity. *Journal of Management inquiry*, 15(3), 219- 234.

Williamson, A. & Dekkers, J. (2005). ICT as an enabler in the community and voluntary sector in New Zealand. In Irwin,G., Taylor,W., ABytheway & C. Strumpfer (Eds.), *Proceedings of the Community Informatics Research Network 2005 Conference*.Cape Town : South America. 408-429.

Wilson, C. (2001). *The changing face of social service volunteering: A literature review*, Wellington: Ministry of Social Development.

Wolpert, J. & Seley, J. (2007). The use of computer and office technology among New York city's nonprofit organizations. In M.Cortes, & K.Rafter, (Eds.), *Non profits and Technology: Emerging research for usable knowledge*. (pp.148-162), Illinois: Lyceum Books.

Wong, I.A.(2009). Investigate the social actor model of ICT use in organizations. *Proceedings of the 42nd Hawaii International Conference on Systems Sciences.*

Yin R.K.(2003). *Applications of case study research* .(2nd ed.). Thousand Oak:Sage Publications..

Yin, R.K. (2003). *Case study research – design and methods* , (3rd ed.). Thousand Oaks: Sage Publications.

Yin, R.K. (2009). *Case study research – design and methods* , (4th ed.). Thousand Oaks: Sage Publications

Young, D.R. (2001). Organizational identity in nonprofit organizations: strategic and structural implications. *Nonprofit management & leadership*, 12(2), 139-157.

Zhu, K. & Kraemer, K.L. (2005). Post-adoption variations in usage and value of e-business by organizations: cross-country evidence from the retail industry. *Information Systems Research* 16(1), 61-84.

Zmud, R., Carte, T. & Te'nni, D. (2004). Information systems in nonprofits and governments: do we need different theories ? *Twenty fifth International Conference on Information Systems.*

Zorn, T. E. (2007). Social and political influences on information technology adoption among civil society organisations in New Zealand: A preliminary report. *Proceedings of the 5th International Symposium on Politics and Information Systems, Technologies and Applications*.

Zorn, T. E., Li, C., & Lowry, S. L. (2007). Survey of community and voluntary organisations' use of information and communication technologies. University of Waikato: Working paper. Available at http://wms-soros.mngt.waikato.ac.nz/ICT/Research+Papers.htm

Zsidisin, G.A. (2003). A grounded definition of supply risk. Journal of Purchasing and Supply Management, 9, 217-224.

Appendices

Appendix 1 - Use of social media

At the time of data collection (June,2010 – January ,2011) , the four case study organisations were not using social media. However as the staff members indicated that they were considering the use of social media , over the period of three months in 2014 (1st September 2014 – 1st December 2014) we analysed their social media use. We did not contact the organisations but purely investigated their use of social media by way of their on-line presence.

Adoption of social media

Since the time of initial data collection in 2011, all four organisations have adopted at least one form of social media. See table below for an overview.

Type of social media	Action for Seniors [AFS]	Independent Living Services [ILS]	Integrated Community Care [ICC]	Tararua Hospice [TH]
Facebook	Yes	-	Yes	Yes
LinkedIn		Yes	-	-
Twitter	Yes	-	-	-
Blog	Yes	-	-	-
Youtube*	Yes	-	-	-

Table A.1   Types of social media used

[Note - *Although primarily a form of media sharing, the use of comments and profiles display characteristics of social media and has therefore been included.]

Action for Seniors currently utilise multiple social media channels to connect with its community. Their Youtube channel is focused on creating awareness in elder abuse and prevention. With less than 10 videos in their YouTube channel published in the period of June /July 2014, this medium seemed to be least used

by AFS. The cost of producing these videos may have been a deterrent as the videos are professionally produced. By comparison AFS posts 2-3 blog posts per month and each post communicates the key learnings of an age related research article. All posts were written by a single author. Of the posts we analysed, two common themes were evident, elder abuse prevention and combating social isolation. Whilst this level of analysis is not indicative of the community uptake, each of the YouTube videos had between 500- 1000 views and each of the blog posts had an average of three comments per post. Although it seems that community is engagement is better via a video sharing form, from the point of the company blogging may be an easier form to deploy. However no inferences can be made without further analysis at this stage as the unique visits are more indicative of the number of comments per post in blogging.

Of the mediums used by AFS their twitter feed seem far more varied in terms of the microblogging content. With an average of four tweets per week, they focus on multiple information themes. Some of the common categories are volunteer recruitment drives, information on financial resources, creating awareness on age related degenerative diseases, advertising elder related events and raising awareness on reports released by other agencies (e.g. Ministry of social development). At present there are minimum retweets (2-3 within a month) and marginally over 450 followers. However this seem to be the most active form of social media for the organisation.

Independent Living Service uses LinkedIn as their social media. The organisation has created a company page which consist information about their services. Beyond the initial set up, it is not evident that the organisation has made efforts to maximise their presence or increase the number of followers. The last updated post advertising a position and is over 150 days ago. Although the organisation has over 80 followers it is interesting to note their minimum presence as there are no content links apart from the organisation page.

One of the interesting findings in this analysis is that , in comparison to AFS, ILS seem to have adopted a "build and they will come approach". With AFS it is clear that they have identified key contributors who will supply content for each of their social media approaches and have established regular timelines for updates. This has enabled them to have a better updated content in their social media.

Facebook is used by three of the organisations in this study.

	Action for Seniors [AFS]	Integrated Community Care	Tararua Hospice [TH]
Total page likes	850-900	175-200	150 -175
Visits	5	50	65
Average updates per month	Less than 25	Less than 10	15-20

Table A.2   Frequency of Facebook use

The frequency of use data (table 12.2) does not provide a clear picture of the Facebook use of the organisations as certain characteristics of the pages are not visible to an outsider. For example the visits counter depends on the page categorisation and only apply to certain categories of pages. Depending on how each of the organisation has categorised their pages, page views can result in an increase in the visit counter. Therefore we cannot comment on the high number of likes in AFS and the number of associated visits without actually knowing the page categorisations.

However the differences in the types of posts are interesting. Whilst Tararua acutely uses Facebook in their fundraising efforts both AFS and ICC uses it to convey positive stories of their organisations Over the three month period we observed Tararua for every 12 posts of Tararua, eight were creating awareness about their fundraising events, three were about volunteer recruitment drives and one was about either a positive story or information about a public event (e.g. seminar). In comparison ICC of 12 posts had only one post on fundraising.

Similarly at Action for Seniors , during the period we observed we could not find any posts relating to fundraising . From this limited analysis it seem evident that the AFS and ICC perceives Facebook as medium to create a positive impression of their organisations and raise awareness by sharing success stories instead of direct fundraising activities. This difference between the three organisations could also be related to the type of clients that the organisations work with. As Tararua works in hospice care sector, their clients may have an heightened sense of privacy in comparison to ICC and AFS.

Appendix 2 - Research and interview questions

In order to guide this study we used the following set of questions as a template for data collection and discussion. Interview questions are listed in section B.

Section A

Affiliations

- How do funders influence ICT use practices in non-profit sector organisations?

- How does the role of the affiliated organisation and resource flows exchanged, influence information management practices of the NPO?

- How do load shifting arrangements influence information flow between affiliated organisations?

- How do organisational members use ICTs to respond to changes in affiliated relationships and service offerings?

- How do organisational members establish and maintain communication with affiliated organisations? How does role ambiguity influence this information exchanges?

Environments

- How do characteristics of IT investment and ICT infrastructure influence information use in NPOs?

- How does access to external ICT resources influence the ability of NPOs to overcome their internal limitations to technology use in common core activities?

Interactions

- How do organisational members overcome issues associated with information capture, processing and dissemination?

- How do organisational members shape information for multiple audiences?

Identities

- How do ICTs participate in social construction and representation of collective self?

- How does the use of ICTs transform individual roles within the organisation?

- How do organisational members use ICTs for profiling and self-monitoring?

Section B – Interview questions

Each interview consisted of two parts, general information and information specific to their job function (volunteer management, client management and fund raising).Question 7 was repeated in role specific interviews.

General

G1	What is your role within the organisation ?
G2	How long have you been in this role ?
G3	What type of an organisation/work did you do before joining this organisation ?
G4	What are the agencies/external organisations you work with at present ?*(V18,C18,F14 for role specific)*
G5	How do you see the operating environment for your organisation changing in New Zealand ?
G6	How do you think the demand for your services will change in the next 5-10 years ?
G7	What types of ICTs do you use in your day to day operations ? *(clarify in role specific interviews, task and applications used)*
G8	What are the professional organisations you belong to ?
G9	How do you receive/provide ICT support or training ?
G10	What are the information challenges you encounter in your role ? *(clarify in role specific interviews, task and applications used C/V/F 11-16)*

Volunteer management

V1	How do you recruit volunteers ? What channels do you use ?
V2	How are volunteers inducted to the organisation ?
V3	How are they allocated to clients ?
V4	How do you prepare volunteer schedules ?
V5	What information do volunteer provide at the time of recruitment ?
V6	How does the organisation assess the suitability of volunteers ?
V7	What type of work do the volunteers deliver ?
(Questions V8,V9,V10,V11 are repeated for each function in V7)	
V9	What information do the volunteers provide as part of their regular work ?
V10	How often do they provide this information and which mediums do they use ?
V11	How do you receive this information ?
V12	How do you collate information that volunteers provide ?
V13	How do you communicate with volunteers regularly ?
V14	How do clients communicate with you ?
V15	How do the volunteers communicate with the rest of the non-profit ?
V16	What information do you provide to the organisation on managing volunteers ?
V17	How do you produce this information ?
V18	What and how are the external organisations you liaise with regularly?
V19	How do you liaise with these organisations ? What information do you provide and how ?
V20	How has your role changed ?
V21	What applications do you use most often (apart from specified above)?

Client management

C1	How do you receive clients ? How are they assessed ?
C2	Can you describe the type of clients you have and the service levels you deliver ?
C3	How are the clients funded ?
C4	How do you provide on-going services in the community ?
C5	What client information do you collect at assessment and how ?
C6	How do you exchange information with assessment organisations ?
C7	What information do the funders require about clients for each service ?
(Questions 8,9,10,11 are repeated for each service and funder C4/C7)	
C8	What information do the staff collect from clients as part of their regular work ?
C9	How often do they provide this information and which mediums do they use ?
C10	How do you receive this information ?
C11	How do you collate information that staff members /volunteers provide ?
C12	How do you communicate this information internally and externally with funders ?
C13	How do the clients communicate with you ?
C14	How do you store client related information (initial, assessment and service delivery)?
C15	What information do you provide to the organisation on managing clients and resources (Staff/volunteers) ?
C16	How do you produce this information ?
C17	What are the external organisations (other than funders or donors) you liaise with regularly ?
C18	How do you liaise with these organisations ? What information do you provide and how ?
C19	How has your role changed ?
C20	What applications do you use most often (apart from specified above)

Fundraising

F1	How is your organisation currently funded ? *(contracts, funders, org.donors, ind.donors)*
F2	How can the funding environment changed in the last 5 years ?
F3	How has the organisation responded to these changes ?
F4	How do you seek donors/ funders for your organisation ?
F5	What information do you collect when assessing funders/donors on behalf on behalf of the organisation ?(initial bid and ongoing)
F6	What are the information challenges that you encounter when engaging with funders/ donors ?
F7	What information do the funders/donors require for each service? (on going)
F8	How do fundraising staff collect/collate this information?
F9	How often do they provide this information and which mediums do they use?
F10	How do you communicate this information internally and externally with funders ?
F11	How do you manage funder/donor specific information ?
F12	How do you maintain the donor/funder relationships successfully ?
F13	How do you store donor/funder information ? (existing and potential)
F14	What are the external organisations (other than funders or donors) you liaise with regularly ?
F15	How do you liaise with these organisations ? What information do you provide and how ?
F16	How has your role changed ?
F17	What applications do you use most often (apart from specified above)

Appendix 3 – Member check workshop report

Organisation	Tararua Hospice
Approach	We provided the final report required by the organisation and requested a workshop to discuss the findings of the study. The objective of the workshop was to ensure that the findings correctly explain the participant's experiences and organisational processes.
Structure	A 20 minute presentation followed by discussion. At the start of the presentation I introduced the main question and sub questions that will guide the discussion. I also informed the participants that they can comment as I presented each of the findings.
Total time	One hour and ten minutes

Commentary

(1) Finding - Value adding and value contributing information flows
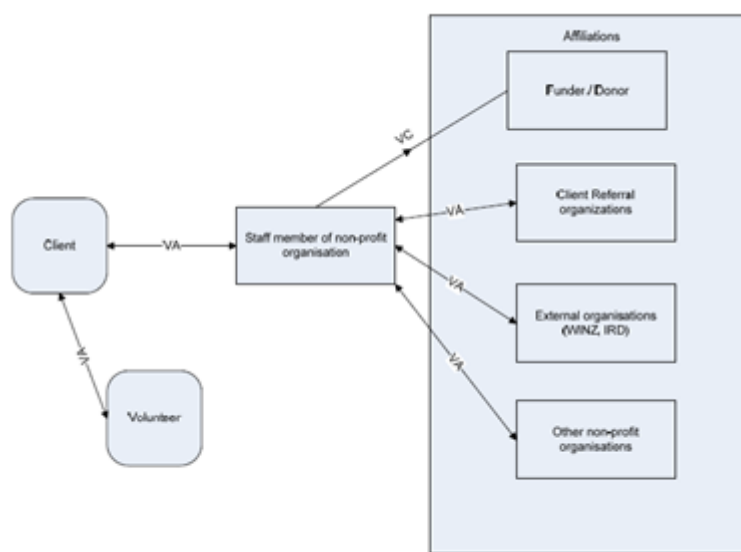

Figure 10.1   Information flows that contribute to adding and communicating value

Participants confirmed this finding in the member check workshop. They commented on the lack of information flow between the volunteer and the staff member. We responded stating that the connection is mainly administrative and therefore has not been identified as a value adding information flow. Participants explained that there are instances when the information provided by the

volunteer to the staff member is a value adding information flow, specifically as some clients may not communicate that information at a client- staff interaction. They provided the following examples

- Change in client's behaviours

- Progression of an illness

- Hazzard at home

We have taken this feedback on board and revised the diagram in the discussion chapter to add value adding information flows between volunteers and staff members.

Participants also commented on the absence of the informal carer in this conceptualisation. They commented that the staff and volunteers interact with informal carers frequently and that interaction adds value to the clients' outcomes. This is unique to Tararua Hospice as they deliver end of life care services to their clients. However staff members at Integrated Community Care have also previously commented on their staff and volunteers interact with informal carers when they deal with clients who have multiple difficulties (e.g. cognitive difficulties and resource challenges). This study did not collect data on informal carers and we have identified it as a limitation of the model.

(2) **Finding – Post-adoptive behaviours- External factors influencing organisational and individual behaviours.**
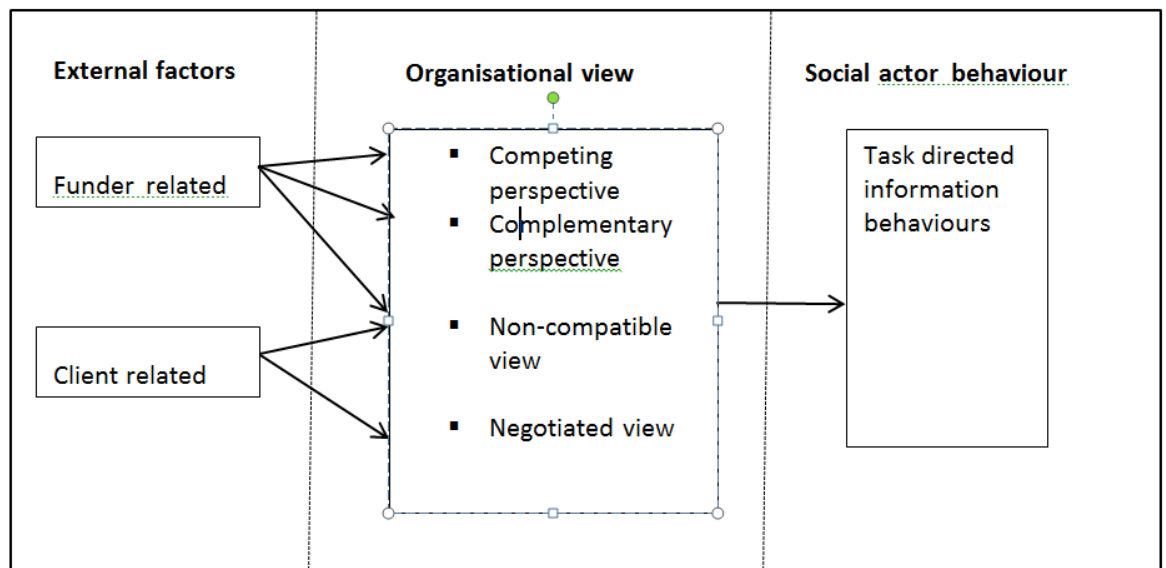
Figure 10. 2 External factors influencing organisational and individual behaviours

Participants were impressed at how each context, organisation and individual were influenced by external factors. They provided positive comments on how the model succinctly captures the organisational responses.

They pointed out that the volunteer is missing from this conceptualisation. We explained that the volunteer is included as part of the social actor. Volunteers are coordinated by an internal staff member, and that staff member and volunteers are included in the conceptualisation of the social actor. Participants clarified that in their organisation there are instances where volunteers are coordinated not by a staff member but by a volunteer themselves. This organisation maintains opshops as part of their fundraising activities. The person in charge of an opshop is a volunteer who coordinates other volunteers. Staff explained that the volunteers in this instance perform dual roles, fund raising and coordinating. We explained that our depiction of the social actor does not distinguish between types of volunteers. As the opshops and coordinating volunteers are specific to this organisation, we did not revise our discussion chapter based on this feedback.

Participants explained that the non-compatible response within an organisation is less defined than the other three responses. They stated that the information exchange within the non-compatible view is one of the important elements that define organisation's future responses to environmental cues. They explained,

"Say for instance three of our clients have wanted a particular service that we don't offer right now. We may have given them details of someone who does. But we still need to capture that information, because towards the end of the year we may have 20 clients who have called us about that service. At that stage we will have to consider if that is one of the services we should offer. We don't collect that information right now, well not very well but we should."

"Yes, this is something we don't do really well. Specially in terms of organisational donors. They may have fund that we don't qualify for this year but we still need to capture that. It is likely three years down the line we do qualify for it "

(3) Finding – Three tier typology of social actor-information roles and behaviours
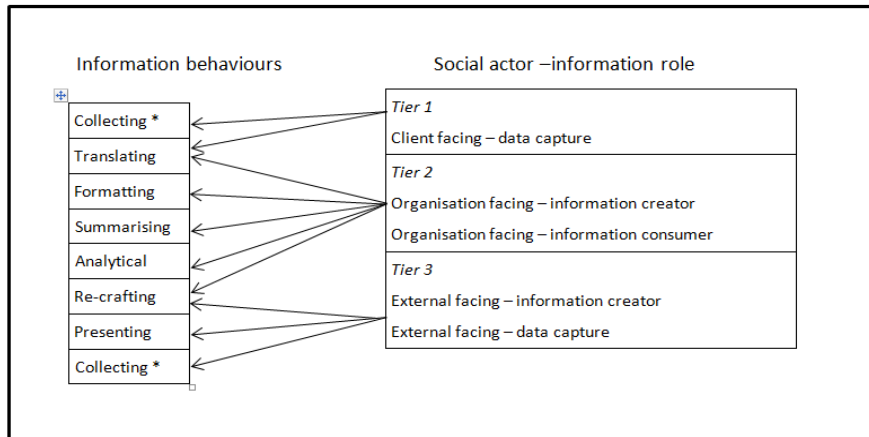

Figure 10.3 – Three tier typology of social actor-information roles and behaviours

Participants commented that this conceptualisation enables them to communicate the challenges that they encounter due to issues in preceding tiers. They explained that a detailed analysis of the information challenges that are encountered at each tier in association with the social actor-information role would be useful to the non-profit sector organisations.

Participants commented on the fluidity of the types of social actor – information roles. Tararua Hospice is currently developing a set of volunteer roles for those volunteers that cannot deliver services within the community but would still like to volunteer at their organisation. They provided examples -:

" we have volunteers that can do a bit of work from home but may not be able to work with a client or with our day programme. So we are now allocating specific tasks that can be done at their homes."

"for example I now have a volunteer who will design and create a leaflet for a community festival on how to donate goods to our opshops."

"We have volunteers that contact organisations for specific type of donations –office equipment."

We explained that social actor-information roles are associated with an entity and are not differentiated as a volunteer or a staff member.

Participants also questioned the absence of some social actor-information roles (e.g. client facing- information creator and client-facing information consumer) from the three tier typology. We explained that the analysis of our data did not support those roles and it is likely that those roles may emerge when this model is applied in a different context (e.g. residential setting). They disagreed with my explanation and stated that hospital social workers can be identified as client-facing information creators and as client-facing information consumers. Whilst we agree with their argument we have not revised the model as hospital social workers were out of scope for this study. However the model is capable of representing a single organisational member by two roles within the same tier or by two roles within two tiers (only one instance in interviews).

Participants highlighted that information loss is associated with data collecting and translating behaviours. They explained that despite the prevalence of computers, some of their volunteers do not have access to the internet in their communities and need to go to the day programme centre to access the internet. Therefore manual data collecting and translating behaviours will remain despite the organisation's access to ICTs.

Participants also commented on summarising information behaviour. They explained that summarising relates to either a specific service or a specific location but not to a client. For instance they would provide a summary of how the day programme is utilised by their clients or may provide a summary of how daily phone call service is operated in Beachtown area.

(4) Finding – role extension

Role extension

Extension to role specification

Role /Action specified by the organisation
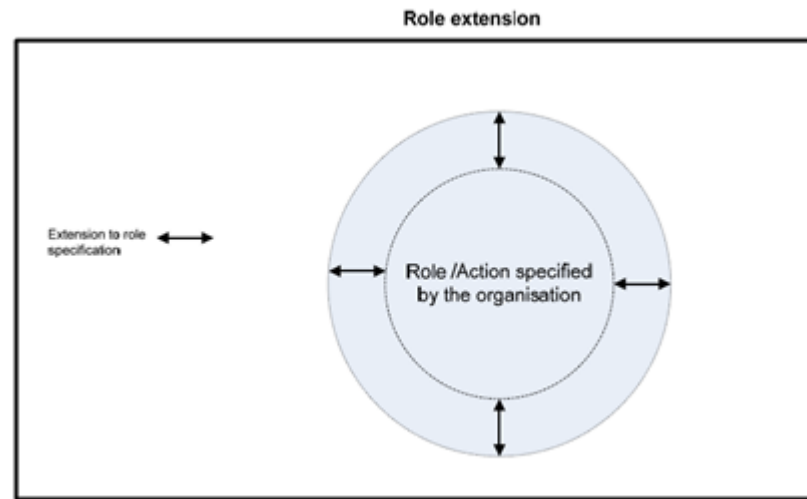
Participants questioned the validity of role extension as only a response to external environment (e.g. client requirements, funder requirements). They explained that within their organisation they have seen the role extension due to individual factors such a personality, approach to problems and established personal networks. They provided an example of their current volunteer services coordinator who has extended the role whilst the two previous coordinators delivered the same role within a limited capacity. As the organisational response has been the same and as the external environment has not changed they argued that in this instance the role extension was due to the individual characteristics of the staff member and not due to external influences. As this is a single specific example which related only to their organisation we have not revised our conceptualisation.

(5) Finding – Client requirement layers and ICTs used

Layer	Description	Client access	Information intensity
Layer 1	Information and access to services provided by the non-profit.	All clients access this layer of services.	Moderate information intensive.
Layer 2	Information on services and funding available within a geographic region.		Less information intensive.
Layer 3	Advocate on behalf of client to access service/funding outside of the non-profit.	Some clients access this layer of services.	Most information intensive.
Layer 4	Facilitate client in selecting options making decisions, relocation. (playing the role of a friend, confidante)	Few clients access this layer services.	Most information intensive.

Table 10.2   Layers of client requirements

Participants stated that adding another column with an example for each layer would have make the table more relatable to them. Once I provided examples on a white board they engaged with this finding and provided following feedback.

a. They disagreed with the Layer 2 been labelled as " less information intensive". They stated that it should be re-labelled as "moderate". They explained as their organisation delivers "end of life care" to clients their staff need to be aware of all information and services within the region in order to ensure that their client receives an integrated service.

b. Participants also disagreed with layer 4 client access – "few clients access this layer of service". They explained that all their clients and informal carers access that layer of services.
    Whist we agreed with their feedback we explained that this conceptualisation is across four types of organisations and their feedback was highly relevant to the hospice sector organisations. We have included a clarification on this in the discussion chapter.

Layer	██████	Tararua Hospice
Layer 1	Maintained within Word and Excel documents.	Maintained within a client information system.
Layer 2	Maintained within details case notes (Word), associated with specific client and social worker.	Depends on the individual, considered community service. Not associated with specific client.
Layer 3		Maintained within a client information system.
Layer 4		

Table 10.3   ICT use in managing client requirements

Participants were disappointed not to see how the other four organisations were using ICTs in managing client requirements. We explained that the first column is provided as an example and as this is a member check workshop the objective was not to provide a comparative analysis. I explained that the final thesis would include a cross case analysis and this complete diagram in the discussion chapter. They would like to consider the possibility of another workshop to discuss "how we compare with others " when the thesis is made available.

  They provided the following feedback

(a) Layer 2- Participants explained that this is another example of information loss as the individual may decide on how they record this information.

(b) Layer 3 – Participants explained information capture in this layer is difficult as they are iterative in nature.

> "Say we talk to WINZ for more funding for our client. That does not end there. WINZ may not agree so we will have to build a case and get more information to support our case. We may not put all that in the system (referring to client information system). We

may just say- contacted WINZ and got additional funding. But that
is not all we have done."

We explained that this is disconnect between actual work they do
and how much they record and they agreed stating that each
encounter with an external organisation should be recorded and not
the final outcome.

(6) Finding - Informal ICT support roles

Types of support	End user cluster	Service champions	Expert users
Introduction to Applications / Information systems		X	
End user confidence building	X	X	
Application walkthroughs / mini training sessions	X	X	
Application level support	X	X	X
Application troubleshooting		X	X
A buffer between a ICT vendor and end user		X	X
Hardware troubleshooting			X
Issue Isolation /escalation			X

Table 9.14   Informal ICT support – Types of support provided

Participants expressed surprise at the level of informal support provided
across organisations. They confirmed the informal support roles and
provided names of people who currently provided such support. They
provided following feedback

(a) Service champions – participants explained the difficulties that their
organisation faced when one of their service champions left the
organisation.

"she was our practice manager and when she left we found it really hard
to find someone who can look after the practice and the system(referring

to client management system). It does place unrealistic expectations trying to recruit someone like that."

"(mentions name of person) is another example. When she leaves I have no idea how we will cope cause she is our go to person for the donor system. Ideally we should be training another person as a back up but we don't do that."

(b) Expert users – Participants questions if there were a possibility of sharing expert users amongst the non-profit organisations within the same geographical area.

"Sort of a helpline , I mean. If we don't have (mentions name of one of their expert users) we can get on the helpline and call someone else."

"We should at least be able to share them between (mentions name of a non-profit organisational within 10 mins drive) and us. We are quite close by after all."

"Yes, there is a helpline for everything these days. We should combine and have one with others (other non-profit organisations)"

I explained that I have not considered expert user sharing possibilities within the scope of the study and the participants. I explained that there are non-profit helplines in the USA and provided http://www.nphd.org/ as an example.

(7) Overall feedback

Overall feedback was positive with participants confirming findings of the study. For those findings that they did not agree with they provided clarifications and examples. The organisation has requested a second workshop at a future date to understand how they compare with other organisations of the study in their ICT use.