

School of Computing
& Information Systems

Implementing technology and organisational based change at Tasmania Police – A case study.

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November 2009

Abstract

This thesis presents a case study into change management strategies utilised by Tasmania Police in the implementation of technology related projects during a ten year period (1998 to 2008). The role and impact of technology in and on approaches to organisational change management has become the focus of increasing debate amongst both academics and practitioners (Markus, 2004). While numerous theories, models and approaches exist that have been developed from organisational experiences, few of them are based on organisational case studies specifically examining the relationships over time between approaches to organisational change management and technology implementations. This research contributes to these debates through analysis of a case study at Tasmania Police. As a hierarchical command-control type organisation with a tradition of top down management this case study also considers the role organisational structure and culture has on approaches to organisational change management and technology implementations.

The case study at Tasmania Police was based on the analysis of four projects that were developed directly as a result of a major business process re-engineering exercise (BATON) initiated in 1997. BATON developed and promoted an over-arching change management strategy and the use of information and communications technology as the major driver for its implementation of organisational change within Tasmania Police. The four projects were selected to specifically investigate the relationships between the implementation of technologies to drive change and the change management strategies utilised. To explore the sustainability of these relationships and overcome the potential limitations of case studies conducted over a single period of time, a two phase approach requiring a second period of research at Tasmania Police was adopted.

The research methodology was underpinned by a subjective ontology and an interpretative epistemology. The strategy adopted a two phase approach requiring data collection and analysis at two time points during the ten year period. The research design uses four technology related projects as a vehicle to study the change management process. During phase one, drawing on tools from ethnography, the researcher became a participant-observer. Data was collected through observations,

informal interviews, activity monitoring and participation in work with the project teams and change management coordinators over a two year period.

Drawing on principles of grounded theory, data analysis of the four projects was conducted iteratively using thematic coding. This analysis led to the generation of six themes identifying eleven factors illustrating the relationships between organisational change management and technology implementations. In particular the analysis highlighted that Tasmania Police relied on informal communication practices and trust networks (as distinct from their hierarchical organisational and governance structures) to achieve change. The analysis also highlighted the capacity for technology to be significant as both an agent and object change that required adaption and flexibility in change management strategies. Interpretation of phase one data suggested that Tasmania Police was an organisation that appeared to fit with conventional models of change management in the literature.

Phase two involved a second period of data collection and analysis aimed specifically at exploring the sustainability of relationships between organisational change management and technology implementations identified in phase one. Phase two data collection coincided with a Tasmania Police three year business planning exercise that incorporated a review of their change management and technology approaches. The research design utilised the outputs from phase one to generate a interview question frame that was used to investigate the current status of organisational change management and technology implementation. The interviews were conducted with members of the business project unit, senior management and change agents. Interview analysis revealed differences in the relationships and approaches adopted by Tasmania Police over time. Phase two analysis also highlighted how new factors had emerged that directly impacted on the organisational approach to technology initiated change.

Interpretation of phase two highlighted how the initial perspectives on Tasmania Police were re-configured and transformed over time. Based on the evidence presented in this case study, the role of technology in and on approaches to organisational change management does require a higher level of sophistication of both project management and change management than had previously been considered necessary within the literature. This thesis contributes to an enhanced understanding of the implementation

phase of technology-based change. This Tasmania Police case study suggests that for hierarchical organisations informal communication networks are critical and flexibly combining elements of change management and project management is required to accommodate technology as both object and potential agent of organisational transformation.

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My Honours research was dedicated to my father who passed away just before it was completed. This research is dedicated to my mother who gratefully is still with us.

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1 Introduction

This chapter provides an introduction to this thesis and is in two major parts. Part one presents an overview of relevant background domains, the research context, research objectives and research questions. It also provides an outline of the research approach and the contributions made by this thesis to understanding the role and impact of technology in and on approaches to organisational change. The last section of part one briefly outlines some of the limitations of this research. Part two presents an outline of the thesis structure and the contents of the remaining chapters. The chapter is structured in the following sections:

- Section 1.1 presents the background to the research and in particular three key relevant background domains: policing and law enforcement; change management approaches; and information technology and innovation.
- Section 1.2 presents the context for this research
- Section 1.3 presents the research objectives
- Section 1.4 presents the research questions for this study
- Section 1.5 presents an overview of the approach adopted for this research
- Section 1.6 presents a summary of the contribution of this thesis
- Section 1.7 presents a summary of the limitations of this research
- Section 1.8 presents a review of the thesis structure outlining the remaining chapters.

1.1 Background

This thesis presents a case study into change management strategies utilised by Tasmania Police in the implementation of technology-related projects during a ten year period (1998 to 2008). The research is undertaken from an Information Systems perspective. Information Systems is a multi-disciplinary field which includes management and organisational theory, sociology, computer science and information theory (The Auditor General Audit Report 1995 No 40). Galliers (1993) identified a number of key issues of concern for Information Systems around integrating technology with business strategy. One of these issues is the need for organisations when implementing technology to support a business strategy to ensure mechanisms for managing organisational change.

Figure 1-1 illustrates Galliers' (1993) concern to incorporate change management as an integral part of the development of business strategy when implementing Information Systems and technology.

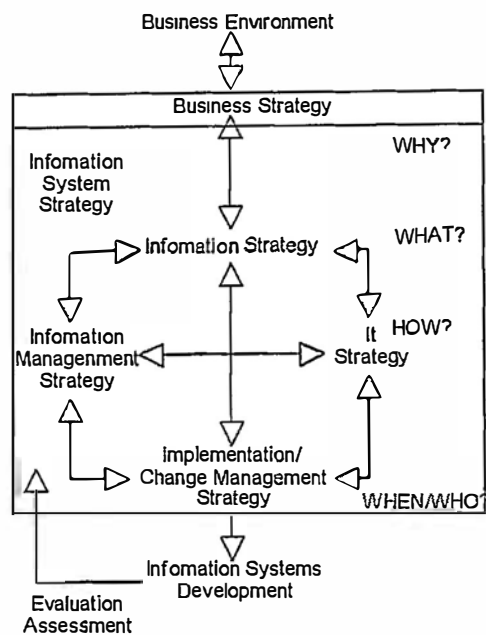


Figure 1-1: IS strategy an part of business strategy (Source Galliers 1993)

With the increased diffusion of networked information technologies and the internet by the 1990s, management theories were being developed that specifically considered linkages between business strategy and technology use. A dominant approach that emerged was Business Process Reengineering (BPR). BPR aimed to provide organisations with a 'big bang' approach to redesigning business processes in a manner that harnessed the power and potential of information technology (Hammer 1990).

Unfortunately, by the mid 1990s it became evident that many BPR initiatives had failed to accommodate the complexity of the implementation process and this had contributed to an increasing disillusionment with the BPR approach (Bashein & Markus 1994). While BPR approaches could be undertaken with conventional project management techniques, it quickly became clear that project success involved more than projects coming in on time and within budget (Schwalbe 2000). The need for specific attention to the relationships between the management of change and the complexities of the implementation of technology were recognised.

As a consequence, the role and impact of technology in and on approaches to organisational change management has become the focus of increasing debate amongst both academics and practitioners (Markus & Benjamin 1997). While there are numerous change management models that may have the potential to be adapted for implementing technology (Orlikowski & Hofman 1997), to date the complexity of the task has continued to pose problems. Amongst the major change management approaches, a number have been developed directly from organisational experiences including Kotter (1995) and Jick (1991). Based on Lewin's (1952) model of change, both these approaches provide step by step instructions on how to manage change (strategic or tactical). Noticeably, these approaches provide only limited advice on the implementation phase of change. This has also contributed to the challenges of exploring the role and impact of technology.

As a result, few researchers, (who have utilised these approaches) have tried to conduct organisational case studies specifically examining the relationships, over time, between organisational change management and technology implementations. Many researchers have tended to combine change management and project management in their approaches and to take technology 'simply as a given' because of the complexity (Markus 2004). As a result, there is limited evidence both on these relationships and on the implementation phase of change (Markus 2004).

This research contributes to these debates through analysis of a case study at Tasmania Police. The case study focuses on the implementation of technology-based projects over a period of time. As Tasmania Police is a hierarchical command-control type organisation with a tradition of top down management, this case study also considers the role that organisational structure and culture has on approaches to organisational change management and technology implementations.

From the discussion presented in this section this research stems from interrelated issues concerning theory and practice in three areas: Policing and Law Enforcement; Change Management Approaches; Information Technology and Innovation.

1.1.1 Policing and Law Enforcement

Australian Police forces are a component of the Australian government. Australia has eight policing organisations, one in each state and one in the Northern Territory

supported by the state or territory governments, and one Federal Police organisation supported by the Commonwealth Government. Each of the state and territory police forces has a community focus by providing services to the people of that state or territory. Recently, most states have been involved in an amalgamation of fire and emergency services to provide an overarching approach to the protection of the community.

Tasmania Police is a paramilitary organisation and therefore exhibits characteristics of a military organisation such as: members of military organisations choose to become members and are making a life long commitment to the organisation; the position is more than a job, it is a way of life; military members undergo extensive training to perform their job. The culture of the organisation predates any of the existing members. Members are expected to conform in ways that members of other organisations are not such as uniform and discipline. Military organisations are hierarchical and are governed with an autocratic leadership style (Warne 2000). Investigating the role organisational structure and culture has on organisational change management and technology implementation will provide insight into an organisation that has this type of culture.

Increasingly, policing agencies are having to provide more efficiencies through economic rationalisation and are being held more accountable based on outcomes rather than rule compliance (Hoque & Moll 2001). Police are adopting “new public management” which supports adopting managerial and commercial approaches to public sector entities. The new reforms have called for less of a top down command control approach to a more “people centred” approach by management (Davies 2000). As with other government entities, police are also facing tight budgetary conditions, placed on them by their governments. Therefore new practices have to provide efficiency gains to support better performance in relation to the identified key goals. Technology has been able to assist this transition (Queensland Police Annual Report 2008).

1.1.2 *Change Management Approaches*

The concept of dealing with organisational change can be linked to Kurt Lewin (1952) who from his field research in social science developed a three-stage planned

approach to change. Since then this original planned model of change has been expanded (Bullock & Batten 1985; Huse 1975; Lippitt, Watson & Westley 1958) to provide advice on planning changing. Jick (1991) has also developed a tactical blueprint model for managing major change in an organisation and offers ten commandments to guide the process. Kotter (1995) subsequently developed an eight step model for transforming organisations that was based on detailed research on over 100 organisations of varying sizes and types (Mento, Jones & Dirndorfer 2002). Kotter's model provides guidance at a strategic level and, usefully, is based on lessons learnt from organisational change failures.

While these organisational change models have the potential to guide technology-based change (Orlikowski & Hofman 1997) they rarely display any acknowledgement of the complexities of technology implementations and few incorporate consideration of the systems development life cycle. Markus (2004) identifies the need to use project management in conjunction with organisational change management when approaching projects involving technology and discusses their combination. Markus goes on to differentiate between technology projects per se, and *technochange* projects. Technology projects are those that aim primarily to improve or streamline a business process and are not directed specifically towards any over-arching organisational change goal. It is acknowledged that change will occur as a result of these types of technology projects but that they are not specifically on 'organisational' change. The concept of a '*technochange*' project refers to those circumstances where the primary project focus is on the use of technology to drive organisational change. Markus (2004) argues that for implementing technology projects a combination of project management and organisational change management is adequate. However, Markus goes on to argue that this approach is unlikely to be successful for *technochange* projects where an integrated technical and organisational solution is advocated.

Clearly, implementing technology has the potential for big improvements in organisational performance but it also poses change management challenges. To date there have been few case studies specifically examining the relationships over time between organisational change management and technology implementation. This

research aims to explore these relationships through an analysis of four projects involving technology at Tasmania Police.

1.1.3 Information Technology and Innovation

There is a strong relationship between information technology and change in organisational settings (Galliers 1993; Markus & Robey 1998). Information technology underpins and supports many of the changes being introduced to organisations in response to competitive and economic pressures. The ongoing development of technology and systems provides new opportunities for organisations to gain competitive advantages and/or make efficiency gains. The rapid development of technology and the shrinking of time and space enabled by technology have also been seen to have benefits for task efficiencies and communication (Walsham 1993).

Information technology has the capacity to alter the social and organisational structure of the workplace and may transform the nature of the work for members of the organisation (Frenzel 1999). Techniques such as Business Process Reengineering (Hammer & Champy 2001) were developed to guide the redesign of organisations to support them to take advantage of information technology. Implementing technology has frequently been approached by adopting project management methodologies. The Institute of Project Management provides advice on implementing projects through their 'Project Management Body of Knowledge'. This work presents nine knowledge areas and supports project managers through project implementation; one area relates specifically to communication and can be seen to have a direct relationship with the management of change. Significantly, technology project management and project managers are frequently compared unfavourably with those of other disciplines due to relatively lower reported project success rates. While this may be as much to do with the differences in project risks and evaluation methodologies, it does highlight the complexity of technology implementations (Fraser & Turner 2002).

An additional dimension of this complexity is the association that has been made between new technology and innovation in organisations over the last twenty years (Clark & Staunton 1989). From this perspective, while innovation can be defined as an idea, practice or object that is perceived as new, it is an innovation's diffusion

across and beyond the organisation that is of most significance. Importantly, innovation and organisational change have increasingly been linked with information technology through discourses on the management of knowledge as mechanisms for supporting organisational efficiency, effectiveness and creativity (Drucker 1995; Nonaka & Takeuchi 1995).

The theory of the Diffusion of Innovations, developed by Rogers (1995), describes the diffusion process as one by which innovation is communicated over time among the members of a social system. The theory goes on to develop a number of other key concepts including: the communication channel as the process by which participants share information with one another in order to reach a mutual understanding; time as it relates to the decision process whereby an individual moves from first knowledge through to adoption or rejection; and a social system as a set of interrelated units that are engaged in joint problem solving to accomplish a common goal. As a result, when exploring the implementation of technology-based change, the theory of Diffusion of Innovations provides a helpful theoretical framework.

In this context, technology can be seen to produce both planned and unplanned impacts on organisations (Orlikowski & Hofman 1997). The implementation of technology therefore has implications for organisational change management that require further investigation.

1.2 The Research Context

This research is based on a case study at Tasmania Police. Tasmania Police is a leading Government Agency within the Tasmanian Government and is charged with the protection of the community. Tasmania Police is a hierarchical paramilitary command control organisation. It operates across four geographical boundaries in Tasmania. Each geographical area is managed by a Commander, who reports to the Deputy Commissioner of Police. Head office for the police is located in Hobart, the capital of Tasmania. The structure of Tasmania Police is three tiered with constables residing at the bottom tier who report to Sergeants and Inspectors at the second tier who in turn report to Commanders. The Commanders are members of the executive

along with the Commissioner, Deputy Commissioner and Assistant Commissioners of Police. In addition, the organisation is supported by State Service Personnel.

The opportunity to conduct this case study results from a strong relationship developed by the researcher with the organisation. Like other policing organisations Tasmania Police is perceived as being a closed organisation offering little access to the general community. In reality, Tasmania Police is open to engaging in mutually beneficial arrangements such as research. Berg (2004) reminds us that for this type of relationship to be positive and productive it must be two way.

Case studies on paramilitary organisations, especially those relating to implementing technology over time, are rare. Investigating the role that organisational structure and culture has on organisational change management and technology implementation will provide insight into an organisation that appears secretive. While policing organisations in Australia are public sector organisations they differ in the areas of environment, services, objectives and revenue (Hoque, Arends & Alexander 2004). Police operate in a dynamic, risky and dangerous environment while protecting the community. However, public sector managers in the past have expected to be administrators and now are having to become managers (Davies 2000). Over the last decade there has been increased pressure for police organisations to change due to changes in community and business expectations, resource constraints, the impact of technology and a call for greater accountability (Hoque & Moll 2001). However, although police are a public sector agency, their culture is different from other agencies.

A number of Information Systems researchers have looked at knowledge and its impact on military organisations: (Ali et al. 2001; Ali, Pascoe & Warne 2002; Warne 2000; Warne et al. 2000). Warne (2000) identifies that military organisations are different from business based organisations in a number of ways. Members of military organisations choose to become members and to make a life long commitment to the organisation. The position is more than a job it is a way of life. Military members undergo extensive training to perform their job. The culture of the organisation predates any of the existing members. Members are expected to conform in ways that members of other organisations are not, such as uniform and discipline. Military organisations are hierarchical and are governed with an autocratic leadership

style. She goes on to point out that while these characteristics are factual, military leaders demonstrate concern, commitment and strong leadership (Warne 2000). These characteristics hold true for policing organisations, hence the paramilitary label being assigned.

Paramilitary organisations are perceived as having more control over their members. The command control environment suggests that orders/instructions issued from the top will be implemented at all levels of the organisation. Previous research (Thomas 1996) has provided evidence that this is not the case. Paramilitary organisations are capable of manipulating change to protect perceived individual power or authority. Indeed, as policing organisations are different from public sector organisations yet similar to military organisations, the impact of the culture on organisational change management and technology implementation must be considered.

Finally, IS researchers are encouraged to take advantage of unique opportunities to study implementation issues (Benbasat, Goldstein & Mead 1987). In relation to the selection of a case study, a unique opportunity is classified as the chance for one to study something one had not previously planned for and which may not occur again (Oates 2006). This case presents a unique opportunity to review organisational change management and technology implementation as it was occurring at Tasmania Police.

1.3 Research Objectives

A review of the literature reveals a focus on snapshot case studies when theorising on change management practices. Change management models developed through snapshot case studies lack evidence of sustainability. Longitudinal case studies are badly needed to illustrate the process of technologically enabled change. The purpose of this thesis is to contribute to change management theory by identifying sustainable factors required to be present when implementing technology-based change. The thesis will contribute a substantive investigation into the implementation of technology-based change within Tasmania Police. The research aims to achieve the following objectives:

- • To understand Tasmania Police and its approach to implementing change and technology

- To examine in detail Tasmania Police projects focused on the implementation of change through technology
- To identify factors present during the implementation of technology and organisational change at Tasmania Police
- To consider how insights generated from the case study at Tasmania Police relate to existing literature on change management and the implementation of technology.

1.4 Research Questions

In order to meet the objectives above, two research questions have been developed.

The first question is:

Research Question One

What approaches does Tasmania Police use in implementing and communicating technology-based change over time?

The second question is:

Research Question Two

How do case study insights enhance understanding of the implementation phase of change and the role and impact of technology?

1.5 Research approach

The case study at Tasmania Police is based on the analysis of four projects that were developed directly as a result of a major business process re-engineering exercise (BATON) initiated in 1997. BATON developed and promoted an over arching change management strategy and the use of information and communications technology as the major drivers for its implementation of organisational change within Tasmania Police. The four projects were specifically selected to investigate the relationships between the implementation of technologies to drive change and the change management strategies utilised. To explore the sustainability of these relationships and overcome the potential limitations of case studies conducted over a single period of time, a two phase approach requiring a second period of research at Tasmania Police was adopted.

The research methodology was underpinned by a subjective ontology and an interpretative epistemology. The strategy adopted a two-phase approach requiring data collection and analysis at two time points during the ten-year period. The research design used four technology related projects as a vehicle to study the technology-based change management process. During phase one, drawing on tools from ethnography, the researcher became a participant observer. Data was collected through observations, informal interviews, activity monitoring and participation in work with the project teams and change management coordinators over a two-year period.

Drawing on principles of grounded theory, data analysis of the four projects was conducted iteratively using thematic coding. This analysis led to the generation of six themes identifying eleven factors illustrating the relationships between organisational change management and technology implementations. In particular, the analysis highlighted that Tasmania Police relied on informal communication practices and trust networks (as distinct from their hierarchical organisational and governance structures) to achieve change. The analysis also highlighted the capacity for technology to be significant as both an agent and object change that required adaption and flexibility in change management strategies. Interpretation of phase one data suggested that Tasmania Police was an organisation that appeared to fit with conventional models of change management in the literature.

Phase two involved a second period of data collection and analysis aimed specifically at exploring the sustainability of relationships between organisational change management and technology implementations identified in phase one. Phase two data collection coincided with the Tasmania Police three-year business planning exercise that incorporated a review of their change management and technology approaches. The research design utilised the outputs from phase one to generate an interview question frame that was used to investigate the current status of organisational change management and technology implementation. The interviews were conducted with members of the business project unit, senior management and change agents. Interview analysis revealed significant differences in the relationships and approaches adopted by Tasmania Police. Phase two analysis also highlighted how new factors

had emerged that directly impacted on the organisational approach to technology-initiated change.

1.6 Research contributions

At a substantive level the thesis has been conducted in a paramilitary organisation that is not generally open to the public, thereby providing a unique opportunity to conduct research (see section 2.4). Access has been given to all levels in the organisation including senior management (see section 4.4.3). The organisation was undertaking change at the time the initial data was collected (see section 2.4.2). The researcher commenced with the organisation at the time they were implementing the Business Process Reengineering exercise called “Project BATON”. BATON has been the catalyst for ongoing change in the organisation over the last decade. The research concluded at a time when Tasmania Police was undertaking business planning that included reviews of their change management practices along with a review of their current technology. Capturing these changes in this organisation in real time is the substantive contribution of this research.

At a methodological level this research provides two contributions. Firstly, this research used the tools of ethnography combined with a case study method adopting a longitudinal focus (see section 4.3.2). The study was conducted in two phases to overcome the limitations of single view case studies (see section 4.3.3). Phase one adopted methods more closely aligned with ethnography, such as observation, to facilitate the researcher gaining a deep understanding of the organisation. Phase two used a more traditional case study data collection method of semi-structured interviews to review the situation current some ten years later. Each phase had a definite purpose. The insights and understanding gained in phase one supported a deeper analysis understanding of the interview data in phase two.

Secondly, the coding of both phases of data was conducted using thematic coding (Boyatzis 1998) guided by open coding (Strauss & Corbin 1990). Thematic coding tends to adopt a positivist approach, which can result in the themes being pre-defined and then applied to the data. This research adopted an interpretivist approach where the aim of analysis for both phases of data was to allow the data to ‘speak for itself’. Boyatzis (1998) offers guidance in the production of themes but tends to lean towards

a positivist approach. Open coding in grounded theory supports the production of themes with an interpretivist approach (Strauss & Corbin 1990). Combining the two approaches has been the second part of the methodological contribution.

The final contributions are provided at the theoretical level. Implementing technology-based change is complex and it is easy for organisations to take the technology for granted. A combination of project management and change management is not sufficient for implementing technology that is being used to drive organisational change. This research therefore supports the approach advocated by Markus (2004) to deal with *technochange*. In addition, this research identifies that, when making decisions about implementing technology-based change, management should never take the technology 'as given'. This thesis contributes to an enhanced understanding of the implementation phase of technology-based change.

This research has enhanced the implementation phase of two models of change (Jick 1991; Kotter 1995). The factors have expanded the one commandment offered by Jick and the two steps presented by Kotter. In addition, while the change agents recruited and used by Tasmania Police do not align with the literature view of change agents (Buchanan & Boddy 1992; Markus & Benjamin 1996), in that they do not act as 'agents' of change, instead they provide a mechanism for effective communication to the entire workplace. These change agents and the role they play suggest a fourth type of change agent to add to the three types identified by Markus and Benjamin (1996). This research would suggest the existence of a "Conduit Model" as a fourth change agent type. There is no doubt that the network has facilitated the implementation of change while never taking ownership of the process. Providing the network with detailed explanations and justification of the change has given the network the ability to have answers to questions posed in the workplace by colleagues. This in turn appears to add to their credibility.

1.7 Research limitations

This research provides insight into one organisation and is bounded in time (Creswell 1998); this in itself is a limitation of the research. The research has provided a view of Tasmania Police and of the change from the perspective of management, project

teams and change agents only. The research was unable to present views on change from officers or state service personnel due to decisions on where to best target resources.

By definition, a longitudinal case study is a study of one organisation with multiple data collection points (Berg 2004). One limitation to this study is the significant time between collection points. The depth of the study would have been increased by adding an additional data collection at the five year mark, as was the original design.

The researcher was embedded in the organisation for the first period of data collection and utilised various forms of observation. As the research was not action research, exposure to the literature was limited until after the collection of phase one data. Working with the project team and the Change Management Coordinators could have had an effect on the outcomes (Walsham 1995). The research design was structured to minimise the effect of the researcher on the research while taking advantage of gaining an insider's view of the organisation.

1.8 Overview of the thesis

1.8.1 Chapter 2: Australian and Tasmanian Police

This chapter provides an overview of Policing in Australia. The chapter is presented in two parts. Part one presents background to policing in Australia, and Police and information technology. Part two of the chapter presents background information on Tasmania Police. The Tasmania Police early drivers for change, Project BATON and the associated changes, are then presented. The last section of part three presents information on the change agents as recruited by Tasmania Police, their training and the Change Management Coordinators.

1.8.2 Chapter 3: Literature Review

This chapter provides an overview of the literature relevant to this research and is presented in three parts. Part one examines research into change management and explores models of change and their related factors including change agents and perspectives on the role of technology. Part two examines research on business process reengineering and project management. Part three examines research on

information technology and innovation including diffusion, information management and knowledge management.

1.8.3 Chapter 4: Methodology

This chapter describes the methodology used in this research. This research has ethics approval from the Human Research Ethics Committee (Tasmania) Network (Ethics reference H10613). The chapter is presented in three parts. Part one presents the philosophical stance and the research strategy. Part two presents the research design, tools and techniques and data analysis methods. Part three briefly outlines the approach taken to the discussion and interpretation of data generated in each phase and describes how the case study findings are produced.

1.8.4 Chapter 5: Data Analysis Phase One

This chapter describes the data analysis for phase one and is structured in two parts. Part one presents the rich description developed out of the stage one iterative analysis. Part two provides a brief reiteration of the thematic coding approach with examples before presenting the six themes derived from this coding process used in the second stage of phase one analysis.

1.8.5 Chapter 6: Discussion and interpretation Phase One

This chapter presents the discussion and interpretation of phase one data analysis. The chapter commences by revisiting the research objectives and research questions then presents a discussion on each of the themes, as presented in chapter five. The discussion of the themes identifies factors relating to the implementation of technology-based change at Tasmania Police. The interpretation highlights factors relating to technology-based change which are discussed in relation to the literature. The factors are then compared to models of change. The chapter concludes with a discussion of the inter-relationships of the factors.

1.8.6 Chapter 7: Data Analysis Phase Two

This chapter describes the analysis of phase two data. It provides a brief reiteration of the thematic coding approach with examples before presenting the seven themes derived from this coding process used in phase two analysis of the interviews.

1.8.7 Chapter 8: Discussion and interpretation Phase Two

This chapter presents the discussion and interpretation of phase two data analysis. The chapter discusses each of the themes as presented in chapter seven. The discussion of the themes identifies factors relating to the implementation of technology-based change at Tasmania Police. The interpretation highlights factors relating to technology-based change which are discussed in relation to the literature. The factors are then compared of models of change. The chapter concludes with a discussion of the inter-relationships of the factors.

1.8.8 Chapter 9: Case Study Findings

This chapter presents the case study findings and is in three major parts. Part one presents a comparison of the factors from phase one and from phase two in a table and then examines those factors. This examination considers the factors that have remained, those that have changed, the new factors and the factors that have disappeared. Part two presents a discussion on the significance of these factors and their inter-relationships. Part three presents the case study findings and the answers to the two research questions.

1.8.9 Chapter 10: Conclusion and Future work

This is the concluding chapter for the thesis and provides a brief summary of the major findings. This chapter discusses the contributions this thesis makes to the Information Systems discipline along with recommendations for organisations that are contemplating implementing technology-based change. The chapter then presents the limitations of this study and suggestions for future work.

1.9 Chapter Reflections

This chapter provides a background summary to this thesis. It identifies the research questions and objectives. The chapter presents an overview of the contributions this research makes to theory and practice of implementing technology-based change.

The chapter outlines three levels of contributions to the Information Systems discipline at a substantive, methodological and theoretical level. The chapter concludes by presenting an overview of the thesis structure outlining the remaining nine chapters.

2 Australian and Tasmanian Police

2.1 Introduction

This chapter provides an overview of Policing in Australia. The chapter is presented in two parts. Part one presents background to policing in Australia, and police and information technology. Part two of the chapter presents background information on Tasmania Police. The Tasmania Police early drivers for change, Project BATON and the associated changes, are then presented. The last section of part three presents information on the change agents as recruited by Tasmania Police, their training and the Change Management Coordinators. This chapter is divided into the following sections:

- Section 2.2 provides an overview of the structure of Police in Australia, how they are funded and how they compare to other public sector departments. It then explores the current status of technology-based projects in each of the Australian Police Forces.
- Section 2.3 introduces Tasmania Police as a part of the Department of Police and Emergency Management (DPEM).
- Section 2.4 presents the catalyst for change at Tasmania Police and describes Project BATON along with the associated change initiatives. The vision and missions statements are also presented along with the “Quick Wins” and their role in identifying if the organisation was ready for change. This section then describes the recruitment, role and training of the change agents and concludes with presenting information relating to the first three Change Management Coordinators.

2.2 Police in Australia

In Australia, police enforce the criminal law on behalf of the Federal, State and Territory Governments. There are eight police forces: one in each state, one in the Northern Territory and one federal. The Australian Police Forces are:

Australian Federal Police (AFP)

New South Wales

Queensland

South Australia

Western Australia

Victoria

Northern Territory

Tasmania

With the exception of the Australian Federal Police, the police forces are under the control of their respective state or territory government (Australian Institute of Criminology, 2008).

The structure of each of the Police Forces is similar, with a Commissioner heading up the agency supported by a Deputy Commissioner, Assistant Commissioners and Executive Management. The States and the Northern Territory have Inspectors and Sergeants in their middle management with Constables forming the base of the organisation.

The basic law enforcement objectives, as dictated by government for each of the Police Forces, are:

- to protect, help and reassure the community
- to preserve peace and safety
- to prevent crime
- to uphold the law in a manner which has regard for the public good and rights of the individual (Australasian Police Multicultural Advisory Bureau, 2005)

Table 2-1 details the eight Police Forces, which vary in size and employment numbers, along with the number of officers employed by each, as at 30th June 2008 (as disclosed in the annual reports for each Police Force).

Table 2-1: Employment numbers for each Police Force (2008)

	<i>Officers</i>	<i>Total Employed</i>
Australian Federal Police	2,855	6,598
New South Wales	15,324	19,319
Queensland	9,618	13,948
South Australia	4,397	5,474
Western Australia	5,647	7,526
Victoria	11,277	13,911
Northern Territory	1,147	1,435
Tasmania	1,252	1,736

All Police Forces reported an increase in officers in the year 2007-2008.

The difference between police services and other public sector organisation has been summarised by Hoque, Arends et al (2004) in Table 2-2.

Table 2-2: Generic differences between the police service and other public sector entities

	Police Services	Other public sector entities
Environment	Dynamic, risky and dangerous	May be stable and predictable
Services	Protection of the community and promotion of safety	To provide a community service (e.g. health and education)
Objectives	To minimise cost and reduce the demand for expenditure	To recover costs (to an extent) by adopting a user-pays strategy
Revenue	State government funding	Fees, charges, taxes, donations and government funding

(Source: (Hoque, Arends & Alexander 2004, p. 78)

2.2.1 Duality

Military and paramilitary organisations exhibit dualities in their organisations. The concept of duality involves the tensions that exist in organisations. In essence a duality is the existence of contradictory elements (Janssens & Steyaert 1999). Dualities are opposites and are not either/or choices, depending on the context, instead they are aspects of an organisation that need to be dynamically balanced (Evans & Doz 1989). Organisations have to deal with three new dualities in the areas of

structure, culture and personal. The three dualities are: stability-instability; unification-fragmentation; and autonomous-relational (Janssens & Steyaert 1999). Evans and Doz (1989) present three mechanisms for developing dualistic capabilities in an organisation: layering; sequencing; and decision architecture. Layering focuses on building new capabilities into the culture while still drawing on past strengths. Sequencing recognises that what is required for the future may not be what is important for today. Decision architecture relates to the way information is processed and decisions made so as to support the complexity of the dualistic organisation. Managers should separate old from the new to allow different structure, culture and processes when dealing with innovation within an existing organisation (O'Reilly & Tushman 2004). The challenge for managers is to come to terms with the 'ands' rather than the 'either/or' of dualities (Sanchez-Runde & Pettigrew 2003). An organisation that is paramilitary in structure has the added complexity of showing evidence of dualities such as care versus control (Davies 2000).

There is evidence that old and new can exist together but this requires a clear vision and a strong management team to oversee the organisation (O'Reilly & Tushman 2004). When change is being implemented across structure, process and boundaries there is a need to reappraise traditional command and control systems and experiment with more flexible and agile organisational forms (Graetz & Smith 2005). There is a need for new approaches to supplement not supplant change initiatives. Dualities can live together and produce benefits (Sanchez-Runde, Massini & Quintanilla 2003).

2.2.2 *Military/Police and drivers for change*

Changes in policing are being driven by the need to monitor performance, to decentralise and to deliver more customer oriented service (Davies 2000). Reforms are aligned to new public management ideals (Chan 1999; Hoque & Moll 2001; Leishman & Savage 1993). Information Communication Technology (ICT) is supporting the new reforms (Skogan & Hartnett 2005). The reforms have a dual purpose: providing credibility for the police to ordinary citizens, and gaining efficiencies of resources (Horque, Arends & Alexander 2004). The reforms can result in downsizing and restructuring (Davies 2000). ICT has been successfully implemented using an incremental approach (Collerette, Legris & Mamghi 2006).

Police, like the military, have different characteristics from other organisations (Warne 2000) and can be viewed as having distinct subgroups within their organisation that strongly influence their daily practices (Herbert 1998). In other ways Police as a paramilitary organisation behave the same as other organisations. When implementing change, if attention is not paid to the human factor by providing feedback, managing commitment and communicating, then change will be unsuccessful as, in any other organisation (Lippert 2003). However Police have been successful in implementing change by ensuring there was clear communication and commitment of the leaders which resulted in a change in work conditions (Jacobs et al. 2006).

So if Police are changing under the pressure of new reforms how are they managing that change?

2.2.3 *Police and IT*

Each of the Australian Police Forces has detailed its activities relating to technology in the annual reports for 2007-2008. In some states the Commissioner of Police has made specific reference to the role of technology in the organisation. Each of the annual reports confirms that the core activity of police is to reduce crime and road traumas. Therefore it seems clear that any application of technology needs to support those core activities. Each Police Force and how it perceives the role of technology, as reported in 2008, will now be presented.

Australian Federal Police committed to the improvement of infrastructure and applications with a focus on significant projects such as Wide Area Network, National Police Reference System and the Laboratory Information Management System. The AFP has instituted a Solution Centre and Project Management Office to embed a consistent project management methodology and prioritisation of projects (AFP Annual Report 2007-2008a).

The New South Wales Police Commissioner is dedicated to the reduction of “red tape”.

“A number of initiatives were introduced this year to reduce paperwork, saving officers’ time and allowing them to more quickly return to the frontline” (AP Scipione APM, Commissioner of Police, Annual Report 2007-2008)

The initiatives involved the establishment of a Criminal Infringement Notice Scheme, Local Court reforms, a Charge Streamlining Project and the NSW Police Force Complaints Streamlining Project. In addition, the NSW Police planned to improve the usefulness, reliability, accessibility, integrity and values of information, communication and technologies (New South Wales Police Annual Report 2007-2008b).

Queensland Police are implementing initiatives that will move them towards a future of high technology policing that is responsive and community focused. They are progressing with the implementation of a single integrated operational policing information management system. To oversee the investment in technology, Queensland Police have instituted an Information Steering Committee that reports to the Board of Management (Queensland Police Annual Report 2007-2008c).

South Australian Police have enhanced their existing technologies to enable the provision of better information in relation to arrests and people in custody during 2007-2008. Funding had been allocated for further development in 2008-2009 (South Australian Police Annual Report 2007-2008d).

Western Australian Police have focused on initiatives that remove administrative and process obstacles that prevent front line officers from engaging with core policing services. During 2007-2008 a new digital radio project was trialled with great success (Western Australia Police Annual Report 2007-2008f).

Victoria Police are developing an upgraded police management information system with the first component, the new records management system, having gone out to tender late in 2008. The focus of the new system is to provide Victoria Police with a system that will be modern and user friendly, provide data security, improve efficiencies in police work practices, provide access to quality information and be

based on an ICT platform that will support future information sharing (Victoria Police Annual Report 2007-2008e).

Northern Territory Police made no specific reference to ICT in their annual report for 2007-2008.

Tasmania Police commenced Project Meridian, which will help them re-engineer for the future.

The project [Meridian] will be designed to build on Project Baton, a reform program which was implemented across the organisation in the mid 1990s. Baton, which was an acronym for Business Alignment of Technology to Operations Network, reviewed existing business systems and developed opportunities for improvements to the operational efficiency of the organisation. (Tasmania Police Annual Report 2007-2008 p.60)

Meridian will build on previous reforms while positioning Tasmania Police to provide more efficient, responsive and effective police services to the people of Tasmania. In addition Tasmania Police is launching an Automatic Vehicle Location project and the Tasmanian Government Radio Network Project.

The overview provided by the Police Forces' annual reports demonstrates that technology was an integral component in the delivery of new systems and processes for police organisations. The technology acted as an enabler to support the core business of reducing crime and traffic trauma.

2.3 Police in Tasmania

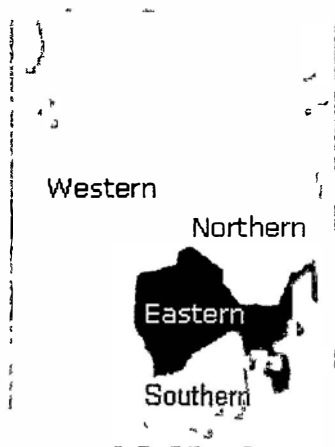
Prior to 2006 The Tasmanian Department of Police and Emergency Management (DPEM) consisted of Tasmania Police, the State Emergency Service (SES) and Forensic Science Service Tasmania (FSST). In March 2006, after the State election, the Department administratively incorporated the Tasmania Fire Service (TFS) and was renamed the Department of Police and Emergency Management. While the change in structure happened during the period of this research it did not impact the research as the focus of the research was Tasmania Police only.

The organisational structure, as defined on the Tasmania Police website, states that Tasmania Police has divided the state into four geographical boundaries called districts and serves a total population of half a million people. Each district is divided into divisions and Commanders of the districts are responsible for the delivery of policing services to the area. The Commanders have been given the accountability and provided with greater control of financial, human resource and administrative areas.

The structure of the organisation has Inspectors answering to the Commanders, Sergeants answering to the Inspectors and Constables being supervised by Sergeants. These ranks make up the majority of police personnel.

The executive is housed in Hobart at the State Police Headquarters. The executive makes direction and policy decisions. The structure of the executive includes the Commissioner and head of the Police (Secretary DPEM), Deputy Commissioner, two Assistant Commissioners and the Director of Corporate Services. The Commissioner of Police reports directly to the responsible Minister who is an elected representative of the people of Tasmania.

Figure 2-1: Tasmania Police Districts (Tasmania Police 2009)



The four policing districts in Tasmania are Northern, Western, Eastern and Southern as shown in Figure 2-1. Tasmania Police requires the officers to accept transfers and move between districts. To enhance promotional opportunities, an officer should work in more than one district. Each district has a distinctive culture. To maximise the use of human resources at officer level the organisation makes frequent use of temporary secondments across and within districts, divisions and ranks.

2.4 Drivers for change in Tasmania Police

In the mid 90s Tasmanian State government guaranteed to keep police numbers stable but would not increase the budget to expand policing activities. To resolve this deadlock Tasmania Police undertook a re-engineering exercise to streamline organisational structures, processes and supporting technologies in order to make efficiency gains. These gains would be calculated on the basis of full-time equivalents (FTEs), resulting in police being freed up to do core policing rather than administration.

Tasmania Police's specific environment includes relevant stakeholders: government, government departments, welfare groups and the public. The organisation when considering restructuring consulted with its stakeholders for clarification of their role in this environment as each of the stakeholders has their own perception of how the Police should perform their duties and what priorities should be adopted.

To commence the organisational re-engineering exercise, Tasmania Police employed an external consultation company to undertake an examination of current work practices as well as to conduct a community and stakeholder analysis of the perceptions of Tasmania Police, how the Police should perform their duties, and what priorities should be adopted.

2.4.1 Vision and Mission

Tasmania police in conjunction with the community, stakeholders and police developed their future direction in terms of a Vision and Mission Statement.

The vision statement was:

“To be recognised as a premier policing organisation.”

With the amalgamation of Police with Emergency Services this has changed to:

“To be widely recognised as Australia's finest policing and emergency management service.”

The mission statement was:
“To provide a safer Tasmania.”

With the amalgamation of Police with Emergency Services this has changed to:
“To make Tasmania Safe”.

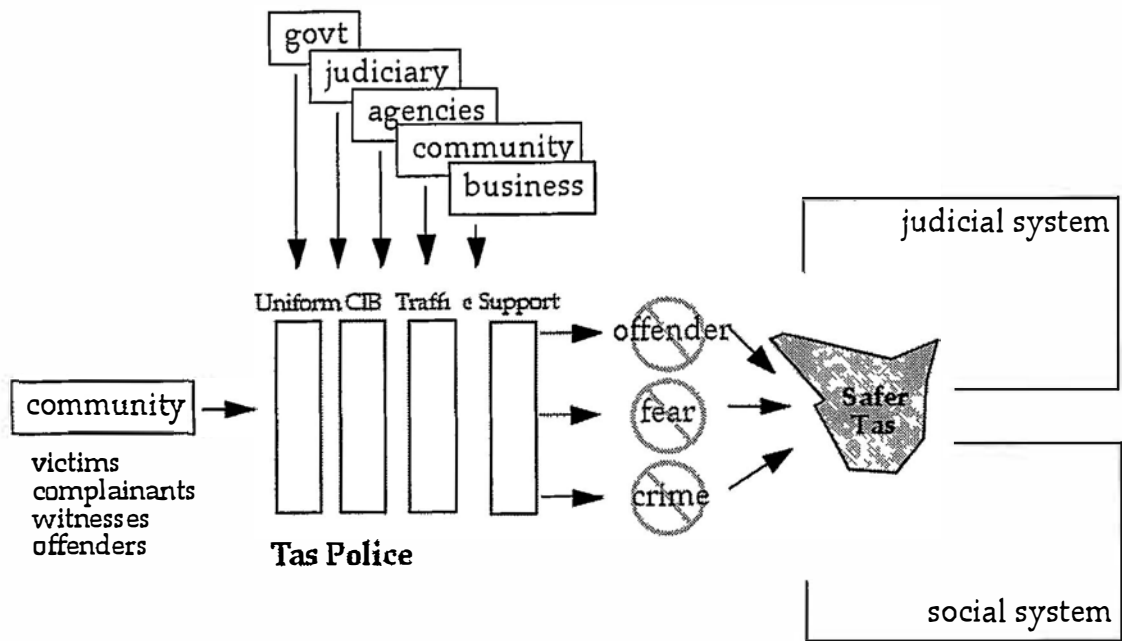


Figure 2-2: Stakeholders for Tasmania Police (KPMG 1995)

Figure 2-2 identifies the key external stakeholders including government, judiciary, other agencies, business and communities. Internally the key divisions have been identified in terms of uniform, Criminal Investigation Bureau (CIB), traffic and support services. The diagram depicts the mission statement of providing a safer Tasmania and the things that need to be dealt with to enable the mission to be achieved such as dealing with offenders, fear and crime. This review set the scene for the consultants to develop the business process reengineering exercise, Project BATON.

2.4.2 Project BATON

Project BATON (Business Alignment of Technology to Operations Networks) was a business process reengineering (BPR) initiative of Tasmania Police. Their motto, more policing, expressed the aim of the project: to maximise the delivery of policing services by using technology as an enabler of new work practices. Project BATON

was designed to use technology as an enabler of new work practices. Project BATON was developed in four phases to be implemented over a five-year period. The four phases were:

Phase 1- Business Direction

Phase 2 - Scoping and Targeting

Phase 3 - Process & Targeting

Phase 4 –Implementation

The four phases were aligned to improve business processes in line with the strategic directions of: fully integrated community network; core policing; operational excellence; and organisational learning.

“Reengineering opportunities include the identification and definition of specific large-scale changes that will transform the manner in which policing is conducted in Tasmania in the long term.” (Scoping and Targeting Report, July 1995 p. 2)

Tasmania Police, in conjunction with the consultants and under the umbrella of Project BATON, had identified nine reengineering opportunities. These were:

- Quick Wins
- Information Management Strategy
- Civilianisation and Community Partnerships
- Human Resources Strategy
- Asset Management Strategy
- Tasmania Police Call Centre
- Radio Network Capability
- Customer Services Policy
- Change Management

These initiatives linked to the strategic directions by:

1. Becoming a full partner in a formal integrated community network
2. Focusing officers on enforcement of the law, crime prevention and the provision of other policing services which are appropriate to their powers and competencies
3. Creating an environment which delivers high value to the communities through efficient and effective processes

4. Continually challenging and reshaping its services and work practices to ensure they continue to meet community requirements.

By 1997 the first two phases of BATON, the Business Direction and the Scoping and Targeting report, had been completed. Phase one produced the vision and mission statement while phase two resulted in increases in the quality and quantity of policing services and released 50 operational police through reduced administration and civilianisation of positions.

The first stage of phase 3, Processing and targeting, was to:

... develop resource management strategies for information, personnel and assets. This stage also included the development of a change management framework and training for departmental Change Agents. (Tasmania Police Brochure, 1997)

To commence phase three Tasmania Police undertook the first of the nine identified reengineering opportunities, Quick Wins.

2.4.3 Quick Wins

The first of the nine reengineering opportunities identified above was Quick Wins. A "Quick Win" was defined by the consultant as: "... a process improvement initiative that could be implemented in less than one year (1996), be low in cost and which would cause little disruption to existing work practices". Specifically, a list of 27 "Quick Wins" was developed. Quick Wins reinforced the required momentum needed to bring about more significant transformation later in Project BATON.

An analysis one year later indicated that the majority of the Quick Wins were successfully implemented throughout Tasmania Police, reflecting that the organisation was indeed willing and able to implement and accept structural, process and systems change (Thomas, 1997).

At the conclusion of the 27 Quick Win projects, Tasmania Police embarked on the design and implementation of the larger scale project: the Information Management Strategy, to address the organisational need for structure, process and systems improvement.

Three technology-based projects operated under the umbrella of the Information Management strategy:

- SAMSON
- Radio Network Capability
- Tasmania Police Call Centre

These projects make up three of the four projects reviewed in this research.

2.4.4 *Change agents*

In 1997 twenty change agents from various ranks and sections including State Service Personnel were recruited and trained as a part of the change management framework. Figure 2-3 graphically presents the original planning for the introduction of the change agents. All districts required coverage by the change agent network. The change agents needed to be representative of the structure of the organisation. Tasmania Police was an organisation with a three-tiered structure. Upper management consisted of the Commissioner, Deputy Commissioners, Assistant Commissioners and Commanders. The middle management sector consisted of Inspectors and Sergeants who worked in the lower level containing operational police, the constables and a pool of 'State Service Personnel' support roles in the organisation. The state service personnel had varying duties ranging from management positions to clerical/reception functions and speed camera operators.

As upper management were the decision makers and had previously been the people in control of the information relating to change they were excluded from the change agent distribution network. The focus of the network was to provide coverage to the middle and bottom tiers of the organisation by recruiting members of those ranks and positions to disseminate the information relating to change.



Figure 2-3 Overview of change management framework (KPMG 1997)

The change agents were selected not on the basis of their commitment to the organisation but on their credibility in the organisation. Change agents required the two major attributes of honesty and courage to support the shift from top driven change to a consultative approach that enabled members to embrace the change.

Tasmania Police were very mobile in terms of transfer, secondment and promotion so, while the initial recruitment provided coverage of the four districts and representation at most of the stations, this was only temporary. One transfer or one secondment of a change agent would mean that there would be an immediate gap in the network.

By July 1998 Tasmania Police had 37 officially recognised and trained change agents and by 2001 the organisation had 55 officially recognised and trained change agents. The ranks distribution is provided in Table 2-3.

Table 2-3: Change agent distribution 1998, 2001

	<i>1998</i>	<i>2001</i>
<i>Constables</i>	13	22
<i>Sergeants</i>	11	15
<i>Inspectors</i>	8	8
<i>State Service Personnel</i>	5	11

A review of the change agent network in 2005 identified a need for more Constables to be recruited into the network. During the recruitment an opportunity was provided for existing change agents to elect to leave the network. Twenty-two change agents withdrew due to work commitments relating to their substantive positions. The review also had to consider representation across the ranks. Any change agents holding the rank of Inspector or higher were contacted and given the option of being removed as an active change agent but remaining on the list of change agents. They would receive information through a separate email list but would not participate in regional and state-wide meetings. The Commanders and Inspectors took on a new role of passive support for the program.

Table 2-4 details the current distribution (2009) of Change Agents by ranks.

Table 2-4 Break up of Change Agents by Role 2009

Staff Classification	Number of Staff	Number of Change Agents	Change Agent Advisor (non active)
Commissioner of Police	1	0	1
Deputy Commissioner of Police	1	0	1
Assistant Commissioner of Police	2		1
Commander	10		1
Inspector	59	3	13
Sergeant	213	34	
Constable	939	40	
Special Constable	0	0	
Trainee	42	0	
State Service Personnel	472	20	

Table 2-5 details the current distribution (2009) of the Change Agents by location.

Table 2-5 Distribution of Change Agents by Location 2009

Staff distribution by location	Number of Change Agents
Commissioners	
Executive Support	3
Human Resources	3
Corporate Services	8
Southern District	16
Eastern District	13
Northern District	13
Western District	24
Internal Investigations	2
Forensic Science Services	2
State Security Unit	1
State Emergency Services	2
Operational Support District	10

In 2009 Tasmania Police had 97 Change Agents in the program.

2.4.5 Change agent role

Prior to 1996 Tasmania Police had tried a number of ways to reach its members including corporate newsletters and flyers and posters on notice boards and in lifts. Tasmania Police also sent out information with the pay slips each fortnight to ensure the members were receiving information about proposed change. Management deemed that these approaches were not effective: officers would still declare they knew nothing about an issue that had been covered that fortnight in the pay mail out.

The role of the change agent has been incremental in development. The role was first mentioned in documentation by the consultant in 1995 and again in 1997 but it was not until the second of the Change Management Coordinators documented the role in 1998 that there was a clear description. The description was refined by the change agents in 1999.

The first mention of change agents appeared in the Scoping and Targeting report 1995. At the time the change agents were labelled Liaison Officers. The Scoping and Targeting report identified the need to use liaison officers to help with communicating information into the field. The consultants further developed the Change Management Framework in 1997 and outlined roles, responsibilities and key

performance indicators for program sponsors, program managers, key stakeholders and program change agents.

The description of the responsibilities provided by the consultants (Appendix 1) was formal and required a substantial skill set from the change agents. The consultants also envisaged that the change agents would be evaluated on the way they conducted the “role”. The initial training of the change agents by the consultants focused around developing the ‘desirable capacities’.

By 1998 the change agents were requesting that the role be clearly defined. The KPMG Change Management Framework did not provide a clear definition of the role for the change agents. The change agents were unsure of the boundaries attached to the role.

In response to the requests for a role definition, the second Change Management Coordinator defined the role of change agent in July 1998.

The role of the change agents had developed since the inception of a structured approach to change in the department. The role of change agent included:

*Acting as an information source, regarding envisaged change
Conducting presentations, training and facilitating workshops as required
Participating in the development of the change process
Monitoring and anticipating likely acceptance and reactions to envisaged change
Advising appropriate ways to manage responses to improve situations
Evaluating the success of the change and recommending appropriate actions to improve situations*

Communication of current accurate information by change agents including responses to enquiries on issues is an important component in the structured change management process.

Communication of information or feedback on issues needs to be:

*Timely
Regular
Accurate
Consistent
Concise (in a form presentable to others)
Provide a reference where additional information can be obtained and to whom feedback can be provided*

This will ensure that change agents are recognised as credible in their role. The change agents are supported in this role by having direct access to the Deputy Commissioner of Police which enables change agents to quickly and accurately obtain feedback on issues from the executive level of the department.

There is no definitive means of communicating information to and by change agents. There are, however, some principles which should be adhered to, that is the information reaches all change agents or interested parties in an accurate and timely manner.

Some of the communication methods used are:

Written reports

Email

Video presentations

Phone conferencing

Internet and

Police intranet site

(Memo, Sergeant B, Change Management Coordinator, 1998)

This definition of the role of change agents was more loosely defined with a focus on accurate and timely information rather than the formal approach planned by KPMG. As a part of the KPMG definition the change agents needed to be ‘able to understand the personal and organisational consequences of change and can apply them to create positive changes to behaviour and thinking in the organisation’. This implies taking ownership of the change. The newly defined role focused on acting as an information channel rather than taking ownership of the change.

When the second round of change agents was recruited and trained they were made aware that one of their main functions involved being attuned to the grapevine and identifying issues before they became major concerns for the organisation. The desired flow of communication is depicted in Figure 2-4. Those concerns needed to be communicated upwards. In the past when the personnel were unhappy with a proposed change, whether a directive or project based, there was no feedback given to either the project team or management. In extreme cases a grievance would be leaked outside the organisation to the media and the public who in turn would require management to explain the reason for the decision or change.

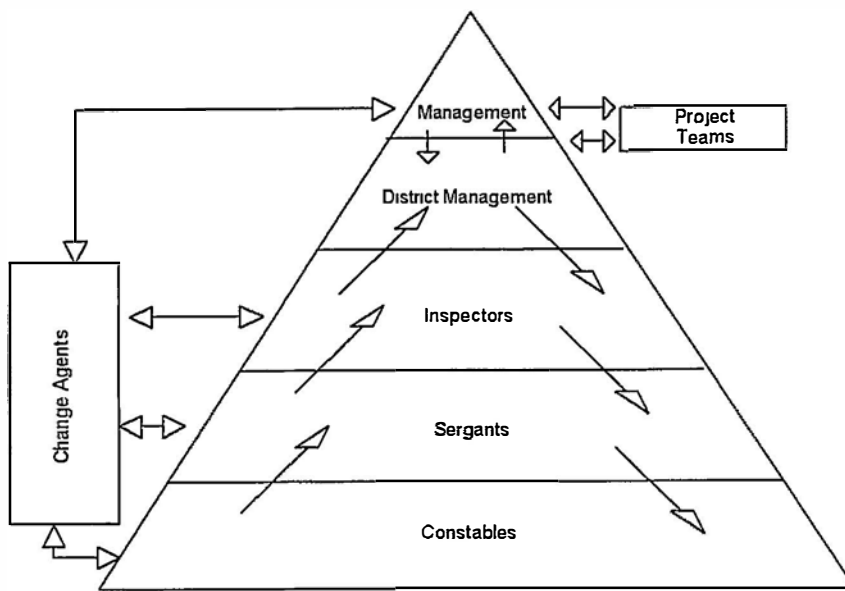


Figure 2-4 Researcher's view of the individual approach

A meeting and workshop was held for the change agents in July 1999. The focus of the workshop was to gather feedback from the change agents on issues they faced in their workplace. The change agents brainstormed in groups then collectively ranked the issues they faced in the organisation. The change agents requested, yet again, that their role be clearly defined so that boundaries could be established in the workplace. The Deputy Commissioner was eager not to have the role defined as he was concerned such a definition might inhibit the function of the change agents. Following the workshop, the Change Management Coordinator developed a broad framework which loosely defined the role.

Organisation Vision

- *To understand the strategic vision for the organisation and actively work towards achieving that vision*

Communication

- *To facilitate within the organisation by communicating information to members*
- *To disseminate information in relation to change to members in the organisation in a timely, accurate and factual manner*
- *To be pro-active by communicating feedback to either the Coordinator or Deputy Commissioner*
- *To be honest in communicating information*

Development

- *To help with training in relation to forthcoming change*
- *To actively seek professional development in the role of change agent*

General

- *To attend District and State-wide meetings*
- *To be attuned to the grapevine of the organisation to maximise the acceptance of change*
- *To conduct feedback sessions with members of the organisation, as and when required*
- *To be committed to the process of change*
- *To be committed to achieving the best possible outcome as a result of implementing change*
- *To be a point of contact for members of the organisation to source information relating to proposed change*
- *To understand the basis of the change being implemented*

The change agents' role involved conducting formal and informal sessions in relation to projects and keeping their peers up to date with the current state of a project and directive based change. They were briefed prior to any change being announced which often occurred concurrently with upper management briefings. These briefings provided factual information relating to the reasons and the proposed benefits of the change prior to the change being disseminated throughout the organisation.

2.4.6 Change agent training

The original recruitment and training of change agents

For the organisation to effectively use the change agent network, the change agents required training to develop their skill base. The first training for change agents occurred in 1997 when eighteen of the twenty change agents participated in a 3 day training course developed and presented by KPMG. This initial group consisted of 6 Constables, 1 Sergeant, 7 Inspectors and 4 State Services Personnel. The consultants had identified the potential use of change agents during the scoping of Project BATON. Training was directed at change management theory, communication

- strategies, teamwork and problem solving. At the completion of the training the role of the change agent had not been clearly defined.

Second round recruitment and training

The second training session for the second round of change agents was conducted in December 1998 when 19 additional change agents participated in a 2-3 day training course. The second course was modelled on the original course but was modified slightly to more adequately meet the needs of the organisation. During the original training, time was devoted to problem solving and teamwork, skills that were already highly developed in the organisation. The lack of recognition for skills already in the organisation caused frustration during the original training session as the trainer was perceived by those attending as demonstrating a lack of insight into their culture. The Change Management Coordinator, BPU Manager, existing change agents, a Lecturer from the University of Tasmania and the researcher, delivered the second course. The Deputy Commissioner of Police opened the course and conducted the first session. He also participated in the change agent meeting on day 3.

The second course program followed the following agenda:

Table 2-6 Second Course Training Program

<i>Day One</i>	<i>Day Two</i>	<i>Day Three</i>
Role of change agents	Conducting Feedback sessions	Course review using feedback session
Role of the Deputy Commissioner	Structure of change management with in department	State change agent meeting
Scope of change agents	Change Management framework	
Change Management theory	Communication of change	
Presentation skills		

Third round recruitment and training

The third change agent intake was trained in February 2001 when 19 additional change agents participated in a two-day training course. The Change Management Coordinator, BPU Manager, existing change agents and the researcher delivered the course. The course had been reduced to two days, rather than the previous three days, by holding the state-wide meeting at another time.

The third course program followed the following agenda:

Table 2-7 Third Course Training Program

<i>Day One</i>	<i>Day Two</i>
Role of change agent	Change Management framework
Role of the Deputy Commissioner	Conducting Feedback sessions
Scope of change agents	Presentation skills
Change strategies	Communication of change
Change Management theory	Course review

2.4.7 Change Management Coordinator

The Change Management Coordinator was a formal position with Tasmania Police and was aligned to Project BATON. The role of Change Management Coordinator was to ensure that an appropriate change management strategy was developed when implementing projects, and to keep the change agents informed of the progress and the reasons for implementing the change.

To support and coordinate the change agent network and the change management strategies a coordinator was seconded to the role of Change Management Coordinator. The agents required a central point of contact regarding change management. From the outset, the role of Change Management Coordinator was created as a part of the Change Management Framework. The first coordinator was a Constable who joined the Project BATON team for a period of six months.

First Coordinator

The original Change Management Coordinator, Constable A, was seconded to Project BATON from the Police Academy. Her role was to facilitate the changes resulting from projects being conducted within Project BATON. Constable A had been involved with the change management program from the beginning. She had trained as a change agent with the consultant from KPMG and had been involved in developing the role of Change Management Coordinator from the outset. Constable A’s secondment concluded in March, 1998 prior to the completion of the Call Centre

- Project when she returned to her substantive position as a trainer at the Police Academy.

Constable A was instrumental in the initial development of the role of Change Management Coordinator.

Second Coordinator

The second Change Management Coordinator, Sergeant B, was recruited from Internal Investigations in May 1998. Sergeant B had no prior experience with change management and had not been trained as a change agent. Sergeant B met with Constable A to gather background information on the role of Change Management Coordinator and on the network of change agents.

Sergeant B brought to the job a different skill set. He undertook a review of the network and met individually with the change agents to discuss their views on the program, their views on their workplace and what they would like to see happen in the future with the program. These discussions identified the need for a second round of change agents to be recruited. State-wide meetings were another initiative that resulted from the consultation. The meetings brought the change agents together where they shared experiences and further enhanced the network through this contact. Sergeant B's secondment ended in February, 1999.

Third Coordinator

The third Change Management Coordinator, Sergeant C, was recruited from Bellerive Station. Both Constable A and Sergeant B had developed a strong network of change agents that had focused on the Call Centre project. Sergeant C joined the Business Project Unit (BPU) after the Call Centre had been implemented and the organisation was focusing on a wider range of projects. Previously the projects being managed by Project BATON had some relationship to each other. The new projects worked in isolation from each other and normally were managed by only one person. A change management strategy was incorporated in each of the projects and the change agents were continuously briefed on the projects and their progress. Sergeant C was the Change Management Coordinator when data collection for phase one was completed.

2.5 Chapter Reflections

This chapter has presented a background to Police in Australia and Tasmania. Australia comprises of five states and two territories. Each state and one territory has its own Police Force. In addition there is a Federal Police Force. Tasmania Police operates across four districts and employs 1,252 officers. Tasmania Police undertook a major reengineering exercise, Project BATON, in the late 90s. This resulted in the recruitment of change agents to help disseminate information about Project BATON to the organisation. All change agents received training and the network had a coordinator who was the pivotal point for dissemination and collection of information. The change agent network continued to grow, ultimately having 97 active change agents.

3 Literature Review – Change, Innovation and Technology

3.1 Introduction

This chapter provides an overview of the literature relevant to this research and is presented in three parts. Part one examines research into change management and explores models of change and their related factors including change agents and perspectives on the role of technology. Part two examines research on business process reengineering and project management. Part three examines research on information technology and innovation including diffusion, information management and knowledge management. The chapter is structured in the following sections:

- Section 3.2 presents an overview of the literature relating to change management. The three dominant models of change are presented: planned change; emergent change and opportunity-based change. Factors associated with change such as strategic alignment and communication are identified and discussed
- Section 3.2.11 describes change agents from a literature perspective
- Section 3.3 describes Business Process Reengineering
- Section 3.4 presents a discussion of Project Management
- Section 3.5 discusses the relevance of Diffusion of Innovations and Technology and Knowledge Management and how these may relate to the implementation of technology-based change.

3.2 Change Management

This section of the literature review will present an overview of the historical development of change models to provide background to the development of approaches to change. The original change model will be revisited along with other models of change. The section concludes with a brief discussion of issues identified in the change literature that have relevance to this research.

Many researchers have written about change and implementing change in organisations (Carnall 1990; Cummings & Worley 2005; Huse 1975; Jick 1991; Kotter 1995; Markus & Benjamin 1996; Orlikowski 1993; Pettigrew 1985) and have provided guidance on how to manage change. The history of the development of change management provides insights into the growing complexity of managing

change in organisations. Organisations are dealing with the increasing pressures of having to compete in a global market and are struggling to find ways to remain competitive therefore having to change to meet these demands. A brief review of the historic development of planned, emergent and opportunity-based change will provide background to this research.

3.2.1 The beginning of change management

The need to understand change and how it effects organisations was first posited by Leavitt (1964) who viewed organisations as multivariate systems in which at least four interacting variables are identifiable: task, structure, technology and actors, as shown in Figure 3.1

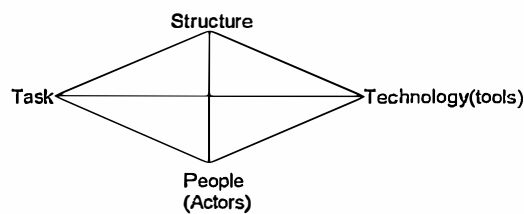


Figure 3-1: Leavitt's Diamond (Leavitt 1964)

Leavitt (1964) identified that the four variables are highly interdependent, so that change in any one will result in compensatory change in others. This theory has resulted in the investigation of the complexity of change when changing one of the four variables. So when implementing technology the organisation needs to be aware that changes will result in structure, task and people.

3.2.2 Planned change

The planned approach to change is based on Lewin's (1952) model of *unfreezing*, *moving* and *refreezing*. Lewin suggests that the status quo of the existing state must be unfrozen, the change implemented, and then the new state refrozen. Lewin stresses that just reaching the new level would not suffice, rather the focus must be that the

permanency of the new level should be the objective (1952, p. 228). Lewin's (1952) simple model is embedded in most change models developed over the last 50 years.

Lewin's work has been separately elaborated on by a number of researchers. For example, Lippitt, Watson et al (1958) expanded the three-phase model to a seven-phase model based on an agent client relationship. Interestingly, Lippitt, Watson et al (1958) first developed a five-phase model and then continued their work to develop the seven-phase model. The expansion involved the original third step, working towards the change, which aligns to the 'moving phase' in Lewin's model. Lippitt, Watson et al (1958) expanded step three to include diagnosing the problem and setting goals, and developing possible solutions, which clearly align to the unfreezing step of the Lewin model. Huse (1975) expanded Lewin's (1952) three-step model into a dynamic seven-step process and in doing so addresses one of the main criticisms of the planned approach by acknowledging that organisations exist in different states at different times and that planned movement can occur from one state to another. Bullock and Batten (1985) developed a planned model for change that was based on meta-analysis of other planned models of change from the organisation development literature. The Bullock and Batten (1985) model describes four phases which have been developed in terms of two dimensions of change: change phases and change process. Jick (1991) acknowledges that change is not a simple step by step process and, rather than producing a new model for change, provides a tactical list of ten commandments which should be viewed as an inventory of ingredients that managers can use when planning and implementing change. Kotter (1995) reviewed 100 organisations of different sizes and types and developed an eight-step strategic model for planning and implementing change. Underpinning this process, Lewin's model is easily identified.

Each of the new models represents further enhancements on Lewin's (1952) original model. The *unfreezing* step has been expanded to include: identifying the threat faced by the organisation (Bullock & Batten 1985; Jick 1991; Kotter 1995; Lippitt, Watson & Westley 1958); identification of the relevant stakeholders; diagnosing the problem and setting goals; developing possible solutions (Bullock & Batten 1985; Huse 1975; Jick 1991; Kotter 1995; Lippitt, Watson & Westley 1958) and creating a vision (Jick 1991; Kotter 1995).

- The *moving* step, which represents the practical implementation of the change, is barely enhanced by the other models. The moving phase becomes implementation (Bullock & Batten 1985; Huse 1975; Lippitt, Watson & Westley 1958). Jick (1991) identifies that communication is the key to the moving phase. Kotter (1995) expands the *moving* phase to focus on creating short term wins and consolidating improvements while looking for more change.

The final step of *refreezing* from Lewin's (1952) model is expanded to include: reviewing the change; terminating relationships; and the change (Bullock & Batten 1985; Huse 1975; Jick 1991; Kotter 1995; Lippitt, Watson & Westley 1958).

Planned change models map to the first model of change, as developed by Lewin (1952). The five models discussed above are presented in Table 3-1 and aligned to Lewin's (1952) three stage model. In presenting this comparison of change management models, the table includes three rows to demarcate the steps advocated in each model for planning, implementation and evaluation of change. As the table illustrates, these change management models provide only limited advice on the implementation phase of change management.

Table 3-1: Summary of Planned Change Models

Lewin 1958	Lippitt, Watson et al 1958	Huse 1975	Bullock & Batten 1985	Jick 1991	Kotter 1995
Planning					
<i>Unfreezing</i>	Develop need	Scouting	Exploration	Analyse the organisation and the need for change	Establish a sense of urgency
	Establish change relationship	Entry	Planning	Create a shared vision and common direction	Form a powerful guiding coalition
	Diagnose problem	Diagnosis		Separate from the past	Creating a vision
	Establish goals and action	Planning		Create a sense of urgency Support a strong leader	Empowering others to act on the new vision
				Line up political sponsorship	
				Develop enabling structures	
				Craft an implementation plan	
Implementation					
<i>Moving</i>	Transform into actual change effort	Action	Action	Communicate, involve people, and be honest	Planning for and creating short term wins
					Consolidating improvements. Producing more change
Evaluation					
<i>Refreezing</i>	Stabilize change	Stabilize	Integration	Reinforce and institutionalize change	Institutionalising new approaches
	Terminate relationship	Terminate			

While the stage *unfreezing* has been expanded to provide guidance to practitioners when dealing with change, it is clear that the middle stage of *moving* has not been expanded. Orlikowski and Hofman (1997) acknowledge that planned change is anticipated ahead of time and occurs as intended. Planned change is often viewed as being top down change. This research deals with planned change that has been anticipated ahead of time and the research is on the ‘*moving*’ of the change.

Communication in planned models

Each of the planned models of change described above (Table 3-1) has communication embedded into its structure. Phase one of Lippitts' (1958) change model relates to awareness and the author notes that there may be communication blockages which inhibit the spread of awareness. Phase two discusses developing a change relationship and identifies the problem of communicating the need for help. In phase three, the change agents need information to diagnose the client system's problem. Phase four focuses on the communication between the client system and the change agent. Phase five discusses the need for feedback when trying to implement actual change. Stabilization is the focus of phase six and the authors warn that no evaluation may be interpreted as poor evaluation. Finally, phase seven terminates the relationship between the client system and the change agent. This termination depends on how dependent the client system has been on the change agent and will involve careful communication to positively terminate the relationship.

Huse (1975) identifies communicating the change as a key step in the change process. Failure during the action phase can be aligned to improper diagnosis or failure to involve key people or groups. Therefore communicating the change to those most affected, namely the key people or groups, will help reduce the risk of failure.

The four phase model of Bullock and Batten (1985) indicates the explicit need for communication in three out of the four phases. Planning requires information sharing, the action phase advises action steps with progress reviews, and integration calls for a hand over from external change agents to internal change agents to ensure the embedding of the change in the organisation.

Jick's (1991) ten commandment model focuses on communication as the key to *moving* the organisation. Jick (1991) relies on communication for commandments that relate to *unfreezing* the organisation.

Kotter (1995) explicitly calls for managers to communicate the vision to the organisation. Communication is embedded in the two steps that align to moving the organisation. Planning and empowering short term wins must be communicated to

the organisation. The consolidation of improvements and being positioned to produce more change requires open communication.

Communication is a key ingredient in the planned models of change. While communication is embedded in these models, little guidance is given on how to communicate the planned change.

3.2.3 *The emergent approach*

The emergent approach to change was developed by those who criticised the planned approach, noting that the planned approach to change assumed that the environment was stable and change could be pre-planned (Burnes 1996). The emergent approach was developed from a critical perspective with authors analysing the planned approach and developing models of change that addressed those perceived shortcomings (Dawson 1994; Pettigrew & Whipp 1993; Wilson 1992). Emergent change is change that arises spontaneously from local innovation and not change that is originally anticipated or intended (Orlikowski & Hofman 1997).

Tenets of Emergent Change

However, the researchers who support the emergent approach are a disparate group who tend to focus on their scepticism regarding planned change but conclude that there is agreement of the main tenets of emergent change. Those tenets are:

- Organisational change is a continuous process of experiment and adaptation aimed at matching an organisation's capabilities to the needs and dictates of a dynamic uncertain environment.
- Though this is best achieved through a multitude of small-scale incremental changes, over time these can lead to a major reconfiguration and transformation of an organisation.
- The role of managers is not to plan or implement changes but to create or foster an organisational structure and climate which encourages and sustains experimentation and risk taking and to develop a workforce that will take responsibility for identifying the need for change and implementing it.
- Though managers are expected to become facilitators rather than doers, they also have the prime responsibility for developing a collective vision or

common purpose which gives direction to their organisation, and within which the appropriateness of any proposed change can be judged (Burnes 1996).

The key organisational activities which allow these elements to operate successfully are: information gathering – about the external environment and internal objectives and capabilities; communication – the transmission, analysis and discussion of information; and learning – the ability to develop new skills, identify appropriate responses and draw knowledge from their own and others' past and present actions (Burnes 1996).

Emergent change models have their basis in the planned change models while taking into account the need for: dealing with an uncertain environment; implementing change incrementally; changing organisational structures and culture to facilitate risk taking, with managers providing a strategic direction for the organisation.

3.2.4 *Opportunity based change*

The last of the three approaches in our historical review is the introduction of opportunity-based change in relation to technological change. Orlikowski and Hofman (1997) describe opportunity-based change as change that is not anticipated ahead of time but is introduced purposefully and intentionally during the change process in response to an unexpected opportunity, event or breakdown. Orlikowski and Hofman (1997) do not dismiss the other two types of change but instead posit that the three types of change may build on each other over time. To allow opportunity-based change to occur the authors observe that, rather than predefining each step and then controlling events to fit the plan, management should create an environment that facilitates improvisation. Opportunity-based change is captured in the improvisational model developed by Orlikowski and Hofman (1997).

3.2.5 *Revisiting the past*

Burnes (2004b) provided insight into the original intent of Lewin's (1952) model of change. In revisiting Lewin's (1952) work he reflected that the model was to be viewed in context with Lewin's (1952) other work of field theory, group dynamics and action research. In addition, Burnes (2004a) analysed the complexity theory

approach to change and concluded that in adopting a complexity approach researchers may need to look to Lewin's (1952) model in order to move forward. Complexity theory has been used to review organisational change in a non-linear view (Styhre 2002) and how they adapt and form (Grobman 2005).

Burnes (2004b) notes that in any analysis of creating or managing change not far below the surface you will find the three stage process beginning with *unfreezing*. Each of the models provides guidance for implementing change. This observation was supported by Elrod II and Tippet (2002) whose work reviewed 15 seminal models of change taken from diverse disciplines and found that 13 followed Lewin's model. The research of Wissema (2001) and Sherer, Kohli et al (2003) also support Lewin's model of change. Some researchers such as Williams and Williams (2007) reinvented the model labelling the phases: initiation, implementation and institutionalisation, while Roberto and Levesque (2005) identified four critical processes: chartering; learning; mobilizing; and realigning. Either directly or indirectly, Lewin's model of change is still providing guidance for organisations undertaking the process of change.

3.2.6 Other models of change

Pettigrew, Woodman et al (2001) attempted to increase the rigour of researchers investigating change by identify six key issues that students of change should pay attention to:

- multiple contexts
- the inclusion of time, history, process and action
- the link between change process and organisational outcomes
- the investigation of international and cross cultural comparisons
- the study of receptivity, customisation, sequencing, pace and episodic change processes versus continuous change processes
- the partnership between scholars and practitioners in studying organisational change.

While researchers have attempted to heed the advice on the six issues, most researchers are unable to accommodate all six at one time.

Mento, Jones et al (2002) produced a holistic twelve steps for implementing change based on the work of Kotter (1995), Jick (1991) and Garvin (2000). The first three steps begin with the change idea and the organisational context into which the change is being delivered. The next five steps are devoted to developing a change plan, providing support for the change and preparing the organisation for the change. The twelve steps finish with a focus on quick wins and measurement along with integrating what has been learnt while, all the time, communicating with the organisation.

Victor and Frankeiss (2002) looked at change from an integrated organisational perspective and developed the five dimensions of change. The dimensions consist of Direct; Describe; Define; Deliver and Develop. Within the dimension of 'describe' the authors include the enabling strategy of communication. The strategy is aimed at providing information that will help employees understand the business and identify what they, as individuals, need to do to contribute.

Researchers have developed new models of change by integrating existing models. Ruta (2005) developed a model by integrating change management and technology acceptance. Leppitt (2006) developed an integrated model of change based on Theory E, practices driven by economic imperatives, and Theory O, practices to improve organisational capability.

Price and Chahal's (2006) six step process for implementing change was based on a review of the literature, interviews, and case studies from a live change process. The six steps consist of: preparing the organisation; developing a vision and implementation plan; checking; communication and workforce engagement; implementation; and evaluation.

While there is no universally accepted model of change (Bamford & Daniel 2005) and no single player has the key to success (Smid, Van Hout & Burger 2006), models of change continue to be used to explore change in organisations. For example Fernández and Rainey (2006) have used the Kotter (1995) model to explore change in the public sector. To add to the complexity of choosing a model, it is recognised that there are different approaches to change such as directed change, planned change and

- guided change (Kerber & Buono 2005). However, common aspects of all models are that the change: must be aligned to a vision or strategic direction; must be communicated; and requires leadership.

Still, little advice is provided on the *moving* stage of change. Models use terms such as implementation (Price & Chahal 2006) and deliver (Victor & Franckeiss 2002) to describe the moving process.

3.2.7 Communication of change

Research has identified communication as a factor that must exist and that requires attention when implementing change. Oliver (2000) discovered that a clear and focused internal communication strategy should align to business goals. Creating a vision, leadership and strong communication are essential for implementing change (Wren & Dulewicz 2005a).

The communication of change must take into account the category of information being disseminated, the appropriate media, the channel and the approach (Goodman & Truss 2004). "Communication is the 'lifeblood' of the organisation and the 'oxygen' of change within it" (Gill 2003).

While communication is a key factor, advice must be sought on whom to communicate with and who should do the communicating. Line managers are best placed to deliver information that addresses employee concerns such as implementation related and job relevant information. Using different sources of communication best disseminates the information (Allen et al. 2007). Dissemination of information to key people prior to reports being distributed allows them to better answer questions (Wissema 2001).

Communication is a key skill required by those implementing change. IT project managers as change agents need six skills: communication, teamwork, process management, leadership, training and continuous learning (Kendra & Taplin 2004). Boards of governance need to create good communication practices (Martin, Quigley & Rogers 2005). Williams and Williams (2007) identify that poor communication is

an issue for implementing change. Technology does not replace face-to-face communication (Ruta 2005).

When implementing technology-based change, management needs to ensure a rigorous process of preparation, communication and management of the change (Collerette, Legris & Mamghi 2006). Therefore it can be seen that communication is a key element for change management and technology-based change in both the planning and implementation phases.

3.2.8 Leadership for change

Leadership has been defined as:

Competencies, skills, knowledge, experience and processes needed to positively influence, enable and empower followers to do extraordinary things in all circumstances and to perform at their personal and professional optimum to benefit themselves, the group and the organisation (Waddell, Cummings & Worley 2004, p. 537).

Leadership should be considered taking into account different contexts: stability, crisis, dynamic conditions and edge of chaos (Osborn, Hunt & Jauch 2002). There is a dynamic link between leadership and organisational culture (Bititci et al. 2006).

When planning change, top executives need to make two decisions: what change is right for their organisation and how to correctly implement it (Bruch, Gerber & Maier 2005a). Leaders are expected to create a clear vision, adjust work culture and generate early success (Wren & Dulewicz 2005a). Strong leadership is central to successful change. Good leaders build commitment to change and believe that their own behaviour is critical for success (Miller 2002).

Leadership is a climate factor and enthused leadership along with a guiding mission statement can lead to positive change (Martin, Jones & Callan 2005). Top management has a pivotal role in communicating with and engaging all employees (Sminia & Van-Nisterrooij 2006) and may need to make changes to their behaviour when trying to improve performance. Those changes can act as a driver for positive change (Waclawski 2002). There is a duality between leadership and management yet both are required for successful change (Gill 2003).

Reviewing change in an organisation such as the Australian Public Service reveals factors that support change such as good leadership, an appropriate model of change, room to negotiate or compromise and well-planned communication (Stewart & Kringas 2003).

3.2.9 Strategic alignment

Organisations are strategically changing and, increasingly, are looking towards the application of technology to create new opportunities (Ward & Peppard 2002). Organisational Development researchers identify that strategic change is the fifth of the five stems of Organisational Development practice (Waddell, Cummings & Worley 2004). Strategic change deals with the relationship of an organisation with its environment and the fits with technical, social and cultural systems. There are two types of change: action-driven change and vision-driven change (Karlton 2004). Action-driven change works with the existing vision, while vision-driven change can result in the vision being changed. Strategy must reflect the organisation's shared understanding (Larsson, Lowstedt & Shani 2001). Strategy should guide change management and recognise the difference between strategic and operational goals (Kallio, Saarinen & Tinnila 2002). Leaders need to make decisions as to what is the right change for the organisation and how to implement that change (Bruch, Gerber & Maier 2005b). Strategy guides change.

3.2.10 ICT based change

It is acknowledged that the failure of large technology-based projects is often due to a lack of requirement analysis, lack of commitment from key parties, lack of a strategic alliance, and to trying to implement an unproven product (Roy & Aubert 2003). Technology projects require stakeholder involvement to identify needs; this results in an inclusive process (Legris & Collette 2006; Scholl 2004). Technology enables business change (Gibson 2003) but the role of technology in the change also should be questioned.

An incremental approach assists the implementation of technology-based change (Yarberry 2007). When taking time to implement large scale technology-based change, one important factor is the creation of an organisational unit to manage the

- projects (Albizu, Olazaran & Simon 2004). Martin and Cheung (2002) align project management to the success of change management projects. Taking an incremental approach provides the opportunity to learn over time (McAfee 2003). Project Managers are cautioned to take an interactive approach to ensure a deep understanding of the users' reality (Drummond & Hodgson 2003). Monitoring and controlling projects has a strong relationship with implementation success (Ford & Greer 2005). Governance is a critical organisational solution when implementing technology-based projects (Martin, Quigley & Rogers 2005).

Although project management is critical to implementing technology-based change (Stapelton & Rezek 2004) a more integrated approach to implementing technology-based change is needed. An integrated approach should account for economic, technical, human and organisational aspects but this can be difficult since the requisite knowledge and expertise may be widely spread throughout the organisation (McDonagh 2001). Maguire and Redman (2007) advise involving HR in technology implementation. Close attention to change management principles and close alignment with organisational strategic objectives can facilitate implementing technology systems (Huq, Huq & Cutright 2006).

Legris and Colletette (2006) look at integrating IT project management, technology acceptance and change management when implementing technology-based projects. Including planned communication and change management strategies leads to smoother implementation and payoff in an IT investment (Sherer, Kohli & Baron 2003). IT projects tend to be heavily biased towards the technology but change management is required to achieve process, structure and culture change (McNish 2002). Benefits from IT investment are more likely when implemented using change management skills (Williams & Williams 2007).

Marcus (2004a) defines *technochange* as technology-driven organisational change while defining Information Technology projects as projects that have narrow goals and aim to improve technical performance at the cost of technical operations.

She argues that to successfully implement *technochange* requires more than the integration of Information Technology Project Management and Organisational

- Change Management: to be successful, an integrated technical and organisational solution is required.

There are three conditions for successful *technochange*. The solution will produce the results if it is implemented properly, if it is used effectively and if the benefits of the solution are captured (Markus 2004). *Technochange* relies on the interferences and diversities of initiatives and outcomes (Diamond 2007).

3.2.11 Change Agents

The concept of change agents surfaces in most readings related to change management. Various meanings have been assigned to their role, either explicitly or implicitly; therefore the exact nature of their role is unclear. Tasmania Police have recruited 'change agents' and here again it seems their role does not easily align with other documented roles.

Change is defined as "any variation or alteration in form, state, quality or essence or passing from one state or form to another" and Agent is defined as "one who performs actions, exerts power, or has the power to act as a moral agent" by the Webster's Dictionary (1979). Combining these indicates that a change agent can be defined as a person who is empowered to act when an organisation is passing from one state or form to another.

Change agents have been aligned to the role of Project Managers (Buchanan & Boddy 1992; Kendra & Taplin 2004; Markus & Benjamin 1996); it is often Project Managers who perform the change agent role as they are responsible for the transition of state or form and are empowered to act. Managers are also assigned the role of change agents (Carnall 1990; Furnham 2002) as are Human Resource managers (Caldwell 2001).

Change agents provide security for organisational members during the periods of growth and development. Change agents have to balance involvement and withdrawal from organisational members during the change cycle (Kahn 1995).

Communication is the key to implementing change: the more channels, less filtering and more feedback there is, the better is the outcome (Leavitt 1964). Change agents need to be trained specialists (Stewart & Kringas 2003). Change agents require more

visible championing and change agency (Williams & Williams 2007) along with having credibility in the organisation (Dover 2002). Change agents need to be diverse and to help peers understand the change (Ranganathan, Watson-Manheim & Keeler 2004a).

As we can see above, the term change agent is a generic term that can have a number of ideal types. Insight can be gained from reflecting on the work of Markus and Benjamin (1996) who defined three ideal types of change agents drawn from the disciplines of practicing Information Systems specialists, organisational development literature, and innovation, management and change politics literature. The three types of change agents are: Traditional IS Model; Facilitator Model; and Advocate Model.

The traditional Information Systems model is based on the premise that technology causes change and that Information Systems specialists have no change responsibility beyond building the technology. The Facilitator model believes that technology alone does not make change, instead clients make change using technology and that the facilitator promotes change by helping increase the client's capacity for change. The Advocate model deems that people, including the advocate, make change and that the advocate influences change targets in the direction viewed as desirable by the people. The models are broad and should not be viewed as empirical categories. Individuals or groups may exhibit a mixture of the models either at the same time or in different situations (Markus & Benjamin 1996). The role of change agents in Tasmania Police will be explored in this research.

The above section has reviewed the literature on change management, leadership, strategic alignment and change agents. This highlights where the questions and objectives of this research are building on this body of work and how, by conducting the case study to be described in chapter six and eight, it contributes to the understanding of implementing technology-based change.

3.3 Business Process Reengineering

This section of the literature review will briefly introduce the concept of Business Process Reengineering and the way in which this approach facilitates identifying

opportunities that can be gained by implementing technology that will drive organisational change.

Business Process Reengineering (BPR) is a process that allows organisations to take advantage of opportunities offered by implementing technology. BPR explicitly promotes the idea that information technology can promote revolutionary change in organisational structures and processes (Kawalek & Wastall 2005).

Hammer and Champy (2001) define reengineering as a fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed. The authors elaborate on how this new world can be transformed beyond recognition by changes in work units, jobs, roles, values, structures and management approaches. This definition highlights the way that BPR focuses on redesign to achieve value-generating processes through the application of technology. Davenport and Prusak (1998), on the other hand, focus on the change aspects of BPR and therefore the social aspects of organisational transformation. These two aspects of BPR identify a relationship between BPR and change management (Albizu, Olazaran & Simon 2004; Huq, Huq & Cutright 2006).

There are some key principles behind BPR that will help organisations as they move away from conventional thinking and the constraints seemingly imposed by organisational structure. These principles include the need to:

- Organise around outcomes not tasks
- Have those who use the process perform the process
- Subsume the information-process work into the real work that produces the information
- Treat geographically dispersed resources as though they were centralized
- Put the decision point where the work is performed, and build control into this process
- Capture information once and at the source (Hammer 1990).

- However BPR failures have been widely reported. Hammer and Champy (1993) identify that as many as 50 to 70% of organisations that undertake BPR do not achieve the results they seek. This questions the implementation of BPR exercises.

The above section has reviewed literature on Business Process Reengineering. This highlights where the questions and objectives of this research are building on this body of work by adopting an incremental approach to implementing technology-based change and how, by conducting the case study to be described in chapter six and eight, the research will add to the understanding of the process.

3.4 Project Management

This section presents information on the main concepts of project management including the areas of governance, planning and implementation (execution). The project management methodology (PMBok) adopted by Tasmania Police is also presented.

Project management can be used to implement the output of a Business Process Reengineering exercise. Project management provides a structured approach to the implementation of technology-based change. A project, as defined by the Project Management Institute, is a temporary endeavour undertaken to produce a unique product or service. The Institute also defines project management as the application of knowledge, skills, tools and techniques to project activities in order to meet or exceed stakeholder needs and expectations.

Projects involve many complexities and effective Project Management is essential for success. Project Management is a formalised and structured method of managing change and executing the required actions for the successful achievement of a project's deliverables and outcomes. It involves rigour and applies to all projects no matter what size, complexity or type. It controls the processes necessary for achieving the specifically defined outputs, by a certain time, to a defined quality and with a given level of resources (Cadle & Yeates 2001). However, the use of Project Management methodologies alone does not guarantee success (Kendra & Taplin 2004).

3.4.1 PMBoK

Bodies of knowledge relating to project management have been developed largely on experience and practice (Crawford 2000) and aim to summarise best practice by producing generic models of the role and content of project management (Widerman 1985/2001). The Project Management Body of Knowledge (PMBoK) is the collection of knowledge within the profession of project management. The knowledge contains traditional practices and innovative and advanced practices (Duncan 1996). PMBoK focuses on nine knowledge areas:

- project integration management
- project scope management
- project time management
- project cost management
- project quality management
- project human resource management
- project communication management
- project risk management
- project procurement management.

3.4.2 Project Communication management

The knowledge area relating to project communication management and how it relates to change management is of interest to this research. Experts agree that failure to communicate is the greatest threat to a project (Schwalbe 2000). Project communication management relates to the timely distribution and collection of project information. Project communication management consists of four processes: communication planning; information distribution, performance reporting and administrative closure (Duncan 1996).

Communication planning determines who will require the information, when they will receive it and how it will be given. Many project managers fail to take time to plan for communication (Schwalbe 2000). Meeting those needs is a factor for project success (Duncan 1996). To facilitate communication PMBoK suggests using communication technologies. Project websites can be used as a medium to post project information (Schwalbe 2000). PMBoK communication planning will produce

the filing structure, distribution structure, description of the information to be distributed, production schedules, and methods for updating the information being distributed. Schwalbe's (2000) communication plan focuses on requirements, format, frequency and procedures. PMBoK communication planning is a formal process that may result in a formal or informal plan.

Cadle and Yeates (2001) acknowledge the role of change management in relation to project management by identifying that implementing technology systems brings associated change and therefore affects the people involved.

3.4.3 Project Governance

The objective of project governance is to plan and manage the project throughout its life. This involves the realisation of project outcomes with high levels of productivity and quality, and with manageable levels of uncertainty and risk (Calder 2005; Simm 2007).

In developing a governance structure for a project and the roles within it, there is always a great deal of flexibility. One principle is that ultimate responsibility and accountability for the project must be clearly defined and accepted at an appropriately high level. The appropriate level is that which has discretionary control over the bulk of the resources to be expended in the project process. For a large project, this will generally be a member of the senior executive (Garland 2009).

It is also highly recommended that representatives from each major business unit be involved directly in the decision making process by their inclusion on the project's Steering Committee. A Steering Committee member from outside the organisation to represent the broader stakeholder interests is also recommended (Baker, Baker & Campbell 2003).

Project technology has to be managed. Failure to do so will ultimately be the responsibility of the Steering Committee or similar body. This will then imply poor project governance. Ensuring that a technology project delivers the desired business

benefit is a key governance issue. The following are well known examples of poor governance.

The Sydney Water Board case where the project was approved without a corporate information technology strategy (Auditor General's Report to Parliament 2003, p. 77).

The Australian Customs Service which used cutting edge and complex technology that spanned many years. There was an acknowledgement of the technological issues early in the project, but very little appears to have been done to alleviate these issues (The Auditor General Audit Report 2006/2007 No 24).

The Department of Family and Community Services and Centrelink. The two technical committees expected to be involved in the project were not involved in managing the project. The committees also did not provide regular reports and considered that it had no responsibility for the project. New technology was introduced which increased the risk of failure (The Auditor General Audit Report 2006/2007 No 40).

3.4.4 *Project Manager and team*

The Project Manager is the key person around which the project will ultimately revolve and appropriate selection of a project manager and team, resourcing of the team and delegation of authority is critical. The role of the project manager has evolved over the years to cope with the increasing complexity of projects themselves. Recent Project Management guidelines explain how this evolution has resulted in project managers allocating tasks to resources rather than resources to tasks (PRINCE2 2005).

A Project Team should include at least one person with an intimate knowledge of the business area, and preferably more. It may also be an advantage if one or more Project Team members are novices or inexperienced in the business area so that fundamental issues are not overlooked or simply taken for granted. Many issues can be uncovered through the process of explaining to those with little background in the area. Finding

the right combination of people with project management, technical and business area skills, let alone people who are able to function effectively as a team, can be quite a balancing act for those involved in projects (Auditor General Audit Report No 40 2004-2005, p. 175).

3.4.5 Project Planning

Project planning is a continuous process as plans need to be updated continually to reflect project performance and changes in external factors. However, at the beginning of each project and each project phase, baseline plans must be documented against which performance will initially be measured (Heerkens 2002). Measuring performance against the baseline is necessary to determine corrective actions needed to stay on plan or to identify any changes required to the plan (Kerzner 2003). The focus should always be on having a current plan that charts the road to successful achievement of the project objectives (Schwalbe 2000). If the plan is not updated continually, it will quickly deviate from project reality and will no longer be useful as a guide to the project team or as a vehicle to communicate with project stakeholders (Kerzner 2003).

3.4.6 Project Execution and Control

The project plan serves as the basis for the project's monitoring, controlling and reporting activities. During project execution, the project manager is responsible for coordinating data collection, monitoring, and reporting project activities (Heerkens 2002; Kerzner 2003). Information should be made available to identify issues accurately and problems early so that project risks can be minimised.

Controlling consists of collecting data to monitor performance against the plan, analysing variances from the plan, deciding whether corrective actions are necessary to bring performance back on plan, and deciding if the plan needs to be adjusted or changed (Heerkens 2002). A plan adjustment is a change to the internals of a plan, such as adding resources or changing the sequence of activities but which does not change the overall project scope, schedule or cost. A plan adjustment does not require the approval of all the stakeholders, only those directly affected. A plan change involves a change in scope, quality, schedule or cost that must be approved by all the

stakeholders. The project status and any actions taken or recommended need to be communicated regularly to the stakeholders including team members, management and the users.

The above discussion identifies that project management provides a structured approach to the implementation of technology-based projects. Project management clearly includes the role of change management and communication. How these areas relate will be explored in this research.

The above section has reviewed literature on Project Management. This highlights where the questions and objectives of this research are building on this body of work by investigating the role of project management when implementing technology-based change and how by conducting the case study to be described in chapter six and eight contributes to the understanding of this topic.

3.5 Information Technology and Innovation

This section of the literature review briefly highlights research that has examined the role of technology in organisations, the concept of Diffusion of Innovations and the emergence of discourses on the use of technology to manage data, information and knowledge.

3.5.1 *Diffusion of Innovations*

A Business Process Reengineering exercise such as Project BATON would be expected to result in the creation of innovation regarding business processes. The limited technology that was available to Tasmania Police at the beginning of this research would also position the organisation to experiment with technology to provide the efficiencies required by the Information Management Strategy. Diffusion, as defined by Rogers (1995), is a process by which innovation is communicated over time among the members of a social system. Diffusion involves four main elements: the innovation; the communication channels; time; and a social system (Rogers 1995).

The first element of the diffusion process is innovation. Rogers (1995) describes innovation as being perceived as new by the individual or units of adoption.

Technological innovation creates uncertainty which must be reduced to a tolerable level before an adoption decision can be made (Rogers 1995). To facilitate the adoption of innovation, uncertainty must be reduced. Uncertainty is reduced by providing information relating to the innovation. The information is provided to potential adopters when the innovation is used by early adopters. These early adopters communicate information relating to the innovation to the rest of the social system. Pilots are a form of creating an environment that allows early adopters to be created and thereby to pass information relating to the innovation to the rest of the organisation. Potential adopters can see the innovation being used and can reduce uncertainty by discussing the innovation with the early adopters.

The second element of the diffusion process is communication channels.

Communication channels are the process by which participants share information with one another in order to reach a mutual understanding (Rogers 1995). Rogers (1995) discusses the principle of human communication, which states that the transfer of new ideas occurs more frequently when the individuals are homophilous, that is they have similar beliefs, education and social status.

Time is the third element of the diffusion process. Time relates to the decision process whereby an individual moves from first knowledge through to adoption or rejection. Time helps to distinguish between the relative earliness or lateness of adoption. Adopters can be classified into five categories: innovators; early adopters; early majority; late majority; and laggards, based on the relative time at which they adopt the innovation. Innovators are active in information seeking and provide information to the rest of the categories. Conversely, individuals in the late majority category are usually lower in social status, make less use of multi media channels and rely on peers for information relating to new ideas. Time relates to the degree to which an individual will adopt an innovation relative to the other members of the system (Rogers 1995).

The fourth and final element in the diffusion process is the social system. A social system is a set of inter-related units that are engaged in joint problem solving to accomplish a common goal. An organisation can be viewed as a social system since it meets these criteria.

Diffusion of Innovations involving technology may not require a change management approach if there is no perceived risk or need to protect existing practices (Skogan & Hartnett 2005; Weisburd et al. 2003). Pettigrew, Woodman et al (2001) link change and innovation and call for researchers to supplement the discipline's knowledge of change rather than supplant it. Therefore the way in which Diffusion of Innovations theory relates to change management will be of interest to this research.

3.5.2 *Technology and Knowledge Management*

Data Information and Technology

In this context, it is important to locate these new discussions on knowledge management within the more conventional activities of Data and Information Resource Management (DRM and IRM respectively). It is now usual for organisations as they grow to recognise the importance of data and information as an asset, similar to financial asset (Data Management Assoc., Chicago). In managing this asset, most organisations appreciate that some form of back-up is required to ensure that data/information is not to be lost. Most often database administrators are charged with these responsibilities including data integrity issues such as data redundancy and data accuracy. More recently, as organisational information systems have grown, DRM and IRM activities have begun to address information standards. Clearly, it is at the link between the value of data and the responsibilities of storing and using it that the requirement for appropriate Data and Information Resource Management strategies has arisen.

Organisations both large and small have installed a variety of products designed to meet their information collection, storage and retrieval needs for traditional records management. However, these systems either quickly become unsupported or face on-going problems in integrating with the changing technical environment. As a result, it has been recognised that successive systems that have been developed independently are expensive to integrate and face too many challenges when addressing data redundancy and format changes. The first step in addressing these issues is the approach, adopted by numerous organisations, of implementing standards with respect to data collection, storage and dissemination. To do this, existing systems need to be replaced or modified in line with data management policies. It is at this

point that decisions must be made regarding the number, size and complexity of systems.

Large integrated systems, such as SAP, JD Edwards and People-soft, which are designed to manage many organisational functions can be slow and expensive to install. Organisations become heavily dependent upon these very large systems and can be exposed to considerable risk in terms of the cost of maintenance and upgrades. The return for capturing and storing information is often not fully realised if the information cannot be accessed in a format that meets the needs of the organisation. Any other products that are purchased will be expected to import data from and export data to these major systems. This in turn makes these peripheral systems more expensive.

Zachman Framework

Data and Information management may be a desirable goal. To this end, there are a number of modelling tools that may be considered. John Zachman's succinct view on Enterprise Architecture is that there is an inevitable trade-off between short term and long-term solutions, specifically (Data Management Association 2002) between implementation and integration.

Zachman (1987) maintains, with considerable recognition and support, that "the 'Framework for Enterprise Architecture' (the 'Zachman Framework') is a useful analytical tool to assist thinking about this trade-off, to correctly set expectations and to devise strategies to mitigate the effects of these short or long term choices."

The Zachman Framework is presented as a universal and comprehensive modelling tool. It incorporates the six primitive interrogatives (what, how, where, who, when, why) and cross tabulates these against five levels of abstraction ranging from the Planner's viewpoint, the conceptual model, logical model, physical model and finally a detailed representation/implementation. Zachman's framework is shown in Table 3-2

Table 3-2: Zachman Framework

	Data (What)	Function (How)	Network (Where)	People (Who)	Time (When)	Motivation (Why)
Objectives /Scope	List of things important to the enterprise	List of processes the enterprise performs	List of locations where the enterprise operates	List of organisational units	List of business events / cycles	List of business goals / strategies
Business Owner's View	UML use cases (text based) and use case diagrams	UML activity and sequence diagrams	Logistics network (nodes and links)	Organisation chart, with roles, skill sets, security issues	Business master schedule	Business rules
Architect's View	Object oriented design model High level Class diagrams	Essential Data flow Diagram - UML activity and sequence diagrams & application architecture	Distributed system architecture	Human interaction architecture (roles, data, access), Security requirements	Dependency diagram, entity life history (process structure)	Business rule model
Technology Designer's View	Detailed Class diagrams, XML Schema Data architecture (tables and columns), map to legacy data	System design structure chart, pseudo-code	System architecture (hardware, software types)	User interface (how the system will behave), security design	"Control flow" diagram (control structure)	Business rule design
Builder's View	Data design (de-normalised), physical storage design	Detailed Program Design	Network architecture	Screens, security architecture (who can see what?)	Timing definitions	Rule specification in program logic
Functioning system	Converted data	Executable programs	Communications facilities	Trained people, using the system	Business events	Enforced rules

Perhaps the most compelling argument is to consider how change might be managed in the absence of such a model. Is it prudent to change anything without an understanding of how it works and what it was designed to do? Beyond the raw data lies the information that the data is expected to represent and beyond this is the way in which information is shared, published, presented, owned and understood. Information systems necessarily include social and management issues. Use of a comprehensive and accurate Zachman's style of Enterprise architecture may be so extensive and complicated as to be unmanageable in itself.

Detailed, whole of enterprise modelling exercises may consume themselves before they return any worthwhile benefits. However, it may be beneficial to examine some of the components, first in isolation and then in terms of important relationships with

other components. The implementation level of the Zachman framework applied to raw data may provide a data map that enables problems of redundancy and incompatibility to be addressed.

Knowledge Management

Knowledge Management can be defined as:

Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms (Davenport & Prusak 1998, p. 5).

This definition aligns with the view that knowledge only exists within the head of a human being and therefore cannot be managed by any type of Information Communication Technology.

An alternate definition of Knowledge Management is:

“Knowledge management ...embodies organisational processes that seek synergistic combination of data and information processing capacity of information technologies and the creative and innovative capacity of human beings (Malhotra 2000, p. 9).

This definition aligns with the view that knowledge can only be achieved through the use of Information Communication Technology.

Knowledge Management (KM) has become the focus for mechanisms designed to increase organisational efficiency, effectiveness and innovation. At the broadest level, numerous writers have argued that in the post-industrial information economy, natural resources, capital and labour are being replaced by knowledge as the basic resource from which socio-economic wealth will be generated (Drucker 1995). In this context, the importance of public and private sector organisations being able to capture, use data, information and knowledge to achieve organisational objectives appears self-evident.

Of course, successful organisations have always been those that can adapt, create and apply new information or ideas. Indeed, most of the concepts that KM draws on, for example, organisational memory (Huber 1991) or the learning organisation (Senge 1990), are not new. So why the new and growing interest in KM? A key factor has been the diffusion of information and communication technologies that can support knowledge-based activities (Davenport, Jarvenpaa & Beers 1996; Sviokla 1996). More than this, however, has been the recognition that in an increasingly complex and uncertain global business environment it is the creation and application of 'knowledge' (not just data and information) that enables organisations to rapidly and innovatively adapt to changing circumstances. These factors combined have contributed to a move towards more dynamic and organic models of organisations and away from mechanistic ones.

Significantly, while much discussion of knowledge management has centred around IT infrastructures and software applications, there is now a growing awareness that people and their skills, experience and creativity are at the core of successful knowledge management implementations. This perspective has been articulately expressed by Thomas Stewart. 'Some companies think they can put all corporate knowledge on one huge server, a giant hyperlinked encyclopedia. It simply can't be done. The real value of information systems is connecting people to people, so they can share what expertise and knowledge they have at the moment, given that the cutting edge is always changing' (Stewart 2000).

Despite widespread agreement on the value and importance of knowledge, there remains little agreement over how to define it. It has been described as: information for action; information combined with experience; and deeper richer information (Land et al. 2001). Others have approached knowledge as a part of a semiotic continuum from the physical world of signals through meanings and intentions to beliefs and expectations (Stamper 1998). While knowledge remains difficult to define, more recently there has emerged a degree of consensus on the fact that it can be classified as either explicit or tacit (Nonaka & Takeuchi 1995). A third classification of implicit knowledge has been explored and is defined as 'the capacity to act' (conscious or unconscious) but acknowledges that this capacity only emerges in the dynamic context of actions (Sveiby 2000).

Explicit knowledge can be codified, expressed in words and numbers and shared in the form of data, specifications etc. Explicit knowledge, as embodied in data and information, is well suited to the capabilities of information and communication technologies to collect, store, retrieve and distribute it. Tacit knowledge is intangible, personal and difficult to formalise or codify. Tacit knowledge is hard to communicate and share with others and tends to be intimately linked to an individual's skills, experience, values and beliefs.

Knowledge management, as an approach to generating best practice in creating, storing and deploying knowledge at individual and organisational levels, is a desirable and worth-while project. KM emerges as not just about doing old things in new ways but moving forward to find new things and new and better ways to do them. Managing knowledge can no longer be viewed simply as the codification of knowledge or the creation of a good Information Technology infrastructure but emerges as a process facilitating shared spaces for knowledge creation, exchange and utilisation (Davenport & Prusak 1998).

Innovation and creation

The creation of a shared space that makes the meaningful exchange of ideas more likely, is an important aspect of any KM strategy. Such a shared space can be a physical location where ideas can be shared, prototypes and demonstrations viewed or it can be an on-line or virtual shared space such as the Lotus Notes' example of shared documents that are resident in shared databases or an intranet with all staff having the opportunity to contribute. An important part of this is discovering the attitude of senior management to the idea of shared spaces.

The above section reviews the literature on Diffusion and Knowledge Management. This highlights where the questions and objectives of this research are building on this body of work by investigating the role of diffusion of innovation and knowledge management when implementing technology-based change and how, by conducting the case study to be described in chapter six and eight, it contributes to our understanding.

3.6 Chapter Reflections

This chapter presented an overview of change literature. The aim of this concluding section is to provide a summary of this chapter and to critically reflect on key sources contribution to the thesis. More specifically, this concluding section examines how the literature review has contributed to the research questions and looks forward to the empirical work.

This chapter has presented literature on a number of key areas of direct relevance to this research. From this review a number of key sources can be identified as providing useful insights that have been used both in reflections on research questions and the approach to the empirical work to be described in the next chapter.

In summary, the key change management sources and insights identified were:

- Change management focusing on the planned approach to change (Lewin 1952, Jick 1991, Kotter 1995) provided a useful starting point for a structured framework for examining change. A planned approach to change has been debated as being no longer relevant. However, Tasmania Police did chose to adopt a planned approach to change and this planned approach will be investigated in this thesis;
- The role of leadership in change (Stewart & Kringas 2003, Martin, Jones & Callan 2005) was usefully identified as a significant success factor for change. Leadership in a hierarchical organisation results in change being driven from the top. This research is positioned to review the role of leadership within Tasmania Police by the researcher being embedded in the organisation for a two year period while working with the team at Business Project Services;
- Organisational strategic alignment (Ward & Peppard 2002, Bruch, Gerber et al 2005) was highlighted as also of potential critical significance in success change. The literature identifies a link between strategic alignment and leadership. Tasmania Police have articulated a strategic direction for their organisation and this research will explore the extent to which this is achieved;
- The role of change agents (Buchanan & Boddy 1992, Markus & Benjamin 1996) as one potential mechanism for supporting change was identified. Tasmania Police has implemented a change agent network to help disseminate

information relating to change. This research will review the role of the network in this organisation ;

- Managing technochange requires more than just a combination of project and change management (Marcus 2004). This research is designed to explore how Tasmania Police manage the implementation of technology based change and will examine whether the technology based change is in fact 'technochange' as described by Marcus;

Combined these key sources on change management provide useful insights to assist in sensitizing the approach utilized in this research.

The chapter proceeded with a review of literature in three sections on Business Process Reengineering; Project management; and, Diffusion, Technology and Knowledge. The key sources and insights identified from these sections were:

- Business Process Reengineering (Hammer & Champy 1993) that was identified as one approach to structuring change involving organisational redesign. This provided useful insights given the adoption of BPR by Tasmania Police;
- Project Management and its role in implementing change (Schwalbe 2000) assisted with highlighting the potential importance of a formal methodology. Tasmania Police use a formal methodology for implementing both organisational and technology based projects. This research will explore the role of project management methodologies when implementing change in Tasmania Police;
- Diffusion of Innovation (Rogers 1995), the role of Technology (Zachman 1987) and Knowledge Theories (Davenport & Prusak 1998) provided alternative perspectives on other significant factors associated with change and its implementation. These alternative perspectives provide an opportunity to review the implementation of technology based change at Tasmania Police by questioning some fundamental assumptions in the change literature including the role of change management practices per se.

Reflecting on this summary in the context of the research questions this research aims to explore the approaches adopted by Tasmania Police in implementing and communicating technology based change over time. The literature review above has

provided useful insights into the role of a number of factors currently identified as significant in implementing change. Namely, reviewing the suitability of a planned change approach for an organisation such as Tasmania Police. Investigating how project and change management guide the implementation of technology and organisational change. Exploring what role a network of change agents plays in implementing change in a para-military organisation. Analysing if the changes implemented can be classified as *technochange*. Reflecting on the utility of alternative perspectives on change and its implementation including Diffusion and Knowledge theories. Combined, by exploring these factors this research will add to the body of case studies exploring the implementation of technology and organisational based change.

Looking forward, the empirical work in the following chapters is designed to explore the actual practice adopted by Tasmania Police. The research design had the researcher being embedded in the field for a period of time. This approach opens the opportunity to consider the relevance of the factors identified in the literature in the context of Tasmania Police implementation of technology and organisational based change.

The next chapter provides a detailed description of the methodology adopted for this research.

4 Methodology

4.1 Introduction

This chapter describes the methodology used in this research. This research has received ethics approval from the Human Research Ethics Committee (Tasmania) Network (Ethics reference H10613). This chapter is presented in three parts. Part one presents the philosophical stance and the research strategy. Part two presents the research design, tools and techniques and the data analysis methods. Part three briefly outlines the approach taken to the discussion and interpretation of data generated in each phase and describes how the case study findings are produced. The chapter is divided into the following sections:

- Section 4.2 discusses at a general level the philosophical underpinnings of research and outlines why this research adopted a subjective interpretivist approach that underpins a qualitative case study method.
- Section 4.3 describes the research strategy. There are three key elements to the strategy: the location of the study; the longitudinal approach to the research; and the use of a two phase approach to the data collection.
- Section 4.4 describes the research design. This section describes the nature and conduct of the case study method. The research design has several components including the selection of projects and participants, entry to the field, the conduct of observations and documentation, keeping contact during the period phases 1 & 2, and the selection of participants and conduct of semi-structured interviews in phase 2.
- Section 4.5 describes the tools and techniques used in phases 1 & 2 of the data collection. Each phase was developed in line with the research design. Phase one utilised observation, documentation, unstructured interviews and meetings to generate field notes. Phase two, based on understanding developed from phase one, utilised semi-structured interviews to focus on specific aspects of change and the role of technology, and to draw out organisational transformations that had occurred since phase one data collection/analysis.
- Section 4.6 describes the approaches taken in the analysis of the data for phases 1 & 2. To achieve the objectives in phase one, data analysis was conducted using two separate techniques with a view to producing two outcomes: preliminary analysis to capture the essence of the change process;

and the thematic analysis, guided by open coding from grounded theory of the data. The outcome from the preliminary data analysis was a case rich description covering the four projects. The outcome from the thematic analysis was a set of themes. To achieve the objectives in phase two, data analysis was also conducted using thematic coding drawing on grounded theory.

- Section 4.8 describes the approach taken to the discussion and interpretation of this research. The discussion and interpretation of the themes lead to the development of a large number of factors and to insight into their relationships, meanings and significance.
- Section 4.9 describes the examination of the factors presented in the discussion of phase one and two themes. The factors were compared for similarities and differences and answers to the two research questions are presented in the case study findings.

4.2 Research Philosophy

This section presents the philosophy underpinning the research and explains the approach for this interpretivist case study on implementing technology-based change within Tasmania Police. The philosophy underpinning the research is a subjective ontology, interpretivist epistemology supporting a qualitative method. As background, a section on different ontological and epistemological positions and the reason why the methodology above was chosen is presented.

Different ontologies, epistemologies and models of human nature are likely to incline social scientists towards different methodologies (Burrell & Morgan 1979).

Therefore it is important that researchers declare their orientation towards human nature through the declaration of their philosophical stance, thereby declaring their methodology for the research. Guba and Lincoln (1994) declare that the basic beliefs that define inquiry paradigms can be summarised by the answer to three questions.

- What is the form and nature of reality and, therefore, what is there that can be known about it? (Ontology)
- What is the nature of the relationship between the knower or would-be knower and what can be known? (Epistemology)

- How can the inquirer go about finding out whatever he or she believes can be known? (Methodology)

The questions are interconnected in such a way that no matter which question is answered first the answer will constrain the answers to the remaining two questions. These questions were used to present the ontology, epistemology and methodology for this research.

4.2.1 *Ontology*

This section presents the ontological position adopted for this research. The design and execution of both management research and information systems research is heavily influenced by the researcher's view of social and physical reality, particularly social reality (ontology) (Alvesson & Skoldberg 2000). Orlikowski and Baroudi (1991) discuss ontology as the empirical world being either objective (independent of humans) or subjective (existing through the actions of humans creating the world). This research, in attempting to answer the research questions posed, is an exploratory study and as such the researcher acknowledges a subjective ontology which "focuses on the meanings that people give to their environment" (May 1997, p. 12). The research aims and objectives rely on discovering how the organisation and its members implement and respond to large scale change. Becoming familiar with both the organisation and the change processes employed requires understanding the meaning that people assign to their environment. Therefore the research is directly concerned with meanings the organisational members assign to the change. In answer to the question on the nature of reality, this researcher views reality as being subjective where people's actions and interpretations define the world they live in. A subjective ontology was adopted for this research.

The research methodology was also influenced by the researcher's view of both the nature of knowledge and the process of gaining knowledge (epistemology). Philosophical commitments, even if they are beneath conscious awareness, have a formative influence on an individual's pre-understandings and basic sense making process (Johnson & Duberley 2000).

Thus philosophical commitments and theoretical orientations are important to, and effect, all decisions regarding the planning and design of research. Indeed, such

theoretical orientations affect the processes of analysis and the drawing of conclusions in subtle ways as well. This section has presented the subjective ontological position, recognising that it is important to declare in a research project one's theoretical orientation. The next section will present the epistemological stance adopted for this research.

4.2.2 Epistemology

This section follows on from and links to section 4.2.1 and presents the interpretivist epistemological position adopted for this research. Two encompassing, important and yet contrasting theoretical orientations are positivism and interpretivism. These two philosophical positions describe complete worldviews or paradigms. The paradigm that guides and informs the research described in this thesis is interpretivism.

Positivism, the alternative paradigm, has been for some time the dominant theoretical orientation in management and information systems research. However in recent years there has been a growth of interpretivist studies (Chen & Hirschheim 2004; Johnson & Duberley 2000; Ridley & Keen 1998; Shanks, Rouse & Arnott 1993).

Interpretivists believe that people create their own subjective meaning as they interact with the world around them (Orlikowski & Baroudi 1991). Interpretivists assert that social and organisational experience cannot be understood unless account is taken of these dimensions. Concerning these dimensions in social life, Interpretivists argue that the quantitative approach of positivism misses the subjective and personal meaning that people attach to themselves and what they do. Indeed interpretivist social science sees social reality as created out of human perception and interpretation (Sullivan 2001).

Thus, to an interpretivist, an important element of social reality is the subjectively determined meaning that social actors give to their interactions with others. Without this interpreted element, the essence of social reality cannot be understood. To some extent at least, then, interpretivists believe that we create our social reality through our interpretations and evaluations of our social interactions. A review of the literature provides evidence of the insight that can be gained from case studies that have reconstructed and presented the social reality for others (Markus 2000; Walsham 1995). The research aims to understand the factors involved in implementing change

in an organisation. Change literature discusses how, when implementing change, people must be involved if the change is to be successful (Todnem 2005). Therefore, understanding the change process relies on understanding change from the perspective of organisational members. Adopting an interpretivist stance supports the research aims and objectives.

In answer to the question about the nature of the relationship, the researcher believes that people create their own meaning when interacting with the world around them and that this meaning provides insight and helps answer the research questions. This section presents background to the researcher adopting an interpretivist stance to the design of the research. The next section will present the qualitative case study approach chosen for this research.

4.2.3 Qualitative Case Study

This section presents the qualitative case study methodology adopted for this research and follows on from sections 4.2.1 and 4.2.2. Reflecting on the interconnection between the three questions stated in section 4.2, the answer to any one question will constrain the answers to the remaining two questions. The researcher has previously justified and declared a subjective ontology with an interpretivist epistemology. Each of these declarations constrains the answer that can be given to the question of how the inquirer can go about finding what he or she believes can be known.

Denzin and Lincoln (2005, p. 3) define qualitative research as:

Qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meaning people bring to them.

Therefore this research adopts a qualitative methodology as the appropriate method. It is thus important to describe this methodology and explain why it is appropriate for the research described in this thesis.

The many facets of qualitative research help identify a qualitative approach as being best suited to this research. A discussion of facets, as outlined by Creswell (1998), presents a strong rationale for the adoption of a qualitative approach.

- The research questions have been formulated commencing with “what and how” thus examining what is going on in this organisation. The nature of the research questions aligns with a qualitative study.
- As previously stated the research is exploratory in nature. The objectives of the research are:
 - To understand Tasmania Police and its approach to implementing change and technology
 - To examine in detail Tasmania Police projects focused on the implementation of change through technology
 - To identify factors present during the implementation of technology and organisational change at Tasmania Police
 - To consider how insights generated from the case study at Tasmania Police relate to existing literature on change management and the implementation of technology.
- The research sought to identify actors and processes associated with implementing technology-based change in the organisation. In phase one of the data collection (section 4.5.1) the researcher was embedded in the organisation to facilitate a deeper understanding of the organisation and a more detailed view of the change. In phase two the researcher returned to the organisation to interview selected actors.
- The research was conducted in the organisation with the researcher responsible for phase one data collection on site while spending time in the organisation. Phase two data collection reviewed the sustainability of the findings discovered in phase one (Creswell 1998).
- Included in the presentation of the findings from phase one of the data collection was a rich description along with a rich description of the themes. A detailed presentation of data facilitated insight into the objectives of the research by describing the change process associated with four projects.

- As elaborated in section 4.3.2, the longitudinal focus of the study along with the planned time lapses between the collections of data in phase one and phase two, supported an extensive data collection in the field.
- The researcher had a role of a participant observer rather than an expert who was there to pass judgement.

A number of methods were available when adopting a qualitative approach to the research, such as ethnography, action research and case study. This research was primarily based on a case study method but used tools associated with ethnography during the familiarisation and data collection in phase one. Both the case study method and the tools are described and justified in the following sections.

Section 4.2 presented why this research into Tasmania Police was conducted with the philosophy underpinning of a subjective ontology, interpretivist epistemology supporting a qualitative method. The next section describes the research strategy, research design and techniques.

4.3 Research Strategy

This section describes the research strategy which is the methodological framework for this research. The section presents an overview of how the researcher, in approaching technology projects in Tasmania Police, investigated change management over time. The change management literature identified the lack of cases presented over a period of time as being problematic (section 3.3). To overcome the problem of single view cases, this research employed a strategy involving two phases of data collection. The strategy involved three key elements:

- Location of the study
- Longitudinal approach
- Two phases

4.3.1 Location of the Study

Case study has been declared as the chosen methodology. Yin (1994), while taking a positivist view, focuses on the scope of a case study and provides the following definition:

A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident (Yin 1994, p. 13).

A case study is an exploration of a “bounded system” over place and time (Creswell 1998). For this research the case study was bounded firstly by the organisation. The research was concerned only with Tasmania Police as the organisation under investigation. The research did not explore relationships the Police had with other organisations or government bodies. The area of interest was Tasmania Police and was bounded by the technology projects identified in phase one (section 4.4.1). Secondly the project was bounded by time, 1998 to 2008, during which two discrete phases of data collection occurred (section 4.3.3).

This section describes the strategy to investigate change in the context of Tasmania Police, 1998 to 2008. Tasmania Police was a hierarchical, para-military organisation that operated with a mandate to enforce the law in the state of Tasmania (section 2.2.2). Generally the organisation operated with a command and control authority system where there was an expectation that an order or instruction issued by the executive would be carried out to the letter by the members of the organisation. The hierarchical decision-making could be influenced by other decision-making approaches involving initiative and the perspectives/opinions of individual officers towards a particular command. Thomas (1996) found that members of an organisation are capable of not responding when they disagree with a directive. As such, this organisation has the potential to act like any other when threatened with change.

Gaining access to this organisation was made possible by a number of previous positive research relationships between Tasmania Police and the School of Information Systems. Previous research (Bolton 1995; Thomas 1996) provided insight into planning change for Tasmania Police. Tasmania Police recognised the value in taking advantage of opportunities to have reviews and research conducted by external parties.

This section has described the location of the study and how the site was bounded by time and place. The next section presents the longitudinal strategy adopted by this research.

4.3.2 Longitudinal approach

This section presents information on how this case study conducted research over time. The strategy employed was to engage in research in the change process over a longitudinal period by utilising two phases of data collection (section 4.3.3), originally designed to be over a five year period but extended to a ten year period. The time frame provided an opportunity to overcome a key limitation of single view case study research based on limited exposure to the organisation under study (Walsham 1995). The two phase approach involved data collection for two years and then a subsequent investigation which examined whether key themes were sustained over time. Approaches vary to research over time; some are historical studies, some are short term studies (Oates 2006). Few, however, aim to verify the sustainability of findings over time.

Supporting this approach was the fact that Tasmania Police had relatively low levels of technology in place at the beginning of phase one data collection. Monitoring the implementation of technology and then allowing the organisation to mature before revisiting provided an accurate account of how technology and change affected the organisation. Implementing technology affects other components of an organisation such as structure, process and people (Leavitt 1964). As technology was used as an enabler with Project BATON, monitoring the organisation as technology proliferated in the first two years and then returning after a period of time to review the embedded practices supported a two phase approach to the research. Studies conducted in organisations that do not take their history into account run the risk of making incorrect attributions of cause and effect (Markus 2000). This section has described the strategy aligned with a longitudinal approach. The next section presents the two phase data collection strategy.

4.3.3 Two phases

This section presents the two phase strategy supporting the longitudinal design towards data collection. One research question was, “What approaches do Tasmania Police use in implementing and communicating technology-based change over time?” There are challenges about how this nuance of change can be overcome when only a single view of a case is conducted (Markus 2000). The strategy used to overcome the limitations of single view cases in this research was to have two phases of data collection. The planned timeframe for data collection was five years, with phase one data collection lasting two years and a planned gap of three years to allow the organisation to embed practices, with the researcher returning for the final data collection at the end of the three year gap. However, due to personal and professional reasons of the researcher and changes at Tasmania Police, the research was conducted over a ten year period.

Phase one data collection focused on the four initial projects associated with Project BATON and the Information Management Strategy. This allowed the researcher to be embedded in the organisation while monitoring the change processes involved. Phase two data collection was planned to take place after a substantial break of three years, with the aim of re-examining the findings from phase one. The break in data collection allowed the organisation to continue on the pathway of technology adoption without being observed. Revisiting the organisation after the break provided insight into the change practices observed in the initial data collection.

In summary, section 4.3 presented the strategy involved in spending time in Tasmania Police to become familiar with how the organisation implemented technology-based change, the adaption of a two phase approach to the data collection, and the selection of a longitudinal design to overcome the limitations of single view case studies. Cases were selected to provide insight into the research question and provide value to the organisation.

4.4 Research design

This section describes the research design that was guided by the research strategy (section 4.3) and the philosophical orientation of the study (section 4.2). Information

- Systems literature contains a significant number of interpretive case studies (for example Markus 1983; Orlikowski & Baroudi 1991). This section aims to describe the nature and conduct of the case study method. The research design had nine components:

- Selection of Projects – Phase One
- Selection of Participants – Phase One
- Enter the Field
- Identifying Opportunities
- Phase One Observations
- Documentation
- Keeping Contact
- Selection of Participants – Phase Two
- Phase Two Interviews

4.4.1 Selection of Projects – Phase One

This component of the research design identified the projects chosen for investigation in phase one of data collection. The design identified, within Tasmania Police, a series of projects in phase one which fulfilled a number of criteria. The criteria, listed below, were developed in conjunction with Tasmania Police (Avison et al. 1999) as a means of gaining entry to the organisation (Berg 2004) and providing reciprocity (Creswell 1998).

- The project was associated with Project BATON (section 2.4.2)
- The project was associated with Information Management
- The project would be ready to implement
- The project should include technology implementation

The projects selected for phase one were:

- Project SAMSON II
- Radio Network Capability Project (Radio)
- The Call Centre Project
- Integrated Crime Management Strategy Project

Project SAMSON II

Project SAMSON (Standardised Access, Maintenance and Service of the Network) was the first component of the Information Management Strategy. It aimed to provide a standard operating system for all computers in the organisation. SAMSON became SAMSON II due to a delay caused by conflict within the Information Technology Branch over which operating system to adopt. SAMSON II was the relaunch of SAMSON. Project SAMSON was implemented in 3 phases. Phase 1 was an audit of PCs owned by the department. Phase 2 was the rollout of the standard operating environment (Windows 95, Netscape 4.05 and Microsoft Office 95). Phase 3 established and implemented the technical infrastructure and standards needed to enable Lotus Notes, email and future workflow applications for the organisation.

Radio Network Capability Project (Radio)

The Radio project aimed to provide a secure method of communication for Tasmania Police and increased the coverage of the radio network. The project was a technology upgrade of the old analogue network to a combined digital and analogue network.

The project was a dual agency exercise involving Tasmanian Hydro Commission and Tasmania Police, therefore negotiations for the radio network were conducted at a high level of government allowing only minimal input from Tasmania Police.

Tasmania Police, along with the Tasmanian Hydro Commission, accepted the tender from Ericsson.

The Call Centre Project

The Tasmania Police Call Centre was developed to address the problem identified by Project BATON with the paper-based Criminal Offence and Modus Operandi (COMO). Incidents were documented when an officer returned to the station and mailed to a common data entry point. Efficiencies such as timely and accurate information would be gained by reporting these incidents directly to the data entry point. Officers would spend less time on administration, thus releasing them to focus on operational policing duties.

The Call Centre project aimed to improve the management of incident information. This was to be achieved by the reporting officer using the radio network or victims' phones to transmit the report to a "Call Centre" for immediate entry into the database.

Once entered by the Call Centre operators (State Service Personnel), the information would be disseminated through the Local Area Network to an Allocation Officer (CIB) and then investigating officers. Officers could then update the database with new information. This would provide a single database to advise customers and pass on additional information.

Integrated Crime Management Strategy Project

A core part of the Integrated Crime Management Strategy was the formation of the Crime Management Unit. Police responding to crime scenes were expected to conduct basic crime scene examination where necessary. Crime Management Unit would receive non-urgent crime reports; these would be checked against various data bases for accuracy and any additional outstanding issues such as warrants. A decision would then be made whether to dispatch police to the scene based on attendance criteria, the wishes of the complainant and police knowledge.

Relationship of projects

Tasmania Police Call Centre project was a reengineering opportunity and was a component of the Information Management Strategy. The Call Centre project was being implemented in 1998 and involved technology. This project relied on two other associated projects; Project SAMSON II and the Radio Network Capability project to provide base infrastructure to the Call Centre. Both Project SAMSON II and the Radio Network Capability Project met the requirements for selection as stated above. At the time of implementation (early 1998) these projects were the only authorised projects being conducted by Tasmania Police. These projects were the first of the projects implemented under Project BATON and as such provided insight into the initial implementation of technology-based change.

The first three projects led to the investigation of a final project in phase one of the data collection, the Crime Management Unit Project, which was a component of the Integrated Crime Management Strategy. The Crime Management Unit project had links to the Call Centre project and therefore was also included as a project of interest. At the time the Integrated Crime Management Strategy was developed, the organisation had terminated further work on Project BATON and the Crime Management Unit project was not heavily reliant on technology. The inclusion of this

project covered the shortfall left by the Call Centre project but more importantly required a cultural change to the way the organisation conducted business. It was therefore decided to include the Crime Management Unit project as a part of the research. Figure 4-1 depicts the projects and their inter-relationships.

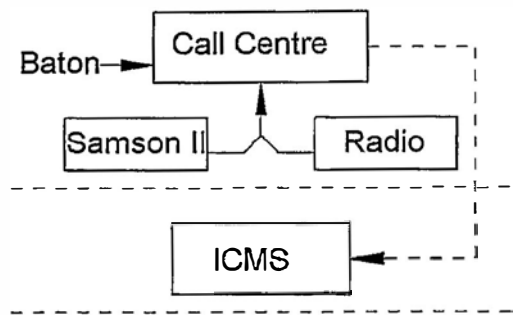


Figure 4-1: Researcher’s view of projects selected

4.4.2 Selection of Participants – Phase One

This component of the research design identified the participants involved in the data collection for phase one. The selection of participants aligned with the selection of projects. The first three projects were controlled by the Project BATON team. This team was responsible for implementing the change in the organisation and its members were therefore key informants in the data collection for this research. The researcher’s primary approach was to work with the project team in their project roles and to gain insight into their experiences and their attitudes towards change. This approach restricted the view to those managing and implementing the change. It was not the intent of this research to provide a holistic view of change at Tasmania Police. At the commencement of this research the Project BATON team consisted of:

- Project Baton Manager and gatekeeper (Inspector)
- Office Manager (State service personnel)
- Call Centre Project Manager (Sergeant)
- IT member (State service personnel)
- Project member (State service personnel) and
- Change Management Coordinator (Constable)

These positions remained constant for the duration of the Call Centre project, however the people filling the positions changed as people were seconded for periods of time to fill the roles. For example, the role of Change Management Coordinator was occupied by three different officers (the final two holding the rank of Sergeant) during phase one of the data collection.

The final group of participants consisted of the relevant stakeholders for the projects being implemented. During Phase one of data collection, the key stakeholders were the Allocation Officers in the Northern District aligned with the pilot of the Call Centre Project and the Criminal Investigations Bureau detectives for the Crime Management Unit project. The key stakeholders for SAMSON II and the Radio Project were the members of the Call Centre Project team.

4.4.3 *Entering the field*

This component of the research design addressed issues of building relationships and trust, embedding in the field, and access to the site. To continue to have a positive and productive relationship both parties had to contribute to the research. That is, these types of relationships were not one way and relied on bargains being struck (Berg 2004). Tasmania Police provided access to the researcher and in return the researcher was expected to produce results that provided value to Tasmania Police. This was a relationship that had continued from the researcher's honours research (Thomas 1996). With limited access over a short period of time the researcher demonstrated that value was provided to Tasmania Police.

Building Relationships and Trust

In an attempt to form a relationship with the participants (May 1997) the researcher interacted with the officers on the projects informally during team meetings, morning coffee and lunch times. The researcher was both jovial and amiable; she provided insight and experience and was not just a passive observer. Entry to the field was not conducted with a predefined agenda. Participation was handled with due care and attention so as not to overtly transform the environment but to allow potential new issues and avenues to be explored (Walsham 1995). However, there were formal meetings such as the Information Management Committee meetings where the role of the researcher was solely that of an observer.

A key strategy of this research was for the researcher to be embedded in the organisation to earn trust (May 1997) and acquire an understanding of personnel, policy, procedures and practices of Tasmania Police's approaches to technology related projects and change. To overcome the barriers of working in a para-military organisation, the researcher had to become involved and be known. The research strategy required ongoing support for a prolonged period of time and the design required the researcher to play a number of roles. As part of the familiarisation process for phase one, this research adopted three typologies of participant observation (see section 4.4.4) where the researcher is immersed in the organisation (Creswell 1998). As the researcher became more embedded and trusted in the organisation, feedback was provided to modify practice (Avison et al. 1999). This technique called for the researcher to spend time in the organisation to build this in-depth case study (Walsham 1995) based on trust.

Access to the site

Entry or "getting in" to the organisation (Berg 2004) was negotiated through the Deputy Commissioner of Police who was also the change sponsor. As a key decision maker in the organisation, he was pivotal to understanding decisions made relating to the changes being implemented and therefore was of key interest to this research.

The primary location for data collection was the Project BATON office. The BATON office became the home of the Call Centre and SAMSON II project (Radio Project was coordinated from the Radio Room). The office was located in the Capita Building situated in Hobart. The Capita building also housed the executive of the organisation. Project BATON was located on the seventh floor; the executive were housed on the ninth floor. The project BATON office became Business Project Services, where the final project for phase one was also housed. Working with the BATON Project team enabled the researcher to participate in events (Yin 1994) as they occurred.

The researcher wore navy blue slacks with a white shirt and navy blue coat; this enabled her to blend in more easily as the uniform of Tasmania Police was navy blue. In previous work (Thomas 1996), while accompanying Constables when visiting a residence, the researcher was mistaken by a member of the public for a detective. The intent was not to become invisible (Berg 2004) but to blend into the surroundings as

much as possible. This approach was extremely useful, especially for site visits, as it aided the perception of membership of the BATON team and therefore acceptance by those in the organisation outside of the BATON office.

As a part of the planning for immersion in the organisation, the gatekeeper, the BATON Project Manager, decided that a desk in the BATON office would be allocated to the researcher, symbolising a place on the project team. This provided an opportunity to observe the operation of the office and watch, listen and learn (Berg 2004).

The activities for the researcher on the days spent at Tasmania Police were aligned with those of the project team. The primary contacts for the research were the Change Management Coordinators as they had the overall responsibility for ensuring that each of the projects incorporated a change management strategy and therefore they possessed the extensive knowledge required (Berg 2004). The researcher attended and participated in project and stakeholder meetings that had been scheduled both by the project team and the Change Management Coordinator.

Over the period of the collection of data (phase one) access to the building was gained with a permanent security pass. The pass allowed access through the front doors of the Capita building and past security without having to report to the security guards and wait to be escorted by a member of the team to the BATON office. The security pass allowed free movement throughout the building without being accompanied by a member of the organisation.

In line with the research strategy, which aimed to support an exploration of the problems of change management within technology projects, the researcher spent one day a week with the Project BATON team for the duration of the projects under review. The immersion in the field was conducted by weekly visits from February 1998 until June 1999; irregular further visits continued until March 2000. This denoted a substantial time component (Laudon 1989). The weekly visits linked directly to the implementation of the Call Centre Project. This period constituted the intensive data collection for phase one.

As the Call Centre, SAMSON II and the Radio project were intrinsically linked; for the purpose of data collection, the three projects were treated as one major project. The Call Centre project commenced in February 1998, was piloted in April 1998, rolled out state-wide in August 1998, and reviewed in February 1999. The Crime Management Unit project commenced in January 1999 and was piloted in April 1999.

The primary data collection involved:

- 33 observation sessions
- 14 Call Centre Project team meetings
- 2 Information Management Board meetings
- 12 site visits
- 5 stakeholder meetings
- 7 change agent meetings
- 5 change agent Training courses
- 5 Feedback sessions

In addition, 15 meetings relating to projects outside the scope of this research were also attended as these provided further insights into the change process (Appendix 4).

Taking advantage of a unique opportunity was a key element of the research design. The change, as defined by Project BATON (section 2.4), called for structural, processual and systems change. Because the organisation was commencing the implementation of Project BATON, the timing of the research provided the opportunity for a review whilst the change was happening rather than requiring a post analysis review.

Benbasat, Goldstein et al (1987), in discussing Markus (1981), argued that she took advantage of a unique opportunity to study an implementation issue. Since the opportunity was unique, they argue that Markus added to the body of knowledge about the implementation of systems, even though some previous research on the same topic existed. A unique opportunity, or a window of opportunity (Harvey & Myers 1995), existed for this research to monitor and evaluate the development of change management practices in relation to implementing technology within Tasmania Police.

4.4.4 Phase One Design - Observation

This component of the research design will identify the data collection method used in phase one of the research. The objective of the phase one data collection was to become familiar with the organisation and observe how change was implemented. To facilitate this objective, the method of observation was chosen as the most appropriate tool. Atkinson and Hammersley (1994) draw a distinction between participant and non-participant observation by developing a fourfold typology, which is:

- The *complete observer* - the researcher remains in the background and watches and listens
 - The *observer as participant* - the researcher participates as if an organisational member
 - The *participant as observer* - the researcher participates fully but overtly as a researcher
 - The *complete participant* - the researcher acts as an organisational member.
- (Atkinson & Hammersley 1994)

The role of researcher was carried out using three of the four typologies: *complete observer*; *observer as participant*; and *participant as observer*. Each typology was adopted for a specific purpose.

Information Management Board meetings required *complete observer* (Atkinson & Hammersley 1994; Slack & Rowley 2000) where the researcher watched, listened and took notes rather than participated. At Information Management Board meetings participants were observed, decisions were noted and non-verbal cues relating to power structures were documented. Access to the Information Management Board could only be given by the Deputy Commissioner of Police therefore any presence had the support of the Deputy; this gave credibility at the executive level.

The typology adopted with the Change Management Coordinator was that of *observer as participant* where the researcher participated as if an organisational member (Atkinson & Hammersley 1994). The role required time to develop (Walsham 1995) and it strengthened with each Change Management Coordinator. The first coordinator was performing the role when the researcher joined the project team. This led the researcher to be treated, initially, as a *complete observer*. During this period the

researcher became familiar with the project status and the background to the project; the role progressively changed from passive to participative as the relationship was established (Berg 2004). When the second and then the third Change Management Coordinator joined the team, the relationship changed to one of *observer as participant* rather than *complete observer*. There was a lack of continuity in the timing of the appointment of each of the coordinators, which resulted in no crossover from one coordinator to the next. This meant that the researcher was perceived by the incoming coordinator as possessing knowledge that would provide continuity to the incoming coordinator, which in turn strengthened the role of observer as participant.

The third typology adopted with the project team was *participant as observer* where the researcher participated fully but overtly as a researcher and as a team member (Atkinson & Hammersley 1994). The researcher was accepted as a member immediately by the Project BATON team. This acceptance was fostered by the Inspector (gatekeeper) who managed the unit. As the Call Centre project moved forward, the role of the researcher became more integral by her: identifying issues in the pilot of the Call Centre project; being actively involved with gathering feedback from the change agents; and organising the review of the project on its completion.

The role of *participant as observer* extended to the rest of the organisation. Officers were comfortable with an outsider being present during meetings or while tasks in the workplace were being performed. The degree of comfort depended on the credibility of the outsider and the degree of threat that the outsider represented. When observing activities outside of the project team (Appendix 5), the researcher's presence was clearly explained to members of the organisation. As with the previous study (Thomas 1996), the researcher's presence, and the fact that the area under observation related to change management, was explained without elaborating on the finer details of the research (Berg 2004).

As a *participant as observer*, the researcher was also involved with the training of change agents. The training program, developed by a consultant, was reviewed. The researcher worked with the Change Management Coordinator on this task and the change management theory session was revised. The two-day training sessions were

conducted when new intakes of change agents were recruited. Appendix 6 details the training sessions.

4.4.5 *Documentation*

This component of the research design identifies how documents were gathered for use as a secondary data source. Interviews, structured or unstructured, and observations may not have provided sufficient information on their own to produce answers (Berg 2004). Documents relating to the four projects, meetings and training were collected and used as a secondary data source. Factual information found in the documents formed the basis of the rich description produced from phase one data. In addition, the documents provided support to the interpretation of the themes developed from both phases of data collection.

4.4.6 *Keeping Contact*

This component of the research design identifies how contact was maintained with the organisation between data collection phases one and two. The two phase approach allowed the organisation to mature both in the way it implemented change and its use of technology but the researcher needed to maintain contact to keep the relationship with the organisation alive. Returning to the field for subsequent data collection was integral to the research design so a strategy for maintaining contact with the organisation, without regular visits, was developed. Tasmania is a small state, which made keeping in contact a simple informal process.

During the break in data collection, the researcher observed and participated in the training of change agents (2001, 2002 and 2005). The researcher delivered the sessions relating to the theory of change and observed the remainder of the training sessions, including the state-wide change agent meetings. In addition, attendance at adhoc meetings and events facilitated keeping in touch.

4.4.7 *Selection of Participants – Phase Two*

This component of the research design identifies the participants involved in the data collection for phase two. Phase two of data collection was designed to validate the

findings from phase one data analysis. Phase one findings revealed the significance of the decisions made by the executive of the organisation in relation to how change was managed. In particular, these findings highlighted how projects were used to implement change and how the Change Management Coordinator was utilized to disseminate information to the change agent network. Therefore, in selecting the interviewees for phase two, the focus was on identifying those people who were decision makers or who were associated with projects and change (Rubin & Rubin 2005). While the total number of interviews conducted in phase two was relatively small, by identifying and interviewing all key decision-makers it was possible to generate data targeted on validating findings from phase one.

From phase one it was identified that the decision makers within Tasmania Police had the strongest influence on how change was managed. More specifically, phase one also revealed that decisions on how the change was communicated rested mainly with the Deputy Commissioner. Therefore when designing phase two data collection it was imperative to include this key decision maker in the list of interviewees. Interestingly, at the time of phase two data collection the Deputy Commissioner was acting in the role of Commissioner. This meant that there was an Acting Deputy Commissioner in the role of Deputy who it was useful to interview because it opened up the opportunity to consider the influence of personality as well as role in the decision making process.

Phase one themes and factors also revealed that Tasmania Police used projects as a method of implementing change and how a network of change agents were used to actively communicate change about these projects to the organisation. As a result an interview with the Manager of Business Project Services was included in the list of interviewees. Given that change was communicated to and from the change agent network via the Change Management Coordinator this role was considered fundamental to the change agent network. Therefore, it was considered important to also interview the Change Management Coordinator to generate further insight into how change was managed at Tasmania Police.

While phase one research was not specifically focused on individual change agents perceptions, two change agents (one from the original twenty and one new to the

network) were included to provide insights and an alternate perspective on the change process. Additionally, these two specific change agents were selected as interviewees because each had unique experiences and stories to tell (Stake 1995). Combined this list of interviewees aimed to provide multiple views on the factors from phase one.

Once the list of participants had been finalised, email contact was made with the Deputy Commissioner of Police to gain approval for the interviews to take place. The Acting Deputy Commissioner of Police forwarded the email to the Change Management Coordinator to arrange the interviews. The Change Management Coordinator chose the change agents to be interviewed all other interviewees were chosen because of their position in the organisation. The Change Management Coordinator was briefed on the background of the interviews by phone. Six interviews were conducted over a period of two weeks. Table 4.1 identifies the positions and the roles of the selected interviewees.

Table 4-1: Interviewees for Phase Two

<i>Title</i>	<i>Description</i>	<i>Role in change</i>
The Commissioner of Police (Acting)	Substantive role is Deputy Commissioner of Police	Change sponsor for the organisation
The Deputy Commissioner of Police (Acting)	Substantive role is Assistant Commissioner	Acting change sponsor for the organisation
The Business Project Services Manager	Business Project Services controls projects for the organisation and the manager reports directly to the Deputy Commissioner of Police	Responsible for ensuring the management and delivery of projects for the organisation
The Change Management Coordinator	Works within Business Project Services and reports directly to the Deputy Commissioner of Police.	Responsible for communicating to the change agent network, working with project managers to develop a change management and communication strategy and providing feedback
Change agent	Recruited and trained prior to phase one data collection	To communicate information to their workplace
Change agent	Recruited and trained after phase one data collection.	To communicate information to their workplace

Based on the findings from phase one, which focused on governance, leadership, implementation of technology and communication, and to provide sufficiency (Seidman 2006), the following roles were identified as participants for interviewing in phase two: two interviewees for management; one interviewee in charge of projects; one interviewee as the coordinator of the change agent network; and two change agents. One change agent was one of the original twenty change agents, the other had recently joined the program. The six interviews provided meaningful insight into how technology-based change had been managed at Tasmania Police.

At the time of organising the interviews, the Commissioner of Tasmania Police was on extended leave and the Deputy Commissioner of Tasmania Police became Acting Commissioner. This provided an opportunity to add the Acting Deputy Commissioner of Police to the list of interviewees thereby gaining a dual perspective on the role of Deputy Commissioner, as it related to change in the organisation.

Phase two design validated the findings from phase one and provided an opportunity to explore which factors remained constant when technology-based change was implemented in Tasmania Police. Phase two design had a more structured approach for data collection. The structured approach supported phase one familiarisation as the researcher had gained an in-depth understanding of the organisation and its process of implementing technology-based change. The familiarisation facilitated a clear understanding of the responses provided to the interview questions. The design of this research increased the rigour and validity of the findings by adopting a two phase approach to data collection.

The research design supported the research strategy by its longitudinal approach while opting for two phases for the data collection. The design also addressed how to build engagement, build trust, gain access the site, and take advantage of opportunities as they emerged. The design for phase one of data collection utilised three of the four typologies of participant observation as the most appropriate method to meet the objectives of familiarisation. Contact with the organisation was maintained between phase one and two of the data collection.

In summary, this section has presented the research design which consisted of nine components and was linked to and supported the research strategy (section 4.3).

4.4.8 *Phase Two Interviews*

This component of the research design identifies the data collection method used in phase two of the research. The objective of the phase two data collection was to validate the outcomes of phase one data collection while investigating how Tasmania Police implemented change. To facilitate this objective, semi-structured interviews were chosen as the most appropriate method.

Interviewing provides multiple views on a case under investigation (Stake 1995). The expectation is that people see things differently and therefore how multiple people view an object or event will provide insight into how participants understand experiences and reconstruct events in which the researcher did not participate (Rubin & Rubin 2005).

The design of the interviews on a short list of issue-orientated questions (Stake 1995) related to the themes revealed in phase one. The questions were designed to structure conversations (Rubin & Rubin 2005) around the broader issues relating to the factors. Research-based sets of questions were worked out in advance (Stake 1995) using main questions as scaffolding questions to the broader issues while ensuring the research problem was examined (Rubin & Rubin 2005).

Follow up questions were used to explore information specific to the comments made by interviewees, with some questions being developed in advance. For example, with the main question, “How many change agents does Tasmania Police currently have?” a number of follow up questions relating to the structure and training were anticipated. Other follow up questions provided clarification on information provided by the interviewee. Probes were techniques employed to keep the discussion going or provide clarification (Rubin & Rubin 2005).

4.5 Tools and Techniques

This section describes the tools and techniques adopted to support the research strategy (section 4.3) and research design (section 4.4). The section outlines the specific tools utilised for phase one of the data collection and then continues by outlining the tools utilised in phase two of the data collection. Each data collection phase was designed separately and in accordance with the objectives of the research and each used different data collection tools. Phase one utilised observation, documentation and unstructured interviews to support the research design; phase two utilised interviews.

4.5.1 Data collection techniques – Phase One

The aim of phase one, as discussed in the research strategy and outlined in the research design, was to explore change in detail for the projects that had been selected. Those projects were the Call Centre project; SAMSON II, Radio project and Crime Management Unit (section 4.4.1). The items being explored related to who was involved and what were the decision processes (of both an informal and formal nature). How decisions were made and accommodated was also explored. A range of data collection techniques was used; these included formal observation sessions, the collection of documentation, unstructured interviews and attendance at meetings. Table 4.1 details the aims of the research, as defined by the research questions and objectives, the techniques used to collect the data, the number of times those techniques were used and the output corresponding with those techniques.

Table 4-2: Techniques and outputs of phase one data collection

Objectives	Techniques	Frequency	Output
<i>Familiarisation with the organisation</i>	<i>Observation</i>	67	<i>Field notes</i>
	<i>Documentation</i>	45	<i>Documentation</i>
	<i>Unstructured interviews</i>	49	<i>Field notes</i>
<i>Familiarisation with implementing change</i>			
<i>Identify change processes</i>			
<i>Monitor technology projects</i>			
<i>Identify important factors</i>			

Observation

Regardless of the typology used while being a participant observer (as described in section 4.4.4) the method followed a standard approach. The observation was always conducted overtly. The focus of the observation was guided by the theoretical interest (May 1997) and the research question. Observations were documented using the field note pro forma (Appendix 7) which became a source of evidence and a basis for data analysis (Oates 2006). The field notes comprised information relating to the date and time, and details of what happened at the site (Sunstein & Chiseri-Strater 2001). Observations provided richness, assisted in the interpretation of the data and helped with the question, “Is this the only way that change takes place?”

The field notes consisted of daily entries which were collated in the field with a focus on the enquiry (May 1997). As previously discussed (section 4.4.1), initially the scope of the study was restricted to the Call Centre Project and the associated projects of SAMSON II and the Radio project. At the beginning of data collection the BATON office was totally focused on the Call Centre Project therefore observation sessions and meetings were centred on the activities of the project team in the BATON office.

Not all weekly visits were restricted to the BATON office. When needed, trips to visit other districts and workplaces with the project team were conducted. Appendix 1 details visits to the north of the State during the pilot of the Call Centre Project. On these occasions, to facilitate the development of field notes later, jotted notes were used to capture the decision-making and justifications. The jotted notes were written in an exercise book along with information relating to the time, place and participants. Field notes, using the pro forma, were constructed when the researcher returned to the office or her home.

Documentation

The collection of documentation, such as business plans, execution plans and cost benefit analysis, provided both primary and secondary sources of data. The documentation gave insight to the background of the projects along with the choices presented to Tasmania Police when deciding on the best option to facilitate the project objectives. Tasmania Police documented all viable alternatives when exploring options to achieve a project objective. These were presented with their advantages and disadvantages along with a recommendation. Project business plans contained information relating to objectives and scope, project management, financial management, risk management and development plans.

When attending meetings, agendas, minutes of previous meetings and associated papers were collected. The agenda, while being the formal program for the meeting, was also used to make jotted notes relating to the items listed and discussed; the information from the notarised agenda was then included in the field notes.

Documents relating to meetings, projects, change management or directives were collected. A list of the documents collected has been included in Appendix 8. The documents aided the interpretation of the data while also providing some primary data for the rich description presented in section 5.2 of chapter five.

Unstructured interviews

The interviews were conducted in a manner that both suited the research and the organisation. The choice of the most appropriate tools for data collection took into account the people in the culture being studied. Officers were used to note taking and

the recording of interviews as a part of their daily working lives (Oates 2006). Officers could view interviewing with suspicion due to the nature of their own work. They were well aware of the reasons for recording interviews, i.e. to ensure that dialogue was accurately captured and could be used as evidence when needed. They had been assured by management that they could speak freely, without fear of retribution. However, officers who would otherwise speak openly were likely to be less open if confronted with an interviewer and a recorder, realising that they would be “on record”. For this reason, the interviews were not recorded. The observation and unstructured interview tools adopted were less confrontational yet extremely effective in the collection of data where the focus was familiarisation both with the organisation and the way in which technology-based change was implemented in the organisation.

Unstructured interviews were dominant as a data collection tool as they allowed the researcher to explore decisions, actions and the reasoning behind decisions.

Unstructured interviews were used to augment the field work in this research (Berg 2004). Discussing aspects of the project with team members clarified decisions and actions that had been made. Numerous discussions occurred with the various Change Management Coordinators in relation to the coordination of the change agents.

Unstructured interviews were used at the end of an Information Management Board meeting (as the researcher was a complete observer) to discuss with the team their perceptions of the outcome of the meeting. Unstructured interviews were used to explore what was happening and why members were doing what they were doing (Delamont 2004). Dialogue from the unstructured interviews was paraphrased and represented using single quotation marks in the field notes (Neuman 2000).

4.5.2 *Field Notes*

Field notes were used in this research to support the data collection for phase one. Each field note pro forma was completed when the researcher returned to the office (or her home) at the end of the meeting. Sometimes this took place after an unstructured interview with the project team where discussions centred on the outcomes of the meeting. Appendix 9 has an exemplar of an observation session and the resulting field note.

The pro forma was constructed so that information relating to date, place, time, topic and participants was readily identifiable. The main component of the field note contained the content of the meeting or unstructured interview. Separate field notes were kept for each meeting or unstructured interview. Observations were kept separately, except when setting the scene for the meeting or unstructured interview.

In addition to capturing the content of the meeting or unstructured interview, field note also captured information relating to the researcher's reflections. At the end of a meeting or visit, reflections of the day, such as the dynamics of the project team and interactions with other areas and members, were noted (Oates 2006). The personal note/observation section of the field note was also used to provide clues and strategies for recalling the data (Berg 2004). The personal notes contained triggers to recall what a visit was like on any particular day. These reflections were kept separately from the main field notes as they were used to aid the interpretation of the data.

In summary, the tools and techniques that were used extensively in phase one of data collection were 82 field notes derived from attending meetings and unstructured interviews. The collection of documentation provided background and insight into the other data collected. Field notes were created directly after an unstructured interview or attendance at a meeting (Neuman 2000). Jotted notes were used to capture information during meetings or site visits and then converted to field notes. Informal interviews provided opportunities to discuss observations or decision making with project team members.

4.5.3 Data Collection Techniques – Phase Two

The coherent link between phases one and two is explained below. Phase one involved the researcher embedding themselves in the organisation and therefore utilized data collection techniques that supported that approach drawing on principles from ethnography. The aims of Phase one was to become familiar with change practices and resulted in the production of themes and factors that were used as the basis for the research design of phase two.

Table 4-3: Categories from Phase One

<i>Factors</i>	<i>Categories</i>
An active level of governance for change	Management
An overall strategic direction that change is easily aligned to	Management
Create an integrated network for communication that sits outside of the normal hierarchical layers	Communication
Communicate to the network at the same time as briefing senior management	Communication
The network is free to choose the appropriate mode of communication for their workplace	Communication
Training is essential	Management/Projects
Change is clearly articulated through projects and project boundaries	Projects
Resistance is embraced and change is explained	Management/Communication
Focus on face-to-face communication	Communication
Diversify communication	Communication
Visible top level support with open door policy	Management

The categories from phase one (see Table 4.3) guided the choice of the interview question design and structure. The first category, management and its related factors from phase one assisted in two ways. Firstly, it guided the choice of interviewees and in particular, identified that the main decision maker was responsible for driving change in the organisation. Therefore it was essential to include the decision maker in the list of interviewees. Secondly, the role of management in relation to change was embedded in the interview frame and was explored through the semi-structured nature of the interviews. The second and third categories of Communication and Projects provided two of the broad sections for the interview question frame. Section two of the question frame focused on the use of projects to implement change, while section three focused on gathering information relating to communication and the change agent network. Finally, the initial section of the interview question frame was derived from the aim of phase two to explore current practices, therefore a broad section of Background was also included.

Phase two aimed to collect data in relation to the change current practices within Tasmania Police guided by knowledge of the organisation that had been generated during phase one. Phase two was more targeted to change practices and the role of

technology and therefore required a different approach to data collection. Semi-structured interviews were conducted and used information about the factors produced from phase one to guide and sensitize the approach. The questions were formulated to gather information relating to the factors, identified in phase one, without these limiting or constraining the interviews. This ensured the interviewer was able to gain depth, detail and richness (Rubin & Rubin 2005).

Based on this explanation the three broad sections of the question frame were arranged as follows:

Section 1: Background

The aim of this section was to provide background information relating to change and change management practices over the period between phase one and phase two of data collection. Questions in section one related to collecting information about the current and previous role of the interviewee along with an overview of the changes and how those changes had been implemented. For example, “On a general level can you tell me what changes have been implemented over the last decade?” Further questions related to the strategic direction of the organisation.

Section 2: The use of projects to implement change

The aim of this section was to explore the role of projects and how they were being implemented in Tasmania Police. Section two consisted of questions on projects, project methodologies and the role of Business Project Services. For example, “In your experience, how have projects been managed and what role does the Business Project Services have?” Further questions were also asked about the process for proposing a project, how the change management methodology for a project was developed and the reporting lines for projects.

Section 3: Communication and the change agent network

The aim of this section was to understand the structure of the change agent network and the communication practices being employed. The questions in section three focused on the change agent network, its structure and role, and the communication practices in Tasmania Police. For example, “Tell me about the change agents and

their communication practices?” Further questions related to who was perceived as being responsible for change.

An outline of the question framework has been included in Appendix 10. A pilot interview was conducted to test the design of the question format and the logical flow of the questions. Minor changes were made: the number of main questions was reduced and the number of follow up questions being posed was increased. The researcher was familiar with the organisation (aim of phase one); this facilitated the development of questions and enabled her to incorporate organisational specific dialogue where it provided better clarity to the question. As change agents do not normally interact directly with project teams or projects, it was evident that questions relating to projects might not elicit a rich response from them. However, leaving those questions in the question frame for change agents allowed evidence of their level of involvement and understanding of projects at Tasmania Police to be noted.

Interviews and transcripts

The more formal approach of semi structured interviews adopted in phase two provided an opportunity for the data to be recorded. Unlike phase one where the aim was for the researcher to embed themselves in the organisation, phase two focused on formally collecting information on current practice. Permission was sought and granted from all interviewees to be involved in the interviews. The interview process commenced with the researcher reading the short statement at the top of the question document (Appendix 10), which provided an overview of progress of the research to date and the purpose of the current interview. The Change Management Coordinator had already obtained permission from the interviewees for the interviews to be recorded on a digital recorder. This was confirmed at the face-to-face interview, by the researcher. Permission was granted in all cases. The interview question frame for phase two was developed out of data and insights gained from phase one; the aim of phase two was to gather specific information relating to the questions posed. To ensure that the information being presented was accurately recorded, a digital recorder was used. A total of six interviews were conducted.

The initial set of questions (section 4.5.3) was designed to use terminology that was familiar to the interviewees. The first section of the interview gathered background

information on each interviewee and the changes the organisation had faced over the last decade. The questions, while acting as ‘ice-breakers’, allowed interviewees to reflect on their previous experiences relating to change before moving on to think about current practices. At times, during this background information-gathering phase of the interview, the interviewees provided information relating to planned future questions. When this occurred, the relevant question was still posed but with the acknowledgement that the interviewee may have already provided an answer to the question. In these cases, the interviewees were free to provide more information in response to the question being asked.

The interviews ranged in duration from one hour and twelve minutes to thirty-two minutes. Each interview was conducted at Tasmania Police Headquarters, with four of the six conducted at Business Project Services and two conducted at the Commissioner’s office. Follow-up questions were used to further explore information (such as projects that had been implemented) provided by participants. They were also used to clarify acronyms. Probes were used to keep the dialogue on the matter being discussed.

At the end of each interview the researcher provided the participants with an opportunity to supplement the information provided by asking, “In closing, is there anything you would like to add relating to change and how it is implemented in Tasmania Police that you have not had an opportunity to discuss?” This opportunity did not solicit further information relating to change but did give the participants the opportunity to summarise their view of the interview. At the completion of the interview the researcher listened to the recording to reflect on the content of the interview while it was still fresh. Following that, a transcript was produced in preparation for data analysis.

This section has presented the tools and techniques used to collect the data and to support the research strategy (section 4.3) and the research design (section 4.4). The next section presents the data analysis methods adopted for phase one and phase two of the data collection.

4.6 Data Analysis

This section describes the approaches taken to the analysis of data for phase one and phase two of the data collection. This research objective was to: understand Tasmania Police and its approach to implementing change and technology; examine in detail Tasmania Police projects focused on the implementation of change through technology and identify factors present during the implementation of technology and organisational change at Tasmania Police. To achieve the research objectives, the data analysis for phase one was conducted using two separate techniques with a view of producing two separate outcomes. Firstly, preliminary analysis was conducted to produce a rich description that provided a detailed chronological overview of the change process associated with the four projects. Secondly, the field notes were analysed using thematic coding (Boyatzis 1998) guided by open coding from grounded theory (Strauss & Corbin 1990). Phase two data was also analysed using thematic coding guided by grounded theory (Figure 4-2). Detailed data analysis is presented in chapters five and seven of this thesis.

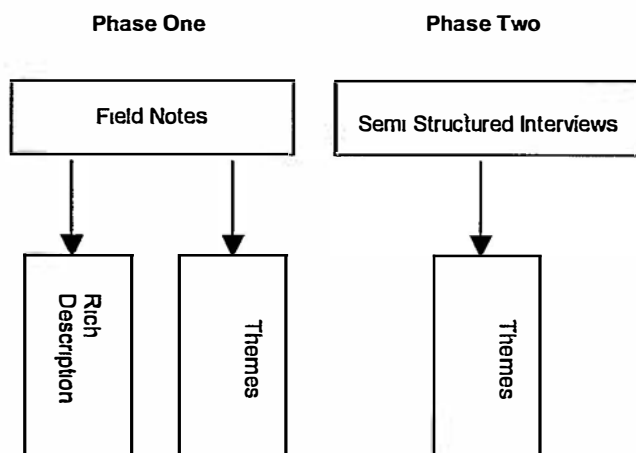


Figure 4-2: Researcher's data analysis process

4.6.1 Two stage approach to data analysis for phase one

The objective of this stage was to identify factors for the implementation of technology-based change in Tasmania Police. As such the aim of phase one was to understand, examine and identify factors from the data. The approach taken to the data analysis to meet those objectives was a two staged approach, which consisted of two separate techniques.

The first stage of analysis involved ongoing preliminary analysis of the data to understand the essence of the process of change. This provided a practical understanding of how change was implemented through the production of a rich description (section 5.2). The second analysis approach was a systemic analysis of the data using thematic coding which was guided by the first stage of grounded theory, open coding (section 4.6.3). The exploration of the themes provided insight into key decision makers and key factors for implementing change in Tasmania Police. The themes directed the investigation for the second phase of data collection.

The two stages facilitated a broader investigation into the data for this phase. The preliminary analysis focused on the creation of deeper understanding through capturing the essence of events and provided practical insights for the research. The focus was moved from condensing or conceptualising the data to the creation of a rich description which captured the occurrences in a natural setting (Miles & Huberman 1994).

The second stage of analysis was a systematic analysis guided by the research question. Grounded theory provided a mechanism to reduce the data by attaching codes and searching for relationships thereby creating a small set of themes. Boyatzis (1998), while adopting a positivist view to data analysis, states that:

“A good thematic code is one that captures the qualitative richness of the phenomenon. It is usable in the analysis, the interpretation, and the presentation of research.” (Boyatzis, 1998 p.31)

These themes represented the data or were grounded in the data and facilitated a final conclusion to be drawn (Miles & Huberman 1994).

4.6.2 Rich Description – Phase One

The rich description was constructed by collating the facts of the case from a variety of sources including field notes, documents and unstructured interviews. The facts, in chronological order, joined together in a rich description to tell the story of the case. Yin (1994) suggests putting information in chronological order as an analytical technique (Miles & Huberman 1994) for analysing the data for case studies.

The rich description form is most commonly found in case studies research where there is a need to investigate the background to produce a rich description for the audience. From this rich description, theory and practice can be developed (Czarniawska-Joerges 1995). The aim of this research was to present the practice in a form that both the practitioner and an academic audience could relate to. In capturing the complexity of practice, the researcher used the rich description to create understanding that was both authentic and credible (Brown 1998). The production of the rich description provided an opportunity for validation by senior members of the organisation prior to publication. This research was covered by a confidentiality agreement. The publication of papers cannot proceed without the express permission of the Deputy Commissioner of Police. Consistent with Byrne (2001), the validity of the rich description was provided by the Deputy Commissioner of Police who verified the contents.

The process of data collection and analysis for the rich description was iterative (Jorgensen 1989). The data collection involved a preliminary process of field notes, which has been recognised as a process of analysis in its own right (Spradley 1980). Observing a workplace, the technology, the actors and their interactions required analysis on the part of the researcher prior to documenting those interactions and observations as the field notes represented the daily happenings and a preliminary draft of the findings (Jorgensen 1989).

The documentation provided another source of data that could support the observations and preliminary interpretation of those observations (Jorgensen 1989, p. 93). Documents provided the framework for the rich description while project documentation contained detailed information relating to scope, objectives and desired outcomes from the projects.

Explanation or interpretation depends on the researcher (Czarniawska-Joerges 1995). The rich description presented in section 5.2 provided a factual account of the process adopted. The factual representation commenced with developing a timeline for the projects. Information was drawn from the field notes and project documentation. The rich description was not only a write up but an artful process involving the manipulation of research material to produce a plausible account (Brown 1998).

The aim of a rich description is to connect the facts observed with the features of the backdrop against which these facts occur (Palmer 2001). The process adopted is intuitive and primitive (Miles 1979), which involves searching for patterns and ideas that help explain the existence of the phenomenon (Goulding 2004). The construction of the rich description validated the first three objectives, which were to:

- Understand Tasmania Police and its approach to implementing change and technology
- Examine these approaches in detail, in the context of the four projects
- Identify important factors for implementing both technology and organisational change.

The data analysis followed three steps, it:

- described the facts of the phenomenon
- identified the way participants assigned meaning to reality
- extracted the essence from the text (Lacity & Janson 1994).

These steps were achieved, initially, by reading through all the phase one data and performing a preliminary analysis (select and arrange). Information was also selected and arranged in chronological order (Miles 1979). The rich description adopted Labov and Waletzky's (1967) structural model, as cited in (Elliott 2005). Information about: the setting, time and place; what happened and what events mean, was documented. Observational information, gathered as a part of the familiarisation with the organisation, supported the factual information gathered from the field notes and documentation.

4.6.3 Thematic Analysis Phase One and Two

The second stage of data analysis in phase one focused on the content of the field notes which were coded at paragraph level to produce themes. Strauss and Corbin (1990) state that if the purpose is to identify themes in the data then open coding will suffice to produce that outcome.

“Although if your purpose is just to pull out themes, then you could pretty much stop here [categories] (Strauss & Corbin 1990, p 67)”

The identification of themes in this component of the research met the objectives aligned to phase one of the data collection. Rice and Ezzy (1999) describe thematic

coding as similar to grounded theory. They suggest thematic coding and content analysis are closely related, the main difference being that the codes are predefined in content analysis. This research produced themes that were grounded in the data and drew upon techniques from grounded theory (Strauss & Corbin 1990) and thematic coding (Boyatzis 1998).

Phase two data analysis adopted the thematic coding process used in phase one. The identification of themes in this component of the research met the objectives aligned to phase two of the data collection. The objective of phase two data collection was to investigate the findings of phase one. While the data collection methods were different for phase one and two, a consistent approach to data analysis was used in both phases to ensure themes produced were 'grounded' in the data (Corbin & Strauss 2008).

Phase two involved analysis of the semi-structured interviews for which the use of thematic coding guided by open coding was appropriate to ensure the ensuing themes were grounded in the data. It is important to note that, while the interviews elaborated on the findings from phase one, the coding process for stage two was grounded in the new data. Pre-defined codes from phase one were not used when coding phase two data. The data was analysed independently from phase one. This approach ensured that any new insights into how change was implemented in Tasmania Police were revealed. In addition, it provided an opportunity for evidence negating the findings from phase one to be revealed.

The analysis of the data incorporated two simultaneous activities: data reduction and analytical categorisation (Neuman 2000). The primary method of analysis belonged with the categorisation. Change management is not a new field and the body of knowledge is extensive. The researcher's primary focus was to gain insight into the process adopted by the organisation in an effort to implement technology-based change (Maxwell 2005). The data, in the form of field notes (phase one), and interviews (phase two) required analysis. An appropriate tool to analyse the data using a categorising strategy was thematic analysis (Maxwell 2005).

Coding was conducted across all the field notes from all projects (phase one) and interviews (phase two) to allow for inferences to be drawn across performances and practices (Lindlof 1995). As the aim was to provide grounded insight in order to allow the data to inform the research findings, open coding from grounded theory was employed to produce themes (Strauss & Corbin 1990). Boyatzis (1998) provided guidance within the framework of grounded theory.

The Coding Process

Coding provided a mechanism for looking at the data in a new way while at the same time coping with the task of data reduction (Miles & Huberman 1994). The aim of coding however was not purely data reduction. Qualitative studies tend to generate large amounts of data that requires analysis. The coding process provided structure to the researcher to delve into the data and produce more than surface themes. It also provided a means of breaking through preconceived biases and assumptions, resulting in the outcomes being grounded in the data (Strauss & Corbin 1990).

The coding process broke the data into discrete parts (summary codes) while asking questions and making comparisons. The process helped to create the basic building blocks where knowledge was created. Similar events (concepts) were grouped to form categories (themes) where their properties and dimensions could be examined. The coding process was about conceptualising the data (Strauss & Corbin 1990).

Boyatzis' (1998) framework provided a step by step approach for thematic coding but it tended to perform this task by adopting a positivist perspective. The inclusion of open coding from Grounded Theory (Strauss & Corbin 1990) ensured that the subjective nature of data was incorporated in the resulting themes.

Open coding, in grounded theory, is described as the "first pass" through the data, one that results in the production of categories or themes. The "first pass" may involve a number of iterations before reaching the production of themes.

Three steps were used in the coding process:

1. Data Reduction to produce summary codes (Boyatzis 1998)
2. Summary codes grouped to produce conceptual labels (Strauss & Corbin 1990)

3. Conceptual labels grouped by links and relationships to produce thematic codes (Boyatzis 1998)

A holistic approach was taken when coding the field notes as the field notes themselves represent “descriptive accounts of people, scenes and dialogue, as well as personal experiences and reactions, that is, accounts that minimise explicit theorizing and interpretation” (Emerson, Fretz & Shaw 2001). The content of all field notes (section 4.5.2), commencing with notes relating to the first visit in February 1998 through to the last field note for the last visit in March 2000, was included in the analysis. The first iteration required the researcher to condense or summarise the data, producing summary codes. “Reducing the raw information may not result in fewer pages or fewer lines but will give it a shortened “outline” form, easier for comparison across units of analysis” (Boyatzis 1998, p. 69). This approach was taken with the field notes in phase one and the semi-structured interviews in phase two. Observations, which were documented separately, were not coded but were used later when interpreting the themes.

Open coding, as described by Strauss and Corbin (1990) and Dey (1999) and Charmaz (2006), is the analytical process by which concepts are identified and developed in terms of their properties and dimensions. Open coding is the first basic analytical step and results in conceptualising the data (Strauss & Corbin 1990). Raw data requires analysis to allow the researcher the ability to discuss or relate information gathered easily (Strauss & Corbin 1990). The aim of the second iteration of the open coding process was to provide conceptual labels from the summary codes to represent the phenomena. The conceptual labels were then categorised (themed) by grouping and assigning them an abstract name. The grouping of concepts into categories or themes allowed for close examination of the data and allowed the researcher to question the data with a view to identifying new discoveries (Strauss & Corbin 1990). This resulted in the first round of themes being developed from the sub-samples. “At this stage in the analysis, there is less concern for a detailed, precise description of the theme and more concern for recording any glimmer of themes or patterns” (Boyatzis 1998, p. 86).

The outcome of the second iteration of open coding was a large number of preliminary concepts. Once generated, the concepts were conceptually analysed to determine links and relationships between them, which is the third iteration of the coding process. The outcome was the generation of a number of analytical categories/themes, representing an abstract grouping of concepts (Strauss & Corbin 1990). The researcher achieved this by comparing categories/themes looking for similarities or differences to facilitate further grouping. Once these had been identified then the themes could be rewritten, usually to a higher level of abstraction. "I examined the list of themes and looked for themes from each list that may be related. They may appear as polar opposites of a characteristic or may merely seem to involve similar phenomena", (Boyatzis 1998, p. 87). Each theme was then taken back to the original data set to assess whether it should be included. The themes were grouped and raised to a higher level of abstraction, resulting in the thematic code. A critical aspect to developing an honest and accurate inductive code was the reading and rereading of the data (Boyatzis 1998).

4.7 Researcher Bias

Qualitative research is of a subjective nature (Denzin & Lincoln 2005) and is therefore open to bias from the researcher. Researcher bias is not related to concerns of objectivity, instead the focus should be on fairness where all possible attempts have been made to have all voices in the inquiry treated fairly and with balance (Guba & Lincoln 2005). However, qualitative research needs to be evaluated using appropriate criteria. Lincoln and Guba (1985) suggest four criteria relating to 'trustworthiness': credibility; transferability; dependability; and confirmability. Each of these will now be addressed.

The credibility of this research is provided in the research design. Lincoln and Guba (1985) refer to the researcher having an extended time in the field with persistent observations to ensure credibility. The design of this research (see 4.3.2) was based on the researcher being embedded in the organisation for a period of two years. In addition, qualitative research may involve the researcher using their own experience to bring out the meaning of the data (Corbin & Strauss 2008). Therefore to address possible researcher bias and ensure credibility the rich description produced from

phase one was also validated by the organisation. Finally in line with the confidentiality agreement the entire thesis has been read and approved for publication by Tasmania Police.

The transferability of this research is in the hands of the reader (Bradley, 1993). Every effort has been made to provide the reader with enough data for those that wish to draw comparisons. The rich description provided in section 5.2 provides insight into the inner workings of the organisation. Chapter 2 provides detailed information as to the structure of Tasmania Police. In addition the research design has provided the reader with two independent snapshots of the organisation at two distinct time periods.

The dependability of this research is provided through the clear and detailed methodology. A number of steps were taken to reduce the impact of bias on the collection and analysis of the data collected in phase one and phase two of this research. Phase one adopted multiple sources for data collection (Miles & Huberman 1994). This approach provided the opportunity for triangulation including iterative reflection (see 4.4). The data was also analysed using a rigorous data analysis technique (see 4.6.1) and every effort was made to ensure that the overall approach was transparent (Auerbach & Silverstein 2003). Phase two data was collected using the more formal approach of semi-structured interviews. Each of the interviews was digitally recorded to ensure accuracy. The recordings were transcribed by an independent secretarial service. The data was analysed using the same rigorous data analysis method adopted in phase one. Phase two data was treated independently from phase one. The resulting themes from phase two are grounded in the data.

The confirmability of this research has been provided by Tasmania Police. The thesis provides a rich description of the organisation and its practices over a period of time. This information is presented to provide the reader with a clear understanding of the characteristics of the data and the research results.

This section has presented the data analysis method adopted for the two phase data collection. The data analysis supported the research strategy (section 4.3) the research design (section 4.4) and the tools and techniques (section 4.5) chosen in this research.

The next section will present information on how the outcomes from the data analysis are presented in subsequent chapters.

4.8 Discussion and interpretation

This section outlines the approach taken in chapters six and eight regarding the discussion and interpretation of the data analysed for phases one and two using the method discussed above. Both phases generated valid interpretations of the analysis through detailed discussion. Each phase is presented independently and compared to the literature current at the time and hence reflective of the body of change management knowledge available to the organisation at the time of data collection and analysis.

Phase one themes and factors are compared to the literature up until 2000. Phase two themes and factors are compared to the literature from 2000 to 2009. A comparison of both phases in relation to all relevant literature is then undertaken within Chapter 9. This phased approach to using two discrete pieces of data collection, analysis and interpretation before comparing them both to all literature, enabled a clear identification of nature of changes in both in technology based change in Tasmania Police and discussion of these subjects in the literature current at the time. Bringing them all together in Chapter 9 enhanced the quality of the interpretation of this research.

The two staged approach to data analysis in phase one led the researcher to produce a rich description that provided background to the organisation and the projects under review as well as a detailed discussion of the themes produced by coding to generate an interpretation that identified 11 factors. This thematic analysis was guided by open coding and provided the researcher with a method of presenting rich insights on the meaning of the emergent themes. The ensuing discussion generated an interpretation of the themes to reveal 11 factors. The development of the 'factors' and their inter-relationships provided empirically grounded insight into the implementation of technology-based change at Tasmania Police.

Chapter eight presents the discussion and interpretation of phase two data. The structure for chapter six formed the basis for this chapter. However chapter eight presents phase two data as a discrete phase. The thematic analysis, guided by open coding, provided the researcher with a method of presenting rich detailed meaning about the emergent themes. The ensuing interpretation of the themes revealed 'factors' and their inter-relationships; these were then compared and contrasted to the 'factors' and inter-relationships developed in phase two of this research. The 'factors' and their inter-relationships are then discussed and compared to the change literature. Factors affecting the implementation of technology-based change were developed based on the interpretation of the factors from phase two of this research.

4.9 Examination of factors from phase 1 & 2 – Case Study Findings

The factors developed and presented in chapters six and eight are examined in chapter nine. The examination provides insight into the implementation of technology-based change over time. The factors produced from the examination of themes in phase one are compared to the factors produced from the examination of the themes from phase two. The examination focuses on: factors that have remained constant over the research period; factors that have changed during that time; and factors that are only present in one phase of the research. It presents the case study findings generated by this research and answered the two research questions. These findings explore the role of technology in and on approaches to organisational change management at Tasmania Police and enhance an understanding of the implementation phase of technology-based change.

4.10 Chapter Reflections

This chapter outlined the philosophical position adopted by the research. A subjective ontology, following an interpretative epistemology, suited the exploratory nature of this research. The research strategy consisted of three main elements: the location of the study; the longitudinal approach; and a two phase data collection.

This qualitative research design employed a case study method. The design consisted of the selection of projects and participants for phase one along with information relating to entering the field, identifying opportunities, observing, documentation and

keeping contact with the organisation between data collection periods. The chapter then presented the design for phase two, consisting of the interview process and the identification of participants.

The chapter discussed the tools and techniques for the collection of data. Phase one adopted observation and unstructured interviews as the main data collection method along with attending meetings and reviewing documentation. Phase two utilised semi-structured interviews.

The chapter then presented the staged approach adopted for phase one data analysis. Preliminary data analysis from phase one resulted in the production of a rich description. Additionally, thematic analysis guided by open coding was applied to phase one data, resulting in themes. These formed the basis for enquiry in phase two data collection. Phase two analysis also adopted a thematic approach guided by open coding to produce themes.

The last sections of this chapter concerned the process used to interpret and discuss the research and the examination of the themes from one phase to the other. The discussion and interpretation of the research factors are found in chapters six and eight and a comparison of the factor from phases one and two of this research are found in chapter nine. The chapter concluded with the case study findings.

The next chapter presents the rich description and the data analysis associated with the thematic analysis guided by grounded theory open coding procedure associated with phase one data.

5 Data Analysis Phase One

5.1 Introduction

This chapter describes the data analysis for phase one and is structured in two parts. Part one presents the rich description developed out of the stage one iterative analysis. Part two provides a brief reiteration of the thematic coding approach, with examples, before presenting the six themes derived from this coding process used in the second stage of phase one analysis. The chapter is structured in the following sections:

- Section 5.2 presents the rich description of the four projects reviewed in phase one of the data collection.
- Section 5.3 provides a brief reiteration of the thematic coding as described by Boyatzis (1998) and guided by open coding from grounded theory to produce the themes.
- Section 5.4 presents the six themes derived from the thematic coding process.

5.2 Project Rich Description

This section presents the rich description developed from the iterative analysis of phase one data. The rich description provides a detailed account of the implementation of the four projects reviewed in this research. The rich description is presented in chronological order and presents the facts as they relate to the implementation of the projects.

Of the three projects implemented by Tasmanian Police in the three-year period from 1997 to 1999, the main project, “The Call Centre Project”, was the primary focus of the organisation at the time. Closely aligned with the Call Centre Project were the Radio Network Capability Project and Project SAMSON II. Integrated Crime Management Strategy was closely linked to the Call Centre project by dealing with some outstanding issues from the Call Centre project. These projects constituted phase one of this research.

With the completion of the Call Centre project, the organisation officially ended Project BATON. Though BATON stopped, the organisation still continued to look for new ways to make efficiency gains utilising existing and new technologies.

Background

In 1995 Consultant A successfully tendered to develop the functional specifications for the Call Centre project. They conducted workshops for business users on their perceptions of the current situation and their vision of the future. An examination of the existing information technology infrastructure led to the development of a satisfactory 'proof of concept'. As a part of the Call Centre Project, Consultant A mapped the existing Criminal Offence and Modus Operandi (COMO) and Stolen Motor Vehicle (Small Motor Vehicles) systems with the business users and stakeholders. These were the main issues they identified:

- heavily paper intensive processes caused problems such as significant delays associated with physically moving the documents
- document tracking was cumbersome and was currently achieved by means of a 'home grown' document tracking system
- significant amounts of police time were spent on administrative tasks
- the Crime Analysis System, which is the main electronic database currently available, did not store all the information required by the end users and access to the database was limited
- information was mainly dissemination by sending print-outs to end users through the internal mail
- the quality of customer service was unsatisfactory because there were numerous points of contact, especially when calling by telephone
- processing in both COMO and Small Motor Vehicles was slow
- neither COMO nor Small Motor Vehicles had a unique identifier
- quality control was poor and there were serious inconsistencies affecting both investigations and statistical reporting
- the Small Motor Vehicles and Crime Analysis Systems were not integrated, resulting in duplication of effort
- the delay in producing the Small Motor Vehicles list resulted in the list being out of date by the time it was received by the operational police.

The next stage was to produce an offence reporting process, drawing on the issues and opportunities previously identified, to conceptualise the future operations. This resulted in a single, standardised 'Offence Reporting Process' that utilised the Call Centre and catered for all offence reports.

The Steering Committee of the Call Centre project was responsible for high-level policy and resourcing decisions. The Information Management Committee was responsible for departmental policy and any resourcing decisions that were outside the scope or knowledge of the steering committee but were nonetheless essential for the delivery of project outputs and the attainment of project outcomes. It was the responsibility of the Information Management Committee to ensure appropriate management of the project components, as outlined in the Business Plan. The Project Sponsor, in this case the Deputy Commissioner of Police, assisted with business management and systems development issues that arose outside the formal business of the Steering Committee.

The project manager was required to report to the Information Management Committee, which met fortnightly, on:

- the status of the project
- areas of concern
- risk management, where appropriate.

A detailed risk management plan was produced, identifying the areas of concern, likelihoods, impacts, counter measures and costs. The main issues were:

- Call Centre staffing
- possibly inadequate skills in Call Centre staff
- inability or resistance to using the new process by operational police
- inability of existing police computer infrastructure to cope with new technology
- radio network unable to cope with Call Centre traffic
- contractors failing to meet implementation milestones
- implementation before Project SAMSON 11 and the Radio Network Capability projects
- the technical risks associated with technological solutions that were new to the both department and the State.

The risk management plan was revised during the life of the project.

The project was developed in four phases, which related to the standard phases in systems development though no particular systems development methodology was

used. Figure 5-1 details the schedule and milestones for the project. The author joined the project team at the beginning of phase 3 in 1998.

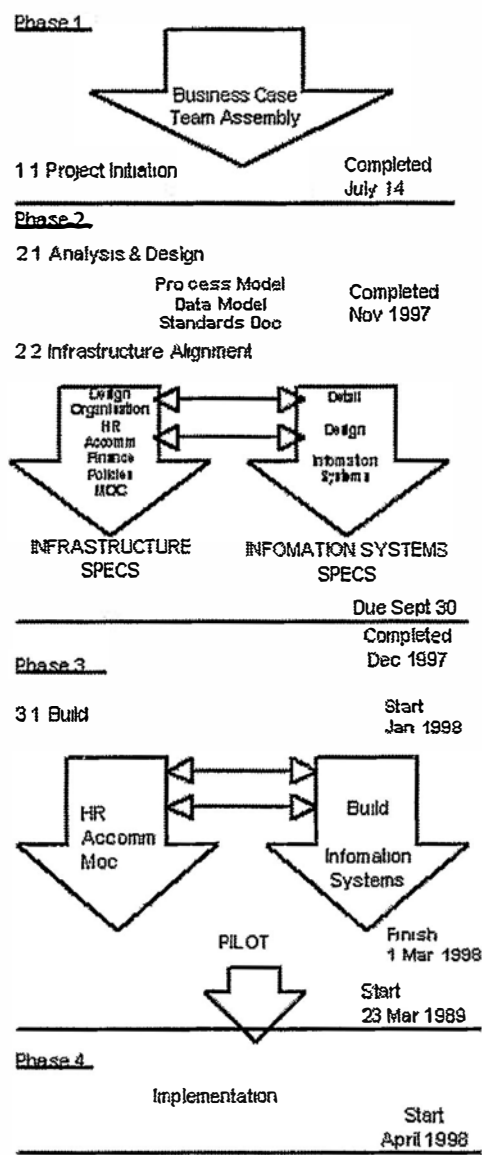


Figure 5-1: Schedule and Milestones (KPMG 1995)

Implementing the Call Centre

The Call Centre project had been outsourced largely because the Information Technology Branch claimed lack of expertise and lack of time and resources to complete the project in the very tight timeframe (six months). The timeframe was a key issue as the government wanted the Call Centre and Radio Network project to rollout together. The project was put out for tender, with the successful applicant (Firm A) subsequently subcontracting the interface and email sub components to another private local firm (Firm B).

The consultant from the main outsourcing firm, Firm A, held regular meetings, conducted risk analysis and was in constant communication with the project team. Milestones were agreed upon at the outset, and the consultant from Firm A was usually present when the project manager reported to the Information Management Committee.

The Offence Reporting process was the pilot for the Call Centre project. To support the launch, the change agents made presentations across the State, using a video to ensure the message was consistent. They were instructed to stop the tape at strategic places and provide additional information. As the pilot was implemented first in the Northern district, the Commander and other key players were continually consulted about any concerns they had.

The Call Centre project relied on all Police stations being online and all personnel having reasonable access to a computer. However, these prerequisites became major problems for the project. Project SAMSON II, which was to have delivered the prerequisites before the Call Centre project began, was delayed by lack of consensus about which common platform was to be used. By the time the Call Centre project started, the project team was still unclear as to how many PCs, let alone what types, were in the work areas, and some Police stations were not online.

The problem became clear at the first meeting with the Northern Districts Superintendent. There was no documentation of the numbers and models of PCs in the district; the information was 'in the head' of one of the district Constables.

The Offence Reporting process required the reports to be allocated to particular Criminal Investigation Bureau detectives. The system would automatically forward an Offence Report to the designated Criminal Investigation Bureau detective who would review the report and decide whether it should be investigated by Criminal Investigation Bureau or handed on to a uniform officer. The allocation would be done using email within the new system. During the initial meeting with the allocation officers in the Northern Districts, it became apparent that some officers had poor computing skills. Unaddressed, this problem would have been a high-risk element. The lack of computer skills would translate into an inability to fully

- understand how the new system would work. There was not yet a developed prototype - just documentation.

By identifying the low level of computing skills, which lead to a lack of understanding relating to the system, the project team took corrective action. The first action was to add a flow chart to the Aide Memoire (Policy document) for the Offence Reporting System. The second action was to arrange for a project team member to give support and additional on-the-spot training to the allocation officer, who had poor computer skills, on the rollout day. While this had originally been incorporated into the rollout plan it had by then become a critical success factor. The third action was to develop a separate procedure for Police stations that were not online and therefore could not receive the offence reports electronically.

The Police Call Centre was sited in the Southern Districts headquarters in the Information Bureau's offices. As similar Call Centres had been established for other departments in the State of Tasmania, the project team could draw on their experience. The room accommodated 8 operators. As operators were required to be at their work-stations for stretches of time, special attention was paid to the ergonomics of the Call Centre. The room was also equipped with a TV and an exercise machine for quiet times.

The training for the Call Centre staff was conducted by a member of the project team. Training began two weeks before the project was piloted in the Northern District. Some of the staff had transferred from other areas in the organisation, while some were newly appointed. A total of twelve operators were trained to provide 24 hour coverage. All were state service personnel. One of the main drivers behind the project was to improve the quality of the data being entered into the systems. This would be more achievable by training 12 data entry operators rather than 1100 police officers.

Rollout in the Northern District

The rollout date for the Northern district was set for 25 March, 1998. The consultant from Firm A informed the project team on 12 March, 1998 that this deadline could not be met. At a meeting between the consultant and the project team, tasks left to be completed were identified and a new rollout date, 1 April, 1998, was set.

At this time, both consulting Firms A & B and the Information Technology Branch were working on various aspects of the project. The politics of the three were interesting. The Information Technology Branch was working in a different direction from the original specifications of the project, at times moving away to second or third options. The subcontracted consulting firm, Firm B, complained about lack of early involvement and lack of communication. Firm B failed to prioritise the requirements of the interface and consequently they delivered an interface that was unacceptable to the officers. With Information Technology Branch then involved, the consultant from Firm A tried to coordinate the efforts of the three groups but had to rely on the project team, especially the Call Centre project manager and the project manager of BATON, to keep the project on track.

The success of the project relied heavily on the project team having some technical knowledge in order for it to fully investigate any options proposed by the consultants. The technical knowledge did not help when dealing with the Information Technology Branch as the IT project team member was on secondment from Information Technology Branch and eventually returned to his substantive position. There was no question about the skill level of the Information Technology Branch but questions were raised about their commitment to the project, relative to the other functions they performed.

Six days before rollout, the acceptance testing began. Information Technology Branch was keen to conduct validity testing, concurrency testing, disconnecting the power, and testing and retrieval of data tracking. Recovery issues, along with issues of replication, were still unresolved and were dealt with after the pilot had been rolled out, so as to not cause further delays. During meetings with Firm A and Information Technology Branch, issues were prioritised as having to be dealt with either before or

after rollout of the pilot. The project team was very much in control of the prioritising process and clearly understood the issues and constraints.

Call Centre staff were given extra training and some mock exercises to fill in during the week the rollout was delayed. During this time, some changes to the interface were suggested. These were made before the rollout. An Information Management Board meeting was called for 3.00pm on 26th March, 1998 to finalise the arrangements for rollout the following week. Before the meeting, one of the team members tried to load a new version of software at the Call Centre but was unable to complete the task. The project team entered the Information Management Board meeting not sure that the rollout would happen as scheduled, but they managed to convey a positive attitude. The problems were discussed and the Information Management Board agreed to meet on Monday, if necessary, to consider delaying the rollout in the Northern District.

The Criminal Investigation Bureau Allocation Officers were given their hands-on training in the two weeks preceding the Northern District rollout. This timing was intended to maximise the retention of knowledge. The Allocation Officers thought the training was insufficient but more time could not be allocated because there was not a working prototype to train on.

The day the Offence Reporting Process rolled out (1 April 1998), two of the project team members were in the Northern district to deal with any issues that might arise. They began work by meeting the morning shift and finished work after briefing the last shift for that day. One of the project team spent time with the Allocation Officer who was not confident of his computing skills. This resulted in the planned change to the allocation process - the printing out of every single offence report - not being adopted by the Allocation Officer.

Issues in the Northern District

The two members of the project team also travelled around the Northern District to deal with any problems promptly. Most problems were resolved with one-to-one demonstrations or a more detailed explanation of the system. One of the stations reported that an offence report with 50 pages of stolen property had arrived but when

the report was opened up it was blank. One of the Call Centre operators had mistakenly held down the return key while entering the report.

In general, Allocation Officers in the Northern District were not happy with the system. A meeting was called with two members of the project team. They were shown to chairs at the front of a half circle formed by the Allocation Officers. The project manager started the meeting by explaining that both he and the other team member were there to identify the concerns, prioritise them and then get to work to resolve them. He stressed that this was a pilot exercise and was not expected to be perfect. The officers were encouraged to take ownership of the system. They had been consulted all through the process and their concerns would be addressed.

The main concern for these Police officers was the layout of the first “page” of the screen. The timeframe had been tight and there had been no acceptance testing of the interface before rollout. Firm B had not spent the time needed to fully understand the end-user requirements of the system. When the Allocation Officer, a detective, accessed an Offence Report, he was doing so to make a decision on who should investigate the matter. To do this, he needed certain pieces of information. However, these were not available on the initial screen; the Allocation Officer had to hunt through the Offence Report to find them. What was needed was an executive summary on the initial screen, with more detailed information at a lower or deeper level.

Firm B had developed the interface from information collected throughout consultation with members of the organisation. The result was a “wish list” of everything they would like to be included. As well as failing to recognise that this was the case, Firm B also did not prioritise the data fields. The result was an ineffective layout of the interface. The meeting ended on a positive note, with the Allocation Officers satisfied that their concerns would be addressed.

The pilot highlighted other issues that needed to be resolved before the statewide rollout. The amount of email an Allocation Officer had to deal with was enormous. The system did not identify Offence Reports that had been updated by the Call Centre; these were flagged exactly the same as new reports. For the revision, a new

change agent was recruited, the Northern Allocation Officer, who was not confident of his computer skills. He acted as a conduit for improvements to the Offence Reporting Process and also facilitated the flow of information in the Northern District by sharing his newly acquired knowledge of the system with other Allocation Officers. He became the central point for the project team when requesting updates on the allocation process as well as for his fellow Allocation Officers.

During the pilot phase of the project, a server leak (data disappearing from the server) was identified. Firm A said it was Firm B's problem; Firm B claimed it was Information Technology Branch's issue. The project manager let them argue for a while but, when it looked as though it would never be resolved, he called a meeting of all parties and announced that no one would leave until somebody took responsibility for the server leak. Firm A had the impression that their involvement in the project ended with the rollout of the pilot. At that point they were working on the improvements requested by the Northern District Allocation Officers but this work was in addition to the original contract. The project manager highlighted to Firm A that their involvement did not end until the system was working satisfactorily.

Communicating to the organisation

While the piloting of the Offence Reporting Process was time consuming, it was important to keep the rest of the organisation informed of the project's progress. The Change Management Coordinator had long returned to her substantive position at the Tasmanian Police Academy and the project team was managing the change aspect of the project. Keeping the Northern District informed of the progress was relatively easy as there were frequent meetings to discuss improvements or modifications and the new change agent was disseminating information effectively in that District.

The rest of the organisation needed an update on the progress of the project and some information on issues that had been identified by the pilot. The project manager was focused on keeping everyone informed, without getting 'bogged down' in technicalities. He called a brainstorming meeting of the project team to help identify the main issues that should be communicated in a newsletter to the organisation. The project team had always kept an issues register to ensure that no issue would be lost or

forgotten. From the register, they prioritised the issues. The brainstorming session classified the issues into three categories. In order of priority, these were:

- System going down for long periods
- Display format of Offence Reports
- Radio difficulties

Each issue was discussed giving the reason, impact, contributing factors and the action being taken by the project team to correct it. The bulletin not only provided information to the other three districts, but also let the officers in the Northern District see that the issues they had raised were being taken seriously. The change agents had been briefed and provided with copies of the bulletin prior to its distribution in the organisation. At the time the bulletin was distributed the project manager returned to his substantive position and the information technologist project team member became the new project manager.

Rolling out to the other districts

At the next meeting with the Information Management Board the progress of the Offence Reporting Process was discussed. The Information Management Committee was informed of the instability of the system. They also discussed the Call Centre operators being under-worked and decided which district would be rolled out next. The Information Management Committee chose the Western District, followed by a combined Southern and Eastern rollout. Western was chosen because it was a small district and the resource audit could be conducted quickly. The decision to combine Southern and Eastern was surprising as the Call Centre's capacity had not been tested. This decision gave rise to a high-rating risk factor.

A new Change Management Coordinator was seconded from the Internal Investigation Department. As the Internal Investigation Department and its members were viewed with suspicion by the rest of the organisation, this seemed to also be a high-risk move. The coordinator's first visit to the Northern District had officers backing away from him, asking, "Who are you here to see?" even though he was in uniform rather than the civilian attire worn by Internal Investigation Department staff. The word soon spread that the Change Management Coordinator role had been filled, and with this came acceptance of the new role he had to perform.

The Western District rolled-out on 13 July 1998, with the project then about a week behind the original schedule. On 1 August 1998, the Call Centre and the Offence Reporting Process began state-wide operations by rolling out to Southern and Eastern Districts.

Access issues

The increase in calls from the state-wide operation created a problem. The time taken to ring through an Offence Report was estimated to be between 8 and 15 minutes. However, there were delays getting calls through to the Call Centre. The centre could place only two calls on hold, which at times left Police officer in a victim's home for 30 minutes trying to ring through details of the offence. The Radio Network project was not working well and Police officers in cars had problems contacting the Call Centre.

Officers soon reverted to the previous practice of not sending in Offence Reports until they returned to the Police station. They would then ring through three or four offence reports. This affected the rostering of the Call Centre staff, as the peak periods were before breaks and the end of shifts. While visiting the Northern District, the Information Technology Branch manager, who was not a member of the Call Centre project team, promised officers to change staffing levels at the Call Centre to cope with the new demand. This caused an issue as, at that time, the project team were once again encouraging officers to contact the call centre when first recording the offence report. The manager of Information Technology Branch was asked to concentrate on areas under his control and leave the call centre to the project team. The project team undertook an education program to try to change the Police officers habits. Eventually the Police Commissioner intervened with a directive to insist that the new process was adhered to.

Integrated Crime Management Strategy

At this time the organisation had embarked on another new project, the Integrated Crime Management Strategy (ICMS). The strategy was based on the premise that effective crime reduction required District Commanders to adopt a holistic approach to crime, utilising District resources as well as strategic alliances with the community, local government and other government agencies. The emphasis was on problem

solving at the local level, drawing on quality intelligence and information. The establishment of performance standards and the measurement of outcomes were essential ingredients.

A core part of the Integrated Crime Management Strategy was the formation of the Crime Management Unit. Police officers responding to crime scenes were expected to conduct basic crime scene examination. They would also strive to obtain all the required information during the initial visit, conduct some investigation and finalise investigations if they could.

Crime investigation could now be conducted in a timely manner. With the completion of the Call Centre project, information relating to crime was now available within minutes of the report being lodged. However, investigations were hampered by incorrect information being reported or not collected while initially at the scene. To resolve this, when a crime was reported the first car on the scene was a patrol car manned by an officer (Constable) capable of conducting base level forensics, such as finger printing, and a Crime Investigation Bureau detective. The new approach still saw Offence Reports processed by the Call Centre.

To compliment the Crime Management Unit there was a Crime Response Unit, staffed by a detective and general duties officer (Constable) working together in order that crime scene examination, investigation and, where possible, resolution be obtained with a single police visit.

Four Crime Management Units were established, one in each of the districts. Initially the units were equally staffed: eight members in each unit including an Officer in Charge and district intelligence personnel. The Crime Management Unit was subject to a rigorous evaluation process after six months of operation to gauge the effectiveness of the units on crime rates, clearance rates and the level of community satisfaction with policing services. It was therefore important that each unit was adequately equipped and tasked to enable accurate comparisons to be drawn.

The Crime Management Unit project also helped Tasmania Police address the ongoing access issue with the Call Centre. The original intention was to give staff in

each of the Crime Management Units direct access to the Offence Reporting System. The Crime Management Units were also given responsibility for quality assurance of the existing offence reports.

Review

In March 1999 a review of the Call Centre project, using a Group Decision Support System, identified 33 problems. The major problems identified were:

- Lack of resourcing, mainly access to computers
- Unrealistic timeframe for the project
- Losing the project manager before the main rollout
- Influence of political pressure on scheduling the project

The lowest-ranked issue was the lobbying to get external stakeholders supporting the project. Seventeen benefits were also identified: the first was that of team dedication, and the last the management of consultants.

Further sessions were held with the Call Centre operators, Allocation Officers and the Information Management Board. A session, not using the Group Decision Support System, was held for 50 officers and state service personnel to help identify their expectations, issues and benefits from the Call Centre project.

The Call Centre project was delivered on time and nearly on budget. Project SAMSON II was delivered after the completion of the Call Centre project. The Police Mobile Radio Network project never attained the desired outcomes.

Through the development of a rich description this section presented the preliminary analysis of the data collected in phase one. It provided insight into how the four projects examined in this research were implemented and managed. The rich description provided an account of the implementation of the projects that was drawn upon to interpret the themes (see section 6.4) produced as a result of the second stage of data analysis discussed in the next section.

5.3 Data Analysis using thematic coding

This section describes the coding techniques used in the analysis of phase one of the data collection. Miles and Huberman (1994) identify three components of data analysis: data reduction; data displays; and conclusion drawing and verification. The three components guide the process of data analysis.

The first iteration was designed to reduce the data. Breaking the data down into smaller pieces allowed preconceived ideas to be challenged by the data itself (Strauss & Corbin 1990). As shown in the exemplar previously provided in Appendix 9 is used to illustrate the first iteration of the data by summarising the content of the data into manageable pieces (summary codes) while still retaining the essence of the data.

Table 5-1: Transcript exemplar February 1998

1	<i>It has been twelve months since I was here last. BATON has now</i>	
2	<i>been allocated permanent office on the 7th floor. In the past they</i>	
3	<i>have been moved around, not a good sign as it must have</i>	<i>Dedicated office</i>
4	<i>detracted from how serious they are about implementing BATON</i>	
5	<i>and change.</i>	
6		
7	<i>There has been a change in the Inspector D has been promoted</i>	
8	<i>giving BATON more support from management. Inspector E has</i>	<i>BATON Project team</i>
9	<i>taken over as BATON project manager; he was previously</i>	
10	<i>Inspector D's 2IC. Other members of the team are Sergeant F,</i>	
11	<i>Call Centre Project Manager; Constable A, Coordinator of</i>	
12	<i>change agents; State Servant G, Training; State Servant H,</i>	
13	<i>Information Technology and State Servant I, Administration</i>	
14	<i>(State Servant I is the only original member of the team).</i>	
15	<i>Sergeant F, Constable A and State Servant H are on secondment</i>	
16	<i>from other areas.</i>	
17		
18	<i>Constable A spent time in the meeting reviewing the location of</i>	<i>Location of change agents</i>
19	<i>the change agents, 20 spread across four districts. She pointed</i>	
20	<i>out that 'the location changed when change agents were</i>	<i>Same message re call centre</i>
21	<i>promoted, seconded or transferred'. She said 'the focus is on</i>	
22	<i>ensuring all change agents are delivering exactly the same</i>	
23	<i>message in relation to the Call Centre'.</i>	
24		
25	<i>Constable A demonstrated the video for the briefing on the Call</i>	<i>Change agents to come to</i>
26	<i>Centre project. 'The video presentation is stopped and</i>	<i>BATON for briefing</i>
27	<i>information from the change agents is presented before returning</i>	<i>Change agents to present info</i>
28	<i>to the final section on the video. The change agents are required</i>	<i>re call centre</i>
29	<i>to come to BATON for a briefing on the presentation'</i>	<i>Video to help with</i>
30		<i>presentation</i>

81	<i>outcomes from the sessions have been of value.</i>	
82		
83	<i>People who have been seconded to BATON are now being</i>	
84	<i>physically moved to the 7th floor. In the past they may have been</i>	
85	<i>left in their own department. Physically moving then has</i>	
86	<i>resulted in a change in attitude and a total focus on BATON.</i>	
87	<i>There is a team environment in the office with individuals</i>	
88	<i>working together well</i>	
		<i>Team physically located in office</i>

The data reduction process produced 140 summary codes from 82 field notes (Appendix 11). Atlas ti (a qualitative software package) was used to facilitate this process.

The area of interest was the existence of a code, not the number of times the code appeared in the data set. Therefore duplicate codes were removed from the list of summary codes. The second iteration of the data required that the data to be exported to Excel where the summary codes were sorted into alphabetical order. The sorting process facilitated the removal of duplicate codes from the list. The original summary codes and their alignment back to the data set were captured in Atlas ti. With the duplicates removed from the list, codes were examined for similarities. For example, when using an inductive process a single code may be given a few slightly different names such as Change Management Coordinator on secondment versus seconded Change Management Coordinator. Strauss and Corbin (1990) describe the grouping process as assigning conceptual labels. The second iteration of the data grouped similar summary codes and if required, raised the associated “label” in level of abstraction. The data produced 50 conceptual labels (Appendix 7).

Table 5.2 below shows how the summary codes from the exemplar are conceptualised into conceptual labels.

Table 5-2: Conceptual labels

Summary Codes	Conceptual Labels
Dedicated office	Projects office
BATON Project team	Project team
Location of change agents	Network of change agents
Same message re call centre	Re launch call centre
change agents to come to BATON for briefing	Briefing on projects
change agents to present info re call centre	Change agents do presentations
Video to help with presentation	Video aid
Communication with change agents difficult	Communication issues
Email not reliable	Communication issues
Lack of computer	Lack of resources
change agents to be informed on all projects	Change agent briefing
DCOP supports using change agents to communicate	Top level support for change
CMC to return to her substantive position	Secondment
Credible CMC	CMC credibility
Feedback sessions for staff re the relaunch of BATON	Feedback
Group Decision Support System	Feedback
Team physically located in office	Project office

Each of the conceptual labels was reviewed using the “focal length” metaphor. Each label was examined by asking, “What is this really trying to tell me?” The conceptual labels were then grouped and raised in their level of abstraction to create themes/categories (Strauss & Corbin 1990). This process involved a number of passes through the sub themes to reach themes that have the desired level of abstraction. The process was guided by existing knowledge in the area under research however the process remained inductive and did not change to a deductive process where codes were forced into pre-defined boxes. By adopting the coding process described above, the researcher was able to remove the summary codes from the raw data. The summary codes were produced in Atlas ti next to the raw data but removed to Excel where further groupings produced the conceptual labels and the resulting themes. Working on the codes away from the raw data provided a process that inherently reduced personal bias. The examples above provide insight into the inductive coding process. The final pass through the data produced six themes:

- Mandating project governance
- Providing strategic direction
- Supporting a network of change agents
- Managing projects
- Promoting cultural change
- Focusing on diverse communication.

Each of the themes is now presented, supported with extracts from the field notes. The order of the themes does not imply significance. Inter-relationships between the themes are presented in the Section 6.5. The second stage of data analysis for phase one was supported by the rich description presented as a result of round one data analysis. The content of the rich description aligned with the themes presented above.

5.4 Themes – Phase One

This section presents the themes produced as a result of the coding process conducted on phase one data. The six themes and their sub themes are presented in no particular order. Extracts from the field notes are provided to validate the development of the theme.

5.4.1 Mandating project governance

This theme related to the processes, procedures and controls by which Tasmania Police supported their projects. The coding process revealed three sub themes relating to this theme: investigation and documentation; and governance. Each of the sub themes will now be presented.

Investigation and Documentation

A formal component of governance was the documentation associated with the project management of technology-based projects. One component of this was the cost/benefit analysis based on full time equivalent (FTE) savings. The savings were a result of more efficient processes and were redirected to operational duties. The savings did not result in a reduction in the work force.

Sergeant B said that 'he and Inspector E have gone to a meeting with the Deputy Commissioner regarding the cost/benefit analysis on Project BATON. The current projects at a cost of just over \$2 million have returned a saving of between 50 - 70 FTE's, depending on which discount rate you use.' (Field Note 14th September 1998)

Project management documentation included feasibility reports that provided management with options relating to viability but also options for the best way to move forward.

Sergeant B briefed me on the latest projects and gave me a copy of the Feasibility study into Domestic Violence as an integrated information project. He said 'the original proposal was based on the amount of money the Commonwealth was making available for the project. (Field Note 26th November 1998)

Acceptance planning and testing were included in the governance and management of projects. This aspect of governance was not common to other Tasmanian government agencies.

State Se vant H has also been working on the Acceptance Plan and he has included a link to the business plan. He said 'there is only one other person in a Government department that has produced an Acceptance Plan.' (Field Note 26th March, 1998)

Risk Management was an ongoing process for project management. The initial risk management plan that was developed with the business case was a working document that was continually reviewed during the life of the project. Adjustments to the project were made when a new potential risk was identified or an existing risk was escalated.

At 10.30 am there was a meeting with Consultant from Firm A in relation to the risk management plan. Work is on track but the consultant raises concern over the Universe architecture. He said that 'at this point integrating all data applications is a bit behind due to some late changes. A clear division has been placed between Universe and the new applications by Firm A to enable Universe to be removed at a later date if necessary.' (Field Note 26th February, 1998)

Anticipating future needs beyond the project defined resource requirements allowed the organisation time to procure the resource, so eliminating a potential crisis.

Resource planning was a component of project management and was built into the business case. Tasmania Police used resource planning as a proactive tool.

The Information Management Board discussed the call centre staff and the committee feel that 'there may be some turnover with the staff in the early stages of the centre.' It was decided that a pool of casuals should be developed (Field Note 26th March 1998)

Process analysis was a tool that facilitated improving business performance by defining the status quo and making recommendations. Ongoing process analysis allowed for modifications to be made during project implementation.

Sergeant J indicated that 'it would be difficult to analyse COMOs for the last 24 hours first thing in the morning and be able to print out the main ones in time for morning prayers.' Some time was spent discussing how the allocation system would work to help Sergeant J to gain some insight into the allocation process prior to rollout. Constable A and Sergeant F decided 'that a flow chart should be developed and attached to the Aide Memoire (instruction manual) to

... facilitate understanding for the end user, especially those with minimal computing skills.' (Field Note 5th March, 1998)

Governance

The Information Management Committee provided governance to the project team. Project Managers reported to the Information Management Board on a regular basis. The agenda of the Information Management Board linked to the milestones of the project. The members of the Information Management Board were such that this committee was empowered to make decisions such as the allocation of resources. The role of the Information Management Board was to monitor the project and make decisions associated with the project when deemed necessary.

Sergeant B informed State Servant H and I that the decision as to which day to roll out the Call Centre for Eastern and Southern would be discussed at Information Management Board (Field Note 20th July, 1998)

Projects had a defined boundary in which there were milestones and a defined end. Once a project had been completed it was officially handed over to the nominated stakeholder.

State Servant H informed me that 'the timeframe for the official hand over will be about the middle of November.' He said that this is only 2 weeks later than the projected hand-over time. (Field Note 19th October 1998)

5.4.2 Providing strategic direction

This theme related to the guidance provided by the organisational strategic direction derived from the vision and mission statements. The coding process revealed one sub theme relating to this theme. The sub theme of vision and mission will now be presented.

Vision and Mission

Tasmania Police had a Vision and Mission statement, both of which were well known throughout the organisation. The Mission statement was embedded into training programs offered at the Tasmanian Police Academy. It was simple and provided a clear direction for the organisation and facilitated decision-making.

Sergeant B and I spoke for some time as to the role of the mission and vision statements. He said 'the mission statement provides the umbrella for the focus of the organisation. If you understand the mission, which should have been derived in conjunction with all stakeholders, then you should be able to identify

'the change being implemented as supporting the mission.' (Field Notes 14th September, 1998)

5.4.3 Supporting a network of change agents

This theme related to the development and support of the change agent network. The coding process revealed two sub themes relating to this theme. The sub themes are change agent network and support for change agents. Each of the sub themes will now be presented.

Change Agent Network

Tasmania Police recruited 20 change agents to help with the communication of change related information. The change agents covered all levels of the organisation and were located in each of the four districts. Personnel in the organisation were transient, with people moving due to promotion or secondment. Mapping the location of the change agents was an ongoing task.

Sometime was spent in the meeting reviewing the location of the change agents, 20 spread across four districts. Constable A said 'the focus was on making sure all change agents was delivering exactly the same message in relation to the Call Centre.' (Field Note 26th February, 1998)

The change agent network was managed by the Change Management Coordinator. The first coordinator was credible with the officers due to her length of service and her substantive role in the organisation. Subsequent coordinators were officers holding the rank of Sergeant.

Constable A said that she 'feels that there has been more acceptance of the change agent program with her working in the role of change agent Coordinator as she is a Constable with 14 years service and is on secondment from the Academy. She has been able to create a more open environment during sessions as she was able to 'disown' BATON due to her secondment status this enabled her to back away from criticism and help people work through them to identify the 'real' issues or concerns.' (Field Notes 26th February, 1998)

Change agents undertook training to help them develop their role. Initially the training was conducted by the consultant employed when scoping Project BATON. Subsequent training sessions were designed and coordinated by the Change Management Coordinator. Each training program followed the same basic structure to provide consistency. Each program was enhanced, based on a review of the current program and the feedback from the previous course.

Sergeant B said, 'The old training program left the change agents with the view that their role was a formal role. They see that their function is to do presentation, disseminate information re projects and conduct formal feedback sessions. There is a major role to be filled in the informal area.' (Field Notes 14th September, 1998)

Every training program conducted by Tasmania Police was formally reviewed by the participants.

Inspector E gave me a copy of the review of the training course for the change agents. He said that 'they seemed happy with the course but they wanted more individual feedback from the trainer regarding individual presentation performance'. (Field Notes 3rd March, 1999)

Support for Change Agents

The Deputy Commissioner of Police was the sponsor for the change agent program. He allocated resources to the program and was instrumental in changing the communication flow in the organisation from hierarchical to one that included the change agents at a high level.

Inspector E informed us that 'the Deputy Commissioner agreed that change agents should be made aware of other events outside of BATON to aid the communication process.' These events have not been forwarded in the past to BATON. (Field Note 26th February 1998)

The structure of the change agent network was refined by the second Change Management Coordinator to include district coordinators.

Sergeant B wanted to discuss the new structure for the change agents. He said 'the idea is to allocate one of the change agents to the role of district coordinator. A district coordinator would provide the project team with a go to person in each of the districts. It is hard, both time wise and financially, to get 30 change agents state-wide together for a meeting.' (Field Note 27th July, 1998)

The district coordinator role was not allocated to one person. The role was rotated between the change agents.

Sergeant B said that 'this role should not be allocated on a permanent basis but on a project or purpose basis as this would allow people to be rotated through the role without building in a perceived new level.' (Field Note 27th July, 1998)

5.4.4 Managing projects

This theme related to how Tasmania Police implemented, piloted, reviewed and managed their technology projects. The coding process revealed three sub themes relating to this theme. The sub themes were: project teams; piloting projects; and monitor and review projects. Each of the sub themes will now be presented.

Project teams

Projects had allocated teams. All projects had a project manager. The Call Centre project team was a large team.

There has been a change in the Inspector D has been promoted giving BATON more support from management. Inspector E has taken over as BATON project manager; he was previously Inspector D's 2IC. Other members of the team are Sergeant F, Call Centre Project Manager; Constable A, Coordinator of change agents; State Servant G, Training; State Servant H, Information Technology and State Servant I, Administration (State Servant I is the only original member of the team). Sergeant F, Constable A and State Servant H are on secondment from other areas. (Field Note 26th February, 1998)

The Project BATON office became the Business Project Services where all projects were housed.

Sergeant B told me that 'the view at this time is that BATON will become the coordinator of all projects within the organisation.' (Field Note 20th July 1998)

The project teams took a 'hands on approach' to the implementation of the projects. Members of the Call Centre project team were present on site in the Northern District during the rollout of the pilot, enabling issues to be handled by the team at the time they were identified.

Inspector F and State Servant H have had a busy time in Launceston since their arrival. They started early to catch the morning shift and stayed late to speak to the night shift. They also have been travelling backwards and forwards across the northern district to ensure that problems are being dealt with and offering advice and support where needed. (Field Note 2nd April 1998)

The Call Centre Project Manager was required to resolve conflict between the two consulting firms. The project manager was required to manage the consultants to deliver on the final aspects of the project.

Firm A are trying to argue that their involvement has ended and it is up to the Police to sort out the problem, but until the system is working 100% Firm A has not finished. This is the message that Inspector F says he is going to deliver at the meeting. (Field Note 23rd April, 1998)

Piloting projects

Piloting was used as the preferred project implementation method. Pilots were conducted across districts. Information gained from the pilot was used to refine the project prior to statewide implementation. In the case of the Crime Management Unit project, various aspects of this project were piloted in different districts across the state.

State Servant G reported that 'Samson has been piloted at the Kingston branch and is ready for statewide rollout all it needs is the funds. The organisation

cannot proceed with some of the other projects without this standard operating platform. (Field Note 14th Sept 1998)

The pilot of the Call Centre project in the northern district identified a number of issues relating to the design and layout of the initial screen used by the allocation officers. The project team developed an issues register that documented all problems with the system. The project team used the register to prioritise tasks. The Project Manager used the issues register to communicate the current status on the changes to the system, to the pilot district and to the rest of the organisation.

The Launceston Criminal Investigation Bureau detectives identified that their main concerns were 'that the information on the screen did not contain the information they required to make an effective decision in relation to the investigation of the crime. What they require is an executive summary.' (Field Note 2nd April 1998)

Monitor and review

Projects were constantly monitored and reviewed and, where necessary, project timelines and work specifications were amended. Priorities for the project team were under constant review and adjustments were made based on those evaluations. In addition, the timeline for the project was also under review by the project team and the Information Management Board.

There was a meeting regarding Crime Analysis requirements and integration. State Servant G reported that 'COMO's are currently up to five weeks behind so integrating and the writing of the interfaces to write reports have been placed into Phase 2. This work is to take place after March 25th.' (Field Note 20th Feb 1998)

After partially addressing the problem of access to the Call Centre, the project team conducted a relaunch to encourage officers to ring in from the field. The benefits from the project relied on the change in behaviour of the officers. Projects were justified on FTE savings and the Call Centre project required officers to remain out in the field to gain those savings.

Sergeant B informed the team that 'There needs to be a big push on to re send the message of ringing in from the field as the implementation of the Crime Management Unit has reduced some of the pressure on the call centre. (Field Note 19th May 1999)

Projects were reviewed using feedback sessions with various groups of stakeholders to identify their expectations, issues and benefits of the project. The feedback sessions for the Call Centre project were conducted using Group Decision Support System for the majority of the stakeholder groups (maximum of 12 in a group).

However one manual session was conducted to gather feedback from a sample of uniform officers (28 officers).

On the 24th February the session was held for the allocation officers. The officers were asked to input data without talking to each other and not to focus on the screen. The allocation officers generated an average of 7 issues each. (Field Note 3rd March 1999)

5.4.5 Promoting cultural change

This theme related to the changing culture of Tasmania Police and how resistance was managed. The coding process revealed two sub themes relating to this theme. The sub themes were cultural change and resistance. Each of the sub themes will now be presented.

Cultural Change

The Call Centre project required officers to make a cultural change to the way they performed their duties. The FTE savings were based on the realisation of the change. The officers were required to stay in the field and ring in details of the offence report to the call centre.

State Servant H said he 'is concerned if the officers are actually ringing in from the field or returning to the station and ringing in multiple offences from there.' With the problems of access the Call Centre he thinks you could guarantee that they have given up and are now calling in from the stations. (Field Note 19th May 1999)

The project team acknowledged the problems of access to the call centre. A number of attempts were made to rectify the access problem. When a partial solution was found the project team discussed implementing a review to see if officers had changed their practice when dealing with offence reports.

State Servant H and I had a meeting with Inspector E in relation to reviewing the cultural change that should have eventuated from the project. (Field Note 17th March 1999)

The Allocation Officer in the Northern District was identified as having poor computing skills. The system for allocation required the allocation officer to use email. The project team acknowledged the lack of skills of the officer and developed a plan to help him learn the skills required for the task of allocation.

The meeting moved onto the computing skills of the Allocation Officer in Launceston. One of the Allocation Officers, Sergeant J, has minimal computing skills especially in relation to e-mail. It is by using e-mail that the allocations will be made. It was decided that either Constable A or Inspector F would sit

with him during rollout to give him one to one support. (Field Note 5th March, 1998)

Resistance

The Information Technology Branch in Tasmania Police was identified as a source of resistance by the Call Centre project team.

The trip home was full of discussion about the Launceston rollout and ITB's lack of support for the Call Centre project. Inspector F said 'they are too focused on their legacy systems and put barriers in the way of new development.' (Field Note 5th March, 1998)

The manager of the Information Technology Branch, while visiting the Northern District decided to review the Call Centre pilot. The review was conducted without the knowledge of the Information Management Board or the project team. The project team had to undertake remedial action to counteract the damage done by the Information Technology Branch Manager.

State Servant H showed me a report by the manager of Information Technology Branch regarding the Northern Pilot of the reporting system. State Servant H said he may have 'encouraged behaviour that countermands standing orders in relation to phoning in reports at the end of the shift ' The project team have worked hard to address any concerns the northern people have had. (Field Note 3rd August, 1998)

5.4.6 Focus on diverse communication.

This theme related to the diverse options available to Tasmania Police for communicating to their staff. The coding process revealed three sub themes relating to this theme. The sub themes were face-to-face communication, traditional communication and communication strategy. Each of the sub themes will now be presented.

Face-to-Face Communication

Briefings, consultations and feedback sessions were conducted using face-to-face communication. Face-to-face communication was the dominant communication method adopted by Tasmania Police.

Inspector F had already discussed a strategy for the meeting and hoped to defuse any negative feelings from the beginning. The meeting was in the muster room with a table and three chairs at the front of the room, this was for us. The rest of the detectives sat around the room forming a large circle. Inspector F started the meeting by explaining that he was there to identify their concern, prioritise them and then get to work and fix them. He said 'that this is a pilot

and they were expecting that not everything would be perfect.' From that point on the whole of the meeting became positive. (Field Note 2nd April, 1998)

The change agents were consulted about the best method of communicating the change for the projects. The consultations helped develop the change management strategy adopted for each of the projects.

Sergeant B said he 'interviewed the change agents in the Southern and Eastern district to gain their views on the performance appraisal pilot and how best to manage the change associated with the implementation. (Field Note 7th September 1998)

Change agents were briefed on projects prior to the rest of the organisation. The briefing included the aim of the project, the reasoning behind the decision making, the current status of the project and the implications for stakeholders.

The presentation would be broken up with some information from the change agents. The change agents are required to come to BATON for a briefing on the video. (Field Note 26th February, 1998)

The change agents were involved in disseminating information relating to the project to the rest of the organisation. The method of dissemination was not standard across districts or units. The change agents were responsible for deciding the best approach for their district or unit.

Inspector E explained to the change agents that the new process will involve the use of a Crime Management Unit. This unit will make effective decisions in relation to attending and managing crime. (Field Notes 20th January 1999)

Traditional Communication

In 1998 the level of technology in Tasmania Police was relatively low. Email was not a dominant form of communication as access to machines was limited. The project team however saw the advantage of using email and decided that it was an effective form of communication to keep the change agents updated.

Email should be used however he highlighted the lack of access by some of the officers. This may require a change in culture. He agreed that targeting informal leaders would provide benefits to the change process. (Field Note 28th May, 1998)

The change agents delivered the presentation to their sections of the organisation. The Call Centre project team used a video to provide members of the organisation with a standard message. The video was paused half way through to allow the change agents to explain the implications of the project to their individual work places.

I had a look at the video that covered the briefing on the Call Centre. (Field Note 26th February, 1998)

A bulletin was developed after the implementation of the Northern District Call Centre pilot. The aim of the bulletin was to communicate progress of the pilot to the organisation. The bulletin identified outstanding issues with the Northern pilot. The bulletin was the mechanism that kept the Northern District informed on the ranking and status of the issues identified during the pilot. The project team believed it essential to keep the northern stakeholders informed on the resolution of issues identified by the pilot.

After lunch Inspector F has asked me to help in developing a bulletin to go out with the pays regarding the pilot of the Call Centre and Offence Reporting process in the northern district. (Field Note 23rd April 1998)

Communication Strategy

An individual communication strategy was developed for each of the projects. The strategy was designed with the input of the change agents and the project team.

How will the presentations be delivered is the question put to the change agents by Sergeant B. The presentation will have to be tailored to the respective groups. The presentations should be backed up with a flyer in the pays, gazette and notices. Use the flow chart yet simplify it and tailor it to each of the individual audiences. (Field Note 20th January 1999)

Open communication between the project team members facilitated the implementation of the Northern pilot and the resolution of problems identified in the initial days of the pilot.

Inspector F spent most of the time on the phone to Inspector E. The communication flow from north to south has been good and there have been some issues that are resolved because Inspector E has kept Inspector F and State Servant H informed about developments in the south. (Field Note 2nd April, 1998)

Regular communication with the change agents was established. Email was used to update the change agents on a regular basis. The project team decided not to wait until milestones had been achieved before communicating with the change agents.

Inspector E spoke about e-mailing the change agents every couple of days with snippets of information rather than waiting until something has been signed off. He said 'a message should be sent even if it is stating that all is well and roll out of the new radio system is on schedule.' (Field Note 12th March 1998)

Tasmania Police was a hierarchical organisation that used directives as a form of communication. The organisation found that, when implementing change associated with a pilot project, a directive was not the best form of communication.

The DCOP spoke over his allocated time and referred to such issues as diversionary conferencing and the fact that this should have been sent out via the change agents. (Field Note 19th January 1999)

5.5 Chapter Reflections

This chapter has described the process used to perform the analysis of phase one of the data collection. Stage one produced a rich description that provided insight into how Tasmania Police implemented technology-based change. Stage two of the data analysis followed the principles of thematic coding guided by Grounded Theory open coding and revealed themes relating to the data.

The first and second sections of this chapter presented the rich description describing the four projects implemented by Tasmania Police. The rich description was constructed by extracting facts from the data and presenting them in chronological order to better explain the change process undertaken.

Section three and four of this chapter presented the process undertaken to produce the themes and their relationship to the data. The use of thematic coding, guided by open coding as prescribed by Strauss and Corbin (1990), produced themes from the field notes. The themes provided the basis for phase two data collection.

In the next chapter the rich description and the themes are interpreted and discussed to produce factors to explore the implementation of technology-based change.

6 Discussion and Interpretation Phase One

6.1 Introduction

This chapter presents the discussion and interpretation of phase one data analysis: The chapter commences by revisiting the research objectives and research questions. The chapter then presents a discussion on each of the themes, as presented in chapter five. The discussion of the themes identifies factors relating to the implementation of technology-based change at Tasmania Police. The interpretation highlights factors relating to technology-based change that are discussed in relation to the literature. The factors are then compared to models of change. The chapter concludes with a discussion of the inter-relationships of the factors. The chapter is structured in the following sections:

- Section 6.2 revisits the research objectives
- Section 6.3 revisits the research questions
- Section 6.4 discusses the six themes identified in section 5.4 and highlights eleven factors that had an impact on the implementation of technology-based change at Tasmania Police.
- Section 6.5 provides a comparison of the factors to the planned model of change (Lewin 1952), Jick's (1991) ten commandment model and Kotter's (1995) eight step model of change.
- Section 6.6 discusses the supportive and conflicting inter-relationships of the eleven factors.

6.2 Research Objectives

This section has revisited the research objectives and research questions to focus the discussion and interpretation presented in this chapter. The main focus of this research was to understand how Tasmania Police implemented technology-based change and to identify factors that were important for that implementation. Before discussing the themes identified in section 4.6, the research objectives and research questions have been revisited. As presented in sections 1.3, this research aimed to achieve the following objectives:

• To understand Tasmania Police and its approach to implementing change and technology

To examine in detail Tasmania Police projects focused on the implementation of change through technology

- To identify factors present during the implementation of technology and organisational change at Tasmania Police
- To consider how insights generated from the case study at Tasmania Police relate to existing literature on change management and the implementation of technology.

6.3 Research Questions

In order to meet the objectives above two research questions were developed.

Research Question One

What approaches do Tasmania Police use in implementing and communicating technology-based change over time?

Research Question Two

How do case study insights enhance understanding of the implementation phase of change and the role and impact of technology?

6.4 Themes and Factors

In this section the six themes are examined and factors relating to change are presented. The themes are first discussed in relation to the projects. The themes are then compared to the literature available up until the time the data was collected. This directly assisted in the analysis of how change processes within Tasmania Police current at the time related to contemporary literature in the context of prevailing change management expertise and practice. The inter-relationships of the themes are then explored. At the end of the section, a conceptual map details the factors and their inter-relationships. The themes are not presented in any order of importance nor are the factors delivered in any chronological order. The next section (6.5) focuses on discussing the importance and inter-relationship of the factors.

6.4.1 Mandating project governance

The analysis revealed that there was an overarching control on technology-based projects and that the hierarchical climate of the organisation resulted in projects being controlled by an Information Management Board. This committee was charged with approving the allocation of resources, making decisions in relation to the project and monitoring the progress of the project. The committee included key decision makers in the organisation along with the stakeholders of the project. Members of the committee were empowered to make decisions. Their role was to monitor the implementation of the project in accordance with the specified timelines and, at the same time, to ensure that the factors of time, quality and cost guided decision-making. The Information Management Board initially demonstrated flexibility when resetting unrealistic timelines.

There was significant evidence (Appendix 8) that documentation was an essential component of proposing and implementing change in Tasmania Police. Documents provided a tracking of change from their proposal through to their implementation. Documents were presented and recorded at meetings; this created a transparent process for change. While the analysis supported this structured approach to change, it is necessary to question whether there were proposals that were never considered by the organisation because they had not been presented in the right format or to the right person. If this were the case, then innovation from the grass roots level may have been restricted. This will be re-examined in phase two of data collection.

The literature supports that planning is an essential process when implementing change (Bullock & Batten 1985; Huse 1975; Kotter 1995; Lippitt, Watson & Westley 1958; Pettigrew & Whipp 1993). Good planning requires controlled implementation (Benjamin & Levinson 1993) and a clear objective (Rhodie 2000). Projects require good planning and controlled implementation to be successful (Jick 1991). Governance controls planning to ensure the goals and objective identified in the planning process are achieved.

Tasmania Police was a hierarchical organisation that operated in a climate of clearly defined procedures. This environment automatically became the basis for how the

organisation dealt with the task of implementing technology-based change. Critical mass for change needed be made within senior management (Pettigrew & Whipp 1993), which formed a powerful coalition (Kotter 1995). A formal approach incorporated rigorous documentation tracking the instigation, selection, development and implementation (Huse 1975) of approved projects. The documentation was a valuable resource for the organisation when communicating the change. Information regarding objectives, goals (Huse 1975), alternatives and strengths or weaknesses was available to both the project team and the change agents to ensure factual information was presented to the organisation.

Governance is a component of the change architecture (Carnall 1990). Keen (1981) advises that committees responsible for implementing change need to incorporate key decision makers who are empowered to make decisions rather than just advise. Change must have support throughout the organisation and, in the case of Tasmania Police, one way this was achieved was by ensuring involvement from key managers in the organisation. The existence of the Information Management Board supported the change by the inclusion of key managers in the decision making process. An important inclusion on this committee was the stakeholders of the project (Jick 1991). The literature supports providing top level support for implementing technology-based change.

From this discussion the analysis supported the first factor for implementing change in Tasmania Police:

An active level of governance for change.

6.4.2 Providing strategic direction

The projects explored in this research used technology to provide efficiency gains and to change current practice. The strategic direction developed by Tasmania Police was embodied in their vision and mission statements. The vision statement, while calling for recognition, also encouraged the organisation to strive for excellence. Using “premier” in the statement conjured up images of leading or being the best. The vision statement identified how the organisation wanted to be seen by the rest of the

world. The vision statement asked the rest of the world to recognise that Tasmania Police was an excellent policing organisation.

The mission statement was built around the core business of maintaining law and order, protecting life and property, enhancing community safety, and reducing the fear and the incidences of crime. The mission statement was a simple statement that offered guidance to the organisation when making decisions. "To provide a safer Tasmania" focused on the core business and, through community consultation, Tasmania Police had learnt that the public feel safe when they see officers on the streets. The mission statement underpinned the reengineering opportunities by returning officers to core policing duties and releasing them from the time consuming administrative tasks. Both the vision and mission statement supported technology and organisational based change.

The analysis confirmed that the mission statement was the driver for projects. Projects were justified and evaluated on the number of Full time Equivalent (FTEs) released back to core policing duties. The business case for the Tasmanian Police Call Centre project documented an expected saving of 7 FTEs by decreasing the reporting time taken for an offence report. In addition, the business case identified that the strategic alignment of the Tasmanian Call Centre project to the organisational strategic direction was high. Tasmania Police worked in an unusual environment with the government guaranteeing funding for the 1100 officers. The guarantee meant that any savings made from efficiency gains were redirected to core policing. Without such a guarantee, the organisation may have been tempted to reduce the workforce thereby reducing some of the financial constraints on the organisation when realising savings.

It should be noted that, while Tasmania Police clearly aligned change and decision making with its vision and mission, that both of these statements were developed ten years prior. Lacking a recent review, their relevance should be questioned.

The literature supports that change requires a vision (Carnall 1990; Huse 1975; Kotter 1995) which links to strategic opportunities (Pettigrew & Whipp 1993) and has an external focus (Rhodie 2000). Technology-based projects need to strategically align

with the organisation (Yetton, Johnston & Craig 1994). The vision should represent the values of the organisation and be shared (Warne 2000; Warne et al. 2000). Jick (1991) posits that a clear vision will guide the organisation in its decision making. Warne, Pascoe et al (2000) identify that a lack of vision can impair the organisation's ability to learn. Leaders need to create simple and effective vision and mission statement (Denton 1996; Kettinger & Grover 1995; Kettinger, Teng & Guha 1997) that guides the future while ensuring that the core business is foremost in the organisational decision-making. The literature supports providing an overall strategic direction for implementing technology-based change.

From this discussion the analysis supports the second factor for implementing change in Tasmania Police:

An overall strategic direction that change is easily aligned to.

6.4.3 Supporting a network of change agents

Tasmania Police recruited a network of people to communicate the planned changes to the rest of the organisation. The people who performed this role were given the name of change agents. The change agents in Tasmania Police were not responsible for implementing the change but were responsible for accurately communicating information in relation to the change to the rest of the organisation. They were not asked to take responsibility for the change, they were not asked to become one of the party faithful, rather, they were asked to honestly and accurately communicate the information provided to them to the rest of the organisation. How they communicated the information was for individual change agents to resolve thereby allowing them the freedom to choose the most appropriate mode of communication for their workplace.

As discussed in section 2.4.4, the change agents were recruited from all levels of the organisation and across all districts, and used both officers and state service personnel. The analysis revealed that this coverage was difficult to maintain as the officers were transient. Transfers to another division or district disrupted the distribution of the change agent network, as did a promotion or secondment as this normally was accompanied by a transfer or a change of rank. The analysis showed

that additional rounds of change agents were recruited to provide the coverage required to ensure that all divisions and districts had change agent representation.

The change agents were supported at the highest level as the Deputy Commissioner of Police, who had an open door policy, was the change agent sponsor. Initially, the Deputy Commissioner briefed the change agent network, via the Change Management Coordinator, before briefing senior management. He later changed the timing and briefed the change agents at the same time as he briefed senior management. He wanted to ensure that the information provided to senior management was transmitted intact to the operational level of the organisation. In the past the organisation had demonstrated an inability to accurately communicate information through all levels of the organisation (Thomas 1996). As the change agent network was based on the normal structure of the organisation, with change agents representing all ranks, information provided to the network was delivered simultaneously across the organisation without being filtered through the hierarchy. While the analysis did not provide any explicit evidence, this approach may have been seen to undermine the senior management of the organisation. The analysis did however reveal that there was recognition by senior management of the change agents in the workplace.

The change agents were supported by the Change Management Coordinator (see section 2.4.7) who was responsible for communicating information, coordinating training and providing resources to the change agents. The Change Management Coordinator also coordinated the change management strategy for all the projects in Business Project Services, and did this in consultation with the change agents. The Change Management Coordinator used a number of communication vehicles to disseminate general information and updates on existing projects to the change agents. The analysis revealed that, when disseminating information relating to a new project or new change, face-to-face communication was the vehicle of choice.

All change agents undertook training for their role (see section 2.4.6). The training was originally developed by the consultant KPMG and was slightly modified for each of the intakes of change agents without diverging from the main theme of the training. The changes included a focus on the change agents becoming proactive in their role and the need to feed information back to the Change Management Coordinator or the

Deputy Commissioner when they came across matters that were of concern to members of the organisation. One such issue was a decision made by management to stop buying white cars for patrol cars. When it was explained that the rationale for the decision was economic and that the organisation was flooding the local market with white cars, the change agents fed that back to their colleagues in their workplace thus resolving the issue. What was of concern to the Change Management Coordinator was that this issue had been the topic of conversation in the organisation and not one of the change agents had asked for clarification of the decision. This highlighted the need for the change agents to become more proactive in their role and to accept that communication was a two way process whereby issues discussed at the grass root level should be passed up to management to provide the opportunity for clarification and explanation.

The change agents in Tasmania Police diverged from those reported in the literature (Bedeian 1992; Bullock & Batten 1985; Guha et al. 1997; Huse 1975; Kahn 1995; Lippitt, Watson & Westley 1958; Ragsdell 2000; Schein 1997) as they were not Information Systems specialists (Markus & Benjamin 1996) nor were they project managers (Buchanan & Boddy 1992; Bullock & Batten 1985; Huse 1975; Lippitt, Watson & Westley 1958). Markus and Benjamin (1996) identified three types of change agents: Traditional Information Systems Model, Facilitator Model and Advocate Model each of which required the change agent to be either an Information Systems specialist or a manager in the organisation. The roles of change agents in Tasmania Police, as described in the analysis, differed from the literature view.

The literature supports that communication is essential when implementing change (Clayton & Gregory 2000; Guha et al. 1997; Klein 1996; Leavitt 1964; Troutt, Ponce de Leo & Bateman 1995). Jick (1991) calls for leaders to seek involvement, communicate and disclose information during the change transformation. He also identifies that real communication requires a dialogue amongst organisational members. Tasmania Police identified that, in order to reduce miscommunication, the timing of the message should be well planned and that building in flexibility allowed each change agent to use the best mode of communication for their workplace. Klein (1996) however identifies that the most effective way to communicate change in an

organisation is to use the lines of hierarchy as the communication channel. The literature supports communication as a factor when implementing change.

Training relating to change should be planned to coincide with the change (Denton 1996; Spencer & Pruss 1993). Training helps the organisation learn (Warne et al. 2000). Jick (1991) includes training in the practical component of the enabling structure. Training was incorporated into all project implementation plans and was a key ingredient in the implementation of change in Tasmania Police. Jick (1991) discusses the importance of an implementation plan to ensure that the organisation is capable of handling the amount of change being undertaken and the development of enabling structures to support the change. Tasmania Police took a holistic view of the amount of change being undertaken by clearly defining the change as projects. The Business Project Services was a component of the enabling structure, as decreed by Jick (1991), and provided support and resources for the change. The literature supports training as a factor for implementing technology-based change.

From this discussion, the analysis supports four more factors for implementing change in Tasmania Police:

Create an integrated network for communication that sits outside of the normal hierarchical layers;

Communicate to the network at the same time as briefing senior management;

The network is free to choose the appropriate mode of communication for their workplace; and

Training is essential.

6.4.4 Managing projects

Technology provided an opportunity for Tasmania Police to improve business practices and release officers back to core policing duties. In 1997 the level of technology in Tasmania Police was relatively low. Phase one of Project SAMSON upgraded the personal computers to a common standard; this resulted in 230 new Pentium standard personal computers (PC) being distributed throughout the organisation. Phase two provided a standard desktop environment so that all PCs operated in the same manner. While it was important that the technology be updated,

to allow for ease of communication and to provide a common platform for the organisation, the analysis supports that technology was not the driver for the reengineering opportunities. Business processes were investigated, mapped and then redesigned. In most cases technology supported the redesign and facilitated the efficiency gains, thus being the enabler.

Tasmania Police demonstrated clear commitment to the process of change by the creation of a project office, Business Project Services. Where practical, all projects were located in the project office, thereby offering support and providing the organisation with opportunities for organisational learning. The project office had a manager who oversaw the projects in the Business Project Services and also had a place on the Information Management Board. All projects had project managers while size dictated if a project required other project members. The Tasmanian Call Centre Project had a team assigned to the project while the other three projects relied only on a project Manager. The project office also housed the Change Management Coordinator who ensured that a change management strategy was aligned to the projects. The Change Management Coordinator worked closely with the project managers and the change agents to develop a tailored change management strategy for each of the projects. The structured approach to implementing change, as demonstrated through the analysis, should result in continuous improvement but were the processes too rigid and did they, therefore, stifle efficiency?

The Tasmanian Call Centre Project involved two training imperatives, the first for the call centre operatives and the second for the allocation officers. The Call Centre operatives had been selected to perform the task of data entry and possessed the required skills to perform the task. The training for the operatives focused on the system. Due to the delay of the pilot, the Call Centre operatives received additional training while waiting for the system to go live. The additional training was not necessary but deemed appropriate to ensure that the just-in-time delivery of the training for the original "go live date" was maintained. The second group to be trained were the allocation officers whose substantive positions were in Criminal Investigation Bureau. These officers were not technology literate so the training had to be carefully planned and delivered.

Project implementation follows a formal methodology, with projects either being piloted or implemented using a phased approach. The Tasmanian Call Centre project adopted both a pilot and a phased approach to its implementation, with the Call Centre being piloted in the northern district then rolled out to the western and finally the southern and eastern districts. The Crime Management Unit project adopted a pilot implementation approach, with different aspects of the project being piloted in various districts. Western district was used to pilot the new phone system associated with the project. The analysis revealed that both these approaches to project implementation provided the organisation with opportunities to review the progress of the implementation.

The literature supports the Tasmania Police use of projects as a mechanism to break down large scale change into discernable pieces (O'Hara, Watson & Kavan 1999; Tyre & Orlikowski 1993). Projects consist of three main factors: time; quality; and cost (Schwalbe 2000; Ward & Griffiths 1996), each of which were carefully considered in the development of the projects by Tasmania Police. Projects are traditionally controlled by setting milestones, creating budgets, using a defined methodology and having a change management strategy aligned to the implementation (Huse 1975; Ward & Griffiths 1996). Projects should provide a clear view and process of the change being implemented and be managed (Benjamin & Levinson 1993; Rhodie 2000). Tasmania Police clearly defined the changes being introduced by using projects with clear boundaries and supporting the projects with the allocation of resources such as space and personnel. A good project manager is essential to the project success (Schwalbe 2006). The literature supports the use of projects when implementing technology-based change.

From this discussion the analysis supports the seventh factor (and reinforced the sixth factor presented in section 6.4.3) for implementing change in Tasmania Police:

***Change is clearly articulated through projects and project boundaries; and
Training is essential***

6.4.5 *Promoting cultural change*

The analysis revealed that the planned change associated with the Tasmanian Call Centre project was clearly defined and was reliant on access to the Call Centre. While the project progressed in line with the execution plan, problems with access were identified shortly after rolling out the project in the last two districts. Officers, after experiencing problems with contacting call centre operators from the victim's home, changed the process and made the calls from the station prior to the end of a shift, thereby reverting to old practices.

The change to the process reduced the expected FTE savings associated with the project as officers were returning to the station early rather than staying on patrol. While the alterations to the process were not desirable for the organisation, the officers recognised that their credibility was being challenged when they were placed on hold by the call centre for periods exceeding thirty minutes while in the victim's homes. The Tasmania Call Centre Project team worked to resolve the access issue and asked that officers be patient while a solution was found. The access issue was not fully resolved by the project team within the scope of the Tasmania Call Centre project. The issue was transferred to the Crime Management Unit project for resolution. The analysis revealed that strict adherence to the project plan inhibited the resolution of the issue. This adherence, and the lack of swift action, pushed the officers to revert to old practices and not make the desired change.

As presented in the rich description (section 5.2), the Tasmania Call Centre project team embarked on an education program to encourage officers to try again to make contact with the call centre from the field. Changing behaviour is hard to implement and made more difficult when the technology does not perform to expected standards. The project team was required to consistently encourage officers to retry gaining access from the victim's house, as prescribed by the business case. At the end of the data collection, a review to check on the required behavioural change had not been undertaken.

A change of behaviour for Criminal Investigation Bureau detectives was also required; with the Crime Management Unit project, however, the change did not rely

on the implementation of technology. Criminal Investigation Bureau officers were asked to work with constables and be the first to attend the scene of a crime.

Previously, the Criminal Investigation Bureau was not involved until the report had been lodged by the patrol officers (usually constables) and allocated to them for investigation. The potential for resistance by the Criminal Investigation Bureau detectives, who view themselves as an elite unit, was identified in the planning of the change management strategy for the project. This prompted the change agents to formulate a change strategy specifically for the Criminal Investigation Bureau. The reasoning and the potential benefits to the new approach to crime investigation were clearly explained to the Criminal Investigation Bureau detectives. Included in the strategy development was the identification of the most credible person to brief the detectives. Because the potential for resistance was so great, the change agents requested that the project manager (an ex Criminal Investigation Bureau detective himself) be the only person to brief the detectives. An additional benefit of having the project manager brief the detectives was that he could answer any questions posed by them. The change agents saw that this was an important aspect of the change strategy for the project. The analysis showed that resistance was embraced and addressed with clear communication explaining the reason for the change and the benefits of the change to the individual and the organisation.

Tasmania Police was a hierarchical, para-military, command control organisation when dealing with its core business. Ranks were acknowledged and orders followed. However the organisation was also a modern, consultative organisation that had adopted modern management techniques to help with the successful implementation of change. In one environment resistors were expected to conform and perform their duties without question. But in the modern organisation, the analysis revealed a focus on clear two-way communication to explain the change and overcome resistance. Tasmania Police managed its dualities as one environment must co-exist with the other.

The literature acknowledges that organisational change is difficult to implement and that the social context, intentions and actions of the key players must be considered, along with the implementation process adopted (Orlikowski 1993). Resistance to change should be identified (Keen 1981). While the changes with projects are

planned and intended, there is an opportunity for other changes to emerge as the system is being used (Orlikowski 1996). This was the case with Tasmania Police, in relation to the Call Centre. Resistance was overcome by targeted promotion of the change to the resisters (Maidique 1980).

Jick (1991) calls for organisations to separate from the past to ensure that the new vision is enacted. The case of officers being unable to access the call centre and therefore reverting to previous behaviour was an example of how Tasmania Police needed to keep reinforcing the separation from the past in order to achieve the desired change. The Crime Management Unit project also required members of the organisation to separate from the past and conduct their business in a new, more efficient manner by changing the way they initially investigated crime. Both these behavioural changes were reinforced by Tasmania Police. Change needs to be reinforced and institutionalised in the organisation (Bullock & Batten 1985; Huse 1975; Jick 1991; Lewin 1952; Lippitt, Watson & Westley 1958). The numerous attempts by the Tasmanian Call Centre project team to ensure that officers rang offence reports in from the field was done to reinforce and institutionalise the change in the organisation.

Rogers (1995), when looking at Diffusion of Innovations, posits that technological innovation creates uncertainty which must be reduced to a tolerable level before an adoption decision is made. The approach taken by Tasmania Police aligned with Rogers' (1995) assertion that participants will make a decision to adopt when their level of uncertainty has been reduced. Further explanation of the change and delving into the rationale behind the change facilitated an adoption decision. The literature supports the factor that change should be explained and that resistance should be embraced.

From this discussion, the analysis supports the eighth factor for implementing change in Tasmania Police:

Resistance is embraced and change is explained

6.4.6 Focusing on diverse communication

The recruitment of the change agents was a deliberate strategy adopted by Tasmania Police to use face-to-face communications as the main method of disseminating information relating to change to the organisation. In the past the organisation had tried a variety of methods of communication. One was to include a newsletter detailing changes with the pay slips that were posted to employees each fortnight. The Commissioner of Police confirmed that this strategy was not effective when officers were asked questions relating to information that they had already been given via the newsletter. When queried, the officers revealed that they were discarding both the pay slip and the newsletter, without reading either.

The Deputy Commissioner of Police insisted that the role of the change agent not be narrowly defined so as to encourage change agents to use the most suitable method of communication for their specific workplace. The analysis revealed that face-to-face communication was the preferred method in the majority of workplaces. However one change agent, a state service member, found that leaving a folder containing copies of emails and documents relating to change on the coffee table in the break room suited his workplace the best. Members of his workplace would then raise issues of concern with him after reading the documents.

As a part of the early training, the change agents were taught how to conduct presentations. Their role included presenting information on projects to members of the organisation. Being involved in determining the best method to communicate information regarding projects, allowed the change agents the opportunity to shape the method of communication to best suit the information being communicated and the audience receiving that information. The analysis supports that presentations suited disseminating the initial information relating to a project. Project updates from the change agents were communicated by a less formal method. Other traditional methods such as bulletins and emails were also adopted to help with the flow of information relating to project updates.

Included in the Scoping and Target report for Project BATON was a communication strategy (Appendix 2) that identified the objectives, target audience, communication

vehicles and implementation schedule. This strategy highlighted the importance of interactive communication for the delivery of information relating to projects.

Written communication was adopted as a supportive tool for the more interactive approach. The analysis revealed that the interactive approach was primarily adopted for all project information dissemination. The communication strategy took advantage of numerous communication vehicles but was aimed at face-to-face communication as the initial contact vehicle.

The communication strategy however did not accommodate the duality of the organisation. The analysis revealed that, at times, the organisation reverted to a command control environment in which orders were issued and expected to be followed. This was not of concern when the order related to core business but was a cause of conflict when the order related to a change of behaviour or process that would normally be managed through a project or disseminated via the change agents. One instance was when the Deputy Commissioner of Police issued a directive that “diversionary conferencing” would be used when dealing with juvenile offenders. Diversionary conferencing required officers to bring first time juvenile offenders who have admitted their guilt together with their victims rather than charging them and handing them over to the courts to deal with.

Management had tried a number of times to convince officers to try this new process but failed to appreciate that the new process was more time consuming than the established method of booking and handing the juveniles over to the court system. It was not until the Deputy Commissioner of Police, at a change agent meeting, explained that the new process aimed to reduce repeat offenders that support for the trial was gained. The analysis demonstrated that, when dealing with an organisation managing dualities, care needed to be taken to use the right approach when making or proposing change.

The literature does not support Tasmania Police’s version of a change agent. There are differing views on what is meant by a change agent (Markus & Benjamin 1996) and, as discussed in section 2.4.5, the change agents for Tasmania Police were initially recruited in line with the Change Management Framework developed by the consultant, who detailed their roles responsibilities and key performance indicators

(Appendix 2). By 1999 the role had been further developed and the change agents became communicators of information. Neither role was in line with the literature. Change agents should focus on open, honest and timely communication to members of the organisation (Brewer 1995; Buchanan & Boddy 1992; Markus & Benjamin 1997) while managers tend not to extend communication to the front line (Brewer 1995). Communication should include the reason for the change (Brewer 1995; Rhodie 2000). Face-to-face is the preferred approach with backup up provided by several other media (Klein 1996). The literature supports face-to-face communication when communicating change. Rogers (1995) would align Tasmania Police change agents with adopting a homophilous approach to communication.

One of the most potent tools for overcoming resistance is open communication (Jick 1991; Warne 2000). Effective communication requires a dialogue and Tasmania Police fostered an environment that supported ongoing dialogue regarding change (Warne et al. 2000). The primary focus was on face-to-face communication, which provided an opportunity for dialogue to take place. However, recognising that a single approach to communication was risky, the communication strategy took the diversity of the audience into consideration and encouraged multiple vehicles of communication, with the aim of reaching the majority of the intended audience. The literature supports diversity of communication as a factor on implementing change.

From this discussion the analysis supports the ninth and tenth factors for implementing change in Tasmania Police:

Focus on face-to-face communication; and

Diversify communication

6.4.7 A factor that is embedded in all themes

The final factor is embedded in all of the themes. Change must have top level support to succeed. Tasmania Police ensured that top level support was provided for all aspects of change. The Deputy Commissioner of Police embodied the top level support for the organisation. While working in partnership with the Commissioner of Police, he was empowered to make operational, tactical and strategic decisions.

The Deputy Commissioner of Police chaired the Information Management Board for the Tasmanian Call Centre Project. The membership of that committee had been chosen to ensure that effective decisions were made in relation to the project and that the relevant stakeholders played an active role in that decision-making. Some members of the executive of Tasmania Police sat on this committee; this provided them with the opportunity to have first hand input into the shaping of the change as it was being implemented.

As the sponsor for change, the Deputy Commissioner was also the sponsor for the network of change agents. He provided them with an open door, either directly to him or via the Change Management Coordinator, to facilitate them seeking further information relating to change and the decisions that were made. This was a significant change in the way this organisation had traditionally operated. The analysis revealed that most of the change agents chose the Change Management Coordinator as the first point of contact rather than the Deputy Commissioner of Police. The Deputy Commissioner also personally briefed the change agents at statewide meetings on other changes that were made or planned. At the end of the briefing, the Deputy Commissioner insisted on a question and answer time where the change agents could ask for clarification or information on issues that related to their workplace.

The manager of the Business Project Services and the Change Management Coordinator both reported to the Deputy Commissioner. The structure of the Business Project Services provided opportunities for continuous improvement, with each project manager being supported by Business Project Services. The Change Management Coordinator provided support to each of the projects and ensured a change management strategy was developed, in consultation with the change agents for each of the projects. The central location of the Business Project Services provided easy access to the executive of the organisation as they were both housed in the same building, albeit on different floors.

The change agent network was the primary method for communicating change to the organisation, with this backed up by other communication vehicles. The interactive approach taken by the change agent network allowed members of the organisation to

engage with the change. The change agent network was supported by other communication vehicles such as email, telephone and bulletins. This diversity of communication was incorporated into the communication strategy to ensure maximum coverage. The role of the change agents was loosely defined to allow for the tailoring of communication based on their individual styles and the appropriate method for the workplace. The Deputy Commissioner encouraged the change agents to be flexible in their approach to communicating within their workplace. The analysis revealed that the change agent network had the support of senior management.

The literature supports that change requires a champion (Benjamin & Levinson 1993; Maidique 1980; Ward & Elvin 1999). Executive leadership and key players' intentions and actions impact change (Nadler & Tushman 1990; Orlikowski 1993) and need to link both strategically and operationally with the need for change (Pettigrew 1990; Ward & Elvin 1999).

Jick (1991) calls for organisations to not undertake large scale change unless they have the support of a strong leader. He labels this leader as the "change advocate". Tasmania Police had visible top-level support from the Deputy Commissioner of Police. This support crossed a number of domains ensuring commitment and support for the change.

From this discussion the analysis supports the eleventh factor for implementing change in Tasmania Police:

Visible top level support with an open door policy

Table 6.1 summaries the factors that have been revealed through the interpretation of the theses from phase one data.

Table 6-1: Themes and Factors

Themes	Factors
<i>Mandating project governance</i>	An active level of governance for change
<i>Providing a strategic direction</i>	An overall strategic direction that change is easily aligned to
<i>Supporting a network of change agents</i>	Create an integrated network for communication that sits outside of the normal hierarchical layers
	Communicate to the network at the same time as briefing senior management
	The network is free to choose the appropriate mode of communication for their workplace
	Training is essential
<i>Managing projects</i>	Change is clearly articulated through projects and project boundaries
	Training is essential
<i>Promoting cultural change</i>	Resistance is embraced and change is explained
<i>Focus on diverse communication</i>	Focus on face-to-face communication
	Diversify communication
<i>Embedded in all themes</i>	Visible top level support with open door policy

6.5 Models of change and Tasmania Police – Phase 1

The discussion above has provided insight into the eleven factors identified in phase one as important to the implementation of technology-based change at Tasmania Police. As discussed in chapter three, models of change can be mapped back to the original model of planned change developed by Lewin (1952). At this point it is helpful to present the eleven factors in relation to Lewin's 3 stage model, Jick's ten commandments and Kotter's eight step model of change, to identify how these factors compare to the change literature. Lewin's will be used as the basis for the discussion.

Table 6.2 illustrates that the existing change management models provided limited guidance on the implementation phase and that the phase one data from Tasmania Police revealed significant complexity.

Table 6-2: Change models and factors

Lewin's 3 Stage Model of change	Jick's Ten Commandments	Kotter's eight step Model	Tasmania Police Factors
Planning			
Unfreeze	Analyse the organisation and the need for change	Establish a sense of urgency	An overall strategic direction that change is easily aligned to
	Create a shared vision and common direction	Form a powerful guiding coalition	Create an integrated network for communication that is outside of normal hierarchical layers
	Separate from the past	Creating a vision	Focus on face-to-face communication
	Create a sense of urgency	Empowering others to act on the new vision	Diversity of communication
	Support a strong leader		
	Line up political sponsorship		
	Develop enabling structures		
	Craft an implementation plan		
Implementation			
Moving	Communicate, involve people, and be honest	Planning for and creating short term wins	Active level of governance for change
		Consolidating improvements. Producing more change	An overall strategic direction that change is easily aligned to
			Visible top level support for change with an open door
			Change is clearly articulated through documentation and project boundaries
			Create an integrated network for communication that is outside of normal hierarchical layers
			Communicate to the network at the same time as briefing senior managers
			Network is free to communicate how they see fit to their workplace
			Focus on face-to-face communication
			Diversity of communication
			Resistance is embraced and change explained
			Training is essential
Evaluation			
Refreeze	Reinforce and institutionalise change	Institutionalising new approaches	

Unfreezing

While the unfreezing section of Lewin's model is not the focus of this research it is interesting to note that four of the eleven factors can be aligned with the first phase of the planned model of change. The three of the four factors align directly with the unfreezing phase of Lewin's (1952) planned change model and offer nothing new. The factor that does not appear in the planned change models (as outlined in Table 3-1) is that of the creation of a network for communicating to the entire organisation. The need for communication is clearly evident in this phase of the change process. Jick (1991), while discussing implementation when introducing his ten commandments, presents eight of the ten commandments that align to unfreezing the organisation rather than the task of implementation. Kotter (1995) presents four steps associated with the unfreezing or planning of the change. Both Jick (1991) and Kotter (1995) suggest the need to create a sense of urgency in the planning stage, guide the planning and have a clearly articulated vision. Tasmania Police, in consultation, defined a strategic direction and then communicated that direction, focusing on face-to-face communication supported by other communication vehicles.

Moving

The factors identified to align with Lewin's (1952) 'moving' phase offer insight into the implementation of technology-based change. Other planned models of change (Bullock & Batten 1985; Huse 1975; Lippitt, Watson & Westley 1958) tend not to elaborate on how to implement the change or move the organisation from one state to the next. Jick (1991) focuses on communication during this phase and he suggests that communication should not be one way and should openly seek out involvement from organisational members. Kotter (1995) focuses on the creation of short term wins in the moving phase to keep the organisation focused and supportive. He also advises consolidation and planning more change. This step suggests continual improvement using a review cycle. The factors identified in phase one of this research focused strongly on communication during the moving phase of planned change. The strategic focus was still visible at that stage and carried over from the unfreezing phase to provide guidance during the moving phase. The change was supported by the use of projects and the whole process received top-level support. The eleven

factors aligned with the moving phase of planned change, with some also being linked to the unfreezing phase.

Refreezing

The third stage of Lewin's (1952) model, 'refreezing', was not the focus of this research therefore it was not surprising that phase one data did not produce factors aligned to this stage. Both Jick (1991) and Kotter (1995) institutionalise the change in this phase. This may be due to the focus on implementation and because some of the projects under review had not been embedded into the organisation at the time of phase one data collection.

From the discussion above it can be seen that the factors derived from phase one data offer some insight into implementing technology-based change. The factors will be explored in phase two data collection.


6.6 Inter-relationship between factors

This section investigates the inter-relationships between the factors identified in section 6.4. The factors are presented in the order of the extent of the relationship they have with the other factors. Each factor and its relationship is summarised in a table prior to discussing the relationship it has with other factors. The wording of some factors has been compressed to allow for ease of reading.

6.6.1 *Creating an integrated network for communication*

This factor has been derived from the theme "Supporting a network of change agents" and the analysis revealed linkages with other factors. Table 6-3 provides an overview of the six relationships aligned with the factor of *creating a network for communication outside of the normal hierarchical structure*.

Table.6-3: Inter-relationships with network

Network Factor	Is related to 	Change Factors
Creating an integrated network for communication that sits outside of the normal hierarchical structure	<i>Must have</i>	Visible top level support with an open door policy
	<i>Primarily uses</i>	Face-to-face communication
	<i>Requires</i>	Training
	<i>Is free to choose</i>	The appropriate mode of communication for their workplace
	<i>Is encouraged to use</i>	Diversity of communication
	<i>Needs to be</i>	Communicated to the network at the same time as briefing senior management

Support for the network was provided by the Deputy Commissioner of Police who was the change sponsor. The analysis revealed that support involved more than supplying a notional figurehead for the change. The creation, resourcing and acknowledgement of the change agent network ensured it played a significant role in the organisation. The Deputy Commissioner of Police was critical to that support. Therefore the analysis supported that a relationship existed between the change agent network and top level support.

As discussed in 6.4.3, the integrated network for communication that sat outside the normal hierarchical structure was a component of the original business case for Project BATON. The change agent network’s primary focus for communicating to members of the organisation was face-to-face communication, so supporting the relationship between the network and face-face-communication.

All the change agents underwent training. All intakes of change agents were trained, with the original twenty trained by the consultant. While the analysis supported a change of direction for the change agents to a more proactive two-way information role, the core basis of the training still aligned with the original delivery.

The relationship that was linked to allowing the network members to choose the most appropriate mode of communication for their workplace was a variation of, or was in conflict with, the relationship of using face-to-face communication. As discussed in

6.4.6, the change agents had, on a number of occasions, asked for clarification of the roles. This relationship conflicted with the use of face-to-face as the primary communication tool in that change agents were free to use other vehicles to communicate.

Previous experience had demonstrated to Tasmania Police that relying on one communication vehicle to deliver information to the organisation was not successful (section 6.4.6). The analysis revealed that, while face-to-face communication was the primary communication vehicle used by the change agent network, they were encouraged to use other vehicles to back up the face-to-face approach. The analysis therefore supported a relationship between the network and diversity of communication.


The relationship for the factor of communicating to the network at the same time as senior management was a direct result of the decision made by the Deputy Commissioner of Police to inform the change agent network of decisions at the same time as he informed senior management, as discussed in 6.4.3. The analysis therefore supported a relationship between the network and being communicated to at the same time as senior management.

Support for the network was given at the highest level of the organisation. The network was originally set up for face-to-face communication with members of the organisation and this was enhanced by the use of other media. The individual members of the network were encouraged to become attuned to their workplace to enable them to customise the delivery of information to best suit that workplace. Finally the network was trained, with change agents receiving the skills required to carry out the role they were assigned. Phase one analysis demonstrated the importance of the network and identified the factors that were related to the network's existence.

6.6.2 Visible top level support with an open door policy

This factor was embedded in all the themes and the analysis revealed linkages with other factors. Table 6-4 provides an overview of the three relationships aligned with the factor of *top level support*.

Table 6-4: Inter-relationship with top level support

Top Level Support Factor	Is related to	Change Factors
		
Visible top level support with an open door policy	<i>Insist that</i>	The network is free to choose the appropriate mode of communication for their workplace
	<i>Instigated</i>	Communication to the network at the same time as briefing senior management
	<i>Ensures</i>	An active level of governance

The factor of top level support did not, in this instance, equate to the change agent network having rigorous procedures imposed on them. The analysis revealed that the Deputy Commissioner of Police had been insistent that this flexibility be retained thus creating a relationship between top level support and the network in which change agents were free to choose the most appropriate communication mode for their workplace.

As discussed in section 6.6.1, the determination to inform the network of decisions at the same time as senior management, was made by the Deputy Commissioner of Police. The Deputy Commissioner of Police confirmed that some senior management were uncomfortable with information being provided to the change agent network at the same time as they were being informed. This concern did not however dissuade the Deputy Commissioner of Police from his decision, which in turn provided more credibility to the change agent network. Therefore there was a relationship between top level support and communicating to the network at the same time as senior management.

While some aspects of top level support focused on the Deputy Commissioner of Police in his role as change sponsor, this relationship shifted the focus to look at broader management support for change. An active level of governance, as discussed


in section 6.4.4, identified the involvement of other senior management in the implementation of change. The analysis revealed a strong link between the Deputy Commissioner of Police and the projects being implemented, as the manager of the Business Project Services reported directly to the Deputy Commissioner of Police. The Deputy Commissioner of Police also chaired the Information Management Board controlling the implementation of the Tasmanian Call Centre Project and the associated projects. This relationship ensured top level support and an active level of governance when implementing change.

The visible top level support not only sponsored but supported the change agent network by encouraging the change agents to be flexible in the manner in which they communicated with their workplace. The top level support ensured that they were provided with information at the same time as senior management, thereby providing them with even more credibility in their workplace. The top level support ensured that change was governed in accordance with the objectives outlined in the business case.

6.6.3 An active level of governance

This factor was derived from the theme “Mandating project governance”; the analysis revealed linkages with other factors. Table 6-5 provides an overview of the two relationships that conflicted with the factor of an *active level of governance*.

Table 6-5: An active level of governance

Active Level of Governance Factor	Is related to	Change Factors
		
An active level of governance	May not support	Resistance is embraced and change is explained
	Does not support	Communication to the network at the same time as briefing senior management
	Is guided by	An overall strategic direction

Tasmania Police was a para-military type organisation that was hierarchically structured and operated its core business in a command and control manner. Based on this observation, the conflict with the factor of an active level of governance and resistance to change is embraced, was logical to assume. There was no evidence in

phase one of the analysis that supported this conflicting relationship except for the duality of the organisation. Standard practice for core policing was that when "instructed" to do something the person receiving the order did it. This conflicted with the management style adopted for implementing change and therefore the two styles conflicted with the managers as they carried out their duties.


The second area of conflict existed because of the Deputy Commissioner's decision to brief the change agent network and senior management at the same time. This presented conflict with managers who wished to remain in control of how and when information was released to their districts or areas. The decision forced managers to either communicate in a timelier manner with those whom they controlled or have the change agents perform that task for them. Some managers saw this decision as disempowering them while the Deputy Commissioner, after not being satisfied with the hierarchical communication process of the organisation, viewed the change as effective.

Projects were governed (see section 6.4.1) by the relevant project team and an Information Management Board. While the projects and the outcomes were clearly defined and recorded via documentation, the role of governance was to monitor implementation to ensure that the outcomes were delivered to the organisation. The overriding factor for project governance was ensuring alignment with the strategic direction of the organisation, thereby delivering the FTE savings originally identified by the project. Thus the governance was guided by the strategic direction of the organisation. The strategic direction underpinned the development of change in Tasmania Police and provided guidance for decision making when implementing those changes.

6.6.4 Network freedom in choice of communication mode

This factor has been derived from the theme "Supporting a network of change agents" and the analysis revealed linkages with other factors. Table 6.6 provides an overview of the two relationships aligned with the factor of *the network is free to choose the appropriate mode of communication for their workplace*.

Table 6-6: Network free to choose

Network is Free to Choose Factor	Is related to 	Change Factors
The network is free to choose the appropriate mode of communication for their workplace	<i>Supports</i>	Diversity of communication
	<i>Must include</i>	Face-to-face communication

Within the network of change agents, all agents were consistently encouraged to customise the information and the mode of communication to best suit their workplace (see section 6.4.3). The focus on customisation supported the relationship between the network being free to choose the communication vehicle and the factor of diversity of communication. Supporting this relationship was the relationship between the network being free to choose and the factor of face-to-face communication.

The basic premise of the creation of the change agent network was to provide the organisation with a group of people who could explain detailed aspects of current change to other members of the organisation. This premise was based on using face-to-face communication as the means by which to have those discussions.

The change agents customised communication to best suit their individual workplace. While the analysis supported a change agent deciding to not use face-to-face communication, the network of change agents was set up based on the change agents' interacting with their individual workplaces using face-to-face communication. The analysis suggested that other communication methods were used to support the main method of face-to-face communication.

6.6.5 The articulation of change through project demarcation

This factor was derived from the theme “Managing projects” and the analysis revealed linkages with two other factors. Table 6-7 provides an overview of the relationship aligned with the factor of *change is articulated through projects and project boundaries*.

Table 6-7: Projects and project boundaries

Projects and Project Boundaries Factor	Is related to →	Change Factors
Change is clearly articulated through projects and project boundaries	Is controlled by	An active level of Governance
	Must align with	An overall strategic direction

Projects boundaries were used as a mechanism for implementing change by demarcating and segmenting individual steps within the change process (see section 6.4.4). Projects were aligned to the strategic direction of the organisation (see section 6.6.6). Tasmania Police, as a hierarchical organisation, governed the development and implementation of projects. Therefore a relationship existed between the factor of articulating change through projects and an active level of governance.


The vision and mission statement represented the strategic direction Tasmania Police were moving towards. As discussed in section 6.4.2, Tasmania Police were focused on providing a safer Tasmania. Thus there was an alignment between the projects and the overall strategic direction for Tasmania Police. While projects were clearly defined it was the alignment with the strategic direction that helped the change be accepted. The analysis supported that formal change was readily accepted by members of the organisation.

6.6.6 Overall strategic direction that change is easily aligned to

This factor was derived from the theme “Providing a strategic direction” and the analysis revealed linkages with another factor.

Table 6-8 provides an overview of the relationship aligned with the factor of *an overall strategic direction*.

Table 6-8: Inter-relationship with strategic direction

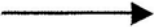
Strategic Direction Factors	Is related to	Change Factor
		
An overall strategic direction that change is easily aligned to	Must have	Visible top level support

A strategic direction cannot exist without top level support. Management must endorse and, through their actions, work towards the strategic direction identified for the organisation. The analysis revealed that the strategic direction for Tasmania Police was the guiding factor by which the organisation aligned decision-making. As discussed in section 2.4.1, the vision and mission statements were derived through consultation, and guided change in the organisation. Senior management used these strategic directions to decide and justify change to practice and procedure. Therefore there was a strong relationship between these two factors.

6.6.7 Training is essential

This factor was derived from the theme “Supporting a network of change agents” and the theme “Managing projects”; the analysis has revealed linkages with another factor. Table 6-9 provides an overview of the relationship aligned with the factor of *training*.

Table 6-9: Training is essential

Training Factor	Is related to	Change Factors
		
Training is essential	To ensure	Resistance is embraced and change is explained

Training was a strong factor in phase one of the analysis and was identified in two of the themes. Training supported the implementation of change by providing those involved with the project, whether stakeholders or end users, with the skills required to perform the task. Tasmania Police, as an organisation, embraced training. Officers were trained from recruits, and progressing through the ranks required additional


The change agents underwent training to acquire the skills

required to perform their role. Resistance was seen as a response from people who possibly required further information about the change being implemented. Therefore it was essential that training was conducted to help the change agents cope with resistance. The analysis from phase one supported the literature by identifying that increased training and communication helped reduce the incidents of resistance to change.

6.6.8 Face-to-face Communication

This factor was derived from the theme “Focus on diverse communication” and the analysis revealed linkages with another factor. Table 6-10 provides an overview of the relationship aligned with the factor of *face-to-face communication*.

Table 6-10: Inter-relationships with Face-to-face communication

Face-to-face Communication Factor	Is related to	Change Factors
		
Face-to-face communication	Conflicts with focus on	Appropriate mode of communication

Face-to-face communication was the main communication vehicle for the change agents; this conflicted with the change agents having the ability to choose the most appropriate mode of communication for their workplace. The analysis provided evidence that a small number of change agents used written communication vehicles to transfer information in their workplace. As the method of communicating was left to each individual change agent, there was an obvious conflict with the preferred method of communicating.

6.6.9 Significance of inter relationships

The discussion in this section identified various inter relationships between the factors and highlighted two significant factors:

- 1. Creating an integrated network for communication that sits outside of the normal hierarchical structure
- 2. Visible top level support with an open door policy

The two factors are central to the other factors as shown in Figure 6-1

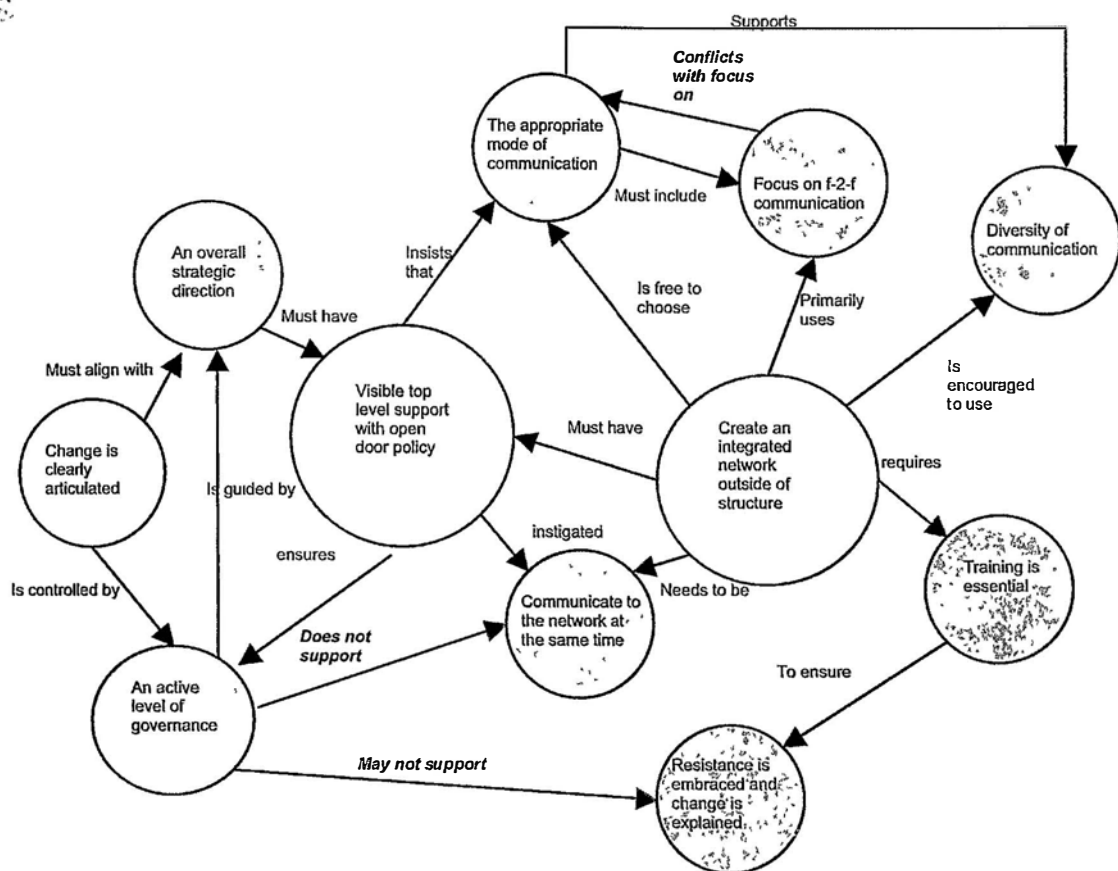


Figure 6-1: Factors for change - Phase one

Clearly, creating an integrated network is connected to various aspects of communication and must have top level support. Tasmania Police used the network to overcome the reliance on the hierarchical structure of the organisation to communicate with members of the organisation. The network's main strength was the ability of the change agents to communicate face-to-face with members of their workplace but they were not restricted to that role and were able to support face-to-face communication with other communication media. The network was provided with training to help with this role. The training was not prescriptive in relation to the role but provided the network with the skills required to perform the task of communication. The sponsor further empowered the network by providing them with information at the same time as it briefed senior district management. This strategy was implemented to ensure accuracy of communication through the organisation.

Visible top level support was central to a number of other factors. The network would not have existed without top level support. They would not have received the information at the same time as district management and would not have been free to

disseminate that information in a manner that best suited their workplace without top level support. The actions of the Deputy needed to align with the strategic direction of the organisation as actions can undermine the communication process. Therefore the top level of the organisation had to adhere to the strategic direction if it were to provide guidance to the organisation. Top level support ensured that change was provided with an appropriate level of governance to ensure that deliverables were forthcoming.

The factor of governance uncovered issues of dualities in the organisation. The organisation was not free to operate exclusively as a modern open and consultative organisation. There was a command control aspect to the organisation that required immediate action when undertaking core policing duties. There was a strong relationship between top level support and the strategic direction, with each factor supporting the other.

The discussion above has highlighted eleven factors and their interrelationships. Two of the factors seem to have greater significance and cross linkages and each of the factors and their inter relationships identified in phase one of this research were explored more fully in phase two of this research.

6.7 Chapter Reflections

This chapter provided the discussion and interpretation of the themes identified in chapter five. The chapter presented eleven factors that evolved from the interpretation of the themes. The factors have been compared to the literature, as presented in section 3.2. The literature supported the majority of the factors found in phase one of the analysis with the exception of *the creation of an integrated network for communication that sits outside of the normal hierarchical layers and communication to the network at the same time as briefing senior management*.

The chapter presented a comparison of the eleven factors with Lewin's (1952) model, Jick's (1991) ten commandments and Kotter's (1995) eight step model. The focus of the comparison was on the Lewin's moving phase (implementation), of which all eleven factors aligned.

The chapter then presented the inter-relationships present between the factors and highlighted two significant factors: *the creation of an integrated network for communication that sits outside of the normal hierarchical layers* and *visible top level support with an open door policy*. The chapter highlighted one factor that conflicted with two other factors. *An active level of governance* may not support *resistance* and did not support *communicating to the network at the same time as senior management*.

The factors, their importance and their inter-relationships were used as the basis for the formulation of the interview questions used in phase two data collection. The next chapter presents the data analysis for phase two data.

Data Analysis Phase Two

7.1 Introduction

This chapter describes the analysis of phase two data. It provides a brief reiteration of the thematic coding approach, with examples, before presenting the seven themes derived from the coding process used in phase two analysis of the semi-structured interviews. The chapter is structured in the following sections:

- Section 7.2 provides a brief reiteration of the thematic coding, as described by Boyatzis (1998) and guided by open coding from grounded theory to produce the themes.
- Section 7.3 presents the seven themes from the analysis of phase two interviews.

7.2 Data analysis using thematic coding – Phase two

This section will present examples of the coding process, as described in detail in section 5.3. These examples are provided as the data collection method used in phase one was field notes while the method adopted in phase two was semi-structured interviews. Both phases adopted the same data analysis method to ensure an inductive approach was adopted for each of the phases.

Table 7-1 and Table 7-2 are exemplar transcripts from phase two semi-structured interviews along with the associated summary codes. The data reduction process produced 917 summary codes from 6 interviews (Appendix 8).

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Table 7-1: Interview Change Agent K, October 2008

118	<i>Change Agent K: Well I am quite passionate about Change</i>	<i>Approach not changed</i>
119	<i>Management. It's something which I've always enjoyed doing and it</i>	<i>Passionate about change</i>
120	<i>always attracts a group of like minded people who I enjoy conversing</i>	
121	<i>with. My approach hasn't changed all that much. I think Change</i>	
122	<i>Management is not, there is a place for, formal atmosphere and there</i>	<i>Informal approach</i>
123	<i>is a place for informal atmosphere and I've had the most success in</i>	
124	<i>informal atmosphere. I might discuss it in a social sense after work. I</i>	
125	<i>might discuss it in a social sense during a tea break and I find I might</i>	<i>No need for great use of IT</i>
126	<i>evoke more conversation sometimes in that sort of theatre than I would</i>	
127	<i>do in a formal presentation when I'm conducting feedback using the</i>	
128	<i>card system or something similar. So I still use the traditional</i>	<i>Still use traditional methods</i>
129	<i>methods. I'm sure there will be people that will howl it down, not</i>	
130	<i>necessarily from within Police but without from outside Police</i>	<i>IT cannot replace face2face</i>
131	<i>perhaps who have a greater emphasis or need for ICT. I don't feel we</i>	
132	<i>have that need for ICT to communicate our change. Email's great, the</i>	
133	<i>net page is great and it gets the message across but nothing like sitting</i>	
134	<i>down with your people, particularly the people under your command</i>	
135	<i>or in your area.</i>	

Table 7-2: Interview with Acting Commissioner of Police, October 2008

615	<i>Acting Commissioner of Police: Well Business Project Services has</i>	<i>Business Project Services</i>
616	<i>become a Secretary for the Information Management Board. Have we</i>	<i>Secretariat for Information</i>
617	<i>been managing Projects as well as we used to? I think probably not, I</i>	<i>Management Board</i>
618	<i>think we've got to get back on it again on a more solid footing. I think</i>	<i>Currently not managing</i>
619	<i>we've taken on too many Projects, I don't think we've been know as</i>	<i>projects as well as they can</i>
620	<i>finishers of Projects now, so we're looking at how we actually do</i>	<i>Not known as finishers of</i>
621	<i>Projects and the role of Business Project Services and how we can get</i>	<i>projects now</i>
622	<i>back to a solid grounding about how we can do things. 'Cause I think</i>	<i>Taken on too many projects</i>
623	<i>we've just taken on too many Projects and we haven't finished a lot of</i>	<i>Have not followed PM</i>
624	<i>Projects we haven't divided Project Management Methodology we've</i>	<i>methodology all the time</i>
625	<i>sort of not followed it as best we can. So I think there's some issues</i>	
626	<i>with Project Management and we've had a, you know we've been</i>	<i>Been involved in National and</i>
627	<i>involved with some of the whole of government things as well so it's</i>	<i>Whole of Gov projects</i>
628	<i>taken up some of our time in the National Projects as well so again so</i>	<i>Take some time to ask how to</i>
629	<i>we've stopped and looked and said okay how can we do this better? In</i>	<i>do this better</i>
630	<i>relation to some Projects and you know why have we, why have we</i>	<i>Had some failed projects</i>
631	<i>failed in some areas, why have we put so many demands on our IT</i>	
632	<i>area, where we can't maybe we have neglected some of the core</i>	<i>Placed too much demand on IT</i>
633	<i>activities IT should be doing, you know like maintaining our current</i>	<i>section</i>
634	<i>systems instead of launching off into new technologies, new projects</i>	
635	<i>where we are struggling to keep up ad maintain our core systems. So</i>	<i>What is the core function of IT</i>
636	<i>you've always got to maintain, you've got to work out okay what's core</i>	
637	<i>function of IT? And then where do these new projects and</i>	
638	<i>technologies sit?</i>	

The analysis of the data produced 104 conceptual labels (Appendix 9). Table 7-3 and Table 7-4 show how the summary codes from the exemplar were conceptualised into conceptual labels.

Table 7-3: Conceptual Labels Example 1

Summary Codes	Conceptual Labels
Approach not changed	CA Role
Passionate about change	Change Management
Informal approach	CA Communication
No great need for ICT	ICT
Still use traditional methods	Communication
ICT cannot replace face 2 face	Face-to-face

Table 7-4: Conceptual Labels example 2

Summary Codes	Conceptual Labels
Business Project Services secretariat for Information Management Board	Business Project Services
Currently not managing projects as well as they can	Project Management
Not known as finishers of projects now	Project Management
Taken on too many projects	Projects
Have not followed PM methodology all the time	Project Management
Been involved in National and whole of Gov projects	External projects
Take some time to ask how to do this better	Review
Had some failed projects	Project Management
Placed too much demand on IT section	ICT
What is the core function of IT	Core function

The final pass through the data produced seven themes:

- Mandating project governance
- Providing strategic direction
- Supporting a network of change agents
- Managing projects
- A culture of embracing change
- Focus on diverse communication
- Management team guiding change.

7.3 Themes – Phase Two

This section presents the themes produced as a result of the coding process conducted in analysing phase two data. The seven themes and their sub themes are presented. The order of the themes is not significant. Extracts of the transcripts of the audio

recordings from the semi-structured interviews are provided to validate the development of the themes.

7.3.1 Mandating project governance

This theme related to the control and support provided for projects at Tasmania Police. The coding process revealed two sub themes: governance and Information Management Board (Information Management Board).

Governance

Governance was evident, with Tasmania Police being one of the first government departments in Tasmania to instigate a corporate plan. The corporate plan mapped out change for the foreseeable future.

... it's probably the best part of twenty years ago when the Department published its first so called Corporate Plan. We'd never had a Corporate Plan. To a certain extent even within Government they were unheard of, within Policing around the country just starting to get legs. A lot of people said well what a waste of time ... we know [what] Policing is, we don't need someone to tell us what to do. (Interview Acting Deputy Commissioner, October 2008)

Communication to the change agent network was approved by the sponsor, the Deputy Commissioner of Police.

...and whoever's in the Deputy Chair will say yeah that's okay as it is or he'll change the wording just to approve what's going out or sent directly to us to get sent out. (Interview Manager of Business Project Services, October 2008)

Information Management Board

The structure of the Information Management Board consisted of members of the Executive of the organisation.

So the [members of the] Information Management Board consist of the Deputy Commissioner, two assist the Commissioners, the Director of Corporate Services and Deputy Director of Corporate Services. (Interview Manager of Business Project Services, October 2008)

The Manager of Business Project Services provided secretariat support for Information Management Board.

I'm not a member as such, I'm the Secretariat, sort of the Manager of Business Project Services and the Assistant go along to provide a Secretariat role but in reality the Manager of Business Project Services... (Interview Manager of Business Project Services, October 2008)

The main role of Information Management Board in Tasmania Police was to monitor current projects by making both operational and high level decisions and intervening when required.

...and Information Management Board just make sure that all projects are being delivered on time, on budget and, and that the organisational or the intent is that your organisational objectives are being met. (Interview Manager of Business Project Services, October 2008)

Information Management Board met once a month and project managers reported the progress of their projects directly to the Board.

Project Manager reports directly to the Information Management Board...(Interview Acting Deputy Commissioner, October 2008)

In the past, Information Management Board did not decide on new projects as that decision was made outside of Information Management Board. Projects that were sanctioned by Information Management Board were sent to Business Project Services for implementation.

So the Information Management Board projects have been initiated at Information Management Board level and sent down the line through Business Project Services and Business Project Services find out what to deliver what Information Management Board want. (Interview Acting Deputy Commissioner, October 2008)

Information Management Board was aware of the majority of projects being worked on at Tasmania Police.

But the reality is that we're pretty close to monitoring everything that's going on around the State and it's there's not too much going on that, that at least one of us [Information Management Board] doesn't know about. (Interview Acting Deputy Commissioner, October 2008)

The role of Information Management Board was about to change to become more of a sponsorship role, with low level decisions made by Project Directors.

So we're going to try and change it so that we've got Project Directors which are actually out there in the Field that are involved with these Projects every day anyway. Senior people who can actually make some of the day to day decisions, and consult out of session if they need to with us up here who can still have a sponsorship role, but it's only really the key decisions that come up to us, not the day to day decisions so, yeah so we access one area where we're doing a little bit of work at the moment. (Interview Acting Deputy Commissioner, October 2008)

7.3.2 Providing strategic direction

This theme related to guidance provided to the organisation by the Vision and Mission statements and their business planning process. The coding process revealed two sub themes: Vision and Mission statement and Business Planning.

Vision and Mission statement

The vision statement of “To be recognised as the finest Policing and Emergency services in Australia” and the mission statement of “to make Tasmania safe” reflected the strategic direction for the organisation.

So and I guess essentially those two, that Vision and Mission sums up what it is we're about as an organisation. (Interview Acting Deputy Commissioner, October 2008)

The Vision and Mission statements provided guidance for change in the organisation as they were more than just words. They were linked strongly with operational duties, enabling officers to understand how their day-to-day activities linked with the strategic direction of the organisation.

They used to be just words, now they actually mean something. Now we actually understand it. (Interview Manager of Business Project Services, Inspector, October 2008)

The Vision and Mission statement were being reviewed to ensure that the statements best represented how they wanted to be recognised, and identified the core activities undertaken by Tasmania Police.

...I think we've still got those as our Vision and Missions but we want to re-look at those again to make sure they're still contemporary. (Interview Acting Commissioner of Police, October 2008)

Business Planning

Tasmania Police was in the process of preparing a new Business Plan. When completed, it will provide the strategic direction for the organisation for the following three years.

And now we're actually kicking into a new business plan model where we're going to change the way we do business and use the business planning process to drive our business not how our benchmarks and performance indicators tended to be driving our business and so that's an issue that we're facing at the moment (Interview Acting Commissioner of Police, October 2008)

7.3.3 Supporting a network of change agents

This theme related to the change agent network and how support was provided by Tasmania Police. The coding process revealed three sub themes: change agent network, supporting change agents and the change agent sponsor.

Change agent network

There were 97 change agents in Tasmania Police. There were a number of recruitment rounds; the later rounds provided an opportunity for people to resign from the change agent program.

Certainly the amount of change agents that have come on board and then there are some that have dropped off. (Interview change agent, Sergeant K, October 2008)

The structure of the change agent network was across districts, ranks and organisations with Emergency Services incorporated into Tasmania Police. A focus was placed on the grass roots level of the organisation and on Station Sergeants. Four Inspectors remained as active change agents.

...not many of the Management level within in the State Service, but mainly at the grass roots levels. Constables, there'd be half and half between Constables and more mid-management... (Interview Change Management Coordinator, Constable A, October 2008)

Supporting change agents

New change agents underwent training to help them perform their role in the organisation. The last round of training was conducted in September 2008. All existing change agents had been trained.

... there was a couple of days two or three days yes, yeah. Constable A organised that and that was very good. (Interview change agent, Constable L, October 2008)

Towards the end there was a move to gain more support for the change agents from senior management.

And these [senior management] are the people who have to approve their people going off to attend change agents Meetings and things, and support the Project within their area of command. (Interview Acting Deputy Commissioner, October 2008)

The main support for the change agent network was provided by the Change Management Coordinator. The role of the Change Management Coordinator was to facilitate communication between the Deputy Commissioner and the change agents.

Obviously here, the change agent Coordinator is your first port of all, she does a great job. She facilitates the feedback of information to and from the Commissioner's back very easily. (Interview change agent, Sergeant K, October 2008)

The role evolved over time. Each new coordinator added to the role. The experience and personality of the Change Management Coordinator influenced the role.

And I mean let's face it, the role really is dependant on experience because it's the experience that helps the person and the same with the change agents... (Interview Change Management Coordinator, Constable A, October 2008)

Change agent sponsor

Support for the change agent network came from the highest level of the organisation with the previous Deputy Commissioner becoming the new Commissioner of Police. The Deputy Commissioner of Police was the change agent sponsor.

But I know that the Commissioner had very strong view, he liked to control them, and have ownership of that and I think he felt that and he may have been perfectly correct that they felt more important that it was him that was going. (Interview Manager of Business Project Services, October 2008)

7.3.4 Managing projects

This theme related to how technology-based projects were implemented by Tasmania Police. The coding process revealed five sub themes: Business Project Services, external projects, small projects, project management and project directors.

Business Project Services

Projects of significance were housed in Business Project Services, with the exception of projects such as the Radio project that were better managed from the stakeholder's area. Not all projects were physically located in Business Project Services, with project managers coordinating some projects "off the side of their desk" while still reporting project related information back to the manager of Business Project Services. Tasmania Police planned to place all projects under the umbrella of Business Project Services.

Most but not all. Like as in the Radio Project stand alone is the whole of government project but we run but it doesn't go through Business Project Services. There's a couple of other examples of that but we're trying to get them again back under one umbrella. (Interview Acting Commissioner of Police, October 2008)

The manager of Business Project Services was the secretariat for Information Management Board and provided the board with updates on all projects under the control of Business Project Services. Ideas were presented to the Information Management Board or the Deputy Commissioner of Police via Business Project Services.

Well Business Project Services has become a Secretary for the Information Management Board. (Interview Acting Commissioner of Police, October 2008)

Business Project Services provided Tasmania Police with an opportunity for continuous improvement.

Business Project Services evolved out of Project Baton. The idea was that it was almost like that continuous improvement type concept. (Interview Acting Deputy Commissioner, October 2008)

Business Project Services were changing, taking on more of a quality assurance and coordination role with projects. Business Project Services were becoming more proactive regarding projects and less dictated to by Information Management Board.

Business Project Services's role, ... look again I think Business Project Services have over the last couple of years at least ...and we were sort of looking for a new way of doing things for a while, have become a bit of a slave to the Information Management Board. (Interview Manager of Business Project Services, October 2008)

External Projects

Tasmania Police was involved with a number of projects external to the organisation. These projects did not necessarily follow the project management methodologies used at the time by Tasmania Police nor were Tasmania Police staff the project managers. The number of external projects had increased over the years, resulting in increased interactions with other government bodies. External projects tended to be more complex, with national projects taking more time to achieve the desired outcome.

Probably the other area where we see impacts, is we're involved in a lot more consultative across Government work now, various inter-agency committees, steering groups, those sorts of things which actually takes a lot of our time, whereas ten years ago we didn't. We were involved in various meetings, it tended to be the more senior people that were involved in meetings whereas now it's right down to the lowest levels of the organisation. (Interview Acting Deputy Commissioner, October 2008)

Informal projects

In addition to the large formal projects investigated in this research, Tasmania Police developed and implemented informal projects. The project managers of small projects reported directly to either a Commissioner or Commander who tended to have a personal rather than organisational interest in the project implementation. The informal projects did not follow standard project management methodologies and

do not have a defined budget. The informal projects were implemented in isolation from other current projects and had no input from Business Project Services.

Introduced because it's a priority and finds a resource and says I want you to do this piece of work for me. And I don't want you to worry about methodology and all that sort of thing and don't worry about a budget, we'll sort that out later so there's been quite a few of those sorts of projects that've gone and a lot of those are actually successful but what tends to happen is that they tend to fail to take into account other work that's going on. (Interview Manager of Business Project Services, October 2008)

Project management

The approach to project management adopted by Tasmania Police had its origins with the consultant and the implementation of Project BATON. At the time Tasmania Police were leaders in the use of a formal project management methodology.

But for the organisation it was in terms of Project Management and across Government it wasn't being done very well here and in fact what we put in place at that time, was, within Government was certainly right up there if not one of the best Project Management Methodologies that any of the Government Agencies had at that time. (Interview Acting Deputy Commissioner, October 2008)

At the time, Tasmania Police used the Tasmanian Government Project Management methodology when implementing formal projects. Different approaches however were used for informal projects (as described above). Project management had both change management and communication strategy embedded within the methodology.

Well projects have been generally managed quite well, if a project has been initiated properly and with a proper governance structure around it and proper documentation early on they seem to be managed quite well. (Interview Manager of Business Project Services, October 2008)

Tasmania Police had experienced some failures with formal projects and, at the time, was reviewing how it managed projects. The organisation recognised that technology projects were more difficult to manage.

...so we've lost a little bit and I think the death of the Intrepid Project which happened last year, early last year, that brought a fair bit of uncertainty to the whole area, we lost a whole lot of resources, the project went bust and we lost a bit of coordination because all these things that Intrepid were going to fix, integration issues, all of a sudden were gone and it's taken a while for us to get back on our feet and we're just starting to now. (Interview Acting Commissioner of Police, October 2008)

Tasmania Police was working on changing the manner in which it coordinated its projects. It intended to adopt a more integrated approach and stream projects into theme areas. Projects would be broken down into deliverable chunks that could be

delivered within six to twelve months. Police Commanders would be included in the management of projects.

Yeah, it's but again I think there's some basic learnings that we just haven't grasped as in where a project takes us three or four years, it's too long, you know to get any results out of it and so we haven't put them into bite sized chunks and say this phase is finished here and it's really good. (Interview Acting Commissioner of Police, October 2008)

Project Directors

The new approach to projects would look to move the day-to-day decision making for projects from Information Management Board to the newly created position of Project Director. Project Directors would come from the operational rank of Commander. Project Managers would report to the Project Director on day-to-day issues. The Project Director would report to the Project Sponsor who would be a member of the Information Management Board. All projects would have a Project Director.

So we're going to try and change it so that we've got Project Directors which are actually out there in the Field that are involved with these Projects every day anyway. (Interview Manager of Business Project Services, October 2008)

7.3.5 A culture of embracing change

This theme related to the culture created by Tasmania Police when dealing with change. The coding process revealed three sub themes: evolving with change, continual improvement and information communication technology.

Evolving with change

Change had been continual for Tasmania Police. They had seen changes to the name of the organisation from force to service, changes to structure, change in leadership, change in workforce, changes in technology and changes to work practices. The organisation changed the way in which it operated and, where appropriate, was consultative rather than directive. There was a change of focus from reactive policing to proactive policing which resulted in changing the way police dealt with crime while also looking to treat the cause of the crime. There were changes in the amount of information available to police officers while performing their duties. Changes in legislation resulted in changes to practice for Tasmania Police. Change was evolutionary. There was one common factor that the changes have focused on: supporting Tasmania Police in the task of core policing.

...but we're now taking a more, we've gone away from the traditional law enforcement just turning up and lock the bad guy up type of approach to a more community minded on long term affect of crime (Interview Manager of Business Project Services, October 2008)

Continual improvement

Tasmania Police recognised that change affects individuals and that some of the change has been cultural. The organisation accepted the need for change and understood that change is complex. Police will continue to require up-skilling, as new legislation or technology is implemented. Police have focused on education and knowledge transfer as a method of coping with change. Secondment has become a tool for utilising the diverse skill set in the organisation.

You know we now realise that we've got a lot of intelligence, we know we've generated through recruiting and training and all that sort of stuff, we've got a pretty smart workforce (Interview Manager of Business Project Services, October 2008)

Information and Communications Technology

There had been an increase in the level of technology within Tasmania Police, resulting in a good ratio of computers to officers. The intention of Tasmania Police was to stabilise the level of technology, and to ensure that systems worked and provided the benefits that were first envisaged. This view was provided through Project Meridian, which aimed to consult at the grass roots level on which technology should be employed, and to feed that information into the new business planning process. There was a lack of integration within the system, which was supposed to be rectified with Project Intrepid but the project failed. Police had found technology projects complex to implement.

Meridian is looking at those technologies, those future technologies. But you know all the feedback have said is that people basically want to fix what we've got now before we look into mobile data terminals and those sorts of things. Where our business planning is different to that. That will feed into that but the business plan is more holistic (Interview Acting Commissioner of Police, October 2008)

7.3.6 Focus on diverse communication

This theme related to the options from which the organisation could choose when communicating with the members. The coding process revealed two sub themes: face-to-face communication and communication strategy.

Focus on face-to-face communication

The role of the change agents was to communicate and gather feedback from their workplace. Face-to-face communication was the main mode of communication used by the change agent network. A forum for the change agents was held three times a year where they had a Q&A session with the Deputy Commissioner of Police and were briefed on current projects by the relevant project managers. While there had been an increase in technology relating to communication, the change agent network still relied on face-to-face communication.

I don't feel we have that need for ICT to communicate our change. Email's great, the net page is great and it gets the message across but nothing like sitting down with your people, particularly the people under your command or in your area. (Interview change agent, Sergeant K, October 2008)

Communication was a two way process, with change management focused on gathering feedback and passing it to the Commissioners. Feedback sessions were held to support Project Meridian. Feedback had increased in the previous few years. Feedback relied on a personal approach.

At the end of the day the Commissioner says, this is the strategy we're going to incorporate, that's why he's the Commissioner of Police. So it's not here to overrule it's here to obtain some feedback if and when it's required. (Interview change agent, Sergeant K, October 2008)

Communication strategy

Tasmania Police was developing a general model to guide the communication strategy as there had been no consistent way to communicate across the organisation. The model would use different communication methods for specific types of information. There had been an increase in the range of media used for communication and, at times, information had been sent out on all media, causing information overload. Bulk email was used for direct communication while important information was sent out to individual email addresses.

So we're actually developing a like an internal communications plan at the moment and identifying what are all the sorts of things that we communicate, what's the best way to actually do that? So then people will actually know what to do rather than asking us each time how can we communicate this type of information? And there should be a plan out there and so people can look for the information there as well. (Interview Acting Deputy Commissioner, October 2008)

Tasmania Police communicated with the change agent network and senior district management at the same time. Communication was important in managing expectation while the depth of information helped provide answers. Essentially, Tasmania Police had to coordinate communication with three distinct areas: District Management; change agent network; and the rest of the organisation.

... so at the same time that something goes out to the change agents and normally they'll be sent a little list of things with, and I'll send a copy to the only Commanders of the area and saying look please revise this and this went out to the change agents today. (Interview Acting Deputy Commissioner, October 2008)

Communication was facilitated by training. The organisation held training days in each of the districts and officers were required to attend a training day once every five weeks. Training days were used to communicate with the whole organisation.

Where it's a whole organisational change, usually what we try to do, there's training days, so every week there's a training day on a Wednesday in each District... (Interview Manager of Business Project Services, October 2008)

Tasmania Police was a hierarchical structured organisation that operated in a command control environment for core policing activities. The structure of the organisation was the formal communication structure in which Constables reported to Sergeants, Sergeants to Inspectors and so on up the line of command. Supervisors were aware that they needed to gather feedback from the front line officers and to provide a supporting role for change. Officers were encouraged to use the chain of command.

Generally the education now is you know the preference is to send feedback through your management lines. (Interview Change Management Coordinator, Constable A, October 2008)

7.3.7 Management team guiding change

This theme related to the management style being adopted by Tasmania Police. The coding process revealed two sub themes to this theme: open and consultative management style and a holistic approach.

Open and consultative management style

There was a concerted effort to make the business planning process more consultative and less directive. The change of senior management resulted in a more collaborative and consultative Deputy Commissioner of Police being appointed. The previous Deputy became the new Commissioner and was fully supportive of the new Deputy Commissioner's style. Tasks under the control of the Deputy Commissioner of Police, such as the Corporate Performance Review, were being changed to support the new management style. All levels of management were expected to embrace a more open and consultative style, where appropriate, in order to understand the issues that officers faced in the field. Management now expected to be asked for an explanation for a change that was being implemented.

...directive changes where little reason was given for a change and now we're much more consultative and considered in relation to change and where we need to we certainly involve those who are affected by change and get feedback and then if we've got to make a change then we'll give them, we'll give the workforce a reason why change occurs. (Interview Acting Commissioner of Police, October 2008)

A holistic approach

Previously, change was driven down from the top, with senior management deciding what was best for the organisation. The new business planning process adopted a holistic view by including members of the organisation prior to the commencement of the planning. Project Meridian was an example of how the organisation was gathering feedback to inform the planning process. Organisational requirements were being generated from the bottom up.

I mean the Commissioner when he first started and one of his first announcements was that we're going to review, we're going to do a review of business process We will start project Meridian. I want the people to direct what the priorities and the direction this project is. (Interview Manager of Business Project Services, October 2008)

7.4 Chapter Reflection

This chapter has described the process used to perform the analysis of phase two data. Like phase one data analysis, phase two data analysis used thematic coding guided by open coding from Grounded Theory to reveal themes relating to the data.

This chapter has presented the seven themes derived from the semi-structured interviews that constituted the data for phase two of this research. The themes are presented and justified with extracts from the transcripts of the audio recordings from the semi-structured interviews.

In the next chapter the seven themes identified in phase two are interpreted and discussed to produce factors for implementing technology-based change.

8 Discussion and interpretation Phase Two

8.1 Introduction

This chapter presents the discussion and interpretation of phase two data analysis. The chapter then discusses each of the themes, as presented in chapter seven. The discussion of the themes identifies factors relating to the implementation of technology-based change at Tasmania Police. The interpretation highlights factors relating to technology-based change that are discussed in relation to the literature. The factors are then compared with models of change. The chapter concludes with a discussion of the inter-relationships of the factors. The chapter is structured in the following sections:

- Section 8.2 discusses the seven themes identified in section 7.3 and highlights twelve factors that have an impact on the implementation of technology-based change at Tasmania Police.
- Section 8.3 provides a comparison of the factors with models of change.
- Section 8.4 discusses the supportive inter-relationships of the twelve factors.

This chapter presents a complete discussion and interpretation of phase two data. Phase two was a discrete and separate round of data collection. Themes and factors are presented, based on the analysis conducted on phase two data. Comparisons of phase one and two factors are then presented in the next chapter.

8.2 Themes and Factors

In this section the seven themes identified in chapter seven will be examined and factors from phase two relating to change will be presented. The themes are first discussed in relation to the relevant Tasmania Police projects. The themes are then compared to the literature. Inter-relationships amongst the themes are then explored. At the end of the section a conceptual map is presented that details the factors and their inter-relationships. The themes are not presented in any order of importance nor are the factors delivered in chronological order. Section 8.4 focuses on discussing the importance and inter-relationship of the factors.

8.2.1 Mandating project governance

The analysis revealed that Tasmania Police provided governance for their projects through the Information Management Board. The membership of the Information Management Board consisted of the Deputy Commissioner of Police, Assistant Commissioners, Director and Deputy Director of Corporate Services. The manager of Business Project Services was an unofficial member of the Information Management Board and provided secretarial support to the board. Formal projects were delivered to Information Management Board from the executive who decided which projects best fitted with the strategic direction of the organisation. Project proposals were developed as a result of senior management's strategic planning or at the grass roots level of the organisation. If the project was developed at the grass roots level, a written proposal, in the form of a project brief, was presented to the immediate supervisor. The supervisor reviewed the proposal and, if the idea was deemed to have value to the organisation, it was passed up the hierarchy until it was tabled at the Information Management Board for consideration. The alternate pathway for project proposals from operational police was through the Change Management Coordinator who discussed the proposed idea with the Manager of the Business Project Services who then presented the idea to Information Management Board for consideration.

All Information Management Board approved projects had resources allocated to them. Either project managers or project teams were appointed, depending on the size of the project. The project managers reported directly to the Information Management Board. Projects had clearly defined aims, objectives and outcomes, which were documented. Projects were allocated a budget and a defined timeline. Once instigated, the project was then implemented by Business Project Services but controlled by the Information Management Board. The Information Management Board monitored all formal projects in relation to time, budget and meeting the set objectives. Project managers provided structured reports to the Information Management Board, which met monthly and reviewed every project while making operational decisions on behalf of the projects and the Project Managers. The Information Management Board decided the rollout dates for each of the projects.

Informal projects were implemented in the districts and reports went directly to an Assistant Commissioner or Commander. Informal projects did not have the structure of formal projects nor did they have an associated budget assigned to them. The Information Management Board was aware of all Tasmania Police projects, both formal and informal, within the state of Tasmania.

Tasmania Police has changed the role of The Information Management Board to a sponsorship role responsible for high level decision making. The structure of the Information Management Board has not changed significantly, except that the newly created role of Project Director (see 8.2.4) will report to the Information Management Board rather than the Project Manager. Not all projects will be reviewed each time the Information Management Board meets. The Project Director will be empowered to make operational decisions for a project without having to consult the Information Management Board. Each project will have a Project Sponsor who will be a member of the Information Management Board. The change in the process of project governance was a direct result of the organisation realising that they were not in control of all of the projects being conducted. More importantly, there was recognition that key stakeholders were being denied the opportunity to be involved in projects that directly affected their area of responsibility. the Information Management Board had been operating at a tactical level rather than the strategic level at which a governing body such as this should be.

The literature supports the role of governance (Elrod II & Tippet 2002) when implementing change. The support for governance is embedded in the literature associated with project management and relates to monitoring and controlling projects to ensure they meet objectives (Ford & Greer 2005; Kerzner 2003; Schwalbe 2006). Implementing technology-based project requires governance to ensure the project stays on track (Martin, Quigley & Rogers 2005; Ranganathan, Watson-Manheim & Keeler 2004b). An important factor when implementing change is to create an organisational unit that would govern the projects (Albizu, Olazaran & Simon 2004; Wissema 2001). Geneva Police has internally appointed project leaders who are governed by the senior executive management committee (Collerette, Legris & Mamghi 2006). Project teams need to obtain senior management commitment when implementing change to ensure resources are made available (McNish 2002). One of

the critical factors is ensuring that a technology project is governed by people who have the authority to make difficult decisions (McAfee 2003).

From this discussion we can derive the first factor for implementing change as:

A hierarchical and structured active level of governance for change.

8.2.2 Providing a strategic direction

The Commissioner of Tasmania Police had both an internal and external focus. He worked with his executive team to create a strategic direction for the organisation. The Deputy Commissioner of Police was the operational head of the organisation and worked in partnership with the Police Commissioner.

Tasmania Police had a Vision and Mission statement that guided change in the organisation. The Vision and Mission statements were more than just printed words to officers at Tasmania Police. The statements represented where the organisation wanted to be and clearly reflected the core value of Tasmania Police, which was to work together to reduce crime. The analysis revealed that the Vision and Mission statements were still relevant even though they were developed ten years earlier.

By 2008 Tasmania Police had come to the end of their current strategic plan and was in the process of developing a new business plan. The plan was taking a more holistic approach and would be used to drive the business. The executive consulted within their organisation to facilitate the planning process. The existing Vision and Mission statements were reviewed as a part of the planning process. Project Meridian was a part of the consultation process and aimed to determine the technology requirements for operational police for the next three years. Previously this planning would have been predetermined with a set agenda prior to consultation.

The analysis revealed that Tasmania Police had worked hard to ensure that the organisation understood the strategic plan and that they were in touch with the corporate priorities. Officers could see that day-to-day activities aligned with the strategic direction set out. Change management had helped achieve the Vision and Mission statements of the organisation. Change was easily aligned to the Mission

Statement of “to make Tasmania Safe”. Each change was recognised as facilitating the function of core policing through more efficient processes or savings in Full Time Equivalents that could be redistributed to core policing tasks.

The literature supports the need for a strategic direction. Organisations need to create a clear vision for change (O'Reilly & Tushman 2004; Wren & Dulewicz 2005b) and this should guide change management (Kallio, Saarinen & Tinnila 2002). The Mission statement is important for understanding the need for change (Wissema 2001). Larsson, Lowstedt et al (2001) however focus on learning processes rather than a clear vision for implementing change.

From this discussion we can derive the second factor for implementing change as:

An overall strategic direction that all change is easily aligned to.

8.2.3 Supporting a network of change agents

The analysis revealed that the change agent network was strong, with 97 change agents who covered all districts and divisions of the organisation providing a good representation of the organisation. The change agents were made up of Constables, Sergeants and State Service Personnel with four Inspectors from early recruitment rounds choosing to remain as active change agents. The program had seen a constant increase in numbers and when a new round of recruitment was undertaken this presented an opportunity for existing change agents, who no longer had time to devote to the role, to exit the program.

The organisation accepted that not all change agents were active at any particular point in time. The role of the change agents was separate from their substantive role and their activity level, at any given time, was directly linked to the current workload associated with their substantive role. The analysis however suggested that most of the change agents used their personal time to communicate with those in their workplace, usually choosing a more informal setting for discussions.

All change agents attended a training course when first recruited. A training course was conducted in 2008 for the most recent round of recruits. The Change Management Coordinator organised the training course which ran for three days at the

Police Academy. The training provided the basic skills needed for the change agents to perform their role. The role was not strictly defined and it was up to individual change agents to personalise the role to suit their skill set and their workplace.

The Deputy Commissioner of Police was the change agent sponsor and had responsibility for the change agents. Two different people had undertaken the role of Deputy Commissioner. Each of the Deputy Commissioners provided support for the change agents. Each had an open door policy for the change agents and each continued working with the Change Management Coordinator to ensure effective, accurate communication to the network. The timing of the communication meant the change agents were briefed at the same time as senior district management.

The Change Management Coordinator affected the way the role was performed. To be effective, the coordinator needed to: be a good communicator; be trusted by the change agent network; have their finger on the pulse of the organisation; and be capable of having a good relationship with the Deputy Commissioner of Police. The role of coordinator evolved over time and was heavily influenced by the individuals who held the position. Late in this research, the role was advertised and the successful applicant was the original Change Management Coordinator. Her experience in the initial change management program, coupled with her background in training and the respect she earned in the organisation, has resulted in her being effective in the role of coordinator.

The development of the change agent network was an innovative practice for Tasmania Police. The ongoing support and allocation of resources saw the program grow over the ten years. The rewards of such an approach were evident and the approach opened the organisation up to allow for open communication, a feat in itself for a command control organisation. One aspect that required attention was that of succession planning for the coordinator. Over time the role was perceived as a way of gaining fast track to promotion by being visible to the Deputy Commissioner. Modifying the recruitment of change agents resolved this perception.

The literature provides little support for the use of a change agent network as it was utilised by Tasmania Police. The literature version of change agents, as presented in

section 2.4.4, focused more on managers and project managers and team members. However Vickers and Kouzmin (2001), in their work with Australian Police, identified that “encouragement of the voice from members [was] invaluable ... voice provides organisations with important feedback”. Feedback was fundamental to the approach adopted by Tasmania Police. The result of such a strategy was that employees who received quality change communication were more open to the change (Allen et al. 2007).

From this discussion we can derive the third, fourth and fifth factors for implementing change:

Create a coordinated, integrated network for communication that is outside the normal hierarchical layers;

Communicate to the network at the same time as briefing senior management; and

Personalisation of the change agent role essential.

8.2.4 Managing projects

The data analysis revealed that Tasmania Police had two types of projects: formal and informal (section 8.2.1). The formal projects were structured; they used a formal project management methodology and were managed by Business Project Services. Formal projects had associated change management and communication strategies aligned to them. The range of formal projects was extended to include whole of Government and National projects. Government and National projects were more complex and required increased interaction with the external partners. Overall, formal projects were well managed by Tasmania Police but recently there had been some slippage resulting in some projects not being finished. Tasmania Police has had project failures with a crucial technology project (Intrepid) failing to deliver a new system. This project was shut down after numerous delays to deliver the system. Little was salvaged from the project.

Informal projects were instigated by individual Commissioners or Commanders and could be personally driven rather than organisationally driven. The informal projects did not follow a formal project management methodology nor did they have defined budgets associated with them. The projects were assigned to officers, in addition to

their substantive role, and managed “off the side of the desk”. There was a general lack of awareness, on the part of the Commissioner or Commander, of other relevant projects in the organisation. The informal projects had a short time frame, were usually low risk and tended to be successful.

The analysis revealed that Tasmania Police had seen an increase in the adoption of technology. As change was handled on a project by project basis, Tasmania Police had been able to be selective about the level of technology it introduced. The analysis supported that, while the members of the organisation recognised a need for technology, they did not see a great need for more technology. Instead they asked that a focus be placed on making sure the current technology worked and resolving the long outstanding issues surrounding integration of existing systems that Project Intrepid was supposed to have resolved.

The benefits of projects were often immediate and visible. While Tasmania Police had not always conducted formal reviews relating to benefits realisation, the analysis revealed that officers easily recognised the benefits of a project because the outcome of change in Tasmania Police was to reduce crime and increase officer’s performance. A formal benefits realisation has since been built into the project management methodology. This will allow Tasmania Police to quantify the benefits from a project more easily.

Tasmania Police was restructuring its approach to projects. It was creating a portfolio approach where each portfolio would have a sponsor who was a member of the Information Management Board. Projects would be managed by Commanders who would be the Project Director. Each project would have a Project Manager. The Project Director would report to Information Management Board when required. All projects, formal and informal, would come under the control of Business Project Services. The restructure demonstrated an attempt by Tasmania Police to be a learning organisation.

The literature supports a project approach to change. Change requires a project management structure with clear goals and defined responsibilities (Martin & Cheung 2002). Change requires process management for successful implementation (Kendra

& Taplin 2004). Success requires adequately skilled people to run the implementation process (McNish 2002). Project Managers as change agents need teamwork, training and continuous learning (Kendra & Taplin 2004).

From this discussion we can derive the sixth factor for implementing change as

Change is clearly articulated through projects.

8.2.5 A culture of embracing change

The analysis revealed that Tasmania Police existed in an environment that involved continual evolutionary change, which was complex. As an organisation it had experienced a change in title from Tasmania Police to Department of Police and Public Safety Tasmania. The organisation, over the last few decades, had seen a flattening of the hierarchical structure, with some ranks being removed. Officers were encouraged to move across districts and divisions with Inspectors required to move every two years, which resulted in a transient workforce. Continually changing legislation was a driver for change in Tasmania Police, resulting in changes in practice and systems. Tasmania Police became more externally aware and worked more closely with other agencies and stakeholder groups.

Tasmania Police recognised that change affected individuals differently and this resulted in a focus on the individual, as opposed to the collective. In the past, change had been directive and top down. Attention broadened to include the cause of the crime rather than just dealing with the crime, with a focus on crime reduction and early intervention. The community focus of Tasmania Police saw a change in the way police dealt with people but this approach did not result in significant changes to the way they conducted core policing duties. The changes affected the manner in which officers collected and managed information relating to crimes. Timely, accurate information supported core policing duties.

Technology also impacted Tasmania Police by providing better access to information. However, Tasmania Police was still dealing with silo systems and was relying on Project Intrepid to resolve the lack of integration with their systems that prevented officers from conducting timely analysis of information in their systems. Over the

previous decade, Tasmania Police introduced more streamlined processes that were supported by technology. This resulted in the officers having to learn new skills associated with the technology. As an organisation they increased their user technology competence. By 2008, there was a good ratio of computers to staff: 900 computers to approximately 1600 staff.

The cultural change at Tasmania Police saw a change in the workforce from fulltime, mainly male officers, to an increased number of female officers, along with part-time employment. Approved outside employment had been accepted by the organisation while in the past being a police officer was regarded as the only job one should have. Ongoing education became more integrated in the organisation, with officers encouraged to undertake further study at tertiary level thereby creating a more knowledgeable workforce. The recruitment of cadets changed to include more diversity in both education level and age.

Change has been a constant with Tasmania Police. The rate of change varied but change itself has been ever present, even at a time when the organisation called for a time of consolidation.

The literature discusses culture (Bititci et al. 2006; Bruch, Gerber & Maier 2005b; Wren & Dulewicz 2005a) and how this is important for the acceptance of change. “The greater an organization’s change capacity... the greater the organization’s ability to embrace guided changing.” (Kerber & Buono 2005).

From this discussion we can derive the seventh and eight factors for implementing change as:

Creating a culture that is accepting of change and
A continually changing organisation.

8.2.6 Focusing on diverse communication

Communication at Tasmania Police was facilitated by the organisation being relatively small and confined by the geography of Tasmania. However the size of the organisation did not negate the fact that not all people received the information that was being disseminated and that it took time to pass information around the

organisation. Email facilitated the information process but the organisation still relied on word of mouth as the most effective vehicle for dissemination and to ensure the message was understood.

The analysis revealed that Tasmania Police had a communication strategy that was aligned to projects and change. In the initial stages of a project, the communication strategy was developed in consultation with the Change Management Coordinator and/or a reference group of change agents. These were usually drawn from the area that the project would impact the greatest, i.e. the stakeholders. The strategy focused on consultation with stakeholders in the early stages of the project, explaining the change and the effects of the change on stakeholders, and gathering feedback from them. The strategy used a variety of communication vehicles. Tasmania Police has committed to reviewing its internal communication practices to better align the types of information with the most appropriate communication vehicle/s to avoid information overload.

Email provided a method for communicating in a fast and effective manner; important information was sent to an individual email address rather than a generic bulk email address. However it was the role of the change agents that was the centre of the communication strategy. The change agent network numbers increased from the original 20 to 97. Their role was to communicate with the organisation in a timely manner that best suited them and their workplace; this was primarily achieved by face-to-face communication. The role was not one of “telling and selling” but was informative and provided a feedback mechanism to senior management. The role relied on the individual change agent’s personality, training and experience. Change agents became more confident in their roles as their experience increased. One function of their role was expectations management. The change agents were recognised in the organisation as playing a significant role, which added to their credibility. The organisation understood that not all change agents were active at any one time as the role was time dependant and therefore was affected by the change agent’s substantive role.

The analysis revealed that change agents were briefed at the same time as senior management but, interestingly, the Change Management Coordinator thought that this

practice had stopped. The Acting Deputy Commissioner of Police confirmed that the practice was still in place. The focus had shifted to aligning the hierarchical management stream and the change agent network so the network could support the normal hierarchical structure. Change agents were not there to replace the management structure. Together the management structure and the change agent network provided a dual pathway for members of the organisation to gather and feedback information.

Change agents received information mainly from the Change Management Coordinator whose role it was to manage the network and liaise closely with the Manager of Business Project Services and the Deputy Commissioner of Police. The change agents met three times a year at a change agents' forum with a minimum of 75% of the change agents attending each forum. They were briefed on the latest projects by project managers and on current issues by the Deputy Commissioner of Police. These sessions concluded with a question and answer time where the change agents could raise issues with the Deputy and ask for clarification. The sessions were intentionally informal where the status of rank was put aside. The forums were an open, honest exchange of information between the Deputy, project managers and the change agents. The forum was an ideal situation for the exchange of tacit knowledge.

While the literature does not transparently support the implementation of the change agent network, as described in this research, it does support the rationale behind the network. Allen, Jimmieson et al (2007) identify that uncertainty is best addressed through different sources of communication. People favour face-to-face, verbal communication (Goodman & Truss 2004) which cannot be replaced by technology (Ruta 2005).

New channels of communication must be established (Price & Chahal 2006) to support the change process. The message must be evaluated when choosing the media, channel and approach for communicating information relating to change (Goodman & Truss 2004). Strong, effective and frequent communication is essential for successful change (Jacobs et al. 2006; Martin & Cheung 2002; Wren & Dulewicz 2005b). Communicating the need to change and providing opportunities for employees to offer feedback and have visible top level support is endorsed (Wissema

2001). Planned communication supports technology-based implementation (Sherer, Kohli & Baron 2003) and communication is a principle that technology project managers should have (Kendra & Taplin 2004).

Figure 8-1 presents an adapted version of Goodman and Truss' change communication wheel. The external component of "Employee Response" has been adjusted to include "anticipated" in relation to employee response. The communication strategy adopted by Tasmania Police tried to anticipate the response to change before determining the best way to communicate. Two of the internal quadrants have been adjusted to better reflect this research. The channel quadrant has been refined to senior management and/or change agents. In the approach quadrant "coercive" has been removed as Tasmania Police would use "directive" when required.

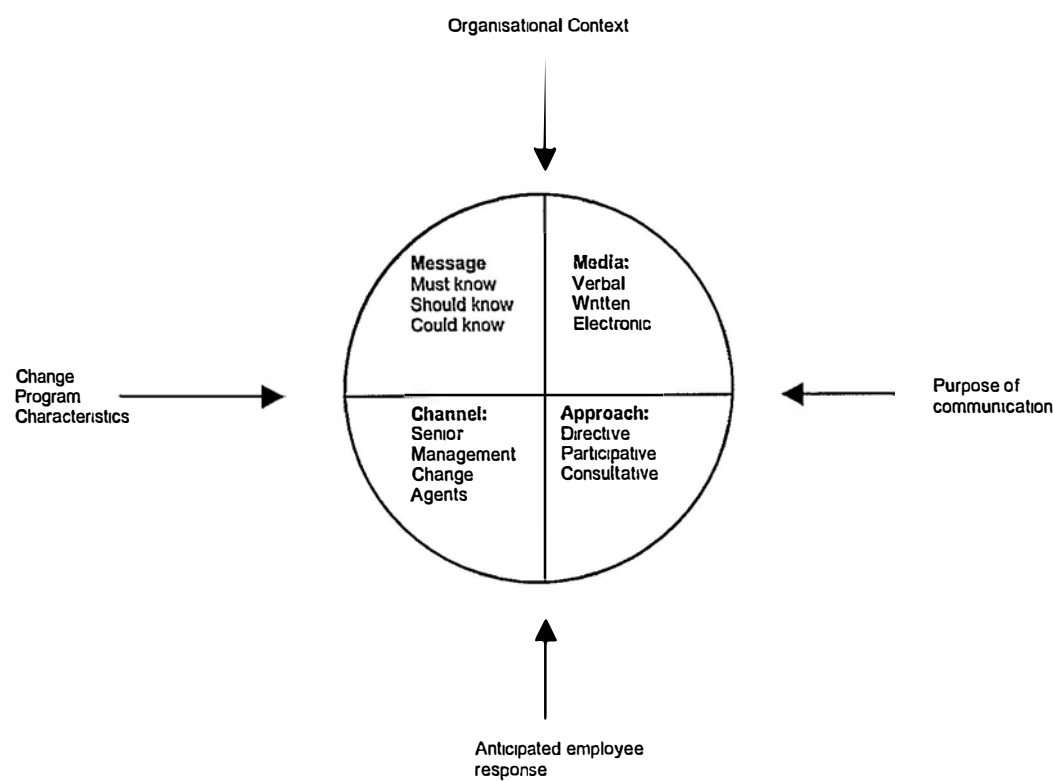


Figure 8-1: The change communication wheel (adapted from Goodman and Truss, 2004)

From this discussion we can derive the ninth and tenth factors for implementing change as :

Focus on face-to-face communication and diversify communication.

8.2.7 *Management team guiding change*

When asked who was responsible for change in Tasmania Police there was general agreement that the Commissioner of Police was ultimately responsible. This however was closely followed with a statement that while the Commissioner was ultimately responsible, change was really the responsibility of everyone in the organisation. Change was complex and the messages associated with change were complex. Experience helped with managing change and Tasmania Police felt that they had gained experience with managing and implementing change. They were quick to point out that they had not always managed change well in the past but were reviewing and planning for the next cycle of change while building on previous experiences.

Tasmania Police underwent a change in leadership, with the Deputy Commissioner of Police being promoted to Commissioner of Police. The new Deputy Commissioner of Police adopted a more open style of management, based on consultation and collaboration. This style, while different from the new Commissioner's, was fully supported by the Commissioner and the organisation. The change in the Deputy meant a change of sponsor for the change agents. The new Deputy was perceived as being more approachable but the analysis supported that the change agents still chose to contact the Change Management Coordinator with issues or to gather information. The new regime included senior management more in the change process thereby creating the dual pathway for members of the organisation. Change agents were recognised as a valuable resource that management needed to support and acknowledge. Listening to people in the workplace was identified as the key to that process.

The literature supports a change in management style when implementing change. There is a need to change manager's behaviour as a driver for organisational performance improvement (Waclawski 2002). Direct supervisors are the best means of presenting implementation related and job relevant information (Allen et al. 2007).

From this discussion we can derive the eleventh factor for implementing change, as:

Dual approach supports hierarchy.

8.2.8 Top level support - a factor that is embedded in all themes

Embedded in all of the themes is that change had top level support. The role of the Deputy Commissioner of Police had not changed and remained aligned with the sponsorship of the change agent network. The Deputy Commissioner of Police continued to chair the Information Management Board but the new regime moved to a more consultative and inclusive style of management with a view of involving more district management in to the process of change. Power remained with the executive of the organisation but day-to-day decision-making devolved to other members of the management team. An example of this was the introduction of the Project Directors.

The manager of Business Project Services and the Change Management Coordinator both reported to the Deputy Commissioner. While email was an essential component in the communication process and facilitated timely and accurate transmitting of information to members, Tasmania Police still relied on the change agent network to ensure that the richness of information was delivered face-to-face in the workplace. The Deputy Commissioner of Police's support was paramount to the continuation of this strategy.

Leadership or top level support is strong in the literature. Top level support and commitment is pivotal in communicating and engaging all employees in the change process (Huq, Huq & Cutright 2006; Jacobs et al. 2006; Sminia & Van-Nisterrooij 2006; Wissema 2001). Leadership facilitates successful change (Wren & Dulewicz 2005b). Executives need to make two decisions in relation to change: what change is right for their organisation and what is the best way to implement that change (Bruch, Gerber & Maier 2005a). The change process requires continuing commitment from senior management (Stewart & Kringas 2003).

The literature supports the early authoritative management style, identifying that it is essential when an organisation demonstrates a power culture (Bititci et al. 2006). Management styles can be either directive or consensus but most managers use a combination of the two (McAfee 2003). Warne (2000) posits that military leadership is "concerned, committed and strong" and can support organisational learning.

From this discussion we can derive the twelfth factor for implementing change as:

Visible top level support for change.

Table 8-1 summarises the factors revealed through the interpretation of the themes from phase two data analysis. The next section of this chapter will compare the twelve factors from Tasmania Police to Lewin’s model of change.

Table 8-1: Themes and Factors

Themes	Factors
<i>Mandating project governance</i>	A hierarchical structured active level of governance for change
<i>Providing a strategic direction</i>	An overall strategic direction that change is easily aligned to
<i>Supporting a network of change agents</i>	Create a coordinated integrated network for communication that sits outside of the normal hierarchical layers
	Communicate to the network at the same time as briefing senior management
	Personalisation of the change agent role essential
<i>Managing projects</i>	Change is clearly articulated through projects
<i>A culture of embracing change</i>	Creating a culture that is accepting of change
	A continually changing organisation
<i>Focus on diverse communication</i>	Focus on face-to-face communication
	Diversify communication
<i>Management team guiding change</i>	Dual approach supports hierarchy
<i>Embedded in all themes</i>	Visible top level support for change

8.3 Models of Change and Tasmania Police – Phase 2

The discussion above provided insight into the twelve factors important to the implementation of change for Tasmania Police. As discussed in chapter two, models of change can be mapped back to the original model of planned change developed by Lewin (1952). At this point it is helpful to present the twelve factors in relation to Lewin’s model of change as an overview of how the factors compare to the planned change literature. Each of the phases will be discussed as they relate to the factors identified for Tasmania Police. Table 8-2 usefully illustrates that the existing change management models provided limited guidance on the implementation phase and that the phase one data from Tasmania Police revealed significant complexity.

Table 8-2: Lewin's 3 stage model and phase two factors

Lewin's 3 stage Model of change	Jick's Ten Commandments	Kotter's eight step Model	Tasmania Police Factors
Planning			
Unfreeze	Analyse the organisation and the need for change	Establish a sense of urgency	An overall strategic direction that change is easily aligned to
	Create a shared vision and common direction	Form a powerful guiding coalition	Create a coordinated integrated network for communication that sits outside of the normal hierarchical layers
	Separate from the past	Creating a vision	Focus on face-to-face communication
	Create a sense of urgency	Empowering others to act on the new vision	Diversity communication
	Support a strong leader		Creating a culture that is accepting of change
	Line up political sponsorship		A continually changing organisation
	Develop enabling structures		
	Craft an implementation plan		
Implementation			
Moving		Planning for and creating short term wins	Change is clearly articulated through projects
			A hierarchical structured active level of governance for change
		Consolidating improvements Producing more change	An overall strategic direction that change is easily aligned to
			Visible top level support for change
			Personalisation of the change agent role essential
	Communicate, involve people, and be honest		Create a coordinated integrated network for communication that sits outside of the normal hierarchical layers
			Communicate to the network at the same time as briefing senior management
			Focus on face-to-face communication
			Diversify communication
Evaluation			
Refreeze	Reinforce and institutionalize change	Institutionalising new approaches	Dual approach supports hierarchy

Unfreezing

Six of the twelve factors aligned with the first phase of the planned model of change. The first four factors corresponded with factors from phase one and aligned directly with the unfreezing phase of Lewin's (1952) planned change model. The four factors and their alignment have been discussed in section 6.5. In addition phase two produced two new factors that aligned with the unfreezing stage. *Creating a culture that accepts change* and *a continually changing organisation* can be seen as elements that helped to unfreeze the organisation.

Moving

The factors identified to align with Lewin's (1952) 'moving' phase offered insight into the implementation of change. Other planned models of change (Bullock & Batten 1985; Huse 1975; Lippitt, Watson & Westley 1958) tend not to elaborate on how to implement the change or move the organisation from one state to the next. The factors identified in phase two of this research focused strongly on communication during the moving phase of planned change. The strategic focus was still visible and carried over from the unfreezing phase to provide guidance during the moving phase. The change was supported by the use of projects and the whole process received top level support. The nine factors aligned with the moving phase of planned change, with some also able to be linked to unfreezing.

As can be seen, Jick (1991) implies that once the planning has been completed then all that is needed is to communicate and the change will be implemented. In contrast, he devotes eight of the Ten Commandments to the 'unfreezing' the organisation. Kotter (1995) reminds us that change is best implemented by identifying short term goals and achieving them. He also advises managers not to declare victory too early and to lever the opportunity to identify more change while consolidating the change already in place. Some similarity can be seen in the factors that focus on communicating the change. Table 8-2 has been presented so as to easily identify the alignment of factors derived from Tasmania Police to those of Jick (1991) and Kotter (1995).

Refreezing

Lewin’s (1952) last phase of ‘refreezing’ has been supported in one factor identified in phase two of this research. Re-scoping the implementation of change to include the organisational management structure can be seen as an attempt to refreeze change.

The discussion above provides evidence that Lewin’s (1952) model of change is a suitable model for Tasmania Police to align change to.

The next section of this chapter will present the inter-relationships between the factors.


8.4 Inter-relationships between factors

This section investigates the inter-relationships between the factors identified in section 8.2. The factors are presented in order of the extent of the relationship they have with other factors. Each factor and its relationships is summarised in a table prior to discussing the relationship it has with other factors. The wording of some factors has been compressed to allow for ease of reading.

8.4.1 Creating an integrated network for communication

This factor has been derived for the theme “Supporting a network of change agents”. This analysis revealed linkages with other factors. Table 8-3 provides an overview of the six relationships aligned with this factor.

Table 8-3: Inter-relationships with network

Network Outside of Structure Factor	Is related to 	Change Factors
Create a coordinated, integrated network for communication that sits outside of the normal hierarchical structure	Must have	Visible top level support for change
	Needs to	Communicate to the network at the same time as senior management
	That will	Personalise the change agent role
	Primarily	Focus on f-2-f communication
	Is encouraged to use	Diversity of communication
	Supports creating	A culture that accepts change

As discussed in 8.2.3, the coordinated, integrated change agent network demanded top level support. For the network to be coordinated there had to be an allocation of resources, in this case a position dedicated to coordinating the network, the Change Management Coordinator. This position was substantive and the person had been hand picked to perform the role. Information relating to decision making, justifying decisions and providing insight into future planning was provided to the change agents from the top level of the organisation. The flow of information from the top was essential to the change agent's credibility. There was a direct link between the network of change agents and the top level of the organisation. This was critical to successful communication.

As discussed in 8.2.6, timely and accurate information was an essential ingredient for the change agent network. Timing was essential as the change agent network needed to be aware of changes prior to them being implemented. The information could be related to a current directive, change in legislation or project. It was essential that information was provided to the change agent network in a timely manner if the network were to function with credibility.

One of the officers interviewed commented that 'you would not find a manual on how to perform the role of a change agent'. He went on to say that, as an organisation, they had manuals on everything down to how to wear your hat. He believed that the strength of the change agent network was that the change agents were left to decide for themselves the best way to perform the role they had been asked to undertake. The role was reliant on the individual personalities of the change agents and their ability to be in tune with their workplace. Change agents grew and adjusted in their role as they gained experience and as their workplace changed. The change agents were given support through the Change Management Coordinator and were provided with networking opportunities with the tri-yearly forums.

The change agent network was initiated because other forms of communication had not been effective in disseminating information to the whole of the organisation. One strength of the network was that it was made up of individuals who were geographically dispersed and provided coverage across districts and divisions within Tasmania Police. The foundation of the network was its personalised approach to

communicating information relating to change. The network therefore drew on the ability to communicate to the workplace using face-to-face communication. The analysis supported the use of face-to-face communication by the change agents when communicating to their workplace but this does not preclude the use of other methods.

As discussed in 8.2.6, email was used widely as a communication tool at Tasmania Police. The communication strategy employed by Tasmania Police used the diversity of communication tools available. The change agents, as a part of personalising their role, chose the most appropriate communication tool to suit the type of information being disseminated.

The change agents provided information about change to members of the organisation. As such, they acted as an information conduit. The network was provided with rich information to help explain the changes that were occurring; the view was that the rationale behind the change, and the clear link to the strategic direction of the organisation, would be enough to create an acceptance of the change. Members of the organisation became more strategically aware and this was credited with an increase in members undertaking further tertiary education. Section 8.2.5 discussed the ever-changing environment of Tasmania Police; this, together with the depth of communication, helped create a culture that was accepting of change. The change agent network played an integral part in creating this culture.

8.4.2 *Visible top level support for change*

This factor has been embedded in all themes and the analysis revealed linkages with other factors. Table 8.4 provides an overview of the four relationships aligned with this factor.

Table 8-4: Inter-relationships with top level support

Top Level Support Factor	Is related to →	Change Factors
Visible top level support for change	<i>Insist that</i>	Personalise the change agent role
	<i>instigated</i>	Communication to the network at the same time as briefing senior management
	<i>Ensures</i>	A hierarchical structured active level of governance
	<i>Provides the</i>	Dual approach that supports the hierarchy

The Deputy Commissioner of Police insisted that the change agent's role was not to be clearly defined with identifiable boundaries, duties and process, with a view to allowing the change agents to personalise their role as best suited their individual workplaces. Subsequently, two other people held the role of Deputy Commissioner; neither saw the need to place formal structure or process on the role of the change agents. The role required personalisation but was reliant on the sponsor supporting that approach. Each of the new Deputy Commissioners of Police acknowledged that the network was effective.

As discussed in 8.2.6, to remain credible the change agents needed to receive information at the same time as senior/district management; the challenge for the Deputy was how to achieve this without alienating senior/district management. The organisation was aware of the benefits of the two channels of communication: the hierarchy and the change agent network. Included in the review of communication practices undertaken in 2008 by Tasmania Police, was an examination of how to best use each of these channels and how to achieve this so each channel was supportive of the other.

Based on the data gathered, it was apparent that senior management of Tasmania Police created a structure that supported and governed change. The structure and support consisted of the change agent network, with 97 change agents spread across divisions and districts. It also included the position of the Change Management Coordinator who managed the network and provided an important link between the organisation and the Deputy Commissioner of Police. Support for projects was


provided by Business Project Services, which coordinated projects for the organisation and had a direct reporting line to senior management. Support was also provided by the Information Management Board, which was responsible for overseeing projects implemented at Tasmania Police. The analysis supported the visible inclusion of management into the governance of change. Overall Tasmania Police created governance for change by adopting a dual approach and providing structure and support within the organisational hierarchy.

Tasmania Police was a hierarchical, para-military organisation. The core business was policing, which required a command control environment; this was supported by a coordinated, integrated, network that sat outside the normal structure. The change agent network was there to support the hierarchy, not replace it. Officers were encouraged to pass information up through the hierarchical network especially when it impacted the workplace and the way in which duties were conducted. There was growing awareness, at all levels of management, that the dual approach was a supportive and informative structure that aided management. Both the hierarchical structure and the integrated change agent network worked in unison to provide the organisation with a dual approach to disseminating information.

8.4.3 A hierarchical structured active level of governance for change

This factor was derived for the theme “Mandating project governance” and the analysis revealed linkages with other factors. Table 8-5 provides an overview of the two relationships aligned with this factor.

Table 8-5: Inter-relationships with active governance

Active Level of Governance Factor	Is related to	Change Factors
		
A hierarchical structured active level of governance	<i>Is guided by</i>	An overall strategic direction
	<i>Understands</i>	Communication to the network at the same time as briefing senior management


An active level of governance not only required top level support, as described in 8.2.8, but also required guidance as to the direction the change should be taking. The strategic direction, as clearly identified in Tasmania Police’s Vision and Mission statements, provided guidance to the decision makers. Having a direction to move the organisation was essential for change but having a strategic direction that would guide the organisation to a more effective future showed vision on behalf of management.

Incorporated into governance was an understanding of the benefits of communicating with the change agent network at the same time as briefing senior management. Some components of the governance of change, such as Business Project Services, supported this dual approach to communication as it ensured that the information reached all levels of the organisation in the form that was originally intended. Overall there was understanding if not support from those who governed change. The change agent network and the hierarchical structure represented a duality in the organisation that by its nature was in conflict. The best result was for understanding and acceptance to be created so each could function effectively in the organisation.

8.4.4 Change is clearly articulated through projects

This factor was derived for the theme “Managing projects” and the analysis revealed linkages with other factors. Table 8-6 provides an overview of the two relationships aligned with this factor.

Table 8-6: Inter-relationships with change is clearly articulated

Change is clearly articulated Factor	Is related to	Change Factors
		
Change is clearly articulated through projects	<i>Must align with</i>	An overall strategic direction
	<i>Is controlled by</i>	A hierarchical structured active level of governance

Projects were used as the basis of implementing change at Tasmania Police. Projects were either internally generated or externally generated with links to other agencies or commonwealth initiatives. Projects had to align with the overall strategic direction of the organisation if they were to be supported by management. Projects needed to


identity how they would help the police achieve their goal of providing a safer Tasmania. Providing process efficiencies achieved this goal by releasing officers from administration work thus enabling them to spend more time on actual policing duties. Based on the data gathered, it appeared that implementing change using projects was effective for Tasmania Police and while not all projects, in particular technology projects, were successful the police have learned from past endeavours. The clear alignment was essential for change to be effectively explained to the organisation.

Project management is a skill that, in the most part, was successful at Tasmania Police. Using the PMBoK (Project Management Institute, 2004) methodology for formal projects, and assigning the appropriate level of governance in the form of Project Managers and the Information Management Board governance, was integral in the process used by Tasmania Police to manage projects. The management of projects changed to allow the Information Management Board to take a more strategic role and to include district management into the project implementation. Governance was a core part of implementing projects at Tasmania Police.

8.4.5 Personalisation of the change agent role essential

This factor was derived for the theme “Supporting a network of change agents” and the analysis revealed linkages with other factors. Table 8-7 provides an overview of the two relationships aligned with this factor.

Table 8-7: Inter-relationships with personalize the change agent role

Personalise the change agent Role Factor	Is related to 	Change Factors
Personalise the change agent role	Must include	Focus on face-to-face communication
	Supports	Diversity of communication

Insisting that the role of the change agents could be personalised was a key component for the network’s success. A significant reason that the network was formed was to take advantage of the opportunities for face-to-face communication. A conversation involving two or more people was seen as the best way to communicate.


There was an expectation that change agents would use this way to communicate in their workplace. This expectation was implied not enforced. The time and the place was left up to the change agents, a number of whom opted to take advantage of informal meetings to raise topics for discussion with their colleagues.

Tasmania Police’s communication strategy was based on using a variety of communication vehicles. While the change agents were expected to communicate in their workplace primarily by using face-to-face communication, they could and did utilise other communication vehicles, as they deemed appropriate. The matching of the communication vehicle with the type of information being disseminated was part of the personalisation of the role.

8.4.6 *Creating a culture that is accepting of change*

This factor derived for the theme “A culture of embracing change” and the analysis revealed linkages with another factor. Table 8-8 provides an overview of the relationship aligned with this factor.

Table 8-8: Inter-relationship with a Culture that accepts Change

Culture that accepts Change Factor	Is related to	Change Factors
		
A culture that accepts change	Results in	A continually changing organisation


Tasmania Police created a culture that is accepting of change. In part this was forced on them by external agents such as the government, which changed legislation and thereby changed the processes in the workplace. Over the decade there were numerous efficiency gains, mainly through the application of technology, which resulted in officers being released from inefficient administrative tasks and returned to core policing duties. With the acceptance of change came opportunities to look for further improvements. Tasmania Police consulted with its members to identify changes for the following three years. Management was comfortable that the members of the organisation understood that Tasmania Police was a continually changing organisation that actively sought and welcomed their input. However, while

seeking members’ input was admirable, it was necessary that management provided the overall strategic direction within which to frame this feedback.

8.4.7 Overall strategic direction that change is easily aligned to

This factor derived for the theme “Mandating project governance” and the analysis has revealed linkages with another factor. Table 8-9 provides an overview of the relationship aligned with this factor.

Table 8-9: Inter-relationship with an Overall Strategic Direction

Overall Strategic Direction Factor	Is related to	Change Factors
		
An overall strategic direction	Must have	Visible top level support for change

The overall strategic direction provided the organisation with a goal to align change with. The strategic direction at Tasmania Police was more than words written in a plan, it was a goal to be actively pursued. However this goal, no matter how relevant, would have been meaningless without top level support. The support at Tasmania Police was more than words, it was demonstrated by every decision and action taken by management. The management team was focused on the task of providing a safer Tasmania. Business decisions were justified with this goal in mind. Members of the organisation accepted the changes that were implemented because they could readily see the direct link back to the strategic direction. At Tasmania Police, “visible” top level support was just that, visible in everything that was done. Management lived and breathed the strategic direction of the organisation, thereby creating transparent change.

8.4.8 Significance of inter relationships

The discussion in the previous section identified various inter-relationships between the factors and highlighted two factors of significance: *creating a coordinated, integrated network outside of the normal hierarchical layer* and *visible top level support for change*. The two factors are central to the other factors as shown in Figure 8-2.

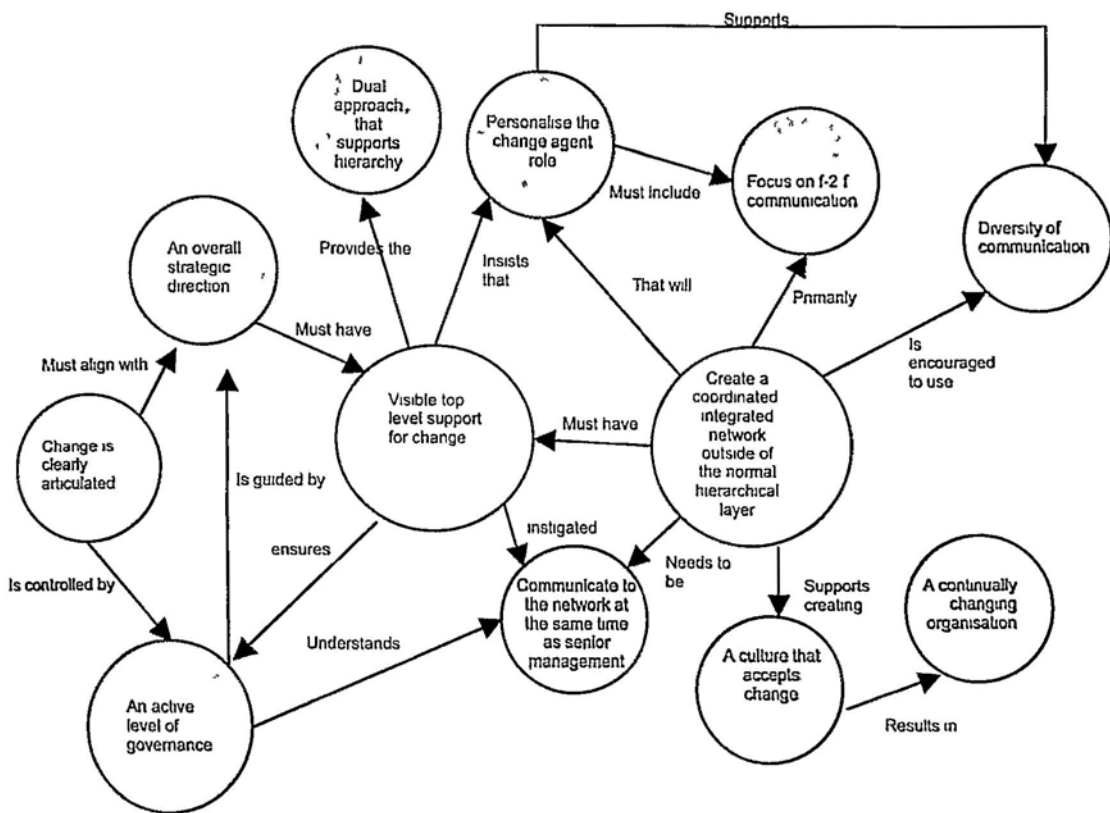


Figure 8-2: Factor for change - Phase two

Visible, top level support was central to a number of other factors. Officers were encouraged to use their supervisors as their first point of contact but were provided with an alternative through the change agent network. This was all the more important in an organisation that dealt with dualities or, what O'Reilly and Tushman (2004) called, an ambidextrous organisation. There was a general understanding that the dual approach adopted by Tasmania Police had benefits, and a recognition that practices needed to support the change agent network but not undermine the management of the organisation. Top level support ensured that an appropriate level of governance was provided, which ensured that deliverables were forthcoming. Change was implemented using projects that were clearly defined and provided with an active level of governance. Formal change was governed by the Information Management Board, with the Deputy Commissioner of Police chairing that committee.

Creating an integrated network required top level support and was connected to various aspects of communication. The network's main strength was the ability of change agents to communicate face-to-face with members of their workplace without being restricted in that role: they were able to supplement face-to-face communication

with other communication media. The change agents personalised their role to suit both the workplace and their own personality. This strategy was implemented to promote accuracy of communication through the organisation. The network could not have functioned effectively without top level support. Without that they would not have received the information at the same time as district management nor would they have been free to disseminate that information in a manner that best suited their workplace.

The link between the two significant factors was that the sponsor continued to empower the network by providing them with information at the same time as senior management.

Towards the end of the research period the role of the hierarchy in the communication cycle was reinforced, creating a dual approach to communication. The actions of the Deputy Commissioners needed to align with the strategic direction of the organisation. Any action that was not aligned to the strategic direction of the organisation could have been perceived as undermining the communication process. The top level of the organisation needed to adhere to the strategic direction if it were to provide guidance to the organisation. Martin, Jones et al (2005) identify the link between an enthused leader and a guiding mission statement, proposing that these are key ingredients to positive change. Wacławski's (2002) four domains of leadership, culture, structure, mission/vision need to be considered simultaneously when implementing change.

The discussion above highlighted twelve factors and their interrelationships. Two factors had greater significance than the other twelve. Three of the factors were: environmental; created by Tasmania Police; and support implementing change.

8.5 Chapter Reflections

This chapter provided the discussion and interpretation of the themes identified in Chapter 7. The chapter presented twelve factors that evolved from the interpretation of the themes. The factors were compared to the literature, as presented in section 8.2. The literature supports the majority of the factors found in phase two of the

analysis with the exception of the *creation of a coordinated, integrated network for communication that is outside of the normal hierarchical layers* and *communication to the network at the same time as briefing senior management.*

The chapter presented the inter-relationships of the factors and highlighted two significant factors: *the creation of a coordinated integrated network for communication that sits outside of the normal hierarchical layers* and *visible top level support for change.* The factors from phase one and phase two will be compared in the next chapter.

9 Case Study Findings

9.1 Introduction

This chapter presents the case study findings in three major parts. Part one presents a comparison of the factors from phases one and two in a table, then examines those factors. This examination considers the factors that have remained, those that have changed, the new factors and the factors that have disappeared. Part two discusses the significance of these factors and their inter-relationships. Part three presents the case study findings and the answers to the two research questions. The chapter is structured in the following sections:

- Section 9.2 presents the comparison of eleven factors from phase one with twelve factors from phase two data.
- Section 9.3 presents the factors that remained stable in the ever changing Tasmania Police environment. The core of the stability is linked to effective decision making when first choosing technology and implementing change.
- Section 9.4 of this chapter presents factors that changed slightly between phase one and phase two. The change represents a refinement of the factor to better describe the changed environment.
- Section 9.5 presents factors that changed significantly between phase one and phase two data collection. Two factors that were present in phase one evolved over time into two new factors from phase two. The new factors were broader than those in phase one.
- Section 9.6 presents the two new factors from phase two data. The two factors demonstrate growth and learning on behalf of Tasmania Police. The organisation moved forward with the adoption of technology and became more efficient at handling change.
- Section 9.7 identifies a factor that was present in phase one but not in phase two. The removal of this factor demonstrates a resolution of the conflict between management and resistance of change.
- Section 9.8 presents a discussion of what is significant in the comparison of phase one and two factors. This section presents two significant factors from the comparison.
- Section 9.9 presents a discussion of the case study findings and the answers to the two research questions.

9.2 Comparison of factors from phase 1 & 2

Table 9-1 provides an overview of the comparison of the factors from the phase one and phase two data analysis. In comparing the two sets of factors, four conditions were found. Some factors were common to phase one and phase two. Some factors changed slightly between phase one and phase two. Some factors that were present in phase one were not present in phase two. Finally some new factors presented themselves in phase two.

Table 9-1: Comparison of factors phase one and two

Factor	*	#	€	μ
Active level of governance for change		#		
An overall strategic direction that all change is easily aligned to	*			
Created an integrated network for communication that is outside of the normal hierarchical layers		#		
Communicate to the network at the same time as briefing management	*			
The network is free to choose the appropriate mode of communication for their workplace			€	
Training is essential			€	
Change is clearly articulated through project boundaries and documentation		#		
Resistance is embraced and change is explained			€	
Focus on face-to-face communication	*			
Diversify communication	*			
Visible top level support for change with open door		#		
Personalisation of role essential				μ
Creating a culture that is accepting of change				μ
A continually changing organisation				μ
Dual approach support hierarchy				μ

- * Common factors for phase one and two
- # Common factors that have slightly changed from phase one and phase two
- € Factors present only in phase one
- μ New factors from phase two

The following sections presents the analysis of the comparison of the factors from phase one and phase two of the data.

9.3 Common factors in phase 1 & 2

The data analysis, as presented in chapters five and seven, identified fifteen factors that were important to implementing technology-based change at Tasmania Police. Of the fifteen factors, four were present in both phase one and phase two:

- *An overall strategic direction that all change is easily aligned to*

- *Communicate to the network at the same time as briefing management*
- *Focus on face-to-face communication*
- *Diversify communication*

The first factor that remained constant in the change environment was the strategic direction of the organisation, which was incorporated in the mission and vision statements. Tasmania Police reviewed that direction but there was no evidence that the earlier statements were no longer relevant. The new business plan produced some minor changes to the wording but the deeper intent was still present. Ten years was a long time for a strategic direction to remain current. The mission statement encapsulated the core business of the organisation. In particular, it was the mission statement that guided the organisation and provided an anchor from which to base and justify the change. The mission statement provided clarity when choosing technology by ensuring that the role and the impact of the technology aligned with the strategic direction of the organisation. In addition, the role of the mission statement was widely understood by members of the organisation and, because of the successful push for further education, officers were better able to understand the need for strategic planning and having a strong strategic direction.

The organisation adopted a bottom-up approach for the second round of planning. The initial planning utilised a top-down methodology. Time made this change possible. The top-down, predetermined approach, used to introduce Project BATON, was the right method at the time for an organisation that was about to reengineer itself incrementally.

While the original approach was consultative by including community and stakeholders, management did not consult with the organisation regarding the changes that were to be made. The changes were pre-determined, as identified in Project BATON. A decade later the organisation had positioned itself to listen and work with members to plan the next steps to the future.

The second factor that remained stable over the decade related to the decision to brief the change agents at the same time as senior management were briefed. As discussed previously, the decision was made by the Deputy Commissioner of Police because he

was dissatisfied with senior management's attempts to communicate to their districts or divisions. Discussions occurred with senior management about changing the manner in which they communicated to a method that was more efficient and effective. Essentially the Deputy Commissioner encouraged senior management to adopt more modern management techniques, which included open communication in the workplace.

At that time, the majority of senior management were 'old school' officers who had been promoted under the previous system of time served and most had come through Criminal Investigation Bureau, which in turn influenced their management style. When senior management did not change their communication practices, the Deputy Commissioner of Police provided information to the change agent network, initially before senior management, to circumvent the communication blockages in the districts and divisions. The briefings then reverted to the change agent network being informed at the same time as senior management.

From the discussion above, it could be assumed that this factor directly aligned with the person holding the position of Deputy Commissioner of Police. Later, however, two different officers held the role of Deputy Commissioner of Police and each continued the practice of communicating with the network at the same time as senior management. Technology supported more open communication practices but Tasmania Police had not viewed communication technology as the total solution to their communication practices, especially when dealing with change management. The reason for the continuation of this practice was linked more with the credibility of the change agents rather than the earlier issue of resolving communication blocks.

To be effective in their role and credible in their workplace, the change agent network required the information at the same time as senior management. Interestingly, one interviewee thought the practice had stopped because middle management had been reintroduced into the feedback cycle of the organisation, thereby eliminating the need for the change agents to be included in the briefing cycle. This factor has the hallmarks of duality embedded into it. How does an organisation empower a network like the change agents while at the same time not undermine the role of senior

management? Providing credibility to the change agents ensured that this factor has remained in play over the last decade.

The third factor that remained constant was the focus on face-to-face communication. Tasmania Police, like other para-military organisations, utilised the benefits of face-to-face communication. Shifts were briefed in person by the supervisor of the day before officers undertook policing duties, to ensure a clear understanding of the priorities of the day. There was a strong culture of training in the organisation. The Tasmania Police training Academy supported that culture. While the world saw flexible and distance education as suitable alternatives to face-to-face training, Tasmania Police still predominately delivered training in person. Meetings and forums were an essential component of the communication strategy so it was not surprising that, when looking for a method to communicate change, Tasmania Police adopted a strategy that was based on face-to-face communication. Rogers (1995) in his theory of diffusion of innovation discusses that a principle of human communication is that the transfer of new ideas occurs more frequently when the individuals are homophilous, that is have similar beliefs, education and social status. Homophilous communication was the basis of the change agent network and this remained stable in the organisation.

The last factor to remain stable at Tasmania Police was the diversity of communication. Appendix 2 identifies thirteen vehicles available to the organisation to communicate the impending change. At the time phase one data was collected, the organisation had limited technology to support communication. By the time phase two data was collected, Tasmania Police had a full range of technological communication vehicles such as intranets, electronic bulletin boards, websites and email. While Tasmania Police favoured face-to-face communication, their underlying approach was one of diversity. Multiple communication vehicles were used to ensure that the organisation received the information in an accurate and timely manner. However this resulted in information overload and confusion about where to find specific information. A review of their communication practices was being undertaken, the aim of which was to provide more structure to the alignment of the communication vehicles and the type of information being disseminated. This will in

part reduce some of the information overload but also address the amount of redundant information in the workplace.

The four factors presented have been stable in an ever-changing, dynamic system. The stability was not as a result of rigid rules that were embedded into the procedures and process of Tasmania Police; the stability was created because the four factors were fundamental to the method Tasmania Police adopted when implementing change over the decade, regardless of the advances in technology. Tasmania Police, by being effective planners and decision makers, demonstrated that the factors were still relevant a decade later. The factors were culturally embedded into the organisation and aligned in such a way that they became an intrinsic part of their change practice.

9.4 Common factors that have changed from phase 1 & 2

The comparison of the factors from phases one and two identified four factors that have changed slightly when presented in phase two. The factors are:

- *Active level of governance for change*
- *Create an integrated network for communication that is outside of the normal hierarchical layers*
- *Change is clearly articulated through project boundaries and documentation*
- *Visible top level support for change with open door*

The factor involving governance of change included information about how the governance was structured. The theme that emerged in phase two data relating to governance was “*A hierarchical structured active level of governance for change.*”

The factor relating to creating an integrated network for communication in phase one was expanded in phase two to include reference to the coordination of the network. The phase two factor was “*Create a coordinated integrated network for communication that is outside of the normal hierarchical layers.*”

The factor relating to change being articulated through project boundaries and documentation in phase one was refined in phase two by removing the reference to

boundaries and documentation. The phase two factor was “*Change is clearly articulated through projects.*”

The factor relating to top level support for change with an open door policy in phase one was refined in phase two by removing the reference to the open door. The phase two factor was “*Visible top level support for change.*”

In phase one of this research, the factor relating to governance was broad and focused on activity. With the passing of time it became evident that the hierarchical nature of the organisation, along with the underlying structure, impacted the factor of governance. Tasmania Police implemented an additional reporting line to the governance of projects. The appointment of the Project Director involved district management with the implementation of projects rather than them simply being the people to whom the finished projects were handed. Project Directors were empowered to make day-to-day decisions relating to project implementation. The Project Directors were chosen based on their substantive responsibilities, thus aligning the change directly to the managers who were most affected. Project Directors not Project Managers reported to the Information Management Board. This change allowed the Information Management Board to take on a more strategic role in the organisation where previously the role was relatively hands on. The revised factor thus incorporated the structure and hierarchical nature of the governance given to change at Tasmania Police, which in turn focused on providing appropriate governance for change.

One of the two key factors for change in this research also saw some refinement between phase one and two of the data collection. The integrated network that sat outside normal hierarchical layers continued to grow and reached a total of 97 change agents. The change agents were recruited incrementally as more change agents were needed to provide effective coverage in the districts and divisions. The rationale behind each round of recruitment was slightly different. Round one agents were identified by the organisation, consultants and the BATON Project Team as being officers suited to the role. By the third round, some officers felt that being a change agent was a good way to gain promotion, as some of the original change agents had been promoted. This realisation caused a review of the self-nomination process

adopted for round two. In the last round, change agents were nominated by their workplace supervisors, in a quest to involve middle management in the change process. All change agents underwent training. The training for each round of change agents provided continuity across all the cohorts.

A key to the effectiveness of the network was the role of the coordinator, thus the inclusion of 'coordinated' in this factor. Over the ten years, the organisation recruited or seconded a number of people to perform the role of coordinator. The network was in various states over the decade. At times there was no coordinator in the role. On other occasions the coordinator lacked experience. At the time of phase two data collection, the original coordinator had returned to the role. Not only was she one of the original change agents, she had continued in her training role at the Police Academy. When collecting phase two data there were repeated references from both management and the change agents that, having an experienced person as coordinator was the key to the functioning of the network. Succession planning for this role was an issue for Tasmania Police. As the role was the key to the network, more focus needed to be paid to succession planning.

The third factor that underwent revision between phase one and two data collection related to the use of projects to articulate change in the organisation. Tasmania Police took an incremental project approach to implementing change. Project BATON was divided up into manageable projects, some of which became the impetus for other projects. With funding being limited, Tasmania Police welcomed opportunities to link into national and federal projects that aligned with their strategic direction. The advantage of these projects was that they normally had funds assigned to them by project instigators. One such project was the national DNA database. Tasmania Police was an early adopter of the state government project management methodology (PMBok) and played an active part in refining the methodology over the decade. Phase two indicated that there had been a move from the centralised formal approach to projects, as not all projects were being managed by Business Project Services. Smaller projects were often run 'off the side of desk' by officers who took this on in addition to their substantive duties. The officers working on these projects reported directly to Assistant Commissioners or Commanders and did not have allocated budgets nor did they follow any formal project methodology in their project's

development or implementation. The informal projects were low in risk and were very successful for the organisation, valuable at a time when a major project by Tasmania Police had failed. The recognition and inclusion of informal projects resulted in this factor being refined, with the removal of boundaries and documentation from the factor. Tasmania Police took stock of what had succeeded and what had caused issues when reconfiguring the role of the Information Management Board and the introduction of Project Directors. Tasmania Police were experienced and successful at implementing project based change although they demonstrated that they had issues with some technology-based projects.

The last of the four factors that were revised was the second key factor identified as being significant for implementing change at Tasmania Police. Visible top level support was identified as being critical in the literature and in this research. Phase one suggested that the top level support should include an open door policy to allow the change agents, in particular, to gain access to the change sponsor, namely the Deputy Commissioner of Police. The factor was still significant in phase two but the need for an open door policy was not evident. The hierarchical nature of the organisation had not supported the open door aspect of top level support.

Traditionally, the rank of Deputy Commissioner was responsible for the day-to-day running of the organisation. The Deputy Commissioner had great authority and power and, in a command control environment, was perceived to use that power. Officers, therefore, were reluctant to go directly to the Deputy Commissioner for information and chose instead to seek clarification from the coordinator. This change did not undermine the role of top level support. In phase two the previous Deputy Commissioner had been promoted to Commissioner and was on leave during the data collection; this provided an opportunity to interview the new Deputy Commissioner while acting as Commissioner along with the Acting Deputy Commissioner. From a research perspective this allowed the personality of the original Deputy Commissioner to be removed as an influencing factor in the research. Both the new Deputy Commissioner and the Acting Deputy Commissioner took on the role of change sponsor, committed time and focus to the change program, and met with the Change Management Coordinator on a weekly basis. All three adopted a hands on approach to the support offered for change in the organisation.

The four factors presented were refined over time to better represent the modified practices at Tasmania Police. The refinement was two fold. The first two factors included additional dimensions: the inclusion of “hierarchy and structure” in the first factor provided insight into the support provided by governance of change; the inclusion of “coordinated” in the second factor better represented the focus of the role of Change Management Coordinator and that role in change practices. The last two factors saw the removal of words, which broadened and better represented changed practices: the removal of “boundaries and project documentation” from the third factor took into account the place for informal projects in the organisation; the removal of “open door” from the fourth factor reaffirmed that the change agents used the Change Management Coordinator as their primary contact with management.

9.5 Factors evolved into new factors

The comparison of the factors from phases one and two identified two factors that were incorporated into two new factors when presented in phase two. The factors were:

- *The network is free to choose the appropriate mode of communication for their workplace*

This was incorporated into the new factor:

- *Personalisation of role essential*

- *Training is essential*

This was incorporated into the new factor:

- *Creating a culture that is accepting of change*

The two factors above were, in essence, still present but they had evolved into new factors that more accurately represented the changed situation. Phase one data provided evidence that the change agents were encouraged to choose the most appropriate method of communication to their workplace. As the change management practices evolved and the organisation matured, the focus of this factor

changed to a broader concept of encouraging the change agents to personalise their role. A decade after the collection of phase one data, and three different people having filled the position of Deputy Commissioner, the role of the change agents was still not mandated by the executive. The success of the change agents was linked to their freedom to decide what was best for their workplace and to choose a style that best suited them as individuals. Freedom of choice was the key to this success. It was of interest to note that, as access to technology such as email increased at Tasmania Police, there was no evidence of this being taken up by the change agents as the primary method of communicating to their workplace.

At the time phase one data was collected, the organisation had undertaken a number of projects and had commenced the process of implementing change. Therefore it was not surprising that training was a factor that supported implementing change. As with the previous factor, the training factor was absorbed by a much broader factor in the changed environment. Tasmania Police created a culture that was accepting of change. To do this they relied heavily on open communication and training. Training was an integral part of the organisation. Each district had a training day once a month, promotion was achieved through completing courses, officers were encouraged to gain tertiary qualifications and project teams provided training on new systems and processes. The environment supported dissemination of information and created a culture that was accepting of change.

The essence of the original factors from phase one were embedded in these new broader factors. The new factors incorporated much more than the original factors. The personalisation of the change agent role embodied the freedom provided to the change agents to perform the role in a time, place and by a method of their choosing. The factor relating to culture was based on training but was reliant on open honest and timely communication to create a culture that was accepting of change.

9.6 New factors from phase two

Phase two data revealed two factors that had not previously been present in phase one data. The two factors were:

- *A continually changing organisation*

- *Dual approach support hierarchy*

Tasmania Police was an organisation that was continually changing. As explained in 8.4.6, the organisation was effected by the external environment and continually needed to adapt in order to perform its core business. Changes in legislation, changes in technology and changes in crime continually impacted the practices of Tasmania Police. Change was a constant factor in the organisation. At a time when management dictated a year of consolidation, change still occurred. The organisation controlled the internal change and decreed that there would be no new projects but, at the same time, powerful external forces created change that had to be actioned. The organisation was unable to decree a year of consolidation. Change was too consistent and had to be dealt with.

The change process was developed outside of the normal structure of the organisation. Project teams were assigned to the Business Project Services, and the change agents were used to disseminate information to the organisation and to provide a direct feedback mechanism to the project teams and the Deputy Commissioner of Police. The intent was to separate the change process from the normal hierarchical structure of the organisation. Latterly, there was a move to include middle management in the change process. By educating middle management that change management was an integral part of their jobs, the organisation anticipated that issues raised at an operational level might be more easily resolved. The dualism of the organisation, i.e. the approach adopted to deal with change and the approach needed to conduct the core business, often conflicted. The command control style versus the consultative open approach used to implement change, seemed to clash. By encouraging officers to use middle management rather than the change agent network as the first port of call, the organisation was able to expand and grow the change program.

9.7 Factors present only in phase one

Phase two of data analysis did not support one factor previously present in phase one. The factor is:

- *Resistance is embraced and change is explained*

Initially, resistance was a focus of the change program. Actively identifying those in the organisation that were resisting change gave the project teams the opportunity to provide more information or include the resisters in the stakeholder group. The change agents provided continuous information to their workplace with a view of minimising resistance. The role of the change agent was not to sell the change but to disseminate information relating to the change. However the change agents were aware that resistance was best met with more information detailing the reason for the change and, in the case of Tasmania Police, the rationale behind the decision making. The environment saw the inclusion of middle management into the change process and, aligned to this, was a recognition that some tasks belong more comfortably with management than with the change agent network. The removal of this factor resulted in the removal of the negative association between *an active level of governance* and *resistance is embraced*. The dual approach to change allowed Tasmania Police to refocus on the role of management and how they could support change and manage their day to day business activities.

9.8 Discussion on significance and inter-relationships

In this dynamic system that was changing over time, it can be seen that two significant factors, *visible top level support* and *creating an integrated network outside of the normal structure*, remained relatively constant. Six factors can be seen to be attributes of the two significant factors, with the remaining three factors related to the environment in which Tasmania Police operated.

Initially, it was thought that top level support could have aligned to the personality of the individual holding the position. However, through the collection of data over time, there was the opportunity to see two other people in that role. The officers involved had very different personalities and each had the freedom to make significant changes to the change program. Interestingly, the subsequent officers made no change to the degree of top level support offered. The change program was an integral component of the way Tasmania Police conducted their business. Included in the program was the commitment from the Deputy Commissioner to act as change sponsor and to provide the required resources and support. The Deputy Commissioner focused on using technology as an object of change. The support of

the Deputy Commissioner of Police seemed to have greater impact due to the para-military style of the organisation and this power was put to good use with the change program.

Using projects as the mechanism to implement change was at the discretion of the executive of the organisation. The Deputy Commissioner of Police was the chair of the Information Management Board and ensured that projects were implemented in a controlled and monitored environment with clear reporting lines. Initially, the change agent network was established outside of the normal structure of the organisation to disseminate information relating to change and gather feedback. The environment still supported the change agent network but, at the same time, looked to the hierarchical management structure to be a part of the communication of change. The inclusion of management, especially focusing on middle management, provided a dual approach to implementing change at Tasmania Police.

The literature identifies the need for top level support (Huq, Huq & Cutright 2006; Jacobs et al. 2006; Sminia & Van-Nisterrooij 2006; Wissema 2001). This case study highlighted that an empowered leader can make a difference to the acceptance of technology-based change in an organisation.

The second significant factor endured the test of time. The change agent network not only endured but grew from 20 change agents to 97 over the ten year period. The change agent's role had not changed over the decade and the focus of allowing the change agents freedom to perform the role in a manner that suited their workplace continued to be supported by all three Deputy Commissioners of Police. The change agents were information conduits and their role was to disseminate information to the organisation and to send feedback to the Change Management Coordinator and the Deputy Commissioner of Police. Face-to-face communication was key to the success of the change agent network. While the role was flexible, the support provided to the network was integrated into the organisation. A key to supporting the network was to have an effective Change Management Coordinator, which was a seconded position. Unfortunately, over the decade there was little focus on succession planning for this role. Technology supported this role but did not replace it. During the times when there was no coordinator, the network proved to be less than effective. The

coordinator at the time this research ended had been seconded to the role for a period of two years. The Deputy Commissioner's decision to provide information to the change agent network at the same time as the rest of senior management created the link between these significant factors.

The research revealed that the environment in which Tasmania Police operated had three supporting factors. An overall strategic direction provided guidance for the changes implemented. It facilitated focused and effective decision making along with the effective allocation of resources. The technology adopted helped achieve the mission of Tasmania Police. Discussions around the changes being implemented at Tasmania Police were easily aligned with the strategic direction, providing context for the change. The strong alignment of technology to the mission resulted in broader acceptance of the change. Officers generally wanted more effective work practices so they could spend more time on core policing activities and less on administration. Technology was used as an enabler not a driver to achieve this end. Tasmania Police did not differentiate technology-based change from organisational based change. All change was subject to a change strategy. *Technochange* (Marcus 2004) has the added complexity of dealing with the technology and this was incorporated into the project management rather than change management.

As presented in section 8.2.5, Tasmania Police worked in a continually changing environment therefore change was a constant in their workplace. External forces imposed change on the organisation even at a time that was decreed to be one of consolidation. Tasmania Police had a culture of accepting change. Officers were focused on core policing and any change that reduced the time spent on administrative tasks was welcomed. At times, some of the changes increased the workload of the officers but these were aligned with more effective results by taking a proactive approach to policing, such as diversionary conferencing. The three environmental factors created a supportive culture for change.

Figure 9-1 provides an overview of how all of the factors worked together to provide an environment that was accepting of change and that supported the implementation of change at Tasmania Police.

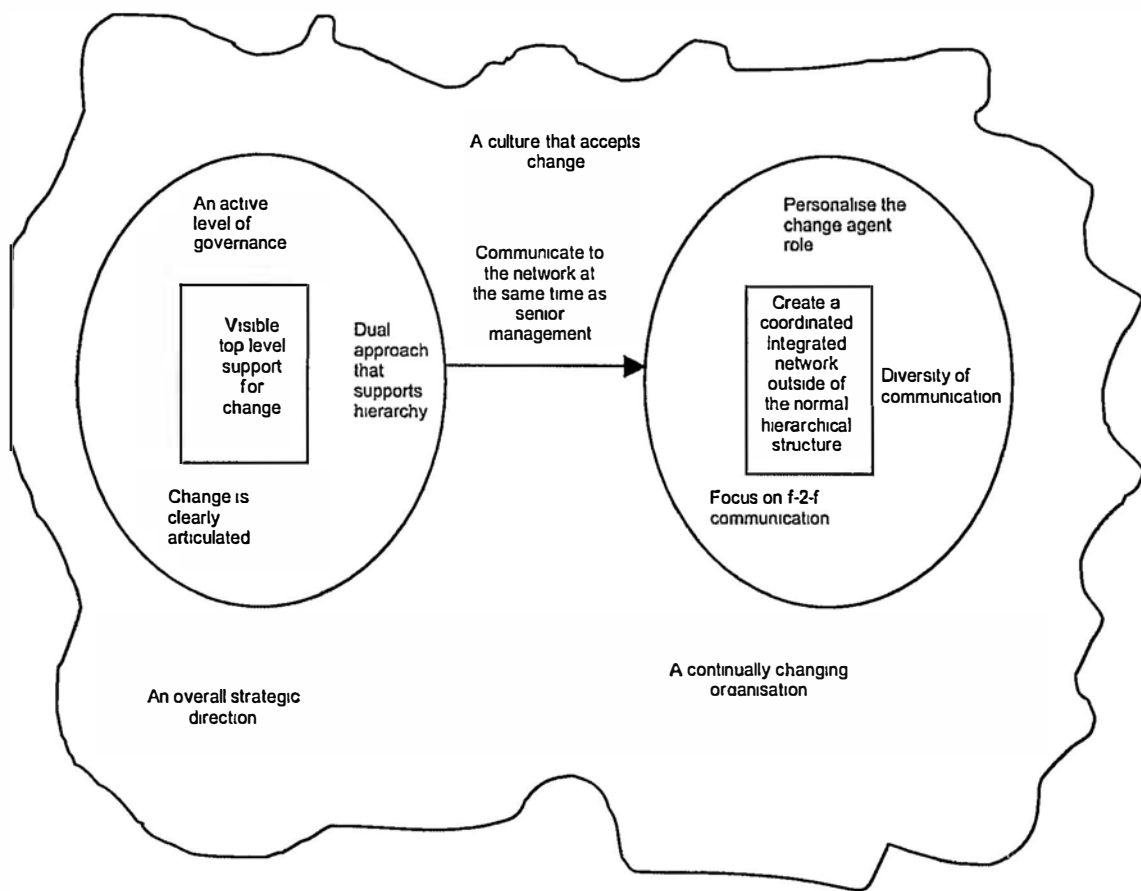


Figure 9-1: Conceptual Map of Change at Tasmania Police

9.9 Case Study Findings

This section of the chapter presents a discussion of the case study findings to answer the two research questions posed by this thesis (section 1.4). Based on the evidence presented in this case study, it was clear that the technologies in the projects analysed had an impact on Tasmania Police. It was also evident that these impacts were not always expected and that the approaches to project management and change management which were utilised, although adequate to get the job done, were not sophisticated enough to accommodate the complexities of the technology. As a result, the analysis revealed some frustration from officers even where change communication was conducted as advocated in the literature. Following Markus (2004), this case study also provided support for the need for greater integration between technical and organisational elements when managing *technochange*. The analysis also indicated that, for this hierarchical organisation, its change agent network was important in assisting Tasmania Police to more flexibly combine elements of change management and project management. However, the dualism between rigidity and flexibility inherent within the organisational structure created its own set of tensions so that,

when ‘push came to shove’, the ultimate sanction of hierarchy was applied. The other side of this dualism was that, over time, the organisation increasingly paid attention to becoming a ‘learning organisation’ that effectively managed its knowledge and its people. Finally, through the conduct of this case study, this thesis has contributed to an enhanced understanding of the implementation phase of change and the role and impact of technology within it.

9.9.1 Findings for Research Question One

The first research question posed was:

What approaches do Tasmania Police use in implementing and communicating technology-based change over time?

As has been discussed in the previous chapters, the approach adopted for implementing technology-based change at Tasmania Police was to:

- Create a change agent network to disseminate information in relation to the change
- Implement change using an incremental project approach
- Manage projects using a combination of project management and change management
- Adopt the PMBoK project management methodology.

Change agents

Tasmania Police recruited what it and the consultants called ‘change agents’ to help with the dissemination of information relating to change to members of the organisation. The change agent network grew, over the period of the research, from the original 20 to 97 change agents. The justification for the growth was the need to provide coverage across the geographical districts and ranks. Tasmania Police had a transient population, with officers moving districts every few years in an attempt to gain promotion. The change agent’s role was to disseminate information, provided to them by management, to their workplace. They were expected to feedback issues of concern to management, thereby creating two-way communications. The Tasmania Police change agents did not take responsibility for the change and were not asked to

either take ownership or sell the change. The message the change agents disseminated was sometimes carefully crafted and vetted by management while other information was gathered directly from the source. The change agents at Tasmania Police differed from those discussed in the literature (Buchanan & Boddy 1992; Markus & Benjamin 1996) yet the evidence from this research would suggest that they played a vital role in the acceptance of change at Tasmania Police. The change agents at Tasmania Police highlight the existence of a fourth type of change agent to add to the three already recognised by Markus and Benjamin (1996). This research would suggest the existence of a “Conduit Model” as the fourth change agent type. Their existence supported open and timely communication of information to the workplace and often transferred tacit knowledge (Nonaka & Takeuchi 1995) by using homophilous communication (Rogers 1995). The evidence from this research would suggest that while change agents did not buy into the change they were a significant part of the change management practice at Tasmania Police.

Project and change management

Under the PMBoK methodology, project managers needed to develop a communication plan that would determine who to communicate with, how and when the communication would take place, and what information would be communicated. To achieve this objective, representatives of the stakeholders, the change agents, were consulted in formulating the communication plan. The involvement of the change agents aligned to a change management approach to communicating the change. There is evidence that change management was embedded in the project management methodology and that this worked well; the only time that change management became the focus was when the technology acted as a negative agent of change, i.e. when the technology did not work as planned or failed in some way. When this occurred, increasing the level of communication was important in order that the organisation was kept informed of the actions taken to rectify the problem. The provision of extra information direct from the project team through the network, detailing how the problems were being addressed, minimised the damage the negative agent of change was having on the project. Therefore there was evidence that project management supported by change management was the approach Tasmania Police adopted when implementing technology-based projects. However, this approach

failed to manage the technology, which is evidenced by project failures and project not delivering the planned outcomes.

The need to manage technology

While on the surface Tasmania Police seemed successful at implementing projects their track record with technology-based projects was not one of success. As an organisation they had had technology failures. At the beginning of this research Tasmania Police had to outsource their first major project for the Information Management Strategy as their in-house capability was solely focused on maintaining legacy systems rather than helping the organisation move strategically forward. The organisation at that time exhibited conflict over the role of technology, with management viewing technology as an agent that would help move them closer to achieving their strategic direction. However, the Information Technology Branch failed to acknowledge the strategic need for new technology. Later plans to deploy new technology that would resolve ongoing issues of data redundancy and lack of integration failed even though more than adequate time and resources had been allocated.

There was evidence that, within Tasmania Police, good management and governance had generally been applied to technology-based projects. However, this had not addressed the technology itself. The focus for implementing the technology-based projects was the project rather than the technology involved. There appeared to have been an assumption that the technology would be delivered as planned - 'magic bullet' thinking (Markus & Benjamin 1997). At times, decisions were made that clearly indicated a lack of understanding of the impact of technology on the organisation, such as the rollout of the call centre to both southern and eastern districts without first load testing the system. Management, in their decision making, seem to focus on two of the three main factors for projects: time and cost (Schwalbe 2000; Ward & Griffiths 1996) with quality not always being considered. There was little evidence that the management of the technology was supported by the governance structure of the organisation. Lack of understanding of the technology itself may have impacted this outcome. This research provides support for Markus' (2004) suggestion that a combination of project management and change management is not sufficient for handling *technochange*. Tasmania Police adopted a *technochange*

approach as it expected the technology to drive organisational change, such as in the Call Centre project.

Creating a culture

The culture at Tasmania Police can be aligned to a number of the differences, as described by Warne (2000). Namely: the officers made a choice about joining the organisation and the job was a way of life; they had undergone, and continued to undertake, extensive training; they conformed to the rules and regulations of the organisation; they worked in a hierarchical structure and were lead by an autocratic leader. These differences created the organisational culture that was distinct from other public sector organisations (Hoque, Arends & Alexander 2004). The hierarchical nature of the organisation facilitated control. This control resulted in a focus on governance when engaged in the implementation of technology-based change.

The decade between 1998 and 2008 saw much change at Tasmania Police; some changes were planned and others were imposed. The catalyst for Project BATON was the call by government for public sector reform. The community and government required police to be more accountable both in their performance and how they managed their resources (Hoque & Moll 2001). Since then, Tasmania Police had existed in a continuous state of change. It could be assumed that the culture of the organisation supported change as would be expected in a paramilitary organisation. Once instructed, it would be anticipated that change would be implemented to the letter. However, implementing change is complex and more so when the change involves implementing technology. For change to be successful, the organisation itself was required to change. Tasmania Police moved from an autocratic leadership to one that was more open and consultative. This change had been fostered and had evolved over time. Evidence would suggest that the new style of leadership co-existed with the old command style of leadership.

Exploring dualities

Tasmania Police embodied the concept of dualities (section 2.2.1). As an organisation it was primarily ruled by command control while at the same time it tried to be a modern organisation. The leadership was both autocratic and consultative. It had a community focus while at the same time it had to enforce the law. Members of the organisation had to act on directives but were being consulted regarding business planning. It was hierarchical, yet had a network that communicated outside of the hierarchy. The organisation employed officers who operated within one culture and State Service Personnel who had a different culture. Tasmania Police took advantage of layering (Evans & Doz 1989) in an effort to build up new capabilities and qualities. Layering involved ensuring officers were transient so as to gain a holistic understanding of the organisation while developing new skills. In addition, Tasmania Police adopted a strategy of seconding within its own ranks to fill positions, such as project management, thus adding a strong cultural understanding to the implementation of projects. The seconded project managers, however, lacked technical understanding and were then reliant on either members from the Information Technology Branch or the external consultant for advice. Tasmania Police had also adopted the strategy of encouraging further education for their officers, to develop new capabilities and qualities that the organisation could draw on. The evidence would suggest that to achieve this Tasmania Police required a forward thinking executive who aimed for innovation and incremental gains (O'Reilly & Tushman 2004).

Coping with complexity

Implementing technology-based change was a complex process. Developing, implementing and managing the technology to deliver organisational change required skills in project management and change management along with the ability to understand and manage the technology. The impact the technology had on the organisation could be positive when the technology performed as planned or negative when the technology did not function in the manner required. In addition, the culture and structure of Tasmania Police provided governance supporting the implementation of technology projects. The governance aimed to ensure projects were delivered on time and within budget while not always considering the impact the technology could have on the organisation if it did not function according to plan. Information was

effectively disseminated at Tasmania Police through the change agent network. This network was free to disseminate information to their workplace in a manner of their own choosing. So while the information had been 'signed off' by management or the project team there was no control over what was delivered in the workplace. The discussion presented so far in answering the first research question identifies the complexity of implementing technology-based change in an organisation that was dualistic by its nature.

To reflect on the approaches used to implement and communicate technology-based change over time, Tasmania Police adopted a project management approach to implementation but failed to recognise the complexity involved in implementing technology. To communicate the technology-based change it created a network of people known as change agents that sit outside of the normal structure whose role it was (in addition to their substantive role) to disseminate information about the change to their workplace. The network did not evaluate the information being disseminated but was required to feedback from their workplace to management.

9.9.2 Findings for Research Question Two

The second of the research questions posed was:

How do case study insights enhance understanding of the implementation phase of change and the role and impact of technology?

To reflect on the literature, the concept of dealing with change can be linked back to Kurt Lewin (1952) who, from his field research in social science, developed a three staged planned approach to change. This model is broad and other change models can easily be mapped back to Lewin's original model. The model however does draw attention to three discrete phases: 'unfreezing', which aligns to planning the change; 'moving', which aligns to implementation; and 'refreezing', which aligns to embedding the change in the organisation. The change literature offers little guidance for the implementation phase. In addition to Lewin's (1952) model, this research has focused on two other change models with the view of exploring the implementation of technology-based change. Jick (1991) developed a tactical blueprint model for implementing major change in an organisation, which offers ten commandments to

guide the planning and implementation. Kotter (1995) developed an eight step model for transforming organisations that was based on research of over 100 organisations of varying sizes and types (Mento, Jones & Dirndorfer 2002). Kotter's model provides guidance at a strategic level and is based on lessons learnt from change failures. The three models have been used as a basis for comparison with the factors discussed in sections 6.5 and 8.3.

In 2004 Markus identified that technology projects were being implemented using a combination of project management and organisational change management. She introduced the concept of '*technochange*' where the focus was on the use of technology to drive organisational change. *Technochange* is when technology is used to drive improvements in organisational performance. She argued that implementing a technology project by combining project management with organisational change programs was not a winning solution. What was called for was an integrated technical and organisational solution to deal with *technochange* (Markus 2004). Little advice has been offered from the literature relating to implementing technology-based change.

Nine of the final twelve factors have been directly aligned to the 'moving' stage of Lewin's (1952) model. As discussed in section 8.3 some of the factors from this research expand Jick's and Kotter's advice on how to implement change. Table 9-2 presents the aligned factors with the models.

Table 9-2: Models and factors for implementing technology-based change.

Lewin's 3 stage Model of change	Jick's Ten Commandments	Kotter's eight step Model	Tasmania Police Factors
Implementation of change			
Moving		Planning for and creating short term wins	Change is clearly articulated through projects
			A hierarchical structured active level of governance for change
		Consolidating improvements. Producing more change	An overall strategic direction that change is easily aligned to
			Visible top level support for change
			Personalisation of the change agent role essential
	Communicate, involve people, and be honest		Create a coordinated integrated network for communication that sits outside of the normal hierarchical layers
			Communicate to the network at the same time as briefing senior management
			Focus on face-to-face communication
			Diversity communication

The factors, along with case study insights, provide guidance for implementing technology-based change. To answer research question two it was necessary to draw on insights gained from this case study. Tasmania Police on the surface seem to have managed the implementation of technology-based change well. However, the technology component of the projects often did not perform in the manner expected and there were no plans in place to deal with problems arising from the technology.

The Call Centre Project did not provide the timely access promised in the Business Plan. SAMSON II was stalled because Information Technology Branch was in conflict over which operating systems should be rolled out. Project Managers, while managing the projects effectively, lacked the knowledge and focus in relation to the technology. The governing board focused on delivering the projects on time and within the budget but neglected to recognise the impact the technology would have on the organisation if it did not function as planned. In contrast, a major technology

project was allowed to continue for extended periods of time while not delivering any outcomes to the organisation. On the positive side, Tasmania Police exhibited excellent change management practices during these projects. They were able to effectively disseminate information relating to change to the organisation in a timely, effective manner. It is now time to reflect on the implementation phase of technology-based change and discuss the things that need to be considered.

The factors developed in this research provide some guidance for implementing technology-based change and most align or expand the guidance offered in the change management literature, such as:

- Have a strategic direction that is embedded in the organisation and that everyone clearly understands and can relate to. Use the strategic direction to align and justify the change (O'Reilly & Tushman 2004; Wren & Dulewicz 2005b).
- Ensure there is visible top level support from someone who is empowered to make resource decisions in the organisation (Huq, Huq & Cutright 2006; Jacobs et al. 2006; Sminia & Van-Nisterrooij 2006; Wissema 2001).
- Adopt a project approach to implementing change. Use a project management methodology to guide the implementation of the projects (Kendra & Taplin 2004; Martin & Cheung 2002).
- Communicate the change. Develop a direct line from top to bottom BUT do not rely on technology to disseminate the information. Ensure the communication involves face-to-face delivery (Jacobs et al. 2006; Martin & Cheung 2002; Wren & Dulewicz 2005b).
- Provide governance for the change but ensure that the organisation understands the complexity of implementing technology (Martin, Quigley & Rogers 2005; Ranganathan, Watson-Manheim & Keeler 2004b).

The factors presented in this research however tell only part of the story about implementing technology-based change. While the factors summarised above positively contributed to implementing technology-based change at Tasmania Police, there were other aspects that needed to be considered to gain a holistic understanding of the complexity of undertaking technology-based change. In addition, it is those aspects of implementing technology-based change that Tasmania Police did not do well that have provided the most insight.

As a result of the discussion above it is possible to highlight how the conduct of this case study has contributed to an enhanced understanding of the implementation phase of change and the role and impact of technology within it.

The first two lessons taught by Tasmania Police relate to preparing an organisation for change. Implementation cannot be done in isolation from the planning and embedding. Therefore it is advisable to visit some important issues before dealing with the actual implementation of technology-based change.

- The structure of Tasmania Police was hierarchical, with three distinct layers. The organisation was paramilitary and command controlled yet communication pathways had blocks that prevented timely and accurate communication practices. Tasmania Police also had resistors to the change and could not rely on the hierarchical structure of the organisation for communication during the change process. To deal with these problems Tasmania Police took both short and long term action to not just deal with the resistance but to overcome it. Tasmania Police who were about to embark on technology-based change therefore:

Overcame resistance to change in the short term but removed it in the long term.

- Military and paramilitary organisations are dualistic by their nature. Dualities offer opportunities that can give an organisation alternative ways of doing things. At Tasmania Police, the duality of command control versus modern management practices offered the opportunity to take advantage of both approaches. A military or paramilitary organisation will always require a hierarchical structure with a command control approach yet these can comfortably co-exist with a flat communication structure and a consultative leader. Tasmania Police looked for opportunities to lever the potential advantages of dualities. In addition they created dualities that provided them with an alternative, thus enabling them to address inefficiencies or issues. Tasmania Police who were about to embark on technology-based change therefore:

Took advantage of dualities that increased effectiveness in the organisation.

The next six lessons focus on addressing the implementation of technology-based change.

- Communication is essential for implementing all change in organisations. Tasmania Police recognised they had a problem with communication in their hierarchical organisation. By viewing the organisation as a social structure (Rogers 1995) and seeing the opportunities offered by the transfer of tacit knowledge (Nonaka & Takeuchi 1995), Tasmania Police was able to recognise the informal aspects of communication in the organisation and create an additional structure for communication. The change agent network was used to support the formal communication methods that already existed in the organisation. By recruiting change agents, Tasmania Police placed members at various levels of the organisation and created opportunities for homophilous communication (Rogers 1995). Tasmania Police needed to ensure they had a timely and accurate process for disseminating information relating to the technology-based change. The information provided contained details justifying the reasoning behind the change. The information was communicated to the change agent network at the same time as senior management was briefed. When dealing with technology-based change, face-to-face communication is even more important than when dealing with organisational change as technology-based change is inherently more complex. The complexity can be dealt with, in part, by homophilous communication but only when the communicator has been thoroughly briefed. Tasmania Police who were about to embark on technology-based change therefore:

Created a change agent network that used homophilous communication to disseminate information explaining the technology-based change.

- Implementing technology-based change can use a project approach. Tasmania Police adopted a project management methodology to support the project implementation. They ensured that the project manager/team developed a communication plan as a component of the project management but the project managers needed to come to terms with the technology. The

technology must be prioritised and not taken ‘as given’. Project managers who do not have backgrounds in Information Technology must not be ‘afraid’ to manage the technology. Good project managers ask the difficult questions, up-skill as the project develops and continually ask questions that will ensure problems are identified as early as possible. Good project management goes hand in hand with implementing technology-based change but the priority must be the technology. Tasmania Police who were about to embark on technology-based change therefore:

Used project management to implement technology-based change but failed to prioritise the technology in that process.

- Technology projects were implemented using a combination of project management and change management at Tasmania Police. However, during the implementation phase, the change management was absorbed by the project management methodology. Change management was essential for all the stages of implementing change and was particularly relevant at the ‘unfreezing’ or planning phase. This research provides evidence that change management is essential if/or when the technology becomes a negative agent of change (assuming the technological problems are being addressed). At such times, increasing the frequency of communication to the organisation and providing updates on the status of the technology reduces the impact of the negative agent of change. Tasmania Police who were about to embark on technology-based change therefore:

Increased the flow of communication to minimise negative effects when the technology did not perform as planned.

- Tasmania Police ensured that technology-based projects were governed. They adopted processes that produced clear documentation of the technology-based project including clear objectives and outcomes. Carefully planned project timelines allowed for appropriate development time. This research revealed an approach that provided a level of governance to support and monitor the implementation of technology-based change at Tasmania Police. However the governance body needed to understand the complexity and consequences of implementing technology. Tasmania Police who were about to embark on technology-based change therefore:

Needed to provide governance that understood the complexities of implementing technology-based change.

- Tasmania Police needed to develop a contingency plan when dealing with technology implementation. In conjunction with risk management they needed to develop strategies to cover potential problems. This research identified a number of issues for which contingency plans should have been developed. Forward planning and pre-empting potential problems would have allowed them to be pro-active. Developing contingency plans that have been authorised by the governance structure would have ensured timely action when they were faced with a problem. Tasmania Police who were about to embark on technology-based change therefore:

Should proactively develop contingency plans for technology-based change

- Tasmania Police should not treat the technology 'as given'. This research has provided evidence that the board of governance, while relying on the technology to deliver change to the organisation, failed to understand the complexity and prioritise the technology implementation. The governance structure was such that it disempowered the project team and at times forced the project team to take inappropriate actions. Technology development and implementation is complex. Markus and Benjamin (1997) first used the term 'magic bullet' yet Tasmania Police treated the technology as if it were a magic bullet. Managers who lack technical knowledge tend to regard the technology as too complex to manage and feel out of their comfort zone. This thinking results in the technology being taken for granted. Yet the same managers are capable of making effective decisions in choosing the appropriate technology. Tasmania Police's management skills were sufficient to manage the implementation of technology-based change. Tasmania Police needed to ask the obvious questions and keep asking them until they were comfortable with the answers. At times technology experts used their knowledge to gain a position of power. Tasmania Police needed to take control and manage the implementation of the technology. They needed to listen to the experts and ask questions but also be prepared to deal with the answers. Tasmania Police who were about to embark on technology-based change therefore:

Needed to understand and manage the complexity of implementing technology.

In summary, to answer research question two, “How do case study insights enhance understanding of the implementation phase change and the role and impact of technology”, this research has revealed the following:

- That traditional change literature offers little guidance for the implementation phase of change.
- The existence of a fourth type of change agent, the change conduit. The conduit model facilitates communication in the organisation but does not take responsibility for the change.
- This research has expanded the implementation phase of Jick (1991) and Kotter (1995) models.
- That some factors produced in this research match advice provided in the change literature and therefore are relevant to implementing technology-based change. These factors, however, align with the ‘unfreezing’ or planning stage of the change process.
- In addition two lessons also relate to the ‘unfreezing’ planning stage of change by offering guidance on overcoming resistance and taking advantage of dualities.
- The research has provided six lessons for Tasmania Police when embarking on implementing technology-based change. The lessons enhance existing understanding and explore the impact and role that technology has on the change process.

9.10 Chapter reflections

This chapter explored and compared the factors from phase one to the factors from phase two data analysis. The chapter identified four factors that both phases have in common. Another four factors were slightly altered over time to better represent the changed environment. Two factors from phase one have evolved to become new, much broader factors in phase two. One factor from phase one was not present in phase two. Two new factors were identified in phase two data. Two dominant factors were discussed, along with three environmental factors that supported change. A

discussion of what was significant was then presented; this identified how the factors worked together to create an environment that was conducive to change.

The chapter concluded by presenting answers to the two research questions. In answering question one, the approaches adopted by Tasmania Police involved: recruitment of change agents; combined project and change management; the need to manage technology; creating a culture; exploring dualities and coping with complexity. In answering research question two, factors corresponded with advice from the change literature. The research provided expansion to the implementation phase of Jick (1991) and Kotter (1995) models. This research presented eight lessons: two relating to planning for technology-based change; and six offering Tasmania Police guidance on implementing technology-based change.

The next and final chapter will present a summary of findings along with the contributions this research has contributed to the IS discipline. Some recommendations, limitations and further options for research will also be presented.

10 Conclusions & Future Work

10.1 Introduction

This chapter concludes the thesis and provides a brief summary of the major findings. It discusses the contributions that the thesis makes to the Information Systems discipline along with recommendations for organisations that are contemplating implementing technology-based change. The chapter then presents the limitations of this study and suggestions for future work. The chapter is structured in the following sections:

- Section 10.2 presents a summary of the findings of this research.
- Section 10.3 outlines the contributions this research has made to the discipline of Information Systems.
- Section 10.4 outlines the limitations of this research.
- Section 10.5 identifies opportunities for future research.

10.2 Summary of findings

In the previous chapter, a detailed presentation was made of the case study findings and answers to research questions one and two. Based on the evidence presented in this case study, it would appear that the technologies in the analysed projects have had an impact on Tasmania Police. Technology projects have been managed using a combination of project and change management. This approach has seen the change management absorbed into the project management, even when the technology projects were not expected to produce organisational based change. Project management is the basis for which change has been implemented at Tasmania Police. The inclusion of change management as a key ingredient in the project management methodology has assisted with the implementation of change.

Following Markus (2004), this case study also provides support for the need for greater integration between technical and organisational elements when managing *technochange*. Tasmania Police used technology to drive organisational change but have not prioritised the development and the implementation of the technology to support this change. All projects implemented at Tasmania Police regardless of the level of technology involvement are managed with the same project management

methodology. Projects that can be described as *technochange* projects require Tasmania Police to focus on the development and implementation of the technology to ensure success. The project management methodology requires manipulation to ensure the technology is downgraded in the meeting milestone deadlines.

The analysis also indicates that, for this hierarchical organisation, its change agent network was important in assisting Tasmania Police to more flexibly combine elements of change management and project management. Creating a homophilous network that takes advantage of tacit knowledge transfer has been an important element for the implementation of organisational and technology-based change at Tasmania Police. This research identifies an additional agent of organisational change type to those previously identified by Markus and Benjamin (1996). The change agents recruited and trained by Tasmania Police constitute a Conduit Model and can be added to Markus and Benjamin's (1996) other three change agent models of: the Traditional Information Systems Model; the Facilitator Model and the Advocate Model.

The dualism between rigidity and flexibility inherent within the organisational structure provided opportunities for Tasmania Police to explore overcoming resistance. Tasmania Police has a number of dualistic aspects such as a focus on core policing versus community policing. While such dualities are in conflict they also provide opportunities to create flexibility that aids overcoming resistance. The dualism of the organisation provided opportunities for Tasmania Police to become a 'learning organisation' that effectively managed its knowledge and its people.

The data analysis produced eleven factors from phase one and thirteen factors from phase two. A comparison of phase one and two factors revealed a final set of twelve factors. When comparing these to existing change models, six factors aligned with the planning phase of change while nine factors (four of which also aligned to the planning phase) aligned with the implementation phase of change (Table 9.2). One factor aligned with the evaluation phase of change. There is a lack of guidance offered by the literature for implementing change this research provides some insight into the implementation phase of change in the context of Tasmania Police.

This research has provided Tasmania Police with eight lessons for implementing technology-based change. Some lessons demonstrate how Tasmania Police successfully managed technology-based change while other lessons identify areas for potential improvement. The main lesson is to recognise, understand and plan for the complexity of dealing with technology-based change.

Finally, through the conduct of this case study, this thesis has contributed to an enhanced understanding of the implementation phase of change and the role and impact of technology within it in the context of Tasmania Police.

10.3 Contribution to the IS Discipline

This thesis makes a contribution to the field of Information Systems at the substantive, methodological and theoretical levels.

At a substantive level, since the thesis was conducted in a paramilitary organisation that is not generally open to the public, it provides a unique opportunity to conduct research (see section 2.4). Access was given to all levels in the organisation including senior management (see section 4.4.3). The organisation was undertaking change at the time the initial data was collected (see section 2.4.2). The researcher commenced with the organisation at the time they were implementing the Business Process Reengineering exercise called “Project BATON”. BATON became the catalyst for ongoing change in the organisation over the following decade. The research concluded at a time when Tasmania Police was undertaking business planning which included reviews of their change management practices along with a review of their current technology. Capturing these changes in this organisation in real time is the substantive contribution of this research.

At a methodological level this research provides two contributions. Firstly, this research used the tools of ethnography combined with a case study method adopting a longitudinal focus (see section 4.3.2). The study was conducted in two phases to overcome the limitations of single view case studies (see section 4.3.3). Phase one adopted methods more closely aligned with ethnography, such as observation, to facilitate the researcher gaining a deep understanding of the organisation. Phase two

used the more traditional case study data collection method of semi-structured interviews to review the situation some ten years later. Each phase had a definite purpose. The insights and understanding gained in phase one supported a deeper analysis understanding of the interview data in phase two.

Secondly the coding of both phases of data was conducted using thematic coding (Boyatzis 1998) guided by open coding (Strauss & Corbin 1990). Thematic coding tends to adopt a positivist approach, which can result in the themes being pre-defined and then applied to the data. This research adopted an interpretivist approach where the aim of analysis for both phases of data was to allow the data to 'speak for itself'. Boyatzis (1998) offers guidance in the production of themes but tends to lean towards a positivist approach. Open coding in grounded theory supports the production of themes with an interpretivist approach (Strauss & Corbin 1990). Therefore, combining the two approaches is the second part of the methodological contribution.

The final contributions are provided at the theoretical level. Implementing technology-based change is complex and it is easy for organisations to take the technology for granted. A combination of project management and change management is not sufficient for implementing technology that is being used to drive organisational change. This research therefore supports the approach advocated by Markus (2004) to deal with *technochange*. In addition, this research identifies that, when making decisions about implementing technology-based change, management should never take the technology 'as given'. This thesis contributes to an enhanced understanding of the implementation phase of technology-based change.

While the change agents recruited and used by Tasmania Police did not align with the literature view of change agents (Buchanan & Boddy 1992; Markus & Benjamin 1996) in that they did not act as 'agents' of change, they did provide an effective mechanism for communication to the entire workplace. In this, the change agents and the role they played suggest that a fourth type of change agent could be added to the three identified by Markus and Benjamin (1996). This research would suggest the existence of a "Conduit Model" as the fourth change agent type. There is no doubt that the network facilitated the implementation of change while never taking ownership of the process. Providing the network with detailed explanations and

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justification of the change gave the network the ability to have answers to questions posed in the workplace by colleagues. This in turn appears to have added to the change agents' credibility.

10.4 Limitations of the study

10.4.1 *Scope of the research*

This research was based on one organisation that was paramilitary in nature. The research was of an exploratory nature and the scope aimed to provide insight into how this organisation functioned when dealing with technology-based change. The two phases of data collection provided the researcher with sufficient data to produce lessons for implementing technology-based change at Tasmania Police.

This research took a longitudinal approach with data collection points occurring ten years apart. During the first data collection period the organisation had limited technology in comparison with other organisations at the time. Their budget cycle precluded a large investment in technology and their workforce had low to basic technology skills. This may have impacted upon the reliance of technology in phase one. A decade later the organisation had been selective in the adoption of technology and was comparable with other organisations in relation to the level of technology utilised. The lack of easy access to technology in phase one may have directly or indirectly influenced the manner in which the organisation dealt with the implementation of technology-based change.

This research did not provide a comparison with other paramilitary organisations. Insight may have been gained through such a comparison. This could be the basis of future research.

10.4.2 *Limitations of case study*

This research provides insight into one organisation and is bounded in time (Creswell 1998); this in itself is a limitation of the research. The research has not provided a holistic view of Tasmania Police and has presented the views of change from senior management, project teams and change agents. The research has not presented views from other officers or state personnel. By definition a longitudinal case study is a

study of one organisation with multiple data collection points (Berg 2004). One limitation to this study is the significant time between collection points. The depth of the study would have been increased with an additional data collection at the five-year mark, as was originally designed.

The researcher was embedded in the organisation for the first period of data collection and utilised various forms of observation. Working with the project team and the Change Management Coordinators could have had an effect on the outcomes (Walsham 1995). The research design was structured to minimise the effect of the researcher on the research while taking advantage of gaining an insider's view of the organisation.

10.4.3 Case study bias

Qualitative research, by its nature, can be influenced by the researcher conducting the research, thereby creating bias. The researcher believed that Tasmania Police was an organisation that was focused on delivering a professional service to the community. Previous interaction with the Police could have influenced the research (Yin 1994). However in this research, the previous research (Thomas 1996) provided background to the business process reengineering exercise, Project BATON, and facilitated building a long-term relationship with the organisation. To minimise the researcher's influences, a number of tactics were employed such as adopting a two phase approach and multiple sources of data collection (Miles & Huberman 1994). Adopting a grounded approach to the data analysis for phases one and two reduced the effect of bias on this research.

10.4.4 Justifiability

Justifiability rather than validity, reliability and generalisability are important to qualitative research due to the subjective nature. Justifying the appropriate use of subjectivity in analysing and interpreting the data ensures that the results are clearly grounded in the data (Auerbach & Silverstein 2003). Justifiability is generated through transparency, communicability and coherence. Clear and detailed description of the method used in this research provides transparency and facilitates a clear understanding of the steps involved that have lead to the findings.

The rich description was approved by the Deputy Commissioner of Police prior to publication which provides communicability through member validation (Neuman 2000; Yin 1994). The clearly explained research approach, data analysis and the thick description of the findings provide coherence to the research (Auerbach & Silverstein 2003).

However, the lack of generalisability of this research is a limitation of this study. This single organisational case study lacks generalisability and is not representative of other groups or organisations. This research however may provide some generality to similar paramilitary type or hierarchical organisation as the findings are presented in a manner that supports the reader assessing the potential transferability to their own setting (Miles & Huberman 1994). It will be left to those organisations to determine the generalisability of the findings of this research to their own organisation.

10.5 Future Research

This research provided an exploratory study on the implementation of technology-based change at Tasmania Police. The study presented fifteen factors, twelve of which have become the final factors associated with the implementation of technology-based change. A further exploration of the factors that affect the implementation of technology-based change at another point in the future would add further depth to this research.

This research has provided evidence of a fourth type of change agent to add to the three models of change agent identified by Marcus and Benjamin (1996). It is the researcher's intention to explore the forth model, the Conduit Model, in future research.

It is envisaged that future research could investigate the implementation of technology-based change and organisational change within a different organisational setting. Suggested future work would monitor the implementation of each type of change. This research provided evidence that technology-based change, when driving organisational change, can be implemented using a combination of project

management and change management as long as the technology is a priority. Further investigation into this belief is required.

This study focused on the practices and views of senior management, project teams and change agents. The findings of this research reflect those views and practices. The views of those affected by the change would need to be explored in future research to provide a more complete view of implementing change at Tasmania Police.

This research adopted a longitudinal view to data collection. Future research involving case studies with single organisation may benefit from adopting a similar method to data collection. It is acknowledged that ten years is an impractical timeframe for such research but much can be gained from revisiting an organisation a second or third time to gain a more holistic picture. Future research conducted in this manner could more effectively provide justifications for the outcomes produced than can a single-view case study.

These are just some of the potential areas for future research. It is anticipated that the method adopted and the recommendations produced will make a valuable contribution for future research in this area.

10.6 Concluding Reflections

At the broadest level, this research has explored an organisation actively engaged in implementing technology and organisational based change over an extended period. The research process deployed a strategy to engage in research in the change process over an extended period of time by utilising two phases of data collection. The two phase approach involved data collection for two years and then a subsequent investigation which examined whether key themes were sustained over time.

This approach supports the perspective that to fully explore and understand technology based organisational change researchers should take the time to overcome the limitations of single view cases and consider the use of two or more phases to data collection.

■ In summary the thesis has provided substantive, methodological and theoretical contributions to the Information Systems discipline. At the substantive level the research was conducted in a paramilitary organisation that is not generally open to the public, it provides some unique insights into this type of organisation's approach to change. At the methodological level this research provides two contributions. Firstly, this research leveraged the principles of ethnography and effectively combined them with a case study method adopting a longitudinal focus. Secondly the coding of both phases of data was conducted using thematic coding (Boyatzis 1998) guided by open coding to effectively produce grounded results. At the theoretical level this research supports the approach advocated by Markus (2004) to deal with technochange and identifies that the change agents and the role they played suggests that a fourth type of change agent can be added to the three identified by Markus and Benjamin (1996).

This research has enhanced Information Systems knowledge about technology and organisational based change including the role of project and change management when implementing technology based change. In addition the recruitment of a network of change agents who are charged with dissemination of accurate information to their workplace while not taking ownership of the change can facilitate successful implementation.

In conclusion, this thesis broadens the knowledge and understanding of the implementation of technology-based change at Tasmania Police. In addition to adding to the body of knowledge regarding technology and organisational change, this thesis will provide Tasmania Police with a reflective analysis on how they have managed the implementation of technology-based change over the ten-year period.

The submission of this thesis could not be timelier as Tasmania Police is currently reviewing a number of aspects involved in this study. It has been a great pleasure and privilege to be permitted to study this organisation. Such in-depth studies contribute significantly to all dimensions of research and is anticipated will assist organisations of similar structure that are about to embark on implementing technology-based change may find this thesis helpful.

11 References

- 2003, *Auditor General's Report to Parliament*.
- 2004-2005, *The Auditor General Audit Report No 40: Performance Audit*, Australian National Audit Office.
- 2005, *Managing Successful Projects with PRINCE2*, TSO, London.
- 2006/2007, *The Auditor General Audit Report*
- 2007-2008a, *Australian Federal Police Annual Report*, Australian Federal Police.
- 2007-2008b, *New South Wales Police Annual Report*, New South Wales Police.
- 2007-2008c, *Queensland Police Annual Report*, Queensland Police.
- 2007-2008d, *South Australia Police Annual Report*, South Australia Police.
- 2007-2008e, *Victoria Police Annual Report*, Victoria Police
- 2007-2008f, *Western Australia Police Annual Report*, Western Australia Police.
- Albizu, E, Olazaran, M & Simon, K 2004, 'BPR and change management: A case study of a large Spanish electricity company', *International Journal of Innovation Management*, vol. 8, no. 4, pp. 355-379.
- Ali, I, Agostino, K, Warne, L & Pascoe, C 2001, 'Working and learning together: Social learning in the Australian Defence organisation', *Information Science*, no. June.
- Ali, IM, Pascoe, C & Warne, L 2002, 'Interactions of organisational culture and collaboration in working and learning', *Educational Technology & Society*, vol. 5, no. 2, pp. 60-68.
- Allen, J, Jimmieson, NL, Bordia, P & Irmer, NE 2007, 'Uncertainty during organizational change: Managing perceptions through communication', *Journal of Change Management*, vol. 7, no. 2, pp. 187-210.
- Alvesson, M & Skoldberg, K 2000, *Reflective Methodology: New Vistas for qualitative research*, Sage Publications Inc, London.
- Atkinson, P & Hammersley, M 1994, 'Ethnography and participant observation', in *Handbook of Qualitative Research*, Sage Publications, London.
- Auerbach, CF & Silverstein, LB 2003, *Qualitative Data: An introduction to coding and analysis*, New York University Press, New York.
- Avison, D, Lau, F, Myers, MD & Nielson, PA 1999, 'Action Research', *Communications of the ACM*, vol. 42, no. 1, pp. 94-97.
- Avison, DE 1995, 'Information systems and Anthropology: an Anthological perspective on IT and organisational change', *Information Technology & People*, vol. 8, no. 3, pp. 43-56.
- Baker, S, Baker, K & Campbell, GM 2003, *Complete guide to Project Management*, Alpha Books, United States.
- Bamford, D & Daniel, S 2005, 'A Case Study of Change Management Effectiveness within the NHS', *Journal of Change Management*, vol. 5, no. 4, pp. 391-406.
- Bashein, BJ & Markus, ML 1994, 'Business Process Reengineering: How can Information Systems managers increase their chances of success?', *International Conference on Information Systems*, Association for Information Systems, Washington DC.
- Bedeian, AG 1992, 'The role of metaphors in organizational change: change agents and change target perspective', *Group and Organizational Management*, vol. 17, no. 3, pp. 242-247.
- Benbasat, I, Goldstein, DK & Mead, M 1987, 'The Case Research Strategy in Studies of Information Systems', *MIS Quarterly*, vol. September.

- Benjamin, RI & Levinson, E 1993, 'A framework for managing IT-enabled change', *Sloan Management Review*, no. Summer 1993.
- * Berg, BL 2004, *Qualitative Research Methods for the social sciences*, Pearson Education Inc, Boston.
- Bititci, US, Mendibil, D, Nudurupati, S, Garengo, P & Turner, T 2006, 'Dynamics of performance measurement and organisational culture', *International Journal of Operations and Production Management*, vol. 26, no. 12, pp. 1325-1350.
- Bolton, P 1995, 'A investigation of Business Process', Honours thesis, University of Tasmania.
- Boyatzis, RE 1998, *Transforming qualitative information*, Sage Publishing, London.
- Brewer, AM 1995, *Change Management: Strategies for Australian Organisations*, Allen & Unwin Pty Ltd, NSW.
- Bradley, J 1993, 'Methodological issues and practices in Qualitative Research', *The Library Quarterly*, vol. 63, no. 4, pp. 431-449.
- Brown, AD 1998, 'Narrative, Politics and Legitimacy in an IT Implementation', *Journal of Management Studies*, vol. 35, no. 1, pp. 35-58.
- Bruch, H, Gerber, P & Maier, V 2005, 'Strategic Change Decisions: Doing the Right Change Right', *Journal of Change Management*, vol. 5, no. 1, pp. 97-107.
- Buchanan, D & Boddy, D 1992, *The Expertise of the Change Agent*, Prentice Hall International, London.
- Bullock, R & Batten, D 1985, 'It's just a phase we're going through: A review and synthesis of OD phase analysis', *Group & Organization Studies*, vol. 10, no. 4, pp. 383-412.
- Burnes, B 1996, *Managing Change: A strategic approach to organisational dynamics*, 2nd edn, Pitman Publishing, London.
- Burnes, B 2004a, 'Kurt Lewin and complexity theories: back to the future', *Journal of Change Management*, vol. 4, no. 4, pp. 309 - 325.
- Burnes, B 2004b, 'Kurt Lewin and the Planned Approach to Change: A Re-appraisal', *Journal of Management Studies*, vol. 41, no. 6, pp. 977-1002.
- Burrell, G & Morgan, G 1979, *Sociological Paradigms and Organisational Analysis: Elements of the sociology of corporate life*, Heinemann Educational Books Ltd, London.
- Byrne, M 2001, 'Ethnography as a qualitative research method', *Association of Operating Room Nurses. AORN Journal*, vol. 74, no. 1 pp. 82-84.
- Cadle, J & Yeates, D 2001, *Project Management for Information Systems*, 3rd edn, Pearson Education Limited, London.
- Calder, A 2005, *Nine Steps to Success: an ISO27001 Implementation Overview*, IT Governance Publishing, United Kingdom.
- Caldwell, R 2001, 'Champions, Adaptors, Consultants and Synergists: the New Change Agents in HRM', *Human Resource Management Journal*, vol. 11, no. 3, pp. 39-52.
- Carnall, CA 1990, *Managing change in organisations*, Prentice Hall International, Hertfordshire.
- Chan, JB 1999, 'Governing Police practice: limits of the new accountability', *British Journal of Sociology*, vol. 30, no. 2, pp. 251-270.
- Charmaz, K 2006, *Constructing grounded theory: a practical guide through qualitative analysis*, Sage, London.
- Chen, W & Hirschheim, R 2004, 'A Paradigmatic and Methodological Examination of Information Systems Research from 1991 to 2001', *Information Systems Journal*, vol. 14, pp. 197-235.

- Clark, PA & Staunton, N 1989, *Innovation in technology and organization*, Routledge, London.
- Clayton, J & Gregory, W 2000, 'Reflections on Critical Systems Thinking and the Management of Change in Rule-Bound Systems', *Journal of Organizational Change Management*, vol. 13, no. 2, pp. 140-161.
- Collerette, P, Legris, P & Mamghi, M 2006, 'A Successful Change in a Police Service', *Journal of Change Management*, vol. 6, no. 2, pp. 159-179.
- Corbin, J & Strauss, A 2008, *Basics of Qualitative Research*, 2nd edn, Sage Publications, Thousand Oaks, California.
- Crawford, L 2000, 'Project Management Competence for the New Millennium', *15th World Conference on Project Management*, IPMA, London.
- Creswell, JW 1998, *Qualitative inquiry and research design: Choosing among five traditions*, Sage Publishing, London.
- Cummings, TG & Worley, CG 2005, *Organizational development and change*, 8 edn, Thomson, USA.
- Czarniawska-Joerges, B 1995, 'Narration or Science? Collapsing the division in organization studies', *Organisation Articles*, vol. 2 no. 1, pp. 11-33.
- Davenport, TH, Jarvenpaa, SL & Beers, MC 1996, 'Improving knowledge work processes', *Sloan Management Review*, vol. Summer, pp. 53-65.
- Davenport, TH & Prusak, L 1998, *Working Knowledge: How organisations manage what they know*, Harvard Business School Press, Boston, Massachusetts.
- Davies, A 2000, 'Change in the UK police service: The costs and dilemmas of restructured managerial roles and identities', *Journal of Change Management*, vol. 1, no. 1, pp. 41-58.
- Dawson, P 1994, *Organizational change: A processual approach*, Paul Chapman Publishing, London.
- Delamont, S 2004, 'Ethnography and Participant Observation', in C Seale (ed.), *Qualitative Research Practice*, Sage, California.
- Denton, KD 1996, '9 ways to create an atmosphere for change', *HR Magazine*, no. October, pp. 76-78.
- Denzin, NK & Lincoln, YS 2005, *The Sage Handbook of Qualitative Research*, 3rd edn, Sage Publishing, London.
- Dey, I 1999, *Grounding Grounded Theory*, Academic Press, San Diego.
- Diamond, R 2007, 'Several simple shared stable decisions premises for technochange', *International Journal of Technology and Human Interaction*, vol. 3, no. 4, pp. 66-75.
- Dover, P 2002, 'Change Agents at Work: Lessons from Siemens Nixdorf', *Journal of Change Management*, vol. 3, no. 3, pp. 243-257.
- Drucker, P 1995, *The post-capitalist society*, Butterworth-Heinemann, Oxford.
- Drummond, H & Hodgson, J 2003, 'The chimpanzees' tea party: a new metaphor for project managers', *Journal of Information Technology*, vol. 18, pp. 151-158.
- Duncan, WR 1996, *A guide to the Project Management Body of Knowledge*, PMI Publishing Division.
- Elliott, J 2005, *Using Narrative in Social Research*, Sage Publications.
- Elrod II, P & Tippet, D 2002, 'The "Death Valley" of Change', *Journal of Organizational Change Management*, vol. 15, no. 3, pp. 273-291.
- Emerson, RM, Fretz, RI & Shaw, LL 2001, 'Participant Observation and Field notes', in *Handbook of Ethnography*, Sage Publications, London.

- Evans, P & Doz, Y 1989, 'The Dualistic Organization', in P Evans, T Doz & A Laurent (eds), *Human Resource Management in International Firms: Change, Globalization, Innovation*, MacMillan, London, pp. 219-242.
- Fernandez, S & Rainey, H 2006, 'Managing Successful Organisational Change in the Public Sector', *Public Administration Quarterly*, vol. 66, no. 2, pp. 168-176.
- Ford, M & Greer, B 2005, 'Implementing Planned Change: An Empirical Comparison of Theoretical Perspectives', *Mid-American Journal of Business*, vol. 20, no. 2, pp. 59-69.
- Fraser, M & Turner, P 2002, 'Project Management (PM): A conceptual framework for identifying components of reported project success - insights for Information Systems (IS) researchers', *13th Australasian Conference on Information Systems*, Melbourne.
- Frenzel, CW 1999, *Management of Information Technology*, 3rd edn, Course Technology, Cambridge.
- Furnham, A 2002, 'Managers as Change Agents', *Journal of Change Management*, vol. 3, no. 1, pp. 21-29.
- Galliers, RD 1993, 'Research issues in Information Systems', *Journal of Information Technology*, vol. 8, pp. 92-98.
- Garland, R 2009, *Project Governance*, Kogan Publishing, United States.
- Garvin, D 2000, *Learning in action: A guide to putting the learning organisation to work*, Boston Business School Press, Boston.
- Gibson, CF 2003, 'IT-enabled business change: An approach to understanding and managing risk', *MIS Quarterly*, vol. 2, no. 2, pp. 104-115.
- Gill, R 2003, 'Change management - or change leadership', *Journal of Change Management*, vol. 3, no. 4, pp. 307 - 318.
- Goodman, J & Truss, C 2004, 'The medium and the message: Communicating effectively during a major change initiative', *Journal of Change Management*, vol. 4, no. 3, pp. 217 - 228.
- Goulding, C 2004, 'Grounded Theory, Ethnography and Phenomenology', *European Journal of Marketing*, vol. 39, no. 3/4, pp. 294-308.
- Graetz, F & Smith, A 2005, 'Organising forms in Change Management: The roles of structure, processes and boundaries in a longitudinal case analysis', *Journal of Change Management*, vol. 5, no. 3, pp. 311-328.
- Grobman, GM 2005, 'Complexity Theory: A new way to look at organizational change', *Public Administration Quarterly*, vol. 29, no. 3, pp. 350-382.
- Guba, EG & Lincoln, YS 1994, 'Competing Paradigms in Qualitative Research', in Sage Publications, London.
- Guba, EG & Lincoln, YS 2005, 'Paradigmatic Controversies, Contradictions, and Emerging Confluence', in NK Denzin & YS Lincoln (eds), *The Sage Handbook of Qualitative Research*, Sage Publications, Thousand Oaks, California.
- Guha, S, Grover, V, Kettinger, WJ & Teng, JT 1997, 'Business Process Change and organizational performance: Exploring an antecedent model', *Journal of Management of Information Systems*, vol. 14, no. 1, pp. 119-154.
- Hammer, M 1990, 'Reengineering work: Don't automate, Obliterate', *Harvard Business Review*, vol. July/August, pp. 104-112.
- Hammer, M & Champy, J 1993, *Reengineering the Corporation: A manifesto for business revolution* Harper Collins, London.
- Hammer, M & Champy, J 2001, *Reengineering the corporation: A manifesto for business revolution*, Nicholas Breakley, London.

- Harvey, LJ & Myers, MD 1995, 'Scholarship and practice: the contribution of ethnographic research methods to bridge the gap', *Information Technology & People*, vol. 8, no. 2, pp. 13-27.
- Heerkens, GR 2002, *Project Management*, McGraw Hill, United States.
- Herbert, S 1998, 'Police subculture reconsidered', *Criminology*, vol. 36, no. 2, pp. 343-369.
- Hoque, Z & Moll, J 2001, 'Public Sector Reform Implications for accounting, accountability and performance of state-owned enterprises- an Australian perspective', *The International Journal of Public Sector Management*, vol. 14, no. 4/5, pp. 304-382.
- Horque, Z, Arends, S & Alexander, R 2004, 'Policing the Police Service: A case study of the rise of "new public management" within an Australian police service', *Accounting, Auditing & Accountability Journal*, vol. 17, no. 1, p. 59.
- Huber, GP 1991, 'Organisational Learning: the contributing processes and the literatures', *Organisation Science*, vol. 2, no. 1, pp. 88-144.
- Huq, Z, Huq, F & Cutright, K 2006, 'BPR through ERP: Avoiding change management pitfalls', *Journal of Change Management*, vol. 6, no. 1, pp. 67-85.
- Huse, EF 1975, *Organization Development and Change*, West Publishing Co, San Francisco.
- Jacobs, G, Keegan, A, Christe-Zeyse, J, Seeberg, I & Runde, B 2006, 'The Fatal Smirk: Insider Accounts of Organizational Change Processes in a Police Organization', *Journal of Organizational Change Management*, vol. 19, no. 2, pp. 173-191.
- Janssens, M & Steyaert, C 1999, 'The world in two and a third way out? The concept of duality in organization theory and practice', *Scandinavian Journal of Management*, vol. 15, no. 2, pp. 121 - 139.
- Jick, T 1991, *Implementing change*, Harvard Business School Press, Boston.
- Johnson, P & Duberley, J 2000, *Understanding Management Research: An introduction to Epistemology*, Sage Publications, London.
- Jorgensen, DL 1989, *Participant Observation: A methodology for human studies*, vol. 15, Sage Publications, California.
- Kahn, WA 1995, 'Organizational change and the provision of a secure base: lessons from the field', *Human Relations*, vol. 48, no. 5, pp. 489-515.
- Kallio, J, Saarinen, T & Tinnila, M 2002, 'Efficient change strategies: Matching drivers and tracers in change projects', *Business Process Management Journal*, vol. 8, no. 1, pp. 80-92.
- Karlton, J 2004, 'Change processes and ergonomic improvements in small and medium enterprises', *Human Factors and Ergonomics in Manufacturing*, vol. 14, no. 2, pp. 135-155.
- Kawalek, P & Wastall, D 2005, 'Pursuing radical transformation in Information Age Government', *Journal of Global Information Management*, vol. 13, no. 1, pp. 79-101.
- Keen, P 1981, 'Information Systems and Organisational Change', *Communications of the ACM*, vol. 24, no. 1, pp. 24-33.
- Kendra, KA & Taplin, LJ 2004, 'Change Agent competencies for Information Technology Project Managers', *Consulting Psychology Journal: Practice and Research*, vol. Winter, pp. 20-34.

- Kerber, K & Buono, AF 2005, 'Rethinking organizational change: Reframing the challenge of change management', *Organization Development Journal*, vol. 23, no. 3, pp. 23-37.
- Kerzner, H 2003, *Project Management: A systems approach to planning, scheduling and controlling*, 8th edn, John Wiley and Sons, New Jersey.
- Kettinger, WJ & Grover, V 1995, 'Toward a theory of business process change management', *Journal of Management of Information Systems*, vol. 12, no. 1, pp. 9-30.
- Kettinger, WJ, Teng, JT & Guha, S 1997, 'Business Process Change: A study of methodologies, techniques, and tools', *MIS Quarterly*, vol. 21, no. 1, pp. 55-80.
- Klein, S 1996, 'A Management Communication Strategy for Change', *Journal of Organizational Change Management*, vol. 9, no. 2, pp. 32-41.
- Kotter, JP 1995, 'Leading Change: why transformation efforts fail', *Harvard Business Review*, vol. March-April 73, no. 2, pp. 59-68.
- KPMG 1995, *Project BATON: Scoping and Targeting Report*, Hobart.
- Lacity, MC & Janson, MA 1994, 'Understanding Qualitative Data: A Framework of Text Analysis Methods', *Journal of Management Information Systems*, vol. 11, no. 2, pp. 137-155.
- Land, LPW, Land, HM, Handzic, M & Auurum, A 2001, *Codifying Organisational Knowledge: A case study.*, Australian Scholarly Publishing, Melbourne.
- Larsson, P, Lowstedt, J & Shani, A 2001, 'It and the learning organisation: Exploring myths of change', *Organization Development Journal*, vol. 19, no. 1, pp. 73-91.
- Laudon, KC 1989, 'Design guidelines for choices involving time in qualitative research', in JI Cash & PK Lawrence (eds), *The Information Systems Research Challenge- Qualitative Research Methods*, HBS, Boston.
- Leavitt, HJ 1964, 'Applied organizational change in industry: Structural, Technical and Human Approaches', in *New Perspectives in Organizational Research*, John Wiley and Sons Inc, pp. 57-71.
- Legris, P & Colletette, P 2006, 'A Roadmap for IT Project Implementation: Integrating stakeholders and change management issues', *Project Management Journal*, vol. 37, no. 5, pp. 64-75.
- Leishman, F & Savage, S 1993, 'Officers or Managers? Direct Entry into British Police Management', *The International Journal of Public Sector Management*, vol. 6, no. 5, pp. 4-11.
- Leppitt, N 2006, 'Challenging the code of change: Part 1. Praxis not make perfect', *Journal of Change Management*, vol. 6, no. 2, pp. 121-142.
- Lewin, K 1952, *Field Theory in Social Science*, Tavistock Publications Ltd, London.
- Lindlof, TR 1995, *Qualitative Communication Research Methods*, vol. 3, SAGE Publications Ltd, California.
- Lippert, SK 2003, 'Humanware issues in a government management information systems implementation', *Annals of Cases on Information Technology*, vol. 5, pp. 112-129.
- Lippitt, R, Watson, J & Westley, B 1958, *Planned change*, Harcourt, Brace & World Inc, USA.
- Maidique, MA 1980, 'Entrepreneurs, Champions, and Technological Innovation', *Sloan Management Review*, no. Winter 1980, pp. 59-76.
- Malhotra, Y 2000, 'Knowledge Management for E -business performance', *Information Strategy, the Executive Journal*, p. (www.brint.com).

- Maquire, S & Redman, T 2007, 'The role of human resource management in information systems development', *Management Decision*, vol. 45, no. 2, pp. 252-264.
- Markus, LM 1981, 'Implementation Politics: Top Management Support and User Involvement', *Systems, Objectives, Solutions*, vol. 1, no. 4, pp. 203-215.
- Markus, LM 1983, 'Power, politics and MIS implementation', *Organizational Science*, vol. 2, no. 4, pp. 430-445.
- Markus, LM 2000, 'Conceptual challenges in contemporary IS research', *Communications of the Association of Information Systems*, vol. 3, no. 4.
- Markus, LM 2004, 'Technochange management: Using IT to drive organizational change', *Journal of Information Technology*, vol. 19, pp. 4-20.
- Markus, LM & Benjamin, RI 1996, 'Change Agency - the next IS frontier', *MIS Quarterly*, vol. December, pp. 385-407.
- Markus, LM & Benjamin, RJ 1997, 'The magic bullet theory in IT enabled transformation', *Sloan Management Review*, no. Winter, pp. 55-68.
- Markus, LM & Robey, D 1998, 'Information Technology and organizational change: Causal structure in theory and research', *Management Science*, vol. 34, no. 5, pp. 583-598.
- Martin, A, Jones, E & Callan, J 2005, 'The Role of Psychological Climate in Facilitating Employee Adjustment During Organizational Change', *European Journal of Work and Organizational Psychology*, vol. 14, no. 3, pp. 263-289.
- Martin, I & Cheung, Y 2002, 'Change management at Mobil Oil Australia', *Business Process Management Journal*, vol. 8, no. 5, pp. 447-461.
- Martin, K, Quigley, M & Rogers, S 2005, 'Implementing a learning management system globally: An innovative change management approach', *IBM Systems Journal*, vol. 44, no. 1, pp. 125-143.
- Maxwell, JA 2005, *Qualitative Research Design: An interactive approach*, Sage Publications, Thousand Oaks.
- May, T 1997, *Social Research - Issue methods and process*, 2 edn, Open University Press, Buckingham.
- McAfee, A 2003, 'When too much IT knowledge is a dangerous thing', *MIT Sloan Management Review*, vol. 44, no. 2, pp. 83-89.
- McDonagh, J 2001, 'Not for the faint hearted: Social and organizational challenges in IT-enabled change', *Organization Development Journal*, vol. 19, no. 1, pp. 11-19.
- McNish, M 2002, 'Guidelines for Managing Change: A Study of their effects on the implementation of new information technology products in organisations', 2, no. 3, pp. 201-211.
- Mento, AJ, Jones, RM & Dirndorfer, W 2002, 'A change management process: Grounded in both theory and practice', *Journal of Change Management*, vol. 3, pp. 45-59.
- Miles, MB 1979, 'Qualitative Data as an Attractive Nuisance: The problem of Analysis', in *Qualitative Methodology*, Cornwell University, vol. 24, pp. 117-134.
- Miles, MB & Huberman, MA 1994, *Qualitative data analysis: an expanded sourcebook*, Sage Publications, London.
- Miller, D 2002, 'Successful Change Leaders: What makes them? What do they do that is different?', *Journal of Change Management*, vol. 2, no. 4, pp. 359-368.

- Nadler, D & Tushman, M 1990, 'Beyond Charismatic Leader: Leadership and Organisational Change', *California Management Review*, vol. Winter, pp. 77-96.
- Neuman, WL 2000, *Social Research Methods - Qualitative and quantitative approaches*, 4 edn, Pearson Education Company, Massachusetts
- Nonaka, I & Takeuchi, H 1995, *The knowledge creating company: How Japanese companies create the dynamics of innovation*, Oxford University Press, New York.
- O'Hara, MT, Watson, RT & Kavan, BC 1999, 'Managing the Three Levels of Change', *Information Systems Management*, vol. Summer, pp. 63-70.
- O'Reilly, C & Tushman, M 2004, 'The Ambidextrous Organisation', *Harvard Business Review*, no. April, pp. 74-81.
- Oates, BJ 2006, *Researching Information Systems and Computing*, Sage Publications, London.
- Oliver, D 2000, 'In search of the Holy Grail - Internal communications and cultural change', *Journal of Change Management*, vol. 1, no. 2, pp. 179 - 185.
- Orlikowski, WJ 1993, 'CASE Tools as organizational change: Investigating incremental and radical change in systems development', *MIS Quarterly*, vol. September, pp. 309-339.
- Orlikowski, WJ 1996, 'Improvising Organizational Transformation Over Time: A situated change perspective', *Information Systems Research*, vol. 7, no. 1, pp. 63-92.
- Orlikowski, WJ & Baroudi, JJ 1991, 'Studying Information Technology in Organisations: Research approaches and assumptions', *Information Systems Research*, vol. 2, no. 1, pp. 1-27.
- Orlikowski, WJ & Hofman, DJ 1997, 'An improvisation model for change management: The case of groupware technologies', *Sloan Management Review*, vol. Winter 1997, pp. 11-21.
- Osborn, RN, Hunt, JG & Jauch, LR 2002, 'Towards a contextual theory of leadership', *The Leadership Quarterly*, vol. 13, pp. 797-837.
- Palmer, C 2001, 'Ethnography: A research method in practice', *The International Journal of Tourism Research*, vol. 3, no. 4, pp. 301-327.
- Pettigrew, A & Whipp, R 1993, 'Understanding the environment', in C Mabey & B Mayon-White (eds), *Managing Change*, Paul Chapman Publishing, London, pp. 5-19.
- Pettigrew, A, Woodman, R & Cameron, K 2001, 'Studying Organizational Change and Development: Challenges for Future Research', *Academy of Management Journal*, vol. 44, no. 4, pp. 697-713.
- Pettigrew, AM 1985, *The Awakening Giant: Continuity and change in imperial chemical industries*, Basil Blackwell Ltd, London.
- Pettigrew, AM 1990, 'Longitudinal field research on change theory and practice', *Organizational Science*, vol. 1, no. 3, pp. 267-292.
- Price, A & Chahal, K 2006, 'A strategic framework for change management', *Construction Management and Economics*, vol. 24, pp. 237-251.
- Ragsdell, G 2000, 'Engineering a paradigm shift? An holistic approach to organisational change management', *Journal of Organizational Change*, vol. 13, no. 2, pp. 104-120.
- Ranganathan, C, Watson-Manheim, MB & Keeler, J 2004, 'Bringing professionals on board: Lessons on executing IT-enabled organizational transformation', *MIS Quarterly*, vol. 3, no. 3, pp. 151-160.

- Rhodie, V 2000, 'The relevance of change management lessons today: Key principles that still hold true', *Journal of Change Management*, vol. 1, no. 2, pp. 194 - 206.
- Rice, PL & Ezzy, D 1999, *Qualitative Research Methods: A health focus*, Oxford University Press, South Melbourne.
- Ridley, G & Keen, C 1998, 'Epistemologies for Information Systems Research: A study of change', paper presented to Ninth Australasian Conference on Information Systems, Sydney Australia.
- Roberto, MA & Levesque, LC 2005, 'The art of making change initiatives stick', *MIT Sloan Management Review*, vol. 46, no. 4, pp. 53-60.
- Rogers, EM 1995, *Diffusion of Innovations*, 4th edn, The Free Press, New York.
- Roy, V & Aubert, BA 2003, 'A dream project turns nightmare: How flawless software never got implemented', *Annals of Cases on Information Technology*, vol. 5, pp. 98-111.
- Rubin, HJ & Rubin, IS 2005, *Qualitative interviewing: The art of hearing data*, 2nd edn, Sage Publications, California.
- Ruta, CD 2005, 'The application of change management theory to HR Portal implementation in subsidiaries of multinational corporations', *Human Resource Management*, vol. 44, no. 1, pp. 35-53.
- Sanchez-Runde, CJ, Massini, S & Quintanilla, J 2003, 'People Management Dualities', in A Pettigrew, R Whittington, L Melin, C Sanchez-Runde, FVD Bosch, W Raigrok & T Numagami (eds), *Innovative forms of organizing*, Sage Publications, London, pp. 251-276.
- Sanchez-Runde, CJ & Pettigrew, AM 2003, 'Managing Dualities', in AM Pettigrew, R Whittington, L Melin, C Sanchez-Runde, FvD Bosch, W Ruigrok & T Numagami (eds), *Innovative forms of organizing*, Sage Publications, London.
- Schein, E 1997, 'The Concept of 'Client' from a Process Consultation Perspective A Guide for Change Agents', *Journal of Organizational Change Management*, vol. 10, no. 3, pp. 202-213.
- Scholl, HJ 2004, 'Involving salient stakeholders', *Action Research*, vol. 2, no. 3, pp. 277-304.
- Schwalbe, K 2000, *Information Technology project management*, Thompson Course Technology, Canada.
- Schwalbe, K 2006, *Introduction to Project Management*, Thompson Course Technology, Boston.
- Seidman, I 2006, *Interviewing as qualitative research: A guide for researchers in education and the social sciences*, 3rd edn, Teachers College Press, New York.
- Senge, PM 1990, *The Fifth Discipline: the art and practice of the learning organisation*, Random House, Sydney.
- Shanks, G, Rouse, A & Arnott, D 1993, 'A review of approaches to research and scholarship in Information Systems', paper presented to Australian Conference on Information Systems, Monash University Melbourne.
- Sherer, SA, Kohli, J & Baron, A 2003, 'Complementary investment in change management and IT investment payoff', *Information Systems Frontiers*, vol. 5, no. 3, pp. 321-333.
- Simm, J 2007, 'Why Projects Fail, Poor Project Governance', *CIO Magazine*, vol. July.
- Skogan, WG & Hartnett, SM 2005, 'The diffusion of Information Technology in Policing', *Police Practice and Research*, vol. 6, no. 5, pp. 401-417.

- Slack, F & Rowley, J 2000, 'Observation: perspectives on research methodologies for leisure managers', *Management Research News*, vol. 23, no. 12, pp. 10-16.
- Smid, G, Van Hout, E & Burger, Y 2006, 'Leadership in Organisational Change Rules for Successful Hiring in Interim Management', *Journal of Change Management*, vol. 6, no. 1, pp. 35-51.
- Sminia, H & Van-Nisterrooij, A 2006, 'Strategic Management and Organization Development: Planned Change in a Public Sector Organization', *Journal of Change Management*, vol. 6, no. 1, pp. 99-113.
- Spencer, J & Pruss, A 1993, *How to implement change in your company - so everyone is happy with the results*, Judy Piatkus (Publishers) Ltd, London.
- Spradley, JP 1980, *Participant Observation*, Holt, Rinehart and Winston, Fort Worth.
- Stake, RE 1995, *The Art of Case Study Research*, SAGE Publications Ltd, California.
- Stamper, R 1998, *A Dissenting Position: A framework of Information Systems Concepts*, IFIP.
- Stapelton, G & Rezek, CJ 2004, 'Change management underpins a successful ERP implementation at Marathon Oil', *Journal of Organizational Excellence*, vol. 23, no. 4, pp. 15-22.
- Stewart, J & Kringas, P 2003, 'Change Management - Strategy and values in six agencies from the Australian Public Service', *Public Administration Review*, vol. 63, no. 6, pp. 675-688.
- Stewart, T 2000, *Intellectual Capital: The new wealth of organisations*, Currency Doubleday, New York.
- Strauss, A & Corbin, J 1990, *Basics of Qualitative Research: Grounded theory procedures and techniques*, Sage Publications, California.
- Styhre, A 2002, 'Non-linear change in organizations: Organization change management informed by complexity theory', *Leadership and Organization Development Journal*, vol. 23, no. 5/6, pp. 343-351.
- Sullivan, TJ 2001, *Methods of Social Research*, Harcourt College Publishers, Orlando.
- Sunstein, BS & Chiseri-Strater, E 2001, *Field working: Reading and Writing Research*, 2nd edn, Bedford Books.
- Sveiby, K 2000, 'A Knowledge-Based theory for strategic formulation', *ANZAM Conference*, Macquarie University, Australia.
- Sviokla, JJ 1996, 'Knowledge workers and radically new technology', *Sloan Management Review*, pp. 25-40.
- Thomas, LM 1996, 'Change Management in Tasmania Police', Honours thesis, University of Tasmania.
- Todnem, R 2005, 'Organisational Change Management: A Critical Review', *Journal of Change Management*, vol. 5, no. 4, pp. 369-380.
- Troutt, M, Ponce de Leo, JA & Bateman, D 1995, 'The interplay between quality improvement principles and the employee communication process', *Benchmarking for Quality Management & Technology*, vol. 2, no. 4, p. 51.
- Tyre, MJ & Orlikowski, WJ 1993, 'Exploiting opportunities for technological improvement in organizations', *Sloan Management Review*, no. Fall, pp. 13-25.
- Vickers, M & Kouzmin, A 2001, 'New managerialism and Australian police organisations A cautionary research note', *The International Journal of Public Sector Management*, vol. 14, no. 1, pp. 7-22.

- Victor, P & Franckeiss, A 2002, 'The five dimensions of change: an integrated approach to strategic organizational change management', *Strategic Change*, no. Jan-Feb.
- Waclawski, J 2002, 'Large-Scale Organisational Change and Performance: An Empirical Examination', *Human Resources and Development Quarterly*, vol. 13, no. 3, pp. 289-305.
- Waddell, DM, Cummings, TG & Worley, CG 2004, *Organisational Development and Change*, 2nd edn, Thomson, Victoria.
- Walsham, G 1993, *Interpreting information systems in organisations*, Information Systems, John Wiley and Sons Ltd, West Sussex.
- Walsham, G 1995, 'Interpretive case studies in IS research: nature and method', *European Journal of Information Systems*, vol. 4, pp. 74-81.
- Ward, J & Elvin, R 1999, 'A new framework for managing IT enabled business change', *Information Systems Journal*, vol. 9, pp. 197-221.
- Ward, J & Griffiths, P 1996, *Strategic planning for information systems*, 2nd edn, John Wiley & Sons, West Sussex, England.
- Ward, J & Peppard, J 2002, *Strategic Planning for Information Systems*, John Wiley & Sons, West Sussex.
- Warne, L 2000, 'Understanding organisational learning in military headquarters: Findings from a pilot study', *Australian Journal of Information Systems*, vol. 7, no. 2, pp. 78-87.
- Warne, L, Pascoe, C, Ali, I, K, A & R, G 2000, 'Social understanding and knowledge management in the Australian Defence Organisation', *1st International conference on Systems Thinking in Management*, CEUR-WS.org, Geelong, Australia.
- Webster, N 1979, *Webster's New Twentieth Century Dictionary*, The World Publishing Company, USA.
- Weisburd, D, Mastrofski, SD, McNally, AM, Greenspan, R & Willis, JJ 2003, 'Reforming to preserve: Compstat and strategic problem solving in American Policing', *Criminology and Public Policy*, vol. 2, no. 3, pp. 421-456.
- Wideman, RM 1985/2001, 'The Project Management Institute ... In the beginning', *Project Management Journal*, vol. 5, no. June.
- Williams, MD & Williams, J 2007, 'A change management approach to evaluating ICT investment initiatives', *Journal of Enterprise Information Management*, vol. 20, no. 1, pp. 32-50.
- Wilson, DC 1992, *A Strategy of Change*, Routledge, London.
- Wissema, JG 2001, 'Offensive change management with the step-by-step method', *Journal of Change Management*, vol. 1, no. 4, pp. 332 - 343.
- Wren, J & Dulewicz 2005a, 'Leader Competencies, Activities and Successful Change in the Royal Airforce', *Journal of Change Management*, vol. 5, no. 3, pp. 295-309.
- Wren, J & Dulewicz, V 2005b, 'Leadership competencies, activities and successful change in the Royal Air Force', *Journal of Change Management*, vol. 5, no. 3, pp. 295-309.
- Yarberry, WA 2007, 'Effective change management: Ensuring alignment of IT and business functions', *Information Systems Security*, vol. 16, pp. 80-89.
- Yetton, PW, Johnston, KD & Craig, JF 1994, 'Computer-aided architects: A case study of IT and strategic change', *Sloan Management Review*, vol. Summer 1994, pp. 57-67.
- Yin, RK 1994, *Case Study Research: Design and methods*, Sage Publishing, London.

Zachman, JA 1987, 'A Framework for Information Systems Architecture', IBM
Systems Journal, vol. 26, no 2, pp 276-292.

12 Appendices

Appendix 1: Consultants role for change agents

The responsibilities of the program change agents were:

Participates in the development of the change process and plan

Estimates resource needs to implement the change

Recommends stakeholder participation levels

Facilitates understanding of the intentions behind the change and engages stakeholders in active participation

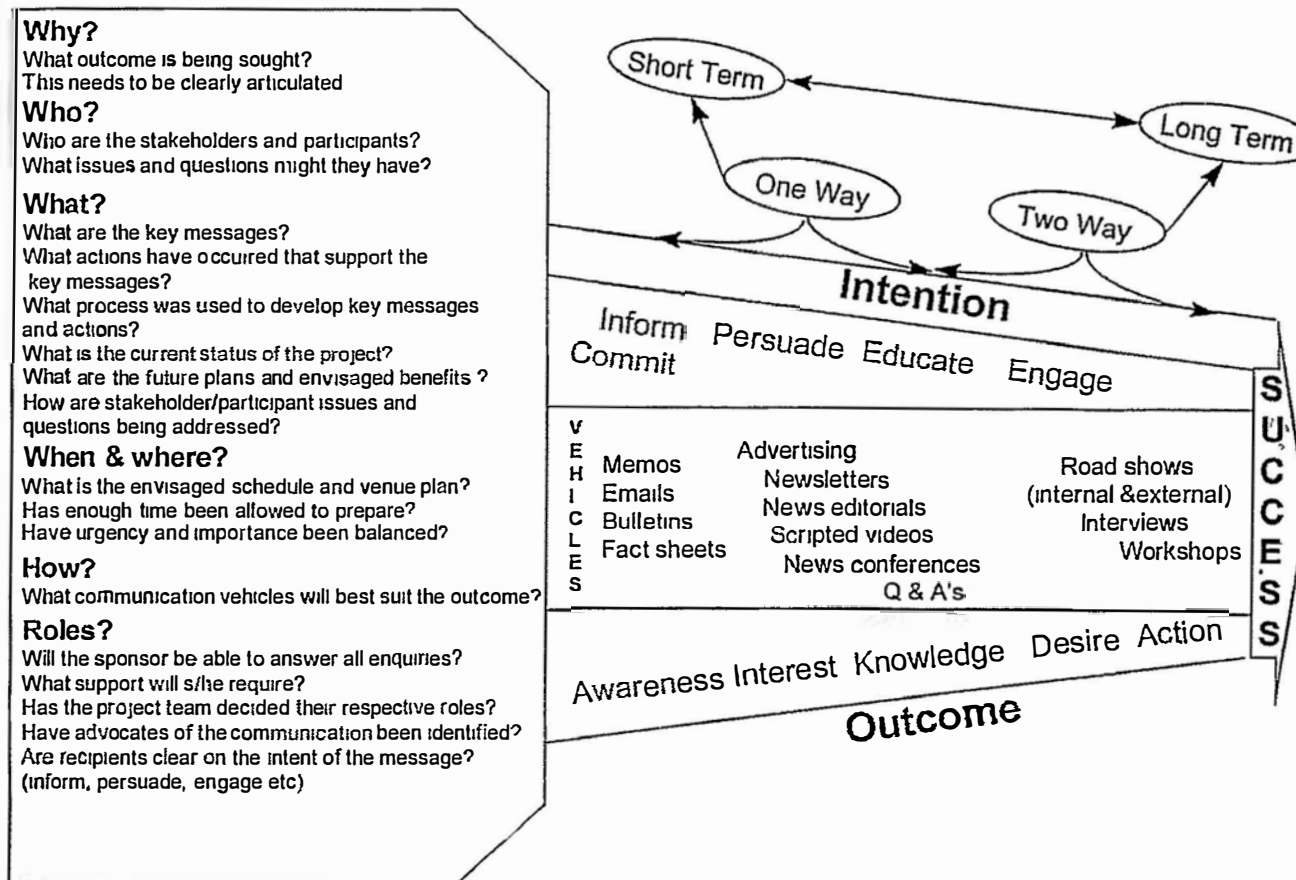
Conducts presentations, trainings and facilitates workshops as required

Acts as an information source about the envisaged change

Advises appropriate ways to manage response to the change.

Appendix 2: Change Management Framework

KPMG Model for communicating sourced from the Change Management Framework document prepared by KPMG (1995).



Appendix 3: Framework for Change

From the beginning of the business process reengineering exercise, Project BATON, through until today attention has been given to the effect change may have on the organisation. KPMG helped Tasmania Police develop a Change Management Framework that was flexible and self-defining. The evolving nature of the change management framework has contributed to the success of implementing change in Tasmania Police with minimal resistance.

Framework for change

The framework consists of six major milestones:

Milestone 1: Agreed terms of reference

The agreed terms of reference includes developing the terms of reference including the purpose of the change program, envisaged benefits, scope of the change program and the deliverables. Key stakeholder are identified along with participants and both are engaged in the process with the outcome of agree terms of reference with stakeholders. (KPMG 1995)

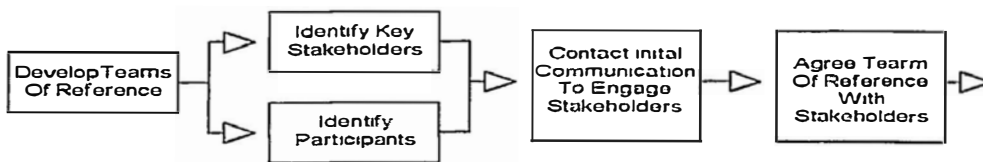


Figure 12-1 Milestone 1

Milestone 2: Agreed program infrastructure

To define the program infrastructure the change program structure is determined along with defining roles and responsibilities and determining functional interfaces and outside dependencies. Once determined methods, tools and techniques can be

decided upon. Instigate a problem resolution process to ensure that an effective escalation approach exists. Research reference documents internally and externally. Establish review and approval process which represent formal points at which the change program will occur. (KPMG 1995)

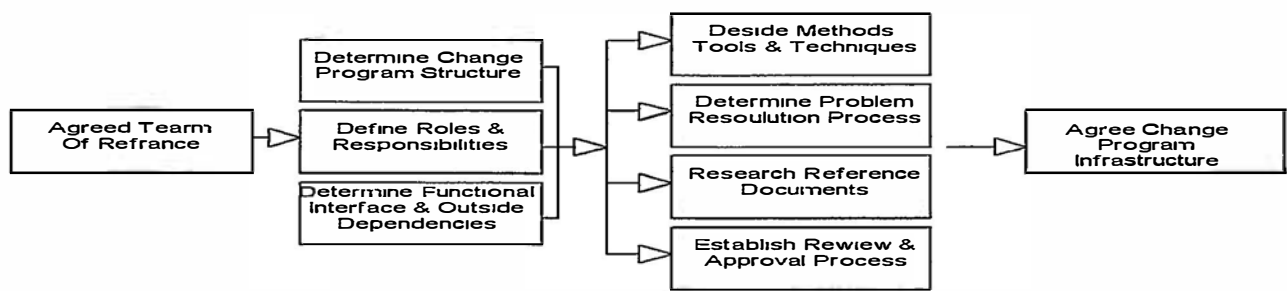


Figure 12-2 Milestone 2

Milestone 3: Agreed change strategy

The agreed change program infrastructure should also take into account the organisational structure, organisational objectives, how the organisation measures itself, the systems and processes, people and culture and outside factors that may effect the change program. Following this is an assessment of the current issues and concerns along with the current drivers and enablers and any future needs and expectations. From this a change management strategy can be developed and agreed. The strategy can then be approved in principle by the program sponsor along with the development of interdependencies and actions for the critical success factors. Costing and funding requirements relating to resource needs will be defined. Finally a schedule and milestones along with estimated risks and contingencies will be identified. (KPMG, 1995)

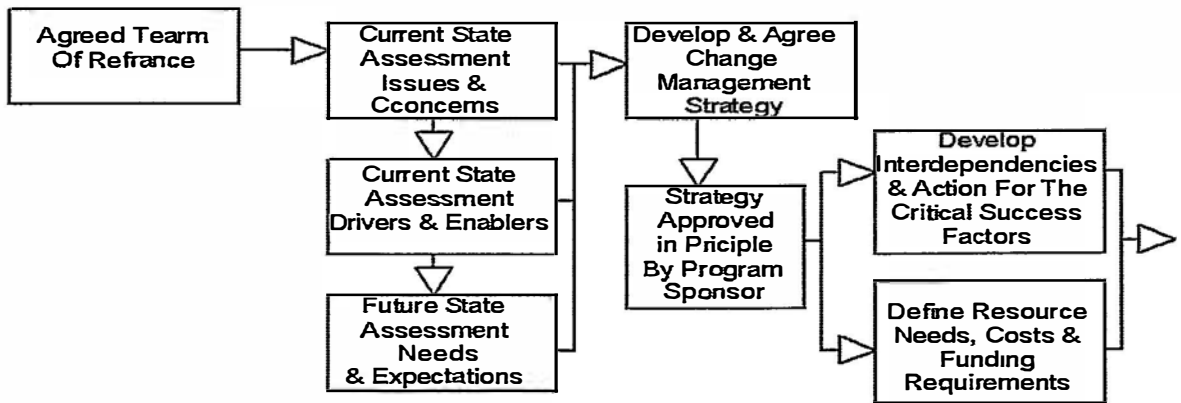


Figure 12-3 Milestone 3

Milestone 4: Communication Plan

The development of the communication plan relies on gaining stakeholder and participant commitment. The plan also provide an opportunity to gain feedback about the envisaged change. (KPMG 1995)

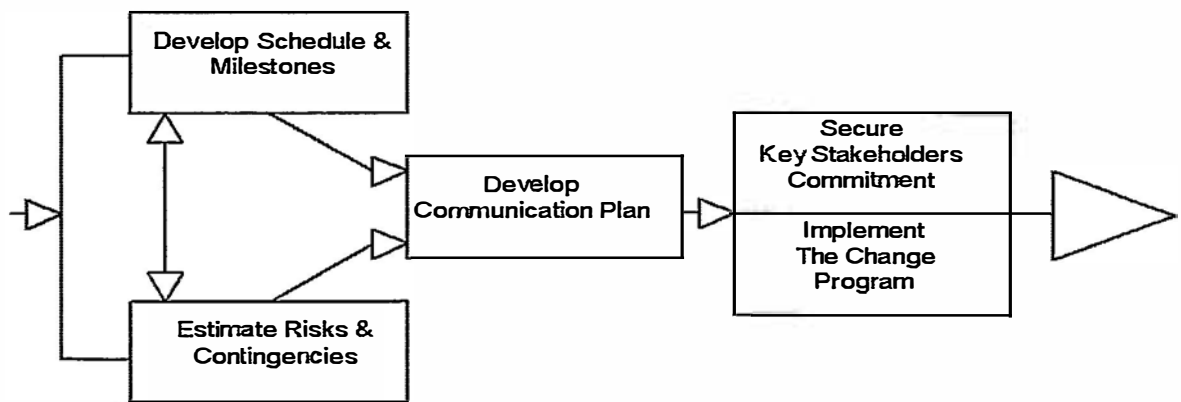


Figure 12-4 Milestone 5 & 6

Milestone 5: Stakeholder Commitment

Resistance to change needs to be anticipated and managed. Commitment is best measured by the degree to which stakeholders do what they agree to do, when they agree to do it. The methods, tools and techniques selected to plan the change will

greatly impact how commitment will be maintained throughout the implementation of the program. Commitment will be maximised when individual needs are considered concurrently with group and organisation needs. (KPMG 1995)

Milestone 6: Implementation

Engage key stakeholders and participants in the change effort. Monitor agreements. Create opportunities for feedback during implementation. Be prepared to alter the plan as new information comes forward. (KPMG 1995)

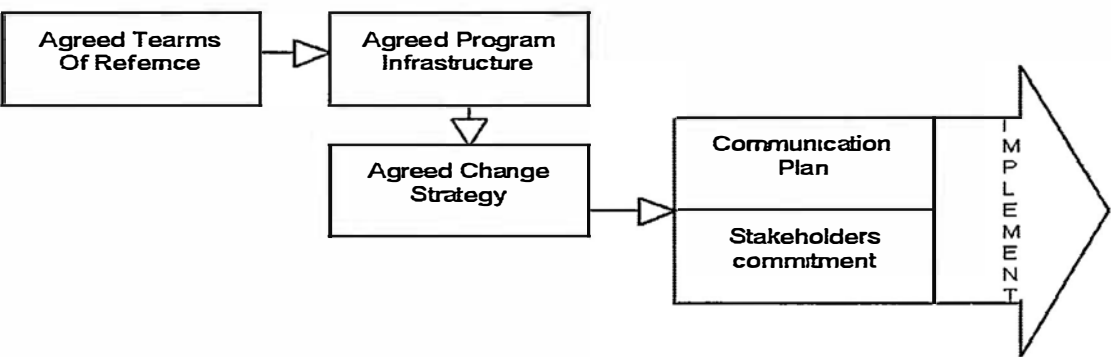


Figure 12-5 Change Management Framework

Figure 12-5 brings the six Change Management Framework milestones together. The milestones commence at the conception of the proposed change and offer guidance through to the implementation of the change.

The problem is therefore the lack of framework for communication change. The theoretical, practical and Tasmania Police model for change management all include as a key component the need to communicate the change. The aim of this empirical research is to produce a framework for communicating change

Appendix 4: Meetings

Meetings attended

Date	Place	Why
26/2/1998	BATON	Consultant/Call Centre Project
12/3/1998	BATON	Consultant/Call Centre Project
12/3/1998	9 th Floor	Call Centre Project
19/3/1998	BATON	Drug an Alcohol program
19/3/1998	BATON	Performance Management Project
19/3/1998	BATON	Consultant/Call Centre Project
26/3/1998	BATON	Project verification
26/3/1998	9 th Floor	Call Centre Project
7/5/1998	BATON	Change Management Coordinator
21/5/1998	BATON	Discuss program
28/5/1998	BATON	Discuss program
1/7/1998	BATON	Briefing Session
20/1/1999	BPS	Briefing on 2 projects
10/3/1999	BPS	Review Projects
16/4/1999	Burnie Police Station	Crime Management Unit project
5/5/1999	Hobart Police Station	Crime Management Unit
9/7/1999	Academy	Lotus Notes
13/7/1999	Launceston	Change agent meeting
27/7/1999	Hobart Police Station	Briefing on Change Management
20/10/1999	Police Academy	Change Management
17/3/2000	Police Academy	Strategy meeting re IT

Appendix 5: Visits outside of BATON

Activities in the field

Date	Place	With how	Why
5/3/1998	Launceston	Allocation Officer, Station Management	Briefing on Call Centre Project
12/3/1998	Call Centre	CC Project Manager and BATON Manger	Inspect Call Centre
2/4/1998	Launceston	Criminal Investigation Bureau	Pilot of Call Centre Project
	George Town	Criminal Investigation Bureau	Pilot of Call Centre Project
9/4/1998	Launceston	Criminal Investigation Bureau	Call Centre Project
21/5/1998	Glenorchy	change agents	Discuss program
4/6/1998	Launceston	Criminal Investigation Bureau	Feedback Session
3/8/1998	Call Centre	Change Management Coordinator	Check on capacity

Appendix 6: Change agent Training

Change Agent Training/meetings

Date	Place	With how	Why
8/12/1998 9/12/1998	Police Academy	Change agents	Training
10/12/1998	Change Agent Meeting	Change agents & DCOP	Update on changes
February, 1999	University of Tasmania	Project Team	Call Centre project review
12/2/1999	University of Tasmania	Call Centre Operators	Call Centre project review
17/2/1999	Police Academy	Users	Call Centre project review
24/2/1999	University of Tasmania	Allocation Officers	Call Centre project review
1/7/1999	Police Academy	Change agents & DCOP	Update on changes
29/11/1999	Police Academy	Change agents & DCOP	Update on changes
1/2/2001 2/2/2001	Police Academy	Change agents	Training
27/11/2002 28/11/2002	Police Academy	Change agents	Training
2/8/2005 3/8/2005	Police Academy	Change agents	Training

Appendix 7: Field Note Proforma

Proforma for Field Notes

<i>Date</i>	
<i>Place</i>	
<i>Time</i>	
<i>Topic</i>	
<i>Participants</i>	
<i>Content</i>	
<i>Personal Notes/Observations</i>	

Appendix 8: Documents Collected

Documentation

Project SAMSON II
Project SAMSON III
Integrated Crime Management Strategy Project Business Plan
IMC Report - Integrated Crime Management Strategy 20/9/1999
Integrated Crime Management Strategy Implementation
Western District Crime Management Unit
Crime Management Unit - First Report Draft
Mapping Crime Management Unit
Radio Project – Issues Briefing Note
Project BATON – Cost Benefit Analysis Review
Stolen Motor Vehicle Integration Requirements
BATON Flyer
Project BATON – HR Strategic Planning Report
Change Management Framework (Presentation ppt)
Project BATON Embracing Change
Review of distribution of change agents – Memo 2005
Position Description – Manager Business Project Services
Business Project Services Implementing Directive – Memo
Management of Change 1998
Change agent List
Email from Change Agent
Email from Constable A
Email from Sergeant B – Update on project January 1999
Change Management Action Plan 1999/2000
SWOT – Role of change agents
Police Intervention Strategy – Business Plan
Fundamental Framework Early Intervention Drug Diversion June 1999
Y2K Project
Project Governance Model
Call Centre Implementation Plan
Police Mobile Data Capabilities – Proposal for Pilot
Call Centre Risk Management Plan February 1998
IMC Report – Call Centre March 1998
IMC Report – Call Centre May 1998
Call Centre Project review – Outcomes December 1998
Change Management April 2000
RD Methodology Project Execution Plan May 1998
ROADS Project Presentation Notes
ROADS Project Flowchart
ROADS Project Meeting Agenda
HR Strategic Plan 1997-1999
Online Charging Business Case
Online Charging Business Case – Western Australia
Project BATON – A United Organisation Embracing Change – Presentation ppt
August 19997
Project BATON – A United Organisation Embracing Change – Report August 19997
Police Service Legislation November 1999

Appendix 9: Field Note Exemplar

Exemplar Field Note

<i>Date</i>	<i>26th February, 1998</i>
<i>Place</i>	<i>Project BATON Office, 7th Floor, Capita Building</i>
<i>Time</i>	<i>0830 - 0930</i>
<i>Topic</i>	<i>Call Centre Project meeting – Presentation on proposed Call Centre</i>
<i>Participants</i>	<i>Inspector E, Sergeant F, Constable A, State Servant G, State Servant H, State Servant I</i>
<i>Content</i>	<p><i>It has been twelve months since I was here last. BATON has now been allocated permanent office on the 7th floor. In the past they have been moved around, not a good sign as it must have detracted from how serious they are about implementing BATON and change.</i></p> <p><i>There has been a change in the Inspector D has been promoted giving BATON more support from management. Inspector E has taken over as BATON project manager; he was previously Inspector D's 2IC. Other members of the team are Sergeant F, Call Centre Project Manager; Constable A, Coordinator of change agents; State Servant G, Training; State Servant H, Information Technology and State Servant I, Administration (State Servant I is the only original member of the team). Inspector F, Constable A and State Servant H are on secondment from other areas.</i></p> <p><i>Constable A spent time in the meeting reviewing the location of the change agents, 20 spread across four districts. She pointed out that 'the location changed when change agents were promoted, seconded or transferred'. She said 'the focus is on ensuring all change agents are delivering exactly the same message in relation to the Call Centre'.</i></p> <p><i>Constable A demonstrated the video for the briefing on the Call Centre project. 'The video presentation is stopped and information from the change agents is presented before returning to the final section on the video. The change agents are required to come to BATON for a briefing on the presentation'</i></p> <p><i>Constable A reported 'I am finding it hard to get in touch with some of the change agents. E-mail is used but is not their dominant communications culture and they require real encouragement to make them use it regularly'. She went onto say 'Some do not have immediate access, as there may only be one computer in a muster room shared with 20 officers. Therefore they do not check their e-mail as often as they should, sometimes not for days'.</i></p> <p><i>Inspector E reported that 'the Deputy Commissioner has agreed that change agents should be made aware of other events outside of BATON to aid the communication process.' He went on to say 'These events have not been forwarded in the past to BATON'. But he said</i></p>

	<p><i>'During discussions the project team were able to identify a number of other projects being implemented in the organisation at this time and the change agents have not been informed of their existence.'</i></p> <p><i>Constable A informed the meeting that she is due to return to her substantive position next month. She said: 'I am not looking forward to leaving the project before it is completed'. Constable A went on to say 'that the six month turnover with the Change Management Coordinator should have a positive effect by placing a dynamic change agent back in the field.'</i></p> <p><i>Constable A said she felt 'there has been more acceptance of the change agent program with her working in the role of change agent coordinator as she is a Constable with 14 years service and is on secondment from the Academy. She has been able to create a more open environment during sessions as she was able to 'disown' BATON due to her secondment status this enabled her to back away from criticism and help people work through them to identify the 'real' issues or concerns.'</i></p> <p><i>Constable A reported back on the feedback sessions that had been conducted around the state along with the 'Relaunch of BATON'. She said 'The analysis of the data shows a positive response to the revitalising of BATON and to the changes that are being proposed'.</i></p> <p><i>The system used in conducting the feedback sessions is similar to that used by the DSS lab except in a manual environment. After the meeting Constable A described the feedback system as 'participants are asked to put points either positive or negative onto cards. The cards are then arranged under main headings. People are asked to speak on their card, there is no pressure to speak but as with the DSS if you do not take ownership of your card you stand the chance of the item being dismissed or ranked at a lower level than you intended it to. This process has provided a level playing field for the participants and the outcomes from the sessions have been of value.'</i></p> <p><i>People who have been seconded to BATON are now being physically moved to the 7th floor. In the past they may have been left in their own department. Physically moving then has resulted in a change in attitude and a total focus on BATON. There is a team environment in the office with individuals working together well.</i></p>
<i>Personal Notes/Observations</i>	<p><i>Day one and I have been welcomed on board without reservation. Constable A made an effort to come over and have a chat. I have a desk in the corner of the long office. The office is open plan and any conversation can be heard, while there is a privacy issue it allows for open communication regarding the state of the project. Inspector E has an office that is separated from the rest by a full glass partition and a door allowing for meetings to be held in private.</i></p>

	<i>The atmosphere is warm and friendly. Inspector E has been concerned that I am happy with working my way through the reports and that I don't feel ignored.</i>
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Appendix 10: Question Frame

Questions

This semi-structured interview arises from ongoing research into change management and the implementation of ICT related change in Tasmania Police. The first round of data collection has been completed. This interview is part of the second round of data collection and aims to generate a snap shot of change management practices and the implementation of ICT projects in Tasmania Police for comparison with phase one.

Background

1. Can you clarify your current position and how long you have held that position?
What other positions have you held?
How long have you been working for TasPol?
2. Can you tell me your experience of how change has been implemented at TasPol?
3. Have approaches to managing change evolved over time?
If so can you give me an example?
4. On a general level can you tell me what changes have been implemented over the last decade?
Has there been an increase in the adoption of ICT?
5. What roles have you played in managing change in TasPol?
6. What do you think the overarching mission and vision of TasPol is?
7. How well do you think this vision and mission are reflected in your experience of change and its management?

Projects

1. In your experience how have projects been managed and what role does Business Project Services have
In the past and currently please give examples
Have they been managed poorly or well?
2. What is your project management methodology?
3. In your experience is this methodology used in managing projects?
4. What reporting lines are in place for projects?
5. What is the process for getting a project off the ground in TasPol?
6. How do you know if the benefits from projects have been realised?
7. How is the change management strategy determined or developed for each of the projects?

Change agents

1. How are officers engaged in the change process?

When are they involved?
How do they get information on the change?
What happens when they resistor the change?

2. How many change agents does Tasmania Police currently have?
structure
number
training
3. Talk to me about change agents and their communication practices
How do they receive information?
When do they receive information?
How do they disseminate information to their workplace?
How does the change agent network communicate to each other?
What support is there for change agents?
4. What do you see as the role of the change agent?
5. If there are issues who do the change agents primarily communicate with?
6. In your view who is primarily responsible for the change?

Closing

1. In closing is there anything you would like to add relating to change and how it is implemented in TasPol that you have not had an opportunity to discuss?

Appendix 11: Summary Codes Phase One

Acceptance Plan
Acceptance testing
Action to reduce resistance
Additional training to cover delay for operators
Another possible delay
Aspects of Crime Management Unit trialled around the state
BATON Manager on secondment
BATON Project Team
BATON to become coordinator for all projects
Break in Change Management with CMC on leave
Briefing on new project
Briefing on other projects
Bulletin to staff re update on call centre
CA training course
Call Centre lost original focus
Change agent training
Change agents consulted
Change agents not proactive
Change agents should lead
Change agents to be informed on all projects
Change agents to come to BATON for Briefing
Change agents to present info on Call Centre
Change of focus for change agent training
Change of Project Manager for a short time
CMC returns
CMC to return to substantive position
Communication strategy developed
Communication strategy for ROADS
Communication with change agents difficult
Consult CAC re change strategy
Consultant Firm B commences
Consultant Firm B wanted to be involved earlier
Consultant id an opportunity
Consultant to be used for some CA training
Cost benefit of projects
Credible CMC
Current projects
DCOP supports using change agents to communicate
Decision to inform change agents as well as executive
Dedicated Office
Delay in rollout not unexpected as timeline was tight
Delay with delivery
District Coordinator role developed
District Coordinator to be short term
District Coordinators
Email not reliable
Extra training for IT staff
Face to face in Launceston
Face to face meeting with pilot group

Feasibility study on new project
Feedback from CA training course
Feedback sessions for staff re BATON relaunch
Further analysis of process
Gathering feedback from change agents
Group Decision Support System session
Good communication
Id inhibitors to change
Id resistance to the project
Idea for Crime Management Unit developed in
Burnie
IMC decide next division for rollout
IMC informed of delay by consultant A
Implement regular communication with CA
Incorrect implementation of a project
Inputting manual session into Group Decision
Support System
Inter agency project
Interference with change process from inhibitor
Internal conflict
Issues for the project
Issues register still with outstanding issues
Key player no IT skills
Lack of continuity of CMC
Lack of documentation of legacy system
Lack of computer
Lack of resources to support the change
Location of change agents
Manage consultants
Manual feedback session
Map resources for pilot
Meet with Pilot group
Model of communication
Need to promote email culture for communication
New CMC
New communication strategy for CC
New process
New process for Call Centre
New project
New project in BATON office
New project proposed
New project with good savings
New reward system
New team member
No identifiable systems methodology used
Official handover date for CC identified
Ongoing issue with CC project
Ongoing review during development
Open communication consultant A
Permanency granted for team member
Pilot of phone system
Plan to check on behavioural change
Planned training for project team
Preparing PowerPoint presentation
Problems with project

Project awaiting ministers sign off
Project finally on track
Project office created
Project office floor design
Project pilot implemented
Project team hands on during pilot
Project team members changing
Project Unit authorised
Projects piloted
Question the cultural change of CC
Re prioritise aspects of Call Centre project
Repeat communication about change for CC
Resistor leak to media
Resource Planning
Resources for new project at discretion of districts
Review of call centre project
Review of change management
Review of change management strategy
Review of project progress
Revised rollout date approved by IMC
Risk issues for the project
Risk Management
Same Message re call centre
Secondment
Secondment extended
Solution for problem with Small Motor Vehicles
system
Strong culture in divisions
System goes live
Team physically located in office
Testing
Training
Training commences
Training of allocation officers 2 days before live
Training of new allocation officer
Travel to Launceston to see Inspector
Unauthorised project
Video to help with presentation
Vision and Mission

Appendix 12: Conceptual Codes Phase One

Acceptance/planning and testing
Addressing resistance
Allocation officer
Briefing on projects
Bulletin
Call Centre project feedback
Change agent briefing
Change agent training
Change agent training feedback
Change agents consulted
Change agents do presentations
Change agents informed with executive
Change Management Coordinator consulted re
change
Change Management Coordinator credible
Communication strategy/model
Cost benefit
Cultural change
Directive not communication
District Coordinator not permanent
District Coordinator role developed
Face-to-face communication
Feasibility
Feedback
Good communication
Hands on
Identify inhibitor
IMC
Inhibitor interferes
Issues register
Lack of resources
Manage consultants
Network of change agents
Official handover
Pilot
Pilot group
Process analysis
Project office
Project team
Promote email
Regular change agent communication
Relaunch Call Centre
Resource planning
Review of cultural change
Review project
Review strategy
Risk management
Secondment
Top level support for change
Video to aid
Vision and mission

Appendix 13: Summary Codes Phase Two

2 ways to raise an issue
25 state services
28 years ago change was directive with little reason given
28 years in police
3 separate area to communicate with
4 inspectors
60 people attending CA forum
70 or 80 change agents
900 computers to 1600 people
97 CA
97 change agents
About to do a new three year strategic directions document
Accepting of change
access to info better
Acquisition of new skills
Acting commissioner
Acting commissioner's style more collaborative and consultative
Acting DCOP
Acting DOP not aware of who was CA
Acting Sergeant Business Project Services
Airport Police
All projects on Information Management Board agenda to monitor
All projects to have a sponsor
Asked for help from Business Project Services
Assistant Commissioner
Assistant Commissioner for 5.5 years
Assisting the CMC
Alternative channel CA
Attempts to manage projects has been good
Authorative approach not best for implementation
Aware of CA in their role
Aware that there is a project management methodology
Bad reviews can effect CV and promotion
Basics of policing has not changed the business is done has
BATON 11 is Meridian
BATON had set agenda
Been involved with national and whole of gov projects
Before implementation Project manager meets with CMC to develop a strategy
Benchmarking process
Benefit realisation assessment
Benefits are visible for changes
Benefits can be immediate or long term
Benefits documented in business case for formal projects
Benefits from projects are transparent
Benefits may be realised but not documented
Benefits realisation is now a part of PM methodology
Benefits realisation not done as well as they could
Benefits realisation plan
Better communication not information overload
Big projects cannot be ran off the side of the desk
Big projects need to be in a controlled environment
Biggest problem integration of our systems and duplicated work processes

Business Project Services continuous improvement approach to PM
 Business Project Services facilitates meeting with DCOP re idea
 Business Project Services has an important role
 Business Project Services manager currently updates Information Management Board on projects
 Business Project Services or commissioner takes briefing note to Information Management Board
 Business Project Services plays a key role in projects
 Business Project Services role changing to QA and coordination
 Business Project Services should be more proactive
 Business Project Services should identify projects to Information Management Board
 Business Project Services slave to Information Management Board
 Business Project Services to play greater role in coordinating projects
 Business Project Services secretariat for Information Management Board
 Briefing note to supervisor
 Briefed CA on CA course
 Briefing note sent to Business Project Services or Commissioner
 Bring commander level into project decision making loop
 Bring police commander into reporting line
 Budgeting issues
 Business planning more holistic
 Business plan a three year document
 Business planning process to drive business
 CA are temperature gauge for org
 CA briefed at same time as commanders
 CA can go direct to Deputy but usually requires an existing relationship
 CA comments well informed
 CA communicate mainly with CMC
 CA communicated to via email
 CA constantly updated
 CA contact CMC by email requesting information
 CA disseminate information using address books
 CA do not use chat room
 CA enthusiastic
 CA exposed to senior management
 CA feedback collated
 CA for 15 years
 CA for 4 years
 CA forum beneficial
 CA forum honest forum
 CA forum informal
 CA forum place for raising issues
 CA Forum provides information
 CA forum provides information before training days
 CA forum significant for facilitating feedback
 CA free to choose best approach
 CA get important information at the same time as senior management
 CA get information about projects
 CA had to include her personal opinion
 CA help with expectation management
 CA involved in a pilot to new uniform
 CA key part of communication process
 CA liaise with CMC
 CA made felt important because commissioner took control
 CA made to feel important

Ca may make first call to CMC
 CA may recommend issue discussed with Sergeant
 CA meeting 3 times a year
 CA meeting 75% attendance
 CA meeting addressing PD for CA
 CA meeting chance for them to feedback
 CA meeting opportunity to network
 CA meeting place to ask questions
 CA meetings focused on them as people
 CA more comfortable with new Deputy
 Ca need time to devote to role
 CA need to feel comfortable with CMC
 CA need to know in case they have to present
 CA network can be effected by personality of CMC
 CA network communicating up
 CA network depends on CA personality
 CA network has good representation in all areas
 CA network trying to replicate rumour mill
 CA not as effective as notice board or intranet
 CA not telling and selling
 CA not to be spin doctor
 CA originally coopted into the role
 CA passes on information
 Ca receive information from CMC
 CA receiving information from other CA
 CA required to gather feedback
 CA role communication
 CA role dependant on experience
 CA role dispelling rumours
 CA role getting feedback
 CA role informing
 CA role needs status
 CA role to feed information up to decision makers
 CA role to keep management in touch with actually happening in the workplace
 CA role to pass on information and gather feedback
 CA role to understand corporate priorities
 CA role two way
 CA role workplace communicator
 CA sort feedback
 CA support role of management not replace it
 CA talk to people
 CA talks with people
 CA tend to use CMC for issues
 CA that make the most difference attend CA meetings
 CA to be a credible person
 CA to pass information back up the line
 CA trained
 CA trained for 2/3 days
 CA training recently
 CA try to focus on Sergeants, Constables and Un
 CA trying meet as many needs as possible
 CA use email
 CA used to receive information before senior management
 Ca uses drinks after work to pass on information

Can do changes better
 Can improve by returning officers to core policing
 Can make changes to processes but no need to
 Can see feedback on intranet sites
 can use both for feedback
 Can't stop change
 Capture a lot of information but don't use it well
 Capture baseline benefits at beginning
 Central should be providing districts information
 Changes in the workforce
 Change agent meeting 80 attended
 Change agents give autonomy
 Change driven from the top
 Change flows from the top down
 Change impacts on individuals differently
 Change in the sponsor
 Change is complex and helped by design but may be more luck
 Change is the responsibility of everyone
 Change is the responsibility of head of organisation
 change makes victims feel safer
 Change management does not need guidelines
 Change management helps police achieve its vision and mission
 Change management here to obtain feedback
 Change management includes a communication plan
 Change management is about face-to-face communication
 Change management is about facilitation of feedback
 Change management is not constrained by guidelines
 Change management is not project management
 Change management is really more internal communications role
 Change Management may need a new name
 Change management moulds and supports business
 Change management more momentum than originally put in place
 Change management process works, works well
 Change management strategy less formal now
 Change of approach to dealing with crime
 Change of focus in later years
 Change of management results in more friendly style
 Change of process with new commissioner
 Change reduces crime
 Change seems delayed in Western
 Change should not be taken for granted
 Change strategy developed by CMC and project team
 Change suggested from field implemented but some not happy
 Change viewed differently in Western
 change with peoples work ethics
 Change with the approach taken by people to policing
 Changes allow for police to take action
 Changes implemented are linked back to vision and mission
 Changes implemented to reduce specific crimes
 Changes in legislation
 Changes in ministers, commissioners
 Changes in the dynamics of the workforce
 Changes in the way we deal with young people
 Changes to domestic violence

Changes to reduce crime
 Changes to work practices
 Chat room established for CA
 Close to 100 change agents
 CMC 2 years
 CMC can help with issues
 CMC contacts supervisor in area to id CA
 CMC facilitates communication to and from Commissioners
 CMC has an awareness of workplaces
 CMC has open door with Deputy
 CMC has regular meeting with DCOP
 CMC influences role
 CMC involves external presentations
 CMC not aware of all things that are happening
 CMC organises training
 CMC role advertised
 CMC role dependent on experience
 CMC role has evolved over time
 CMC role not defined
 CMC suggests try supervisor first
 CMC working with project managers
 Crime Management Unit providing collated information to id crime in areas
 Crime Management Unit same structure
 Collated information provides insight into crime
 Collectively learnt more about change
 Combined CMC, Business Project Services and Information Management Board
 influence change
 Commander will become project director
 Commanders sent info as well as CA
 Commissioner based projects no budget assigned
 Commissioner instigated projects tend not to follow proper methodology
 Commissioner need to be internally focused to perform their role
 Commissioner of Police has ultimate say
 Commissioner primarily responsible for change
 Commissioner responsible for change
 Commissioner sets the strategic direction of the organisation
 Commissioner took control of CA
 Commissioner works with the management team to set direction
 Commissioners project do not take into account other projects
 Commissioners projects can be successful
 Commissioners projects personality not organisational
 Commissioners will find answers to questions if they do not know
 Communication happens in a range of ways
 Communication important for expectation management
 Communication in any organisation is an issue
 Communication includes who to contact re feedback
 Concentrate on information that is relevant
 Constable
 Consulting everyone and coming up with an overall approach
 Consultation with area effected by project
 Continual improvement area re change
 Core and non core members of Information Management Board
 Core CA provide the feedback
 Corporate Performance Reviews good

Could do better at id benefits for projects
 Could run network better
 Could use CA forum to raise idea
 Counter terrorism
 CPR's resulted in silo systems
 CPR caused districts to implement new processes
 CPR had an impact not understood by commissioners
 CPR lead to new systems that are not aligned with corporate priorities
 CPR new process with new Deputy
 Creating an integrated approach to projects
 Credibility defined
 Crime is reducing
 Crimtrac uses Prince 11
 Criteria is credibility and confidence to give feedback
 Cultural change with workforce attrition rates
 Culture supports a broader role for change agents
 Current issue causes officers to use their own resources
 Current issue impeding work practices
 Current issue in workplace
 Current issue raised at CA forum
 Current role is about change
 Currently CA and Senior management informed at same time
 Currently can have project managers reporting to a commissioner
 Currently commissioners not up-to-date with projects
 Currently not managing projects as well as they can
 Currently reviewing vision and mission
 Currently they understand strategic direction
 Day-to-day activities aligned with corporate plan
 DCOP answers questions at CA forum
 DCOP finds CA forum good for issues to be raised informally
 DCOP has open door with everyone re issues
 DCOP operational head of organisation
 DCOP should do something about current issue in the workplace
 DCOP very engaging
 Decision to not have CA know things before others
 Decisions come from the top
 Depending on change some groups more than others
 Depth of information help provide answers
 Deputy approves emails
 Deputy briefs CA meeting
 Deputy Commissioner 7 months
 Deputy in charge of CPR
 Deputy not briefing CA at same time as Commanders
 Deputy Q&A session at CA meeting
 Deputy supports idea from State service
 Detective, uniform and training
 Developing a communication plan so people know where to look for information
 Developing a new approach to project management
 Did get some benefits out of failed projects
 Different means to get message across
 Different stakeholders that require consultation
 Different strategies for looking at benefits
 Difficult to get states to agree
 Digitalization of forensics

Directive does not require feedback
 Distance and travel makes consulting with outlying areas difficult
 District Response Division
 Districts targeting crime
 DNA Database caused little change to process
 Do not want 20 clones as CA
 Do not want CA as a part of the rank structure
 Drafting policies
 Dual approach to gathering feedback
 Early intervention
 Educated more re new practices
 Education and recruitment help with change
 Education immerses them in corporate priorities
 Email does not get the job done
 Email used for direct communication
 encourage feedback
 Encourage tertiary study earlier
 Encouraging a more thoughtful approach to policing
 End of three year strategic document
 Evaluate how many hour project requires
 Evaluating Gateway project for verification and checking
 Everyone is a part of the process of change
 Everyone responsible for change
 Evidence act
 Evolutionary change
 Example of grip from workplace
 Example of how an idea was implemented
 Example of information being in more than one place
 Example of when feedback is wanted
 Examples of projects that took too long
 Explain change in communication
 Experience helps manage change
 Family Violence
 Feedback
 Feedback being actioned
 Feedback from CA re corporate planning
 Feedback gathering working well
 Feedback increased in the last two years
 Feedback is down to the autonomy of the CA
 Feedback mechanism used to establish if benefits have been realised
 Feedback now back thru management line
 Feedback session to help with communication
 Few projects outside of Business Project Services
 File tracking via IT
 Fix thing we have before moving on
 Flexible
 Focus on building organisational trust re feedback
 Focus on educating and keep officers trained up
 Focus on mid managers i.e. sergeants re CA
 Focus on senior people more supportive of CA
 Force changed to service
 Forensic and DNA examination
 Forensic data collated with IT
 Forensics

Forensics creating bigger databases
 Formal and informal projects have different approaches taken
 Formal and informal projects
 Formal communication through Commanders
 Formal feedback
 formal projects managed well
 Formal read out is not the best time to pass on information about change
 Frank feedback given at CA forum
 Fringe CA will always be there
 Frustrating that issues not raised
 Gap with skill set re IT and mature aged officers
 Gathering feedback
 General awareness of change management
 General model to guide communication strategy
 Generally going well
 Getting feedback is difficult
 Get involved not necessarily at the right stage
 Getting right people difficult for IT projects
 Gone thru a lot of change in last 6/7 years
 Good facilitator in Lee-Anne
 Good ideas get watered down
 Good way to engage people in an important process
 Government projects
 Grips come out during drinks session
 Had some failed projects
 Had some failures
 Have different communication methods
 Have done full circle re how changes are implemented and communicated
 Have driven change in the organisation
 Have not been good lately at PM
 Have not been smart with change management generally
 Have not followed PM methodology all the time
 High level of performance
 HR issues
 ICE
 ICT cannot replace face-to-face
 ICT has developed
 ICT has not made that much difference
 ICT is a global problem
 Id best people to help with implementation
 Id change agents to work with project managers
 Idea generated at station to reduce specific crime
 Idea implemented in a few weeks
 Idea put on paper and sent to Sergeant and up the ranks
 Idea reports sent thru hierarchy of org to Information Management Board
 Idea sent through the hierarchy
 Ideas are presented at the CA forum
 Ideas put forward thru project proposal
 Ideas sent to Information Management Board
 If not enough time then not do anything
 Information Management Board assumes projects will develop change strategy
 Information Management Board aware of 'most' projects
 Information Management Board called for realisation benefit assessment
 Information Management Board changing to meeting once every six weeks

Information Management Board decide on further action re project proposal
 Information Management Board ensure projects are delivered on time, on budget and meet org objectives
 Information Management Board has previously made low level decisions
 Information Management Board impose fixed rollout date
 Information Management Board influences change
 Information Management Board kept in loop on progress of change strategy
 Information Management Board look to salvage what it can from Intrepid
 Information Management Board make high level decision
 Information Management Board meets once a month
 Information Management Board monitor all projects
 Information Management Board need to commit to reviewing projects
 Information Management Board should decide on new projects
 Information Management Board updated on projects
 Information Management Board usually knows what is going on around the state
 Information Management Board will take more of a sponsorship role
 Implementation of IT projects is an issue
 Implemented best PM methodology for BATON
 Important information is sent out to individual email addresses
 In the past Information Management Board has not decided on new projects
 In touch with corporate priorities
 Include SES and Forensics in Taspol
 Increase in change agents
 Increase in ICT
 Increase in medium to communicate with organisation
 Increase in the number of females
 Increase in the use of IT
 individual practice
 Information being sent out on all medium
 Information overload
 Informal approach
 Informal projects got results in a short space of time
 Informal projects had high risks
 Information comes from the Deputy or projects to go to CA
 information overload
 Information overload from a number of sources
 Information posted on the change management website by CMC
 Information presented at training days
 Information provided by phone to CA
 Information provided via intranet to CA
 Information received in variety of ways
 Information sent to CA via email
 Imitative may come to CMC to avoid having to do a report
 Inspector of Business Project Services influences change
 Inspectors shuffled every 2 years
 Intentions to manage projects not reflected
 Intrepid delayed as not ready
 Intrepid did not fix existing problems
 Intrepid shut down
 Intrepid to deliver an new offence reporting system
 Intrepid was supposed to fix integration issues
 Involve those affected by change
 Involved at high level implementation of change
 Involved in change with external parties

Issue can be raised at CM forum
 Issue from change agents acted on
 Issue that the ownership sits with the Deputy
 Issues can be sent to CMC
 Issues from field taken to Commissioner's office
 IT has made policing easier
 IT helps with drug programmes
 IT projects difficult to manage
 Just developing new approach to projects
 Keeps organisation energetic and dynamic
 Key to id benefits before project is implemented
 Knowledge transfer
 Lack of technology early on was not a problem
 Last week has seen a lot of change
 Lee-Anne 23 years
 Legislation has changed lots in 15 years
 Less directive more consultative
 Lift in education
 Like looking for new ways to do things
 Listening more
 Listening more to feedback
 Little issues not raised at local level
 Little change to change management
 Little issues raised at feedback session
 Little projects may run in districts with no business plan
 Locking in a new PM methodology
 Look at vision and mission via business planning process
 Looking at Vision and Mission to make sure they are still contemporary
 Looking to see if communications should be with Business Project Services
 Lost resources with Intrepid
 Lost some of the formal approach to change management strategy
 Mainly prosecution focus
 Majority worked in Eastern and Southern
 Managed change as a manager/supervisor
 Management may try to please the majority
 Manager of Business Project Services provides a secretariat role to Information Management Board
 Managers need to manage
 Managers should be a part of change management
 May have only included only those CA on the ground
 May need to change safe for safer
 Meeting with stakeholders determines if benefits have been realised
 Member of Information Management Board
 Member of original BATON team
 Membership of Information Management Board
 Meridian
 Meridian feedback fix what we have now
 Meridian gathering good feedback
 Meridian healthy for organisation
 Meridian helping id projects for Business Project Services
 Meridian looking at systems in districts
 Meridian re look at where we are at with BATON initiatives
 Meridian then fits into business plan
 Meridian to come up with workable solution

Meridian looking at future technologies
 Message becoming increasingly complex
 Message will get across
 Met frequently
 Methodology is used for projects
 Mid managers key players re change
 Might be good for commissioner to take turns of going to meeting
 Minor matters brought to the attention of DCOP at CA forum
 Mission - To make Tasmania Safe
 Mission to make our community safe
 Mission to make Tasmania safe
 Mission to make Tasmania the safest state
 More aware of linkages between day-to-day and corporate
 More consultation
 More consultative
 More consultative committees
 More credibility to role as person approached
 More decision making committees
 More education and younger managers focus more on corporate strategies
 More external focus to issues in society
 More external interaction
 More knowledge of CA
 More level headed police
 more mediums
 More of organisation see strategic linkages
 More org awareness of how people influence positions
 More than 60 CA
 More thought into how to train different people
 More understanding of change in Southern
 Most projects run thru Business Project Services
 Motor registry
 Move away from multiple communication channels for one piece of information
 Moves along a conduit with speed
 Moving projects to control of command areas
 Moving to place all projects under the umbrella of Business Project Services
 My approach has not changed
 National project required political intervention
 National projects more complex
 National projects such as central mail indexing
 National projects such as Crimtrac
 Need a holistic view and then feed that back
 Need bit size chunks for projects
 Need expectation management
 Need senior management to support CA network
 Need to align internal communication with change management
 need to assess how we send out information
 Need to be careful how you use each technology
 Need to control the amount of change agents
 Need to decide where CA and Change management sit
 Need to fix what we have got
 Need to have support of senior management
 Need to improve internal communications
 Need to look at objectives documented have been achieved
 Need to capture benefits early

New business plan
 New commissioner has insight on how to get things done
 New commissioner man of action
 New commissioner wants to review
 New commissioner not using Information Management Board
 New CPR process
 New culture for Taspol
 New focus on benefit realisation
 New focus on make use of benefits
 New ideas sent through normal hierarchy
 New IT to record information
 New legislation changing all the time
 New legislation causes change
 New performance indicators
 New process project manager reporting to project director
 New project having benefits realisation done now
 new technology practices for operational police
 No change in message
 No consistent way on how to communicate with organisation
 No doom and gloom story
 No folder telling CA how to do the job
 No need for great use of ICT
 No need to complicate process to determine benefits
 No prescriptive style in approach to change
 No prescribed method for conducting role of CA
 No prescriptive way to manage change
 Nominated CA feels more support as nominated by Supervisor
 Not all CA will be active
 Not all change requires feedback
 Not consistently good at communicating change
 Not encouraging too many new ideas as have too many projects
 Not enough equipment
 Not good at reviewing benefits
 Not in a managers interest to knock back a good idea
 Not know as finishers of projects now
 Not much to save from Intrepid
 Not sure they realise benefits
 Not surprised that there are 97 CA
 Not trained as a CA
 Notify CA early
 Now more consultative and considered re change
 Number of CA fluctuates
 Numerous communication avenues
 objectives set out in business plan
 Off the side of the desk projects still use resources of Business Project Services
 Officers can see systems should be more integrated
 Officers do not always have time to log onto a computer
 Officers engaged thru change agent network
 Officers know if changes have reduced crime without stats
 Officers now allowed to have outside employment
 Officers required to have reasonable IT skills to cope with different systems
 Officers see the benefits of IT
 Officers want to do job better
 Ok to send info thru email but need CA physically located in workplace

Old process favoured females
 On secondment to internal investigations
 One change increased admin but compensated with extra police
 One member of Information Management Board sponsors projects
 One of the first change agents
 One of the first to do a corporate plan
 One project CA did not receive information first
 online arrest procedures
 Operational issues should go thru supervisor
 Opportunities for improvement
 Organisation has worked hard to make members understand the linkages to big picture
 Organisation is trying to make officers to stop and think
 Organisation realises CMC in the past not quite right
 Original change agent
 Originally change implemented as a directive
 Origins may come from the field
 Other communication medium
 Overtime there have been strengths and weakness re managing change
 Part-time work now allowed
 Passionate about change management
 Past corporate decided what was best
 People are busy so concentrate on issues that are relevant
 People do not want new wave technology
 People encouraged to use chain of command
 People feeling safe as mission
 People interested to become a CA
 People oriented change complex
 People perceptions of what the role is may limit access to the area
 People to determine new direction
 People unsure of where to look for information
 Perceived need for further training
 Performance indicators and benchmarks have been driving business
 Personal style connected with position
 Philosophically everyone is responsible for change
 Piloting a project at Eastern
 Placed too much demand on IT section
 Planning has not been bad but could be better
 Planning if project meets the needs
 Planning on how to send out information
 Plans will change when planning for change
 Played a major role in implementing change
 Policing is about id a problem and then a solution
 Police culture is decisive
 Police had problems with IT projects
 Policing becoming increasingly complex
 Portfolio approach to projects
 Positions ranging from constable to assistant commissioner
 Prescriptive in following methodology
 Previous DCOP intimidating
 Print out information for future reference
 Prior to BATON no PM methodology
 Process is now to id an area that needs a CA
 Project director makes low level decisions

Project director runs steering committee
 Project proposal through briefing note
 Programme directors make day-to-day decisions
 Project director reporting to Information Management Board
 Project director reports to sponsor (Commissioner)
 Project directors out in the field
 Project failed to deliver
 Project grouped into programmes
 Project manager
 Project manager reporting to a project sponsor
 Project manager reports directly to Information Management Board or commissioner
 Project managers undertake PM training
 Project Meridian gathering feedback
 Project proposal template
 Project proposals need briefing note or business plan
 Project will take us off the road a bit more
 Projects all work from Business Project Services not necessarily physically
 Projects have been fragmented for a while
 Projects have communication and change strategies
 Projects have sponsors
 Projects initiated by Information Management Board and sent to Business Project Services
 Projects of significance run in Business Project Services
 Projects outside of Business Project Services not big
 Projects presented at training days
 Projects report to the Information Management Board
 Projects should aim to achieve mission statement
 Projects should be assessed on objectives
 Projects should have an organisational focus
 Projects should have objectives
 Projects to be no longer than six to 12 months
 Projects use guidelines
 Projects will have Programme Directors
 Providing opportunities to voice concerns
 Radio project
 Raise idea with CA forum
 Raise idea with CMC
 Real conflict if officers not comfortable to go to supervisors with feedback
 Reasonable ideas are not rejected
 Reassessing if Change Management should be communications now
 Recently looking at benefits realisation plans
 Recognition to understand change affects people in different ways
 Relaxing time best to pass on information
 Relying on technology could be an issue
 Reporting tightly monitored
 Resistors are outside the scope of change management
 Resistors is a matter for managers
 Response can be diverse between districts and people
 Responsibilities have changed
 Restructuring projects into streams
 Review communication practices
 Reviewing Gateway review for QA on projects
 Reviewing how to communicate internally
 Reviewing internal and external communication methods

Reviewing strategic directions
 Reviewing where communications better
 Role is swiftness and response
 Role more holistic now
 Role of CA facilitates feedback
 Same amount of paper being used
 Same structure for CA
 Same structure no need to change that
 Sergeant in Business Project Services before
 Secondment effect org learning
 Secondment of Business Project Services manager effects project management
 Secretary responsible for change
 See CA as feedback drivers
 Senior management apart of change process
 Senior management do not like CA receiving information at same time
 Senior management want to get more involved in change
 Senior people not happy with CA getting information first
 Sergeant
 Set chain of command
 Set up so officers can voice opinions
 Should be able to measure back to objectives
 Should review projects
 Significant input projects best dealt with at Business Project Services
 Small organisation not difficult to communicate
 Small projects can run off the side of the desk
 Small projects to be under Business Project Services
 Smart workforce
 Some CA active others not
 Some CA hold meetings
 Some CA may be sending back their view of the world
 Some CA regularly respond
 Some changes have been more informative
 Some changes have negative aspects
 Some follow the methodology more closely than others
 Some left the program
 Some major project not ran thru Business Project Services such as asset management
 Some people will still miss out
 Some project leave Business Project Services with the manager
 Some project use other project methodologies
 Some projects take too long
 Some send out circulars
 Some use word of mouth
 Sometimes it takes a while for the message to get out
 Sometimes the media find out before CA and Commanders
 Southern word of mouth works
 Sponsor determines what goes to Information Management Board for org decision making
 Sponsor makes high level decisions
 Sponsor of projects
 Sponsor to talk on behalf of projects
 Sponsors sit on IMC
 Sponsors to be members of Information Management Board
 Start up phase the project manager develops initial change strategy
 State services provide stability to counteract secondment issues

Still rely on personal feedback
 Still struggling to get message out
 Still use face-to-face contact
 Still use traditional method
 Still want to be best and be safe
 Still worked under Business Project Services for completion of project
 Strategies need reassessing as we go
 Strategies reviewed by project team and stakeholders
 Strategy needs to take into account projected effect
 Streamline systems
 Structure of Information Management Board
 Structure reporting to Information Management Board
 Structures in place to assist change
 Struggle to check on project benefits
 Substantive Deputy Commissioner
 Supervisor exposed more to process
 Supervisors course trains mid managers re change management
 Supervisors need to gather feedback
 Supervisory role supporting change
 Systems implemented at district level should have been central
 Systems not integrated
 Take some time to ask how can we do this better
 Taken on too many projects
 Talking to people important
 Tas Government Management Methodologies
 Taspol have guidelines for everything they do
 Technology and legislation
 Technology helps people interact with projects
 Tend not to do formal reviews re benefits of projects
 Tend to use southern more for feedback
 Tend to wait until after project has been implemented to determine benefits
 Tertiary study linked to promotion
 The commissioner responsible for change
 The way the message is sent out does not have to change
 Themed projects to sit in silos
 Themed projects to provide governance
 Thinking about the message getting out
 Thought 50 change agents
 time to listen
 Time to listen in last 6 months
 Too many change agents
 Too structure will loose benefits
 Tool kit to help manage change
 Top management drive the rate of change
 Training personnel may have input into CM strategy
 Training days takes 20 weeks to cover whole organisation
 Training days used to communicate with organisation
 Training for pilot was basic
 Transient change of people in positions
 Treating the causes of crime
 Try and manage change
 Try to coordinate communication to 3 areas
 Try to id benefits at the start of a project
 Trying to achieve our mission

Two way communication
 Under take a review - Project Meridian
 Unique chain of command
 Up to CA as to how they engage their audience
 Up to commanders to read this info
 Use a variety of methods for communicating change
 Use CA network as a reference group
 Use intranet to reduce information overload
 Use notice board to disseminate information
 Use of IT a requirement of the role
 Use whole of government methodology
 Used to be words now they mean something
 Used to learn strategic direction for exams
 Using barcode to help store data
 Using ICT in a better way
 Victim Safety Response Team
 View is from somebody
 vision - professional, accountable, reliable, productive police service
 Vision and mission reflected well in change
 Vision and mission reflected well in changes
 Vision and mission still relevant today
 Vision and mission sum up where we as an organisation
 Vision to be recognised as the finest policing and emergency service in Australia
 Vision to be the finest Police organisation in Australia
 Voice of western does not reach corporate
 Want feedback for ideas that require shaping
 Wanting police to be more holistic in their approach
 We do change well but need to always try to do it better
 We work for one purpose to reduce crime
 Western feedback perceived to go nowhere
 Western not exposed to corporate view of Taspol
 Western operates differently
 Western you just do change
 What are our core responsibilities
 What does the community want?
 What is the core function of IT
 When consultative run workshops to gather feedback
 When implemented have lost sight of original vision to some degree
 Whole of Gov methodology
 Will follow up or ask for help
 Will give reason for change
 Wont take on matter that have no knowledge of will ask for help
 Work flow
 Work history
 Work together to reduce crime
 Worked at Taspol for 15 years
 Worked at Taspol for 7 years
 Worked both north and south
 Worked for Taspol 28 years
 Worked mainly in Western
 Worked on legislation on Crimtrac
 Worked on the DNA Database project
 Worked Taspol 14 years
 Worked with Sergeant F for 2 years (previous Business Project Services manager)

Working closely with other agencies
Working in Business Project Services is about change
Working on a new communications model
Workshops id Intrepid missing key component
Would consult people re project idea
Would like District CA coordinators
Written documents sent out first
Youth Action Unit

Appendix 14: Conceptual Codes Phase Two

3 separate area to communicate with
Accepting of change
Awareness of change agents
BATON
BATON set agenda
Better communication
Bottom up
Business Project Services
Budget
Business plan
CA communication
CA forum
CA increased
CA pathway
CA role
CA structure
CA support
CA training course
change
Change affects individuals
Change agent forum
Change in leadership
Change in title
Change in workforce
Change is complex
Change is happening
Change management
Change of focus
Change of sponsor
Change previously directive
Change sponsor
Change supported -idea
Change to practice
Change to structure of police
Changes to policing
CMC
Collective learning
Commissioner responsible for change
Communication
Communication strategy
Complexity
Consolidation
Consultation
Continual improvement
core policing
CPR
cultural change
Directive
District view
district differences
Dual pathway

Education
Everyone responsible for change
evolutionary change
Experience
External projects
External projects
Face-to-face communication
Feedback
focus on core policing
Gap with IT skills
Good ratio computers to people
Governance of change
Hierarchical channel
holistic focus
ICT
Information Management Board monitor
projects
implementation
Improve
individual effect positions
Information
Integration issues
Issues
IT projects
IT skills
knowledge transfer
Leadership
Majority rules
managed change (as a manager)
Management more open style
Meridian
Mission statement
More information available
open door
Outcomes of change
Project benefits
Project failure
Project management
Rate of change
Review
Secondment
Senior Management
Small projects
Sponsor
strategic planning
support for CA
Top down
Top level support
Training
Training days
Transient organisation
Two pathways
Up skilling
Vision and mission