Sensemaking Processes and Stakeholders’ Reactions to IT Implementation

Amir Rahighi

Submitted in fulfilment of the requirements for the
Doctor of Philosophy

Faculty of Business and Law
Swinburne University of Technology
2018
Abstract

This research investigates how sensemaking activities of stakeholders (including change agents and change recipients) influence and shape their reactions (attitudes and behaviours) to change during IT implementation. It seeks to derive insights into the role and influence of stakeholders’ relationships and interactions on developed responses and reactions (including resistance to change and support).

This research adopted the interpretive paradigm and followed social constructionism as its epistemology to investigate and understand stakeholders’ reactions through a sensemaking lens. The research design utilises interpretive multi-case study analysed through qualitative methods. This research investigated two case studies and used different sources of evidence (including semi-structured interviews) during two stages: pre- and post-IT implementation.

The findings of this research suggest that stakeholders’ sensemaking processes are consonant or dissonant, involving and leading to complex and dynamic reactions during IT implementation. Stakeholders manifest different feelings, attitudes and behaviours towards change from positive and supportive to negative and resistive. Further, the findings of this research contributed to the understanding of sensemaking processes during IT implementation and the implications of stakeholders’ sensemaking on their reactions to change.
Acknowledgements

I would like to acknowledge and thank the people who, each in their own way, supported my academic journey and my intellectual, professional and personal growth. It would not have been possible to fulfil this study and write this PhD dissertation without the help and support I received from them, for which I am truly grateful.

I would like to thank my principal supervisor Professor Judy McKay for her patience, guidance and valuable insight and advice. I am grateful for her support and encouragement through many obstacles and trials that I faced during my academic journey. My gratitude also goes to my co-supervisor Dr Rajiv Vashist for his comments and thoughtfulness. I am grateful for their time and effort in providing critical and constructive feedback and insightful suggestions that greatly enhanced the quality of this dissertation.

I wish to acknowledge the Faculty of Business and Law and the Swinburne University of Technology for their support throughout my candidature. I would also like to thank my colleagues and fellow PhD students. I also thank Dr Diane Brown for copyediting the dissertation according to the Australian Standards for Editing Practice (2013).

My thanks to all research participants for giving their time and sharing their experiences and opinions throughout the data collection process. This dissertation would not be possible, nor would it be meaningful, without them.

Last but not the least, I am very grateful to my family and friends who have stood by me during this journey and surrounded me with support, motivation and encouragement. My special thanks go to my lovely wife, Aseman Zonouzi, who supported me through it all, meeting the demands on my time with patience and understanding. I would also like to thank my son, Amirali, for graciously waiting for me to finish writing weekend after weekend so we could spend some time together. You remind me daily of the richness of my life, and I cannot imagine the world without you in it. Your presence has brought a balance to this long journey that indeed helped to keep me going. I dedicate this dissertation to my adorable son and beloved wife. Further, I would also like to thank my parents for their prayers and unwavering emotional support.
Declaration

This dissertation contains no material which has been accepted for the award to the candidate of any other degree or diploma. To the best of my knowledge, this dissertation contains no material previously published or written by another person except where due reference is made in the text of the examinable outcome.

Amir Rahighi

2018
# Table of Contents

Abstract ................................................................................................................................. ii  
Acknowledgements ................................................................................................................ iii  
Declaration ............................................................................................................................... iv  
Table of Contents .................................................................................................................. v  
List of Figures ........................................................................................................................ ix  
List of Tables .......................................................................................................................... x  

Chapter 1 Introduction ........................................................................................................... 1  

Chapter 2 Literature Review ................................................................................................. 9  
  2.1 Introduction ...................................................................................................................... 9  
  2.2 IT implementation ........................................................................................................... 9  
  2.3 Reactions to IT implementation ..................................................................................... 11  
    2.3.1 Support for IT implementation .............................................................................. 15  
    2.3.2 Resistance to change and IT implementation ...................................................... 18  
  2.4 Sensemaking processes ................................................................................................. 24  
  2.5 Research objectives and research questions .................................................................. 29  
  2.6 Summary ....................................................................................................................... 30  

Chapter 3 Research Methodology and Design .................................................................. 31  
  3.1 Introduction ...................................................................................................................... 31  
  3.2 Research paradigms and their philosophical assumptions ........................................... 32  
  3.3 Justification for the choice of research paradigm for this research ............................... 33  
  3.4 Choice of research method ........................................................................................... 34  
  3.5 Case study method ......................................................................................................... 35  
    3.5.1 Multiple case study design ................................................................................... 35  
    3.5.2 Research case selection ....................................................................................... 36  
    3.5.3 Data collection methods ...................................................................................... 36  
    3.5.4 Data analysis approach ....................................................................................... 40  
    3.5.5 Strategy for writing up the results ...................................................................... 45  
  3.6 Validity of research results ............................................................................................. 48  
    3.6.1 Credibility ............................................................................................................ 49  
    3.6.2 Transferability ..................................................................................................... 50  
    3.6.3 Dependability ....................................................................................................... 51  
    3.6.4 Confirmability ..................................................................................................... 51
Chapter 4 IT Implementation at ExMoney .......................................................... 54
 4.1 Introduction ......................................................................................... 54
 4.2 Case Study 1: ExMoney ................................................................. 54
 4.3 IT environment at ExMoney ............................................................ 55
 4.4 Data collection for ExMoney case study ............................................. 59
 4.5 Round one: Pre-Implementation (ExMoney) ....................................... 62
    4.5.1 Developing mutual understanding ............................................. 62
    4.5.2 Appraising change and constructing meanings ......................... 67
    4.5.3 Interacting with others ............................................................ 70
    4.5.4 Feeling involved .................................................................... 73
    4.5.5 Seeking benefits ..................................................................... 76
    4.5.6 Attitudes and reactions ............................................................ 78
    4.5.7 Justifying reactions .................................................................. 81
 4.6 Round two: Post-Implementation (ExMoney) ....................................... 83
    4.6.1 Developing mutual understanding ............................................. 84
    4.6.2 Appraising change and constructing meanings ......................... 86
    4.6.3 Interacting with others ............................................................ 90
    4.6.4 Feeling involved .................................................................... 94
    4.6.5 Seeking benefits ..................................................................... 97
    4.6.6 Attitudes and reactions ............................................................ 100
    4.6.7 Justifying reactions .................................................................. 106

Chapter 5 IT Implementation at GovOrg .................................................... 111
 5.1 Introduction ......................................................................................... 111
 5.2 Case Study 2: GovOrg ................................................................. 111
 5.3 IT environment at GovOrg ............................................................ 112
 5.4 Data collection for GovOrg case study ............................................. 114
 5.5 Round one: Pre-Implementation (GovOrg) ....................................... 117
    5.5.1 Developing mutual understanding ............................................. 117
    5.5.2 Appraising change and constructing meanings ......................... 121
    5.5.3 Interacting with others ............................................................ 125
    5.5.4 Feeling involved .................................................................... 129
7.3.5 Sensemaking is an ongoing process ................................................................. 233
7.3.6 Sensemaking is focused on extracted cues ..................................................... 235
7.3.7 Sensemaking is driven by plausibility rather than accuracy ............................... 237
7.4 Conclusion .............................................................................................................. 239
  7.4.1 Concluding remarks on the answers to the research questions ....................... 240
  7.4.2 Contributions and implications ....................................................................... 242
  7.4.3 Strengths and limitations of this study and suggestions for future research ...... 247
  7.4.4 Concluding remarks ......................................................................................... 250
Bibliography ............................................................................................................... 251
Appendix A Interviews Guide .................................................................................... 268
Appendix B Diaries Guide .......................................................................................... 271
Appendix C An example of using initial coding ......................................................... 273
Appendix D An example of developing focused codes .............................................. 274
Appendix E List of focused codes ............................................................................ 275
Appendix F An example of a summary table of a category ........................................ 276
Appendix G List of constructed categories and themes for CRs ................................. 277
Appendix H List of constructed categories and themes for CAs ............................... 278
Appendix I More examples of participants’ perspectives (ExMoney) ......................... 279
Appendix J GovOrg Case Study Documents ............................................................. 294
Appendix K More examples of participants’ perspectives (GovOrg) ......................... 297
Appendix L Human ethics clearance ........................................................................ 319
List of Figures

Figure 2.1 A two-factor view on stakeholders’ reactions (van Offenbeek, Boonstra & Seo 2013) ..... 14
Figure 3.1 Overall research design of this study ........................................................................... 31
Figure 3.2 Organisation of categories for focusing on RQ1 for CRs ........................................... 46
Figure 3.3 Organisation of categories for focusing on RQ2 for CRs ........................................... 46
Figure 4.1 Organisational structure of ExMoney ........................................................................... 54
Figure 4.2 ExMoney’s system structure pre- and post-IT implementation ................................ 57
Figure 4.3 Locating CAs and CRs at ExMoney .............................................................................. 61
Figure 5.1 Organisational structure of GovOrg .......................................................................... 111
Figure 5.2 GovOrg Windows 7 Deployment Stages ...................................................................... 113
Figure 5.3 Locating the CAs and CRs at GovOrg ......................................................................... 116
Figure 6.1 Some factors that appeared to influence the feeling of being understood ................. 179
Figure 6.2 The consequences of discrepancies in change appraisals ........................................ 184
Figure 6.3 Some of the appeared impacts of ‘feeling involved’ .................................................. 193
Figure 7.1 Identified themes and their relationships .................................................................... 210
Figure 7.2 Factors that influenced change appraisal and meaning construction ........................ 213
Figure 7.3 Developing mutual understanding through interacting with others .......................... 215
Figure 7.4 A clustering of the factors that appeared to influence stakeholders' reactions .......... 217
Figure 7.5 Examples of stakeholders’ reasons for justifying reactions ....................................... 219
Figure 7.6 Meaning construction, reacting to change and justifying reactions .......................... 220
Figure 7.7 Reciprocal identity construction between CAs and CRs ............................................ 223
Figure 7.8 Various emerged identities of stakeholders in IT implementation ............................. 224
Figure 7.9 Constructing identity and accounts of change ............................................................. 226
Figure 7.10 Reciprocal relationship between constructed environment and reactions ............... 231
Figure 7.11 Factors that appeared to influence extracting and focusing on cues ........................ 236
Figure 7.12 Theoretical model ..................................................................................................... 239
List of Tables

Table 1.1 Dissertation structure........................................................................................................................................... 8
Table 2.1 Dichotomous views of stakeholders’ reactions to change......................................................................................... 12
Table 2.2 Anchor points on the behavioural continuum (Herscovitch & Meyer 2002, p. 478) ..................... 13
Table 2.3 A summary of suggested antecedents of stakeholders’ support for change .................................................. 16
Table 2.4 Commitment to change research issues and recommendations (Jaros 2010) ............................ 17
Table 2.5 Some definitions of resistance to change .............................................................................................................. 19
Table 2.6 Some of the most important reasons for resistance to change .................................................................................. 20
Table 2.7 Some of the most prominent resistance theories and models ................................................................................ 21
Table 2.8 Resistance types and behaviours (Meissonier & Houzé 2010, p. 541) .................................................. 23
Table 2.9 Selected definitions of sensemaking ......................................................................................................................... 25
Table 2.10 Summary of sensemaking properties ................................................................................................................... 26
Table 3.1 Sources of evidence for this research: strengths and weaknesses ................................................................. 37
Table 3.2 Summary of strategies for establishing trustworthiness (Lincoln & Guba 1985) ............................... 48
Table 4.1 IT implementation process at ExMoney .................................................................................................................. 58
Table 4.2 ExMoney participant details ................................................................................................................................. 60
Table 5.1 IT implementation process at GovOrg ...................................................................................................................... 113
Table 5.2 GovOrg participant details .................................................................................................................................. 115
Table 6.1 Factors that appeared to facilitate the development of mutual understanding ............................................ 180
Table 6.2 Factors that appeared to influence CR appraisals of IT implementation .................................................. 182
Table 6.3 Examples of stakeholders’ retrospective change appraisal .................................................................................. 183
Table 6.4 Summary of CA reasons for interacting with CRs .............................................................................................. 186
Table 6.5 CA approaches and methods for developing interaction with CRs ............................................................... 187
Table 6.6 Summary of perceived impacts and benefits of ‘involving CRs’ ........................................................................... 189
Table 6.7 Some approaches in facilitating CR involvement ................................................................................................. 190
Table 6.8 Summary of CR reasons for not feeling involved in change process ............................................................ 192
Table 6.9 Some identified reasons that appeared to influence CA reactions ................................................................. 197
Table 6.10 Some of the reasons that influenced CR reactions to change .................................................................................. 199
Table 6.11 CA justifications for their perspectives and reactions ........................................................................................ 202
Table 6.12 CR justifications for their reactions to change ................................................................................................. 204
Table 6.13 Examples of CA and CR justifications for their reactions .................................................................................. 205
Table 6.14 CA reactions to change .................................................................................................................................... 207
Table 6.15 CR reactions to change .................................................................................................................................... 207
Chapter 1
Introduction

Information Technology (IT) is highlighted as an important means to increase performance (Sykes 2015) and to improve quality of products and services (Venkatesh, Bala & Sambamurthy 2016) in organisations. In today’s competitive business environment, organisations find it necessary to adopt and implement IT-based solutions and innovations to improve business processes and functions, and thus achieve greater operational productivity (Bala et al. 2017; Lyytinen & Newman 2015; Tian & Xu 2015) and strategic benefits (Rai & Tang 2010). According to Gartner (2017), worldwide IT spending is forecast to exceed US$3.9 trillion by 2021. Organisations continue to make substantial IT investments to enhance the efficiency and effectiveness of their internal and external processes to remain adaptive and competitive (Tian & Xu 2015; Robey, Ross & Boudreau 2002).

Despite organisations’ efforts to increase the efficiency and effectiveness of IT implementation, multiple studies report a general failure rate greater than 60% (e.g. KPMG 2017; Panorama 2014). In a report on the state of the software development industry, the Standish Group (2015) suggests that, of the 50,000 studied information system (IS) projects worldwide, only 29% succeeded, while approximately 19% failed (i.e. cancelled prior to completion or delivered but never used) and about 52% were challenged (i.e. delivered late, over budget, and/or with reduced features and functions). Furthermore, although IT implementation may achieve budget, schedule and scope targets, many appear to be ineffective (Kim & Kankanhalli 2009). They may be underutilised, avoided or misused, and thus prevent organisations from reaping intended outcomes and benefits of such change (Maas, Fenema & Soeters 2014; Jasperson, Carter & Zmud 2005). Achieving the intended value of an IT implementation depends not only on mandatory and routine use of IT, but also on extended use that includes voluntary, exploratory and exploitative use of implemented features and functions to support performance and increase productivity (Tsai, Compeau & Meister 2017; Kim, Chan & Gupta 2016; Hsieh & Wang 2007; Sousa & Goodhue 2003). This indicates that a significant proportion of IT implementations do not meet performance objectives, remain underutilised or fail to achieve expected business values, thus leading to significant financial losses for organisations.

Research has examined factors that can facilitate or inhibit IT implementation process and influence its effectiveness. Technical reasons that can affect the success of IT implementation include project management methodology and process (Lawrence 2015; Weston 2001), skilled resources
Rothenberger, Srite & Jones-Graham 2010; Sammon & Adam 2010), and the design and development approach adopted (Santamaría-Sánchez, Núñez-Nickel & Gago-Rodríguez 2010). However, many studies discuss: non-technical (including social and behavioural) factors such as leadership and top management commitment and support (Veiga et al. 2014; Dezdar & Ainin 2011; Venkatesh & Bala 2008; Jeyaraj, Rottman & Lacity 2006); user involvement and satisfaction (Laumer, Maier & Weitzel 2017; Lytyinen & Newman 2015; Belias & Koustelios 2014); communication (Mishra, Boynton & Mishra 2014; Finney 2011); and culture (Sasidharan et al. 2012). Further, IT implementation is often accompanied by extensive changes to organisational processes and activities involving different stakeholders (Bala & Bhagwatwar 2017; Bhattacherjee et al. 2017; Mangan & Kelly 2009). Therefore, while IT implementation could be considered satisfactory from a technical perspective, its effectiveness may depend on stakeholders’ active participation in the process, their continued support of the new changes, and their committed use of delivered innovations and systems (Kim, Chan & Gupta 2016; Klein, Conn & Sorra 2001).

Stakeholders may manifest different reactions towards IT implementation from positive and functional to negative and non-functional (Bhattacherjee et al. 2017; Lapointe & Beaudry 2014; Bryant 2006) And further, they may have complex interpretations of the consequences of IT implementation. They may perceive some changes as a threat that can have detrimental impacts on their status or work (Sarker, Chatterjee & Xiao 2013), while they may consider some other changes as an opportunity that brings positive and constructive effects (Srivastava, Chandra & Shirish 2015; Beaudry & Pinsonneault 2005). Further, stakeholders’ interpretations and perceptions of IT implementation and its results may change over time. Therefore, stakeholders may demonstrate different emotional, cognitive and behavioural responses depending on their understanding and interpretation of change and context.

Stakeholders may have diverse perceptions and interests and different expectations of change, although they may work together and interact (Drummond et al. 2017; Young, Mathiassen & Davidson 2016; Lin & Silva 2005). For example, a group may perceive some aspects of IT implementation as more important or relevant to their status, work activities or identity. Therefore, they may pay more attention to those aspects and become more sensitive to related changes and events. Further, the identity of both individuals and groups entail how they consider and appraise change. Stakeholders’ identities refer to “the meanings that individuals attach reflexively to themselves” (Brown 2015, p. 23) and involve their perceptions of their roles, responsibilities and status in their organisation and relation to IT implementation. Weick (1995) states that “depending on who I am, my definition of what is ‘out there’ will also change” (p. 20). IT implementation in organisations usually involves multiple
stakeholder groups with various roles, responsibilities, conditions, and change related knowledge and experiences. Thus, differences in stakeholders’ identities, characteristics and conditions can give rise to different perspectives and perceptions of change and may lead to divergent reactions towards change. Recent studies emphasised a lack of understanding and management of stakeholders’ perceptions of change during IT implementation as a key reason for implementation failures, and further called for investigations into the process of formation and development of stakeholders’ perceptions and attitudes (Drummond et al. 2017; Laumer et al. 2016; Bala & Venkatesh 2013).

Stakeholders’ reactions to change have been argued to have substantial impacts on the progress and effectiveness of IT implementation, and gaining the targeted outcomes and benefits of such change in organisations (Bala et al. 2017; Bhattacherjee et al. 2017). User resistance to change is generally argued to be a non-functional reaction and one of the most crucial causes undermining IT adoption and implementation success (Laumer et al. 2016; Kim & Kankanhalli 2009; Lapointe & Rivard 2005). Stakeholders may express oppositional attitudes, hinder the implementation process, and try to maintain the status quo. They may challenge implementation plans and delay the project and may be reluctant to use the new system. Further, stakeholders may react to the change aggressively and exhibit disruptive and destructive behaviours. Negative attitudes and dysfunctional behaviours can decrease efficiency by increasing costs over time, and diminish productivity (Ford, Ford & D’Amelio 2008; Del Val & Fuentes 2003). These factors have been recognised as salient impediments to successful and effective change implementation that need to be understood and addressed (Croasdell, Kuechler & Wawdo 2013; Lapointe & Rivard 2005; Piderit 2000). In contrast, stakeholders’ desire to support IT implementation, their engagement and participation, and their commitment to change and use of new systems are emphasised as positive and functional reactions that can facilitate effective implementation and result in benefits (Bagayogo, Lapointe & Bassellier 2014; Herscovitch & Meyer 2002).

Scholars from both organisational change management and IT implementation research have emphasised the significance of gaining more comprehensive understanding of stakeholders’ reactions toward change (Geiger et al. 2017; Vakola 2013; Oreg, Vakola & Armenakis 2011; Lapointe & Rivard 2005). For example, several studies have stated the need for improving interpretations of resistance to change in order to employ more informed and effective strategies and methods for overcoming resistance or mitigating its negative influence (Lee & Joshi 2017; Laumer 2011; Oreg 2006; Markus 1983). They argue that if stakeholders’ resistance to change is not considered and addressed appropriately, negative feelings and interpretations develop and dysfunctional and destructive behaviours occur, and ultimately this can hinder and undermine IT implementation and result in project
failure (Mahmud, Ramayah & Kurnia 2017; Thomas & Hardy 2011; Jiang, Muhanna & Klein 2000). Similarly, prior research has considered understanding stakeholders’ support for and commitment to change in order to improve the success of IT implementation (Lysova et al. 2015; Jaros 2010; Klaus, Wingreen & Blanton 2010; Armenakis & Harris 2009; Herscovitch & Meyer 2002). These studies emphasised the need for focusing on the processes that may inhibit or facilitate stakeholders’ engagement and the development of stakeholders’ commitment to change. Piderit (2000) argues that “successful organizational adaptation is increasingly reliant on generating employee support and enthusiasm for proposed changes, rather than merely overcoming resistance” (p. 783). Unfortunately, the research on reactions to change has predominantly been concerned with investigating and explaining negative attitudes and behaviours perceived as impediments to change implementation (Ford, Ford & D’Amelio 2008; Piderit 2000). Less is known about more supportive responses amongst stakeholders and differences in patterns of reaction over time (Stensaker & Meyer 2011).

Despite the importance of understanding stakeholders’ reactions during IT implementation, relatively less attention has been devoted to investigating different reactions to change (including support and resistance) in the same study. Some recent studies have stated that functional (e.g. change acceptance, compliance and support) and non-functional (e.g. non-compliance and resistance) reactions often co-occur and co-exist (Stein et al. 2015; Lapointe & Beaudry 2014). They have discussed a conceptual connection between resistance and acceptance and argued that stakeholders may support IT implementation while at the same time avoid using the new system and functions or vice versa (Geiger et al. 2017; van Offenbeek, Boonstra & Seo 2013). Thus, stakeholders’ different feelings, attitudes and behaviours should be considered and studied together. This study argues that knowing why and how different reactions toward IT implementation occur and develop over time, and understanding resistance or support attitudes and behaviours, can give change agents the opportunity to direct the implementation process and change in a way that is more successful and productive.

Previous research has adopted various theoretical perspectives to examine different reactions of stakeholders. For instance, Lapointe and Rivard (2005) adopt a multilevel perspective and conceptualise resistance as a result of the interaction among an IT implementation conditions, context and stakeholders at individual, group and organisational levels. Kim and Kankanahalli (2009) use the status quo bias perspective to argue that perceived threats and costs associated with change are the main reasons for resistance. They further explain that change recipients prefer to maintain their current status and resist change if they perceive threats to their status and situation. Ford and Ford (2009) adopt a social constructionist perspective and argue that resistance to change is constructed in and maintained
by the conversations between change agents and change recipients. Alternatively, Bhattacherjee et al. (2017) use a coping theoretic lens to investigate and understand users’ emotional and behavioural reactions to mandatory IT implementation. They suggest a taxonomy of reactions towards change including two acceptance responses (engaged and compliant) and two resistance responses (reluctant and deviant). In these studies, the relationships between perspectives and actions of change agents (hereafter CAs) and reactions of change recipients (hereafter CRs) toward change have obtained little explicit consideration (Oreg & Berson 2011; Ford, Ford & D’Amelio 2008), particularly in the context of IT implementation. This research challenges the strong tendency of many prior studies to focus mainly on CR attitudes and reactions while giving less attention to interactions between CAs and CRs. It seeks insights into the role and influence of stakeholders’ relationships and social interactions on their reactions to IT implementation.

Building on previous research on resistance and support responses to change (e.g. McKay et al. 2012; Lewis, Mathiassen & Rai 2011; Lapointe & Rivard 2005; Hirschheim & Newman 1988), it can be argued that reactions are dynamic, involve social interactions amongst stakeholders, and include various emotions, attitudes and behaviours that may emerge at different stages of the change process and distinct levels of the organisation and evolve during IT implementation. Further, understanding stakeholders’ reactions to change requires a process view and dynamic approach, which considers IT implementation context and the conversations and social interactions amongst stakeholders. Moreover, it is essential to consider various interpretations and discourses about change, relationships, and social constructs and processes. Therefore, to derive insights into stakeholders’ reactions to IT implementation, this research adopts sensemaking perspective, a theory which sheds light on the ways in which stakeholders make sense of their experiences of unexpected interruptions and noticed changes through ongoing social interactions (Weick, Sutcliffe & Obstfeld 2005; Weick 1995). This study puts forward the view that sensemaking can provide an appropriate theoretical framework for focusing on stakeholders’ interactions and their social construction of meaning, and for investigating and understanding their dynamic and complex reactions to change (Stensaker & Falkenberg 2007; Weick 1995; Gioia & Chittipeddi 1991).

Sensemaking thus involves the social construction of meaning through interaction, conversation and action (Balogun 2006; Maitlis 2005). Maitlis and Christianson (2014) define sensemaking as “a process prompted by violated expectations, that involves attending to and bracketing cues in the environment, creating intersubjective meaning through cycles of interpretation and action, and thereby enacting a more ordered environment from which further cues can be drawn” (p. 11). During IT implementation,
stakeholders engage in sensemaking processes to overcome equivocality and uncertainty (Weick, Sutcliffe & Obstfeld 2005) and therefore gain a better understanding of change and its potential consequences (Ford & Ford 2009; Stensaker, Falkenberg & Grønhaug 2008). They communicate their perceptions and expectations with others, create shared collective interpretations, and construct plausible meanings of change that serve as a basis for explaining and shaping their feelings, behaviours and actions (Sandberg & Tsoukas 2015; Weick, Sutcliffe & Obstfeld 2005). Thus, understanding sensemaking processes gives valuable insights into various social aspects of IT implementation, particularly social processes through which stakeholders interpret change, construct, negotiate and maintain meanings, and ‘stay in action’ (Jensen & Kjærgaard 2010; Weick, Sutcliffe & Obstfeld 2005). This study follows Walsham’s (1995b) suggestion on how interpretive studies could use theoretical concepts without being constrained by them. The sensemaking theory is used in this research to operationalise the research questions and ‘scaffold’ the initial empirical work. However, this scaffold is removed in the subsequent empirical work and data analysis to avoid being constrained by the sensemaking framework, enabling the researcher to remain open to field data and allow for an interpretive understanding of the stakeholders’ perspectives.

Against this backdrop, this research aims to investigate and understand how sensemaking processes influence stakeholders’ feelings and shape their attitudes and behaviours towards IT implementation over time. In this regard, it focuses on meaning construction processes and social interactions of stakeholders pre- and post-IT implementation. This study seeks to gain insights into emerging sensemaking processes both within and between CAs¹ and CRs² (the two key stakeholder groups involved in IT implementation) in order to gain a deeper understanding of developed patterns of responses and reactions to change including resistance and support. Furthermore, improving and extending the current understanding of stakeholders’ reactions to change during IT implementation helps CAs to facilitate change process, prevent or mitigate dysfunctional impacts of resistance, promote CR engagement, support and commitment to change, and ultimately achieve greater success with IT implementation. The research objectives and research questions of this study are discussed in section 2.5.

This research adopts the interpretive paradigm and follows social constructionism as its epistemology to investigate and understand stakeholders’ reactions. This study assumes reality as subjective and a social construction (Walsham 2006). Further, stakeholders construct, negotiate and reconstruct

¹ CAs: Change Agents who initiate, design, sponsor and implement change.
² CRs: Change Recipients who are expected to adopt and adapt to the change.
subjective meanings and shared understandings collectively and through ongoing social interaction. Therefore, this perspective enables the research to consider the perspectives of both CAs and CRs in order to investigate and interpret their social interactions and their reactions to IT implementation (Klein & Myers 1999). It allows important insights into the stakeholders’ constructed meanings from their perspectives and in their context (Moon 2008). In addition, this study uses sensemaking as a “sensitizing device” (Klein & Myers 1999) to view, understand and interpret the interactions and feelings of CAs and CRs, and their attitudes and behaviours toward IT implementation from the sensemaking perspective. The sensemaking perspective allows for an interpretive exploration and explanation of individual interpretations, social interactions amongst and between CAs and CRs, and their behaviours and collective actions (Maitlis 2005; Weick, Sutcliffe & Obstfeld 2005).

The research design of this study is the interpretive multi-case study that is analysed through qualitative methods. This research investigated two case studies and used different sources of evidence (including semi-structured interviews and diaries) for data collection, which allowed for comparison and contrast. The researcher studied the process of IT implementation and investigated sensemaking activities between CAs and CRs at two points in time (pre- and post-IT implementation). This strategy allows the researcher to study social phenomena and investigate complex interpretive processes over time in order to capture their dynamics and explore changing conditions. This research used Grounded Theory data analysis method and adopted the coding and categorisation techniques (Charmaz 2014) to analyse collected data. The data analysis strategy in this research involved two phases. In the first phase, doing a within-case analysis process, an in-depth analysis of the collected data was conducted to explore themes and patterns of sensemaking, social interactions and reactions. In the second phase, a cross-case thematic analysis was conducted to explore, compare and interpret meanings and insights. (Table 1.1 outlines the structure of the dissertation.)
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Content</th>
</tr>
</thead>
</table>
| **Chapter 1: Introduction** | • Research motivation  
• Problem statement and research aim  
• Dissertation structure |
| **Chapter 2: Literature Review** | • A critical review and analysis of the relevant literature related to the research topic, including:  
  o IT implementation processes in organisations  
  o Reactions to IT implementation (including support for and resistance to change)  
  o Sensemaking processes  
  o Sensemaking perspective for understanding stakeholders’ reactions  
• Research objectives and research questions |
| **Chapter 3: Research Methodology and Design** | • Research paradigms and their philosophical assumptions  
  o Justification for the choice of interpretive research paradigm  
• Choice of research method  
• Case study method and key elements (including case study approach, data collection and data analysis and strategy for writing up the results)  
• Validity and trustworthiness of research results |
| **Chapter 4: IT Implementation at ExMoney** | • Background to the ExMoney case  
• Information about the research participants  
• Within-case analysis of IT implementation at ExMoney  
  o Presentation and analysis of the collected data (two rounds at the pre- and post-IT implementation stages) based on the seven identified themes  
  o CAs’ perspectives  
  o CRs’ perspectives |
| **Chapter 5: IT Implementation at GovOrg** | • Background to the GovOrg case  
• Information about the research participants  
• Within-case analysis of IT implementation at GovOrg  
  o Presentation and analysis of the collected data (two rounds at the pre- and post-IT implementation stages) based on the seven identified themes  
  o CAs’ perspectives  
  o CRs’ perspectives |
| **Chapter 6: Cross-Case Analysis** | • Cross-Case comparison |
| **Chapter 7: Discussion, Conclusions and Recommendations** | • Discussion of the research findings  
• Discussing findings from the sensemaking perspective  
• Conclusion  
  o Concluding remarks on the answers to the research questions  
  o Contributions to theory and implications for practice  
  o Limitations and suggestions for future research |
Chapter 2

Literature Review

2.1 Introduction

This chapter presents an overview of key concepts and theories in the literature and relevant to this research. The literature review helps me to widen my perspective in understanding the research context and assists me in the acquisition and development of my “theoretical sensitivity” (Charmaz 2014). The chapter is divided into five sections. Section 2.1 introduces the chapter and section 2.2 discusses IT implementation in organisations. Section 2.3 reviews stakeholders’ reactions to IT implementation and the changes instigated. Section 2.4 focuses on sensemaking processes in organisations. It considers different definitions and characteristics of sensemaking. Research objectives and research questions are presented in section 2.5. Finally, section 2.6 concludes with a brief summary.

2.2 IT implementation

IT implementation is a process that involves multi-level planned endeavours to improve one or more (multiple) organisational (business) systems, processes or functions (Nan & Tanriverdi 2017; Lyytinen & Newman 2008; Klein & Sorra 1996). It is a “transition period” between the decision to implement change and regular and committed use of IT (Klein & Sorra 1996). IT implementation thus involves proactively adopting and embedding IT in the organisation to improve its business processes (Tian & Xu 2015; Li et al. 2009).

IT implementation process incorporates multiple stages and various activities (Brown, Chervany & Reinicke 2007; Cooper & Zmud 1990). Researchers have introduced and developed several process models to elucidate IT implementation, assimilation, routinization and institutionalisation in organisations. For instance, Cooper and Zmud (1990) develop a process model of IT implementation involving six stages: initiation, adoption, adaptation, acceptance, routinization, and infusion; Tolbert and Zucker (1999) offer a three-stage model of innovation institutionalisation including habitualisation, objectification, and sedimentation; Markus and Tanis (2000) consider four phases of IT implementation that comprise chartering, project (configure and rollout), shakedown, and onward and upward phases; and Zhu, Kraemer and Xu (2006) specify three stages of IT assimilation in organisations as initiation, adoption and routinization. Several studies take a chronological perspective and suggest different stages of IT implementation such as: pre-implementation, during-implementation and post-implementation.
(Hassandoust, Techatassanasoontorn & Tan 2016; Schwarz et al. 2014; Cresswell & Sheikh 2013; Ray et al. 2011; Keshavjee et al. 2006; Motwani, Subramanian & Gopalakrishna 2005). Drawing upon these studies, this research takes the chronological view and argues that considering these stages provides a more comprehensive foundation for studying IT implementation process, and its changes and outcomes over time. According to Laumer et al. (2016), these three stages of Information System (IS) implementation can be defined as (p. 318):

- Pre-implementation: before the new IS is available for use in the organisation
- Implementation: when the new IS has been implemented and employees are starting to use it
- Post-implementation: when the new IS is becoming or has become part of the organization.

IT implementation process is often accompanied by extensive organisational change (Bhattacherjee et al. 2017; Beaudry & Pinsonneault 2005; Hirschheim & Newman 1988). This process can cause both intended and unintended outcomes (Balogun & Johnson 2005), and can result in both "congruent consequences" that are consistent with desired change, and "counteracting consequences" that are undesirable and not supporting the objectives of implementation (Balogun 2006). IT implementation typically includes altering or introducing new positions, roles, technologies and functions, and adjusting work practices and procedures (Laumer et al. 2016; Mackrell, Kerr & Von Hellens 2009; Lewis 2007; Balogun 2006; Umble & Umble 2002). Lyytinen and Newman (2008) explain IT implementation as a socio-technical change which not only alters tools, procedures, skills, roles and organisational structures, but also may transform values, beliefs, social relationships and interactions. IT implementation brings about new conversations, patterns of discourse and behaviours (Pieterse, Caniëls & Homan 2012; Ford, Ford & D'Amelio 2008). It transforms social systems, relationships and processes of interaction in the organisation (Oreg 2006), and these organisational changes may influence perception of CRs regarding their identity, which may be replaced, transformed or updated during change (Stein, Galliers & Markus 2013; Maitlis & Sonenshein 2010; Corley & Gioia 2004).

Successful implementation of an IT innovation requires supportive attitudes and behaviours toward, and acceptance and committed use of IT (Geiger et al. 2017; Kim, Chan & Gupta 2016; Klein, Conn & Sorra 2001). Klein and Sorra (1996) state that the higher the level of committed use of IT innovation in an organisation, the more effective and successful IT implementation will be to improve the organisation's performance. They further argue that the implementation process requires changing behaviours of targeted organisational members (those who are expected to use an implemented IT innovation or to support its use) to increase committed use of such innovation. In addition, apart from mandatory and continued use, some studies argued the need for extended use or the stakeholders’
voluntary, exploratory and exploitative use of implemented IT innovation and systems in order to enhance the effectiveness of IT implementation and achieve the intended value of change (Tsai, Compeau & Meister 2017; Hsieh & Wang 2007; Sousa & Goodhue 2003). In other words, stakeholders’ reactions to change are significant to the success of IT implementation (Kim, Hornung & Rousseau 2011; Bartunek et al. 2006). Oreg, vakola and Armenakis (2011) state “at the heart of events and a main determinant of the extent to which any change can succeed, is how change recipients react to organizational change” (p. 462).

2.3 Reactions to IT implementation

Stakeholders’ reactions to IT implementation are multidimensional and involve how stakeholders feel about change (affective dimension), how they think about change (cognitive dimension), and how they behave in response to IT implementation and change (behavioural dimension) (Walsh, Gettler-Summa & Kalika 2016; Oreg, vakola & Armenakis 2011; Oreg 2006; Piderit 2000). IT implementation may cause changes in routines, processes and procedures, activities, functions and systems, roles and responsibilities, and relationships. It may have multiple influences on stakeholders, can bring advantages, ease of usability and satisfaction or may cause disadvantages, stress, inconvenience and/or suffering. Stakeholders may have multiple perceptions and concerns about change (Drummond et al. 2017; Lewis 2007) or experience change in various ways (Young, Mathiassen & Davidson 2016; Bryant 2006). For instance, they may perceive some changes as a threat (Kerr & Houghton 2014; Sarker, Chatterjee & Xiao 2013) while considering others as an opportunity to their status or work (Srivastava, Chandra & Shirish 2015; Beaudry & Pinsonneault 2005). Therefore, they may react differently and demonstrate diverse emotional, cognitive and behavioural responses to IT implementation (Bhattacherjee et al. 2017; Lapointe & Beaudry 2014).

Previous studies have identified and investigated various types of stakeholders’ reactions to change. Many of these studies have collapsed these proposed types and categories into different dichotomies. In their review of reactions by CRs to change, Oreg, vakola and Armenakis (2011) report that many studies considered “negative reactions” including stress, anxiety, fatigue, and negative emotions, while others focused on “positive reactions” including pleasantness, satisfaction and commitment. Table 2.1 presents dichotomous views of stakeholders’ reactions to change. Many authors are inclined to focus on one of these views and seldom consider whether they are linked (Oreg, vakola & Armenakis 2011). Another group of papers more explicitly argues that stakeholders’ reactions to change can be viewed as continua of attitudes and behaviours (Stein et al. 2015; van Offenbeek, Boonstra & Seo 2013; Meyer et al. 2007; Herscovitch & Meyer 2002; Coetsee 1999). They emphasise that reaction to change is a
complex and multidimensional concept involving dimensions and categories that are not necessarily discrete (Piderit 2000). Further, stakeholders may manifest different feelings, attitudes and behaviours towards IT implementation from functional (e.g. change acceptance, compliance and support) to non-functional (e.g. non-compliance and resistance) considerations (Geiger et al. 2017; Stein et al. 2015; Lapointe & Beaudry 2014).

**Table 2.1 Dichotomous views of stakeholders’ reactions to change**

<table>
<thead>
<tr>
<th>Views</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative or Positive</td>
<td>(Cole, Bruch &amp; Vogel 2012; Holt et al. 2007; Smollan 2006; Lines 2005)</td>
</tr>
<tr>
<td>Pro or Anti</td>
<td>(Giangreco &amp; Peccei 2005)</td>
</tr>
<tr>
<td>Active or Passive</td>
<td>(Chreim 2006; Stensaker et al. 2003; Coetsee 1999)</td>
</tr>
<tr>
<td>Constructive or Destructive</td>
<td>(Ford, Ford &amp; D’Amelio 2008; Bovey &amp; Hede 2001b)</td>
</tr>
<tr>
<td>Rational or Irrational</td>
<td>(Ford, Ford &amp; D’Amelio 2008)</td>
</tr>
<tr>
<td>Conscious (Deliberate) or Unconscious (Not Deliberate)</td>
<td>(Brunton &amp; Matheny 2009)</td>
</tr>
<tr>
<td>Adaptive or Maladaptive</td>
<td>(Bovey &amp; Hede 2001a)</td>
</tr>
<tr>
<td>Acceptance or Non-Acceptance</td>
<td>(Bagayogo, Beaudry &amp; Lapointe 2013; van Offenbeek, Boonstra &amp; Seo 2013)</td>
</tr>
<tr>
<td>Acceptance or Resistance</td>
<td>(Lapointe &amp; Beaudry 2014; Joshi 2005)</td>
</tr>
<tr>
<td>Compliant or Non-Compliant with IT usage policies</td>
<td>(Lapointe &amp; Beaudry 2014)</td>
</tr>
<tr>
<td>Conformity or Lack of Conformity with IT terms of use</td>
<td>(Stein et al. 2015; Bagayogo, Beaudry &amp; Lapointe 2013)</td>
</tr>
<tr>
<td>Support or Resistance</td>
<td>(Stein et al. 2015; Kim, Hornung &amp; Rousseau 2011; Jaros 2010; Bareil, Savoie &amp; Meunier 2007; Fedor, Caldwell &amp; Herold 2006)</td>
</tr>
</tbody>
</table>

Coetsee (1999) proposes a polarised spectrum of stakeholders’ behaviours toward change ranging from commitment through involvement (acceptance of change), apathy, passive resistance, to active resistance. The highest point in Coetsee’s (1999) continuum is acceptance, though he is more focused on resistance to change. Similarly, Herscovitch and Meyer (2002) develop and study a continuum of change-related behaviours of stakeholders ranging from active resistance through compliance to championing. (Table 2.2 presents the anchor points on the behavioural continuum.)
Table 2.2 Anchor points on the behavioural continuum (Herscovitch & Meyer 2002, p. 478)

<table>
<thead>
<tr>
<th>Anchor Point</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active resistance</td>
<td>“Demonstrating opposition in response to a change by engaging in overt behaviours that are intended to ensure that the change fails”</td>
</tr>
<tr>
<td>Passive resistance</td>
<td>“Demonstrating opposition in response to a change by engaging in covert or subtle behaviours aimed at preventing the success of the change”</td>
</tr>
<tr>
<td>Compliance</td>
<td>“ Demonstrating minimum support for a change by going along with the change, but doing so reluctantly”</td>
</tr>
<tr>
<td>Cooperation</td>
<td>“Demonstrating support for a change by exerting effort when it comes to the change, going along with the spirit of the change, and being prepared to make modest sacrifices”</td>
</tr>
<tr>
<td>Championing</td>
<td>“Demonstrating extreme enthusiasm for a change by going above and beyond what is formally required to ensure the success of the change and promoting the change to others”</td>
</tr>
</tbody>
</table>

A more recent study by van Offenbeek, Boonstra and Seo (2013) expands the continuum of resistant behaviours presented by Coetsee (1999) and emphasises support in contrast to resistance. van Offenbeek, Boonstra and Seo (2013) propose a two-factor view on user reactions and present a conceptual connection between acceptance of (ranging from high use to non-use) and resistance to (ranging from enthusiastic support to aggressive resistance) change (Figure 2.1). They further state that acceptance and resistance can co-occur and co-exists during IT implementation, and show that user’s behavioural reaction towards change can be categorised into four groups as supporting users, resisting users, resisting non-users and supporting non-users. Stein et al. (2015) consider a continuum for IT use instead of acceptance dimension. They combine the support/resistance dimension with that of conformity/non-conformity with IT terms of use. And they argue that IT as a stimulus may induce uniform or mixed emotions and emotions can shape different forms of IT use patterns of behaviours including challenge, achievement, deterrence, and loss (Stein et al. 2015). Consistent with these studies, this research considers stakeholders’ reactions to IT implementation as a continuum of feelings, attitudes and behaviours ranging from resistance to support.
Figure 2.1 A two-factor view on stakeholders’ reactions (van Offenbeek, Boonstra & Seo 2013)

Scholars have recognised the voluntary or mandatory nature of an IT implementation as an important influence on stakeholders’ reactions (e.g. Hwang, Kettinger & Yi 2015; Malhotra, Galletta & Kirsch 2008; Venkatesh & Davis 2000). Bhattacherjee et al. (2017) use a coping theoretic lens to investigate and understand users’ emotional and behavioural reactions to mandatory IT implementation. They conceptualise diverse types of user response and suggest a taxonomy of reactions towards change including two acceptance responses (engaged and compliant) and two resistance responses (reluctant and deviant). Tsai, Compeau and Meister (2017) propose three types of perceived, intended and realizable voluntariness. They argue that different types and levels of voluntariness can invoke different reactions to change. Much of the previous research has focused on IS acceptance and use in voluntary settings (e.g. Malhotra & Galletta 2005; Lou, Luo & Strong 2000). However, in practice, IS usage is often mandatory (Chae & Poole 2005; Brown et al. 2002), which means that users usually have no choice in their use of the IS. Mandatory IS use is “where users perceive use to be organizationally compulsory” (Brown et al. 2002, p. 284). In this research, the studied IT implementations were mandatory in nature, in which the implementation and adoption decisions were made by senior management, users were required to “use the system to perform their job functions, [and] there [were] no alternatives to actual use” (Wang & Butler 2006, p. 449). Further, mandatory IT implementations are accompanied by different mandates (including rules, regulations, constraints and work requirements), which are often subject to social interpretation and negotiation of the meanings of those mandates (Boss et al. 2009; Chae & Poole 2005). Therefore, the mandatory context of the studied IT
implementations in this research could help garner insights into the social interactions and development of shared interpretations amongst stakeholders.

2.3.1 Support for IT implementation

User commitment to and support for change has been the subject of considerable research. Kim, Hornung and Rousseau (2011, p. 1665) define supportive behaviours as actions users take “to actively participate in, facilitate, and contribute to a planned change initiated by the organization”. Herscovitch and Meyer (2002) consider three levels of behaviour supportive of change: compliance, cooperation and championing. They study these supportive behaviours as consequences of commitment to change. Herscovitch and Meyer (2002) further define commitment to change as “a force (mind-set) that binds an individual to a course of action deemed necessary for the successful implementation of a change initiative” (p. 475). They argue that commitment to change is a multidimensional construct and involves three dimensions, reflecting affective, continuance, and normative attachments to change:

[Commitment to change mindset] can reflect (a) a desire to provide support for the change based on a belief in its inherent benefits (affective commitment to change), (b) a recognition that there are costs associated with failure to provide support for the change (continuance commitment to change), and (c) a sense of obligation to provide support for the change (normative commitment to change). That is, employees can feel bound to support a change because they want to, have to, and/or ought to. (Herscovitch & Meyer 2002, p. 475)

Increasing commitment to change is emphasised as one of the most important factors in achieving and retaining stakeholders’ support for IT implementation and change (Kim, Chan & Gupta 2016; Herscovitch & Meyer 2002; Coetsee 1999; Klein & Sorra 1996). Meyer et al. (2007) explicate that stakeholders who believe in change benefits and have a desire to support change (affective commitment to change), or feel an obligation to provide support (normative commitment), are more willing to go above and beyond change compliance. They are inclined to do more than the minimum expected actions to ensure achieving change benefits and promoting and supporting change (Herscovitch & Meyer 2002). Armenakis and Harris (2009) explain five important determinants that motivate stakeholders to commit to and support change, including:

- to understand that there is a discrepancy between the current state and the desired state, and the change is required (discrepancy)
- to perceive that the change is appropriate to address the discrepancy (appropriateness)
- to believe that the change can be implemented successfully in the organisation (efficacy)
• to believe that CAs support the change and are committed to its success (principal support)
• to perceive that the change is beneficial to the CRs (valence).

Several studies have explored potential antecedents of commitment to and support for change. For instance, some scholars argue that user involvement in the change process increases their support for it (e.g. Barratt-Pugh, Bahn & Gakere 2013; Franckeiss 2012; Whelan-Berry & Somerville 2010). Researchers also highlight the role of long-term relationships with and trust in managers (e.g. Shah & Ghulam Sarwar Shah 2010; Neves & Caetano 2009; Taylor & Hill 2007), high-quality change communication (e.g. Oreg, Vakola & Armenakis 2011; Allen et al. 2007), and participation (e.g. McKay, Kuntz & Näsvall 2013) in engendering users’ supportive responses towards change. Table 2.3 summarises some of the suggested antecedents of stakeholders’ commitment to and support for change.

**Table 2.3 A summary of suggested antecedents of stakeholders’ support for change**

<table>
<thead>
<tr>
<th>Antecedents of Support</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involvement in change</td>
<td>(Barratt-Pugh, Bahn &amp; Gakere 2013; Franckeiss 2012; Goksoy, Ozsoy &amp; Vayvay 2012; Marks &amp; Mirvis 2011; Shibayama, Tanikawa &amp; Kimura 2011; Whelan-Berry &amp; Somerville 2010; Budhwar, Varma &amp; Katou 2009)</td>
</tr>
<tr>
<td>High-quality change communication</td>
<td>(Allen et al. 2007; Wanberg &amp; Banas 2000; Miller, Johnson &amp; Grau 1994)</td>
</tr>
<tr>
<td>Openness and readiness through communicating the need for change</td>
<td>(Herscovitch &amp; Meyer 2002)</td>
</tr>
<tr>
<td>Favourableness of change on an individual level</td>
<td>(Fedor, Caldwell &amp; Herold 2006)</td>
</tr>
<tr>
<td>Participation in change</td>
<td>(Rogiest, Segers &amp; van Witteloostuijn 2015; McKay, Kuntz &amp; Näsvall 2013)</td>
</tr>
<tr>
<td>Goal congruence, perception of personal and organisational change benefits</td>
<td>(Oreg, Vakola &amp; Armenakis 2011; Armenakis &amp; Harris 2009)</td>
</tr>
<tr>
<td>Development of job satisfaction</td>
<td>(Mangundjaya, Utoyo &amp; Wulandari 2015)</td>
</tr>
<tr>
<td>Positive emotions about the consequences of change</td>
<td>(Vakola, Armenakis &amp; Oreg 2013; van den Heuvel et al. 2013)</td>
</tr>
<tr>
<td>Consideration of individuals’ needs and concerns</td>
<td>(Battistelli et al. 2014; Kool &amp; van Dierendonck 2012)</td>
</tr>
</tbody>
</table>
Perception of managers’ competence  
(Nohe et al. 2013; Herold et al. 2008)

Implications for working conditions and jobs  
(Conway & Monks 2008)

Fit of change with the organisation’s vision  
(Turner Parish, Cadwallader & Busch 2008)

In a critical review of the literature on stakeholders’ commitment to change, Jaros (2010) argues that there are multiple inconsistencies in defining concepts and using terms, in describing principles of defined concepts, and in operationalising commitment to change and support as a problem for research. For instance, he explicates that Armenakis and Harris (2009) present a “unidimensional” conceptualisation of commitment demonstrating stakeholders’ willingness to support the change while Herscovitch and Meyer (2002) argue that commitment to change is not a single state but instead a multidimensional construct. Jaros (2010) identifies some issues in the reviewed literature and discusses the areas that should be considered in future research, including a multidimensional view of commitment and underlying motivational processes of commitment. (Table 2.4 lists a part of these identified issues and recommended directions for future research on commitment to change.)

In the context of this research, support for change refers to stakeholders’ responses and reactions consistent with the goals of IT implementation and change.

**Table 2.4 Commitment to change research issues and recommendations (Jaros 2010)**

<table>
<thead>
<tr>
<th>Research issue</th>
<th>Recommendations</th>
</tr>
</thead>
</table>
| Commitment to change concept        | 1) Studies that compare the predictive power of unidimensional and multidimensional C2C constructs, and whether normative C2C has a different factor structure and independent predictive utility compared to affective C2C.  
2) Avoid usage of ‘intent to commit’ proxies for C2C.  
3) If using only a single component of a multidimensional C2C construct, provide rationale for doing so. |
| Development of commitment to change | 1) Studies that investigate core psychological processes that may inhibit or facilitate the development of C2C, such as cognitive dissonance, habituation, and entrainment.  
2) Comprehensive assessments of theoretical models such as Coetsee (1999), and Armenakis and Harris (2009). |

3 C2C: Commitment to Change
Decisions about employees to study

1) Careful assessment of the change context: which departments/subunits/employee groups/job categories are affected, and possible multi-level effects.

2) Cross-cultural assessments of C2C processes using tests of statistical invariance.

3) If assessing C2C’s impact on behaviour, avoid use of behavioural proxy and self-reports in lieu of actual behaviours.

### 2.3.2 Resistance to change and IT implementation

Resistance to change is reported as one of the most critical and salient variables that can markedly diminish the effectiveness of IT implementation in the organisation and hinder its success (Laumer et al. 2016; Kwahk & Kim 2008; Lapointe & Rivard 2005; Jiang, Muhanna & Klein 2000), or cause an implementation failure (Kim & Kankanhalli 2009). Bovey and Hede (2001b) cite a study of change implementation in 500 large Australian organisations that found employee resistance to be the most considerable and prevalent problem confronted by management. If users do not engage in IT implementation process, or do not use the new IT system, the organisation may not achieve the expected benefits from their investments (Maas, Fenema & Soeters 2014; Croasdell, Kuechler & Wawdo 2013).

There are several definitions and conceptualisations of resistance to change. Some definitions of resistance are presented in Table 2.5. In many studies, resistance to change is defined as deliberate opposition or unfavourable reactions and behaviours to an intended change (Hirschheim & Newman 1988) that impede or hinder change implementation and achieving organisational goals (Mahmud, Ramayah & Kurnia 2017; Klaus, Wingreen & Blanton 2010; Chawla & Kelloway 2004; Oreg 2003; Markus 1983). Some other researchers construe resistance to change as “inertia” and define it as behavioural reactions that seek to maintain “the status quo” (Lee & Joshi 2017; Kim & Kankanhalli 2009; Del Val & Fuentes 2003; Maurer 1996). In line with more recent studies, this research takes the view that resistance to change is multidimensional and a complex construct (Rafferty & Jimmieson 2017; Polites & Karahanna 2012; Oreg 2006; Piderit 2000). So, it considers cognitive and affective facets of resistance beyond the behavioural. From this view, resistance to change comprises how individuals feel about change (affective), how they think about change (cognitive), and how they behave in response to change (behavioural).
Table 2.5 Some definitions of resistance to change

<table>
<thead>
<tr>
<th>Definition</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Resistance is defined as behaviours intended to prevent the implementation or use of a system or to prevent system designers from achieving their objectives.” (p. 433)</td>
<td>(Markus 1983)</td>
</tr>
<tr>
<td>“Resistance to change may be defined as an adverse reaction to a proposed change which may manifest itself in a visible, overt fashion (such as sabotage or direct opposition) or may be less obvious and covert (such as relying on inertia to stall and ultimately kill a project). It could occur fairly quickly, remain latent for a short period of time and then emerge, or lay dormant for a considerable time only to appear later.” (p. 398)</td>
<td>(Hirschheim &amp; Newman 1988)</td>
</tr>
<tr>
<td>“Active resistance [is] defined as demonstrating opposition in response to a change by engaging in overt behaviors that are intended to ensure that the change fails.” “Passive resistance [is] defined as demonstrating opposition in response to a change by engaging in covert or subtle behaviors aimed at preventing the success of the change.” (p. 478)</td>
<td>(Herscovitch &amp; Meyer 2002)</td>
</tr>
<tr>
<td>“Resistance to change is defined as an individual’s tendency to resist or avoid making changes, to devalue change generally, and to be averse to change across diverse contexts and types of change (Oreg 2003). Resistance to change has also been conceptualized as any conduct that seeks to keep the status quo, or the persistence to avoid change (Del Val &amp; Fuentes 2003).” (p. 258)</td>
<td>(Kim &amp; Gupta 2012)</td>
</tr>
<tr>
<td>“Resistance is defined as behavioural reactions expressing reservation in the face of pressure exerted by change supporters seeking to alter the status quo.” (p. 3)</td>
<td>(van Offenbeek, Boonstra &amp; Seo 2013)</td>
</tr>
</tbody>
</table>

It is important to identify the reasons for resistance to change and explore its antecedents and sources, in order to better understand, interpret and manage change. Multiple studies have investigated and identified potential reasons for, and underlying antecedents of, resistance to change (related to the individual, organisational context and environment). For example, many researchers state the lack of appropriate understanding of change as an important reason for resistance to IT implementation (Drummond et al. 2017; Ferneley & Sorepperez 2006; Oreg 2006). CRs might not have adequate information about the benefits of change and its implications or might misinterpret it. Also, in many studies "perceived threats or stresses" (e.g. loss of power and equity threat, or the stress and strain of increased efforts) are recognised as considerable reasons for resistance (Laumer et al. 2016; McKay et al. 2012; Kim & Kankanhalli 2009; Lapointe & Rivard 2005). CRs might perceive the new IT innovation and change as having discriminatory effects, or find or misunderstand it as being contrary to their interests or status (Sarker, Chatterjee & Xiao 2013; Joshi 2005, 1991). (Some of the most important reasons for resistance to change are listed in Table 2.6.)
Table 2.6 Some of the most important reasons for resistance to change

<table>
<thead>
<tr>
<th>Reason</th>
<th>Descriptions and some reference examples</th>
</tr>
</thead>
</table>
| Loss of power                   | • Job insecurity, disempowerment (Jiang, Muhanna & Klein 2000)  
|                                 | • Change to the decision making process (Markus 1983)  
|                                 | • Fear of losing autonomy and control or specific skills (Joshi 1991)  
|                                 | • Loss of ownership and control of information (Hirschheim & Newman 1988)  
|                                 | • Power relations (Ye et al. 2017)                                                                                                                                                                 |
| Loss of equity                  | • Equity changes: perceived decrease in net gain, or perceived increase in inequity of an individual (Hess, Joshi & McNab 2010; Joshi 1991)                                                                 |
| Fear of changing the status quo | • Innate conservatism, reluctance to change the status quo (Hirschheim & Newman 1988)  
|                                 | • Low motivation for change, Cynicism (Selander & Henfridsson 2012; Del Val & Fuentes 2003)  
|                                 | • Perceived constraints on freedom of choice (Murray & Häubl 2011)                                                                                                                                 |
| Perceived threats or stresses   | • Inability to adapt to new change/routines (Marakas & Hornik 1996)  
|                                 | • Perceived increase in required effort, time and skill levels to perform new tasks and routines (Mahmud, Ramayah & Kurnia 2017; Del Val & Fuentes 2003; Joshi 1991)  
|                                 | • Perceived threats (Hsieh 2015; Lapointe & Rivard 2005)  
|                                 | • Uncertainty and unfamiliarity (Jiang, Muhanna & Klein 2000)                                                                                                                                 |
| Lack of appropriate perception  | • Not perceived the change as beneficial, distorted perception (Kim & Kankanhalli 2009; Oreg 2006; Del Val & Fuentes 2003; Piderit 2000)  
|                                 | • Not convinced of the merits of the change (Hirschheim & Newman 1988)                                                                                                                               |
| Poor communication and social interaction | • Manifesting needs or concerns (Ferneley & Sobrepererez 2006)  
|                                 | • Background conversations (Ford, Ford & McNamara 2002)  
|                                 | • Rumours, incorrect information (Elving 2005)  
|                                 | • Leadership inaction, lack of management support (Del Val & Fuentes 2003; Hirschheim & Newman 1988)  
|                                 | • Lack of involvement and participation (Hirschheim & Newman 1988)  
|                                 | • Lack of designer-user interaction (Hirschheim & Newman 1988)                                                                                                                                     |

In contrast, some legitimate and constructive reasons for resistance to change are also evident in the literature. For instance, Piderit (2000) argues that stakeholders might resist a change initiative and prevent the implementation process because they believe that it does not fit the organisation, or does not improve organisational or individual performance (e.g. because of its poor quality), and may disrupt existing processes and functions (e.g. due to its critical issues and inconsistencies). In fact, stakeholders
may resist a change initiative in order to attract attention of CAs, and communicate their discomfort and dissatisfaction (van Nistelrooij & de Caluwé 2016; Thomas, Sargent & Hardy 2011; Lapointe & Rivard 2005; Marakas & Hornik 1996).

Researchers also have adopted several perspectives and used diverse theoretical lenses (e.g. some of the most prominent resistance theories and models are presented in Table 2.7) to study and explicate resistance. For instance, resistance is conceptualised as "a result of the interaction among several antecedents" (Lapointe & Rivard 2005, p. 462), which causes different attitudes and reactions (Piderit 2000) to IT implementation. Piderit (2000) and Oreg (2006) explain multidimensional views of resistance in which evaluation of change by CRs could be reflected in their emotions and feelings, their beliefs (thought) and cognition, and their behaviours and actions. Also, Lapointe and Rivard (2005) propose an integrated and multilevel model (a dynamic view) of resistance to IT implementation that comprises the interaction between IT implementation conditions, its context, and its stakeholders at individual, group and organisational levels. Kim and Kankanhalli (2009) develop a framework, based on the status quo bias perspective, to interpret user resistance to IT implementation. Kim and Kankanhalli (2009) also adopt the equity-implementation model (Joshi 1991) and the theory of planned behaviour to explain how users evaluate change based on their preferences, their current situation, and several related antecedents (e.g. perceived value, switching costs, colleague opinion, self-efficacy for change and organisational support for change), and, ultimately, how they decide to accept change or resist it.

**Table 2.7 Some of the most prominent resistance theories and models**

<table>
<thead>
<tr>
<th>Theory/Model</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity-Implementation model (equity theory): CRs evaluate the change based on the net equity (perceived decrease in their outcomes and perceived increase in their input), and analyse its costs and benefits.</td>
<td>(Joshi 1991)</td>
</tr>
<tr>
<td>Attribution theory: CRs may resist the change or accept it based on their previous experience of outcomes (their attitudes and beliefs about success or failure) of a similar change.</td>
<td>(Martinko, Zmud &amp; Henry 1996)</td>
</tr>
<tr>
<td>Passive resistance misuse (passive aggressive behaviour theory): Resistance behaviours are passive-aggressive responses of CRs to their perceived threats or stresses of the change.</td>
<td>(Marakas &amp; Hornik 1996)</td>
</tr>
<tr>
<td>Multilevel model of resistance: Resistance behaviours (passive, active or aggressive) may occur at individual, group and organisational level</td>
<td>(Lapointe &amp; Rivard 2005)</td>
</tr>
</tbody>
</table>
following perceived threats that arise from the interaction between initial conditions and a given object.

| Compliance/resistance/workaround model: Resistance can be either positive or negative and may result in different kinds of workaround behaviours (harmless, hindrance and essential workarounds). These behaviours are the result of interactions between different antecedents including “enforced proceduralisation”, “organisational and personnel issues”, “discipline” and “non-engagement with the system”. | (Ferneley & Sobreperez 2006, pp. 350-351) |
| Status quo bias theory: Perceived threats and costs associated with change are the main reasons for resistance. CRs prefer to maintain their current status and resist the change if they perceive threats (inequities or losses) to their status and situation. | (Kim & Kankanhalli 2009) |
| User reactions framework: Acceptance and resistance are two distinct and complementary behavioural dimensions of user reactions. According to this framework, adoption reactions of users can be categorised into four behavioural groups: acceptance or non-acceptance (acceptance dimension), support or resistance (resistance dimension). | (van Offenbeek, Boonstra & Seo 2013) |

Ford and Ford (2009) argue that most of these studies consider resistance as either a natural and neutral phenomenon and “a product of interaction” among stakeholders (objective or mechanistic perspective), or conversely as an oppositional and detrimental attitude and/or tendency of an individual or group (subjective or social perspective). Instead, Ford and Ford (2009) recognise the social constructionist perspective of resistance and argue that resistance to change is constructed “in the conversations and relationships”, and as a result of encountering different expectations and interpretations of stakeholders.

The above studies emphasise that resistance to change could emerge in various forms and have different consequences. Stakeholders can react to IT implementation in different ways and manifest various behaviours towards change. (Some resistance types and behaviours are presented in Table 2.8.) For example, Coetsee (1999) describes four levels of resistance behaviour: apathy, passive resistance, active resistance, and aggressive resistance. Also, some researchers posit that resistance could be considered as a continuum of attitudes and behaviours, from negative and destructive to positive and constructive, and have different consequences for IT implementation (Lapointe & Rivard 2005; Marakas & Hornik 1996; Hirschheim & Newman 1988). Jiang, Muhanna and Klein (2000) argue that resistance is not necessarily an “irrational response” to change. Although resistance might have detrimental and negative results (Ferneley & Sobreperez 2006; Martinko, Zmud & Henry 1996; Kossek et al. 1994), conversely, it may convey positive and valuable feedback, provide useful insights into IT
implementation process (Oreg 2006; Ford, Ford & Ford 1994), cause functional and constructive results (Ford & Ford 2010; Piderit 2000) and lead to performance improvement (Lapointe & Rivard 2005).

**Table 2.8 Resistance types and behaviours (Meissonier & Houzé 2010, p. 541)**

<table>
<thead>
<tr>
<th>Resistance types</th>
<th>Resistance behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apathy</td>
<td>“Corresponds to behaviour of disinterest and inaction of a person toward the situation. Also named ‘neutral zone’, it represents the situation in which people are aware of changes, but their perceptions are neutral and their behaviours characterised by a sort of passive resignation.”</td>
</tr>
<tr>
<td>Passive resistance</td>
<td>“A person adopts some behaviours aimed at slowing down changes and keeping the previous system (examples: voluntary delays in tasks to do, argumentation in favour of so-called advantages of existing rules and processes).”</td>
</tr>
<tr>
<td>Active resistance</td>
<td>“Is considered as a ‘constructive form’ aimed at the improvement of the project (examples: expression of different points of views, negotiation about a consensus, accommodation).”</td>
</tr>
<tr>
<td>Aggressive resistance</td>
<td>“Users can resort to threats, blackmails, boycotts and all other actions whose objective is blocking the situation.”</td>
</tr>
</tbody>
</table>

Using the work of Hirschheim and Newman (1988) and Lapointe and Rivard (2005), it could be argued that resistance to IT implementation is a dynamic process that involves interactions among stakeholders and includes diverse attitudes and behaviours. Resistance evolves over time, may emerge at several stages of the change process and occur at distinct levels of organisation. On the whole, while there are different perspectives and models proposed and adopted to better understand and interpret resistance to change; there is a consensus among researchers that the management of resistance is important to both achieve successful IT implementation and realise desired outcomes (Lee & Joshi 2017; Laumer 2011; Kim & Kankanhalli 2009; Lapointe & Rivard 2005; Joshi 1991).

Since, in many studies, resistance is conceptualised as a hurdle to achieving successful change that has negative and dysfunctional impacts on IT implementation, it could be argued that most strategies and approaches suggested for dealing with resistance to change are about avoiding and preventing resistance, or mitigating and eliminating it. For instance, some of these strategies are: building positive attitudes toward change (Peccei, Giangreco & Sebastiano 2011; Piderit 2000); increasing emotional and cognitive readiness for change (Holt et al. 2007; Armenakis, Harris & Mossholder 1993); providing support (Kim & Kankanhalli 2009) and training (Del Val & Fuentes 2003); considering contextual aspects like cultural fit (Rivard & Lapointe 2012; Del Val & Fuentes 2003); providing information
about change and improving communication (Laumer, Maier & Weitzel 2017; Rivard & Lapointe 2010; Ford, Ford & D'Amelio 2008; Oreg 2006); reduce complexities and uncertainties (Balogun & Johnson 2005); enhancing stakeholders’ participation in IT implementation (Elving 2005; Jiang, Muhanna & Klein 2000; Hirschheim & Newman 1988); offering incentives (Lowry, Gaskin & Moody 2015; Ngwenyama & Nielsen 2014); and reconsidering roles and power structures and relationships (Kerr, Houghton & Burgess 2007; Griffiths & Light 2006). On the other hand, many of these studies neglect the positive aspects of resistance, or do not consider its potential value and functional consequences for IT implementation (Ford, Ford & D'Amelio 2008).

Resistance can be a useful resource for IT implementation (Rafferty, Jimmieson & Armenakis 2013; Ford & Ford 2009; Ford, Ford & D'Amelio 2008). Stakeholders’ resistance to change can be used to identify and sort out the deficiencies and inconsistencies in the new system. Resistance provokes critical conversations, which provides CAs with the opportunity to communicate change and explain its vision, goals and desired outcomes, and this also helps CRs to have a better understanding and perception of change. And further, resistance causes discussion and interaction among stakeholders, increases intervention and engagement with change, and can ultimately lead to higher levels of use, commitment and support. However, gaining these potential benefits requires a different perspective for understanding and interpreting stakeholders’ reactions to IT implementation.

In sum, this study argues that to achieve more benefits from IT implementation and to have more effective change processes, it is essential to consider both the positive and negative impacts of resistance (Stein et al. 2015; Bagayogo, Beaudry & Lapointe 2013; van Offenbeek, Boonstra & Seo 2013; Rivard & Lapointe 2012). Thus, a more in-depth understanding of stakeholders’ reactions can help to minimise dysfunctional impacts of resistance and encourage supportive attitudes and behaviours.

### 2.4 Sensemaking processes

Sensemaking can be described as a process of retrospective construction and ongoing development of plausible meanings and interpretations of changes and reactions (Weick, Sutcliffe & Obstfeld 2005; Weick 1995). (Some definitions of sensemaking are presented in Table 2.9.) Sensemaking is a socially intertwined process, which comprises reciprocal relationships between interpretations and actions (Maitlis 2005). In this dynamic and active process, individuals seek and extract information from ongoing cues and stimuli, negotiate and share their perception and interpretation with others, make plausible meaning and form common cognitive models through social interactions, and take action
(Ford, Ford & D'Amelio 2008). In other words, collective understanding and socially constructed meaning influences how stakeholders feel and think about change, how they behave and respond to change, and the actions they may take. Weick (1995) recognises seven characteristics of the sensemaking process: it is grounded in identity construction; retrospective; enactive of sensible environments; focused on and by extracted cues; social; ongoing; and driven by plausibility rather than accuracy. (A summary of sensemaking properties is presented in Table 2.10.)

Table 2.9 Selected definitions of sensemaking

| Definitions                                                                                                                                                                                                                                                                                                                                 | Reference          |
| ---                                                                                                                                                                                                                                                                                                                                                                  |                   |
| “...making of sense” (p. 4), “Sensemaking is understood as a process that is (1) grounded in identity construction, (2) retrospective, (3) enactive of sensible environments, (4) social, (5) ongoing, (6) focused on and by extracted cues, (7) driven by plausibility rather than accuracy” (p. 17) | (Weick 1995)       |
| “Sensemaking involves the retrospective development of plausible images that rationalize what people are doing.” (p. 409)                                                                                                                                                                                                                                             | (Weick, Sutcliffe & Obstfeld 2005) |
| “Sensemaking unfolds as a sequence in which people concerned with identity in the social context of other actors engage ongoing circumstances from which they extract cues and make plausible sense retrospectively, while enacting more or less order into those ongoing circumstances.” (p. 409)                                                                                                                                  |                   |
| “a process prompted by violated expectations, that involves attending to and bracketing cues in the environment, creating intersubjective meaning through cycles of interpretation and action, and thereby enacting a more ordered environment from which further cues can be drawn.” (p. 11)                                                                                           | (Maitlis & Christianson 2014) |
| “Sensemaking occurs in organizations when members confront events, issues, and actions that are somehow surprising or confusing … emerges from efforts to create order and make retrospective sense of what occurs. … Thus, sensemaking is a process of social construction … in which individuals attempt to interpret and explain sets of cues from their environments … through the production of accounts … or through the activation of existing accounts. … Sensemaking allows people to deal with uncertainty and ambiguity by creating rational accounts of the world that enable action. … Organizational sensemaking is a fundamentally social process: organization members interpret their environment in and through interactions with others, constructing accounts that allow them to comprehend the world and act collectively.” (p. 21) | (Maitlis 2005)                                                                 |
| “Sensemaking is the process of social construction that occurs when discrepant cues interrupt individuals’ ongoing activity, and involves the retrospective development of plausible meanings that rationalize what people are doing … Sensemaking is thus about connecting cues and frames to create an account of what is going on.” (p. 551)                                                                                                                                  | (Maitlis & Sonenshein 2010) |

25
Sensemaking is a social process of meaning construction and reconstruction that enables individuals through interacting with others to collectively create, maintain and interpret their world.” (p. 5) (Rouleau & Balogun 2008)

Sensemaking occurs when individuals turn a flow of organizational experiences into words and salient categories that they can comprehend and then use these as a springboard for action.” (p. 898) (Blatt et al. 2006)

Sensemaking is the process by which stakeholders construct coherent perceptions that may enable and facilitate change (Moon 2008; Weick 1995). The process involves social construction of meaning through interactions, conversations, negotiations, reflections and actions (Vlaar, van Fenema & Tiwari 2008; Ivory et al. 2006). Stakeholders may have different understandings of change and its consequences, and this may vary (Barrett, Heracleous & Walsham 2013), for example, at different stages of IT implementation. They can communicate their expectations about change with colleagues, thus engaging in sensemaking through which they mutually construct plausible perceptions of IT implementation (Balogun 2006). Moreover, CAs and CRs would be able to create shared collective interpretations and gain a better understanding of change and its potential effects (Kumar & Singhal 2012; Ford & Ford 2009; Stensaker, Falkenberg & Grønhaug 2008), which reduces equivocality and uncertainty (Stensaker & Falkenberg 2007; Weick, Sutcliffe & Obstfeld 2005) and thus supports change (Balogun & Johnson 2005; Ford & Ford 1995). There are also sensegiving activities in this process, which stakeholders (mostly mentioned as top management and middle managers who have the power, authority or credibility) attempt to provide their interpretations of change to others and therefore influence their sensemaking (Maitlis 2005).

**Table 2.10 Summary of sensemaking properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounded in identity construction</td>
<td>“Who I am as indicated by discovery of how and what I think” (Weick 1995, p. 61). The experiences that have shaped actors’ identity influence how they interpret their environment. Their identity is also continuously redefined by their experiences and their interactions with others.</td>
</tr>
<tr>
<td>Retrospective</td>
<td>“To learn what I think, I look back over what I said earlier” (Weick 1995, p. 61). The experiences that have shaped actors’ identity influence how they interpret their environment. Their identity is also continuously redefined by their experiences and their interactions with others.</td>
</tr>
<tr>
<td>Enactive of sensible environment</td>
<td>“I create the object to be seen and inspected when I say or do something” (Weick 1995, p. 61). Actors try to understand and interpret their environment in a reciprocal process of interaction, and seek to create order of it. They construct plausible meanings and interpretations (socially and through conversation and negotiation with others) continuously and those constructed (collective) accounts shape their actions and behaviours. Thus, they shape their environment and being shaped by it.</td>
</tr>
<tr>
<td>Social</td>
<td>“What I say and single out and conclude is determined by who socialized me and how I was socialized, as well as by the audience I anticipate will audit the conclusions I reach” (Weick 1995, p. 62). Sensemaking is a social process. What actors do depends on others who socialised them and how they are socialised.</td>
</tr>
<tr>
<td>Ongoing</td>
<td>“My talking is spread across time, competes for attention with other ongoing projects, and is reflected on after it is finished, which means my interests may already have changed” (Weick 1995, p. 62). Sensemaking is an ongoing process. Actors continuously construct plausible interpretations (meanings) of the surrounding ambiguities and equivocalities and then reflect on their interpretations.</td>
</tr>
<tr>
<td>Focused on and by extracted cues</td>
<td>“The “what” that I single out and embellish as the content of the thought is only a small portion of the utterance that becomes salient because of context and personal dispositions” (Weick 1995, p. 62). Actors pay attention (noticing) to related cues and events and extract (bracketing) related ones according to the context. For this purpose, they may use their experience and look past events (retrospective, backward-looking) or try to anticipate future conditions or effects (forward-looking). Some events and cues may become noticeable because of context. Actors create a reference point, elaborate some events and construct plausible meanings for them.</td>
</tr>
<tr>
<td>Driven by plausibility</td>
<td>“I need to know enough about what I think to get on with my projects, but no more, which means sufficiency and plausibility take precedence over accuracy” (Weick 1995, p. 62). Sensemaking is driven by plausibility rather than rationality and accuracy. Actors construct plausible interpretations that are “sufficient to guide goal-directed behaviour” (Weick, Sutcliffe &amp; Obstfeld 2005, p. 419).</td>
</tr>
</tbody>
</table>

Moreover, change is dynamically enacted and developed through sensemaking and sensegiving processes over time (Maitlis & Lawrence 2007; Maitlis 2005; Rouleau 2005). These processes are comprised of ongoing discourses, engagements and interactions among stakeholders (Moon 2008; Balogun & Johnson 2005). CRs negotiate their perceptions with others and contribute to the construction of a collective understanding of change, which finally influences or forms their response.
Sensemaking theory has previously been adopted to study IT implementation in organisations (Kristiansen, Obstfelder & Lotherington 2015; Svejvig & Jensen 2013). For instance, Jensen, Kjærgaard and Svejvig (2009) used sensemaking theory for understanding individual interpretations and investigating how and why information systems are adopted by users. They conducted an empirical study of the implementation of an Electronic Patient Record (EPR) system in a Danish healthcare setting. They argue that sensemaking focuses on “the relationship between cognition and action in organizations, specifically addressing cognitive and social mechanisms for dealing with unexpected events—for example, the introduction of new technology” (Jensen, Kjærgaard & Svejvig 2009, p. 345).

Moon (2008) states that resistance to change is “a constructed understanding about the state of one’s relationship with the organisational environment”, and managing it is possible through understanding and considering different sensemaking interactions (including multiple constructed interpretations of change, various discourses and conversations, and relationships) among stakeholders. Similarly, Ford, Ford and D'Amelio (2008) argue that resistance is a label assigned by CAs to CRs as part of their sensemaking. They further explain resistance to change as a dynamic of three components: CR sensemaking including how they understand change, respond to it and take action; CA sensemaking and sensegiving activities including how they understand and interpret CR behaviours and actions and how they react to them; and both CA and CR relationships and interactions that provide the context of sensemaking.

Also, some studies imply that through sensemaking it is possible to pre-empt and mitigate dysfunctional reactions to change, and increase the level of support and commitment to change. For instance, Moon (2008) explains that background conversations and social interactions among stakeholders shift collective understanding and provide a receptive climate for change, which increase readiness for change and reduce inertia or resistance to change (Armenakis, Harris & Mossholder 1993). Furthermore, sensemaking brings about social change (Maitlis & Sonenshein 2010), which can positively influence and change users’ attitudes and behaviours about IT innovation, reduce resistance to change (Oreg 2006), and increase the level of support and use (Klein & Sorra 1996). Also, sensemaking enables stakeholders to connect “cues” to “frames” (Weick 1995) and resolve uncertainty that often follows a change, and also cope with complexity and ambiguity of IT implementation through interaction with others (Balogun & Johnson 2005; Maitlis 2005). In addition, sensemaking and sensegiving activities entail a higher level of communication and participation in the change process,
which can decrease resistance (Ford, Ford & D'Amelio 2008; Elving 2005; Del Val & Fuentes 2003). Through social interactions, stakeholders can be involved and engaged in IT implementation actively, influence others’ attitudes and behaviours, and promote change (Moon 2008).

In conclusion, as reviewed in the literature in this chapter, there are a number of strategies that are proposed in order to prevent, reduce or overcome resistance to change. However, according to Ford, Ford and D'Amelio (2008), these strategies are mostly one-dimensional and overlook the potential benefits and functional impacts of the resistance to change process. This study argues that there is a need to shift the approach and propose new strategies and models for the management of resistance to change. In this new perspective, it is essential to understand and consider sensemaking processes and their influences on IT implementation including the dynamics of meaning construction, discourses and negotiations, relationships and social interactions amongst stakeholders and context. Further, it could be argued that this approach develops CA interpretations of CR responses to change (including their emotions, cognitive states, and behaviours and actions), and thus helps CAs to manage those responses better in order to encourage support, promote CR engagement through their contribution and commitment to change, and increase IT implementation success.

### 2.5 Research objectives and research questions

The objectives of this research are:

- To investigate and understand how CAs and CRs make sense of IT implementation: this study is interested in exploring and studying sensemaking processes that influence IT implementation. Implementing new IT innovation changes the status quo (i.e. existing settings, roles, relationships, activities and procedures) and thus brings about ambiguity and complexity. In these situations, stakeholders try to make sense of change (Maitlis 2005). However, they might construct dissimilar meanings, and have various interpretations and feelings about change (Balogun & Johnson 2004) which may result in divergent or convergent sensemaking trajectories.

- To investigate and understand how sensemaking processes of CAs and CRs influence and shape their reactions: this study seeks to understand the role and influence of CA and CR relationships and interactions on developed reactions. And further this study investigates different responses to change associated with sensemaking processes (Sonenshein 2010; Maitlis 2005). Thus this research attempts to derive deeper insights into CA and CR reactions (attitudes and behaviours) to change, and to understand how resistance and support processes (van Offenbeek, Boonstra & Seo 2013) emerge and develop during IT implementation.

The research questions that assist in achieving the above objectives are:
• **RQ1:** How do CAs and CRs make sense of IT implementation over time?
• **RQ2:** What are the implications of sensemaking of CAs and CRs for the way they react to IT implementation?

### 2.6 Summary

This chapter provides an overview of key constructs and theories that relate to this study. First, a short review of IT implementation in organisations is presented. Then, models and theories of stakeholders’ responses and reactions to change are discussed, including reviewing and analysing the most significant studies of support and resistance in the context of IT implementation and organisational change. Reaction to change is considered as a continuum of attitudes and behaviours, ranging from aggressive resistance to enthusiastic support (van Offenbeek, Boonstra & Seo 2013; Herscovitch & Meyer 2002; Coetsee 1999). Finally, an overview of the sensemaking theory and related research is presented (Weick 1995). The review highlights that sensemaking can be used as an appropriate “sensitizing device” (Klein & Myers 1999) to interpret and understand stakeholders’ reactions to change (Sandberg & Tsoukas 2015; Sonenshein 2010; Stensaker & Falkenberg 2007).

It is argued that understanding how stakeholders react to IT implementation and respond to the changes is a critical area for further study (Vakola 2013; Oreg, Vakola & Armenakis 2011; Lapointe & Rivard 2005). The literature on organisational change and IT implementation assert that stakeholders react to change and events differently (Bryant 2006) and demonstrate diverse emotional, cognitive and behavioural responses depending on their understanding and interpretation of change and the context in which change occurs. Unfortunately, the research on reactions to change to date has predominantly been concerned with investigating and explaining negative reactions to change, perceived as impediments to change implementation (Ford, Ford & D'Amelio 2008; Piderit 2000). Less is known about more supportive reactions among stakeholders and differences in patterns of reaction over time (Stensaker & Meyer 2011). This research aims to contribute to a better understanding of sensemaking processes during IT implementation and their implications for stakeholders’ reactions to change. The next chapter outlines the methodology and methods adopted and the research design in order to fulfil the objectives of this study. It also discusses the operationalisation of the research questions, strategy for writing up the results, and validity and trustworthiness of the study.
3.1 Introduction

In this chapter, the research methodology and design based on the adopted research paradigm and its ontological and epistemological assumptions are discussed. The research design here is interpretive multi-case study analysed through qualitative methods. Figure 3.1 outlines the overall research design of this study. This chapter also details the steps taken in designing and conducting this piece of research from data collection to data analysis. The purpose of this chapter is ultimately to justify that the selected research method and developed research design are appropriate for conducting this study and to ensure the conduct of rigorous research.

![Figure 3.1 Overall research design of this study](image-url)
3.2 Research paradigms and their philosophical assumptions

A paradigm represents a worldview based on a set of basic beliefs and certain ontological, epistemological, and methodological assumptions (Guba & Lincoln 1994). It is a set of answers to the following three types of question (Guba & Lincoln 1989, p. 83):

- The ontological question: What is there that can be known? What is the nature of reality?
- The epistemological question: What is the relationship between the knower and the known (or the knowable)? What kind of knowledge can be obtained and what are the limits of knowledge?
- The methodological question: What are the ways of finding out knowledge? How can we go about finding out things?

There are several ways to address these questions; hence researchers may consider different research paradigms and philosophical assumptions. That is, the adopted research paradigm forms the basis for and sheds light on the philosophical assumptions, and guides the research. It also helps researchers to choose and use appropriate research methods. Orlikowski and Baroudi (1991) recognise positivist, interpretive and critical paradigms of information technology research, each with their different beliefs about the underlying nature of existence or what constitutes valid research.

The *positivist paradigm* assumes a world with objective realities made up of well-established structures and fixed relations (Goles & Hirschheim 2000). Positivists investigate objective events and facts empirically in order to identify pre-existing and immutable principles and relationships. In other words, they attempt to discover, understand and explain structures, behaviours and relationships through “hypothetic-deductive logic and analysis” (Orlikowski & Baroudi 1991, p. 9). Therefore, tested hypotheses and verified research outcomes are replicable and generalisable, and can be used to predict and explain events and relationships and control actions (Chen & Hirschheim 2004). There are some criticisms of the adoption of the positivist paradigm in studying IT in organisations. For instance, positivists try to find replicable and generalisable results and ignore the possible impacts of historical conditions, context and social interactions on human behaviours and actions (Orlikowski & Baroudi 1991). They also assume causal relations and generalised principles and laws (Guba & Lincoln 1994). This approach stresses objectivity and is thus not suited to this research which emphasises understanding subjective meanings and interpreting the impacts of social interactions and reciprocal relationships on the construction of reality.

In the *interpretive paradigm*, reality is subjective and a social product, which is not independent of social actors and researchers who produce, and make sense of, their worlds (Orlikowski & Baroudi 1991). Furthermore, meanings are constructed, negotiated, shared and maintained through ongoing
social interactions. Thus, constructions of reality may vary by how reality is understood, perceived and interpreted in different contexts (Walsham 1995a). Interpretive researchers seek to investigate and interpret behaviours and social interactions, and understand those shared realities from the actors’ perspectives in their natural environment and context. Orlikowski and Baroudi (1991) assert that the interpretive perspective “attempts to understand how and why individuals, through their socialization into, interaction with, and participation in, a social world, give it a certain status and meaning” (p. 13). Thus field studies are used to gain a better understanding of these social processes among humans and within their social settings and context, and in turn generate valid interpretive knowledge (Orlikowski & Baroudi 1991). On the whole, the aim of this approach is to understand how social actors interpret realities and enact constructed meanings, and further how their distinct interpretations shape their responses and behaviours.

The critical paradigm highlights the fact that “social reality is historically constituted” (Orlikowski & Baroudi 1991) and this paradigm helps researchers to critically evaluate their understanding of social realities, and analyse and interpret inconsistencies, conflict and change (Mingers 2001). Social conditions and relations are dynamic, and constantly emerging and evolving. Critical researchers attempt to critique the status quo in terms of changing social structures, practices and conditions, to eliminate social inequities. Moreover, they generally perform longitudinal studies of social processes and organisational structures including long-term historical studies or ethnographic studies (Chen & Hirschheim 2004; Orlikowski & Baroudi 1991).

3.3 Justification for the choice of research paradigm for this research

This research intends to investigate the impacts of sensemaking processes on stakeholders’ reactions to IT implementation, so the need for deeper insights and more detailed understandings of stakeholders’ social interaction within specific contexts of organisations is emphasised. This study follows the interpretive paradigm of research because its focus is on understanding the subjective meanings that stakeholders construct and ascribe to IT implementation plus the associated social processes whereby inter-subjectivity is achieved. Orlikowski and Baroudi (1991) assert that “interpretive studies assume that people create and associate their own subjective and intersubjective meanings as they interact with the world around them” (p. 9). Further, the interpretive paradigm is suitable for understanding stakeholders’ feelings and thoughts, and interpreting their actions and behaviours (Klein & Myers 1999), which is appropriate for achieving the objectives of this research.
Ontologically, this study assumes reality as a social construction (Walsham 2006) and “an emergent social process” (Orlikowski & Baroudi 1991). Meanings are constructed and reconstructed using language and conversations, and through actions and interactions. Through these collective and social processes, stakeholders consistently try to understand and interpret the ‘why’, ‘what’ and ‘how’ of IT implementation process. Although they may have different perceptions of change and its effects, they negotiate and construct meanings, and arrive at a plausible understanding (Moon 2008). This is compatible with relativist ontology in which it is assumed that social reality is not ‘given’ and therefore there may be multiple interpretations (e.g. multiple truth or interpretations about IT implementation process, and change or reaction to change) (Guba & Lincoln 1989).

Epistemologically, this research adopts social constructionism, a perspective that argues that knowledge is subjective and constructed through social interactions. Further, this perspective assumes social construction of reality and contextual negotiation of constructed meanings (Crotty 1998) through language and conversations (Ford 1999), interactions, and engagement over time (Moon 2008) and situated within a discourse community. The aim of social constructionism is to produce understanding of the phenomenon within its context (Klein & Myers 1999).

3.4 Choice of research method

Research methods are systematic and have established procedures for generating knowledge. Each research method implies different assumptions and includes various research procedures and practices (Myers 2013). Myers (1997) argues that “a research method is a strategy of inquiry which moves from the underlying philosophical assumptions to research design and data collection” (p. 241). According to Orlikowski and Baroudi (1991), the research paradigm and its underlying assumptions indicate which research methods are feasible and appropriate for generating valid knowledge. The researcher must consider the ontological (the nature of reality) and epistemological (how knowledge of that reality can be obtained) perspectives of the research, and its context.

The choice of research method influences the path for conducting the research and collecting data and affects the research results. Selecting an appropriate research method is a significant step. There are some frameworks developed by researchers to guide and support the selection of an appropriate research method (Shanks, Arnott & Rouse 1993; Galliers 1991). Researchers have adopted various methods for conducting research in Information Systems (IS) and they have used different methods for collecting and analysing data. Some prevalent research methods in IS are survey, case study, ethnography and action research (Myers 1997; Galliers 1991). Among these methods, case study is a
well-accepted qualitative method frequently used in IS (Klein & Myers 1999; Walsham 1995a; Orlikowski & Baroudi 1991). The next section justifies the use of case study as an appropriate method for this research.

3.5 Case study method

Yin (2009) defines case study method as “an empirical enquiry that investigates a contemporary phenomenon in-depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p. 18). By adopting this research method, researchers are required to undertake real-life investigations, and can understand complex interactions among stakeholders, technologies and organisations. Benbasat, Goldstein and Mead (1987) argue that case study method is appropriate for IS research as researchers can perform the study in the organisation as a ‘natural setting’. Further, the case study method is most likely to be appropriate to generate answers to ‘how’ and ‘why’ questions.

The researcher argues that interpretive case study method is the most appropriate approach for this research based on the following reasons. First, interpretive case study method relies on an underlying social constructivist epistemology (Klein & Myers 1999), and presupposes that knowledge of reality is a social construction by human actors, which is in line with the adopted research paradigm and epistemological and ontological assumptions. Second, the objective of this research is to explore and derive insights into the implications of sensemaking processes on reactions (including resistance and support). Given there has been little research on the influence of sensemaking on reactions to change; this research is exploratory in nature. The case study method supports the exploration of potential patterns of interaction and facilitates in-depth understanding of their outcomes (stakeholders’ thoughts and actions) (Walsham 1995b) towards IT implementation. Third, this study aims to answer how sensemaking processes influence the development of different reactions to IT implementation. As mentioned earlier, this type of research question is appropriate for a case study strategy. Finally, understanding sensemaking processes requires considering contextual conditions, which can be achieved using case study method.

3.5.1 Multiple case study design

The research design is an “action plan” (Yin 2009) that helps the researcher answer the research questions. It sheds light on how the research is to be conducted in order to achieve the research objectives. In this study, the researcher sought to develop the research design, prepare required research documents, plans and procedures, and devise data collection protocols and data analysis approach.
A multiple case study design was chosen for this study. Researchers select and study more than one case, primarily with an instrumental interest in those cases, in order to exemplify and shed light on an emerging issue and investigate a certain pattern of behaviour (Stake 2013, 2005). According to Yin (2009), collecting data from several different sources provides a helpful foundation for comparison and improves learning about the phenomenon. Moreover, multiple cases allow more investigation of the issue of concern and provide “more in-depth or multifaceted insights” (Liamputtong 2009, p. 193). This research includes two case studies.

Luck, Jackson and Usher (2006) define case as “a single specific phenomenon. Case study research has particular boundaries; therefore, the case is a system that is bounded by time, place, event or activity, and these boundaries can assist in limiting data collection. These boundaries are explicitly set via the description of the locale, culture, group process or institution” (p. 104). Furthermore, in order to collect appropriate data for answering the research questions, the study needs to define case and specify its context and constitutive activities.

This research also adopts a longitudinal, cross-sectional design by collecting data at two points in time: pre-implementation (i.e. after a decision is made about a new IT implementation but before its initiation) and post-implementation (i.e. the implementation is complete and the new IT innovation is in use). This recurrent cross-sectional design allows the researcher to study social phenomena, investigate and compare complex interpretive activities over a period of time in order to capture their dynamics and explore changing conditions (Yin 2009; Orlikowski & Baroudi 1991). The study involves 29 participants from stakeholders with various change roles (19 CRs and 10 CAs in total).

3.5.2 Research case selection

In line with the objectives of this research, the case is defined as IT implementation in an organisation. In order to select appropriate cases for this study, four criteria were considered and applied: 1) the organisation plans to implement an IT innovation that involves controversial changes that may stimulate diverse interpretations, responses and reactions of stakeholders, 2) IT implementation process (from adoption to post-implementation and use) takes six to nine months, 3) IT implementation involves multiple functional units of the organisation, and 4) the implementation is carried out by in-house change agents.

3.5.3 Data collection methods

This study conducted multiple data collection methods including semi-structured interviews, diaries and documentary information. The study also used different and complementary sources of data in
order to gather comprehensive and rich data through triangulation (Liamputtong 2009), and to strengthen the credibility of the research and enhance the reliability of research outcomes. It involved several participants (multiple interviewees from both CAs and CRs) during different IT implementation stages in two distinct cases, as previously mentioned. Where applicable and possible, the researcher also attended public or team discussions, meetings and change related events, and took field notes in order to capture and investigate interactions, reactions, conditions and settings. The adoption of multiple data collection methods enables the study of sensemaking processes from different perspectives, and allows the investigation and understanding of stakeholders’ motives, attitudes and behaviours.

The strengths and weaknesses of the three adopted data collection methods for this research are presented in Table 3.1 (Yin 2009; Balogun, Huff & Johnson 2003).

### Table 3.1 Sources of evidence for this research: strengths and weaknesses

<table>
<thead>
<tr>
<th>Source of evidence</th>
<th>Strengths</th>
<th>Weaknesses</th>
<th>How to deal with weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews</td>
<td>• Targeted: focuses directly on case study topics</td>
<td>• Bias due to poorly articulated questions</td>
<td>• Ask questions in an unbiased manner</td>
</tr>
<tr>
<td></td>
<td>• Insightful: provides perceived causal inferences and explanations</td>
<td>• Response bias</td>
<td>• Use multiple methods of data collection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Inaccuracies due to poor recall</td>
<td>• Rely on multiple sources of evidence to corroborate any insight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reflexivity: interviewee gives what the interviewer wants to hear</td>
<td></td>
</tr>
<tr>
<td>Diaries</td>
<td>• Useful to track events through time from the perspective of the practitioner</td>
<td>• Little available guidance for their use</td>
<td>• Plan semi-structured diaries</td>
</tr>
<tr>
<td></td>
<td>• To repeatedly capture large amounts of data on a particular activity</td>
<td>• Can be time consuming</td>
<td>• Ask for comments immediately after a relevant event occurs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Use audio or written formats</td>
</tr>
</tbody>
</table>
3.5.3.1 Semi-structured interviews

Interviews are essential sources of evidence for a qualitative study (Yin 2009). In-depth interviews enable the researcher to elicit rich information from the perspective of participants on the phenomenon under investigation, and seek an understanding of participants’ thoughts, perceptions, interpretations, feelings and experiences (Liamputtong 2009, p. 43). This research used semi-structured in-depth interviews as the main method of data collection. The semi-structured interview has an agenda (i.e. some topic areas) or an incomplete script (i.e. some questions) that needs to be covered during the interview; however, there is a need for improvisation (Myers & Newman 2007). The researcher has the flexibility to discuss issues, interpretations and meanings more deeply. Moreover, the interview is a kind of conversation between the researcher and participants. Through the conversation, this method helps the researcher to access deep information about participants’ constructed meanings, understand their motives, and make sense of their interpretations of a specific action, occasion or practice (Liamputtong 2009).

This study conducted in-depth interviews with key stakeholders (from both CAs and CRs at different levels) in two main parts. First, it sought to investigate how they perceived IT implementation process (by asking questions like: “what are the expected gains from…?”; “have there been any changes in…?” or “what influence does IT implementation have on…?”) and the rationale behind the changes (by asking questions like: “what do you mean by…?” or “why did you do that?”). The aim was to listen to their stories and experiences, elicit their expectations and interpretations of these changes, and understand their feelings and thoughts. Thus, interviewees were asked to describe IT implementation process and related changes in their organisation, and explain how changes affected their work, status, relationships and activities. Second, the study attempted to understand and interpret their subsequent actions (or inactions) toward IT implementation and changes. The interviewees were asked to describe
how they reacted for or against change; how they negotiated their understandings and interpretations of change with others; and how they affected the change process.

The interview protocol was informed by the research objectives and sought to explore and capture participants’ experience and reflections on change processes and their reactions towards IT implementation. Following Walsham’s (1995a) suggestion that theory should guide the initial empirical work in interpretive case studies, the development of interview questions was guided by the sensemaking perspective. Nevertheless, the researcher attempted to remain open to other questions that became relevant to the research objectives and emerging analysis. In this study, the interview protocol consisted of questions organised under seven headings, including: participants’ background, roles, and work practices; interactions amongst and between stakeholder groups; information sharing and negotiation processes; expectations; meaning construction processes; perceptions and change experience; and reactions (feelings, attitudes and behaviours) towards change. (The interview guide is presented in Appendix A.)

This study sought to conduct multiple interviews with a reasonable number of participants from both CA and CR groups. The researcher conducted 28 interviews with 15 participants in the first case study (six CAs and nine CRs), and 26 interviews with 14 participants in the second case study (four CAs and 10 CRs). Two rounds of interviews were conducted at two stages of IT implementation (pre- and post-implementation) to gain further insights into sensemaking processes, their dynamics and their impacts on stakeholders’ reactions to change. (More detail about participants and interviews will be presented in chapters 4 (see Table 4.2) and 5 (see Table 5.2).

3.5.3.2 Diaries

Diaries can help the researcher track events from the perspective of participants and explore how change is perceived and reacted to (Balogun, Huff & Johnson 2003). In this study, written semi-structured diaries were used to collect reflections and perceptions of participants during IT implementation. CAs and CRs were asked to record important events and issues related to IT implementation, provide their comments and reflections on those situations, and answer some questions such as: “what is going well and why; what is going badly and why; what problems do you foresee; what have been the significant events; and what rumours are circulating?” (Balogun & Johnson 2005, p. 1577). The researcher obtained 12 written diaries from six participants (three CAs and three CRs) in the first case study, and 10 written diaries from five participants (three CAs and two CRs) in the second case study. (More detail about participants and diaries will be presented in chapters 4 (see Table 4.2) and 5 (see Table 5.2).) (The diary guide is also presented in Appendix B.)
3.5.3.3 Documentation

This source of evidence can take several forms (Yin 2009) such as: email correspondence; notes, diaries and documents; agendas and minutes of meetings; proposals, plans, presentations and reports; announcements and news; and project websites. These documents help the researcher to strengthen the validity and authenticity of collected data from other sources, obtain more details about events and actions, and attain other clues and evidence of interactions. This method was used to collect background information on IT implementation process and change prior to interviews.

3.5.4 Data analysis approach

3.5.4.1 Data analysis strategy

Qualitative analysis methods seek to make convincing sense out of the data, involving a “detailed, intensive, microscopic examination of data in order to bring out the complexity of what is in those data” (Strauss 1987, p. 10). This study employed concurrent data collection and analysis activities. According to Miles and Huberman (1994), data collection and data analysis should overlap to allow for flexibility in data collection procedures; therefore the researcher remains open to new ideas or patterns, which may emerge. Conducting data analysis also helps the researcher to justify how much data needs to be collected. Moreover, qualitative data analysis is a continuous and iterative process of data reduction, data display and conclusion drawing/verification activities (Miles & Huberman 1994).

A key factor in determining the strategy of the data analysis was the use of theory in this research. As explained in section 3.3, this research adopts the interpretive paradigm and assumes reality as subjective and a social construction. The use of theory plays a fundamental sensitising role in interpretive research. Klein and Myers (1999) state that “interpretive researchers are not so interested in ‘falsifying’ theories as in using theory more as a ‘sensitizing device’ to view the world in a certain way” (p.75). This study follows Walsham (1995a) approach for the uses of theories in an interpretive research. In the earlier stages of the research, sensemaking theory was used “to create a sensible theoretical basis to inform the topics and approach of the early empirical work” (Walsham 1995a, p. 76) and as an initial guide to the research design and data collection. However, the researcher tried not to be constrained by the adopted sensemaking lens or other theoretical concepts. As Walsham (1995a) suggests, an interpretive study can use theories to inform initial data collection, then remove ‘scaffolding’ during data analysis and remain open to field data.

It is desirable in interpretive studies to preserve a considerable degree of openness to the field data, and a willingness to modify initial assumptions and theories. This results in an iterative
process of data collection and analysis, with initial theories being expanded, revised, or abandoned altogether. A simple metaphor for this latter case is the use of scaffolding in putting up a building, where the scaffolding is removed once it has served its purpose. (Walsham 1995a, p. 76)

Further, to remain open to field data and avoid being constrained by a priori learning and experience, this research follows a grounded theory analysis as its data analysis strategy. Glaser and Strauss (1967) put forward and developed the Grounded Theory as a systematic methodological strategy for analysing data and with the goal of arriving at a theory from data. Charmaz (2014) has developed an interpretation of grounded theory that assumes that individuals co-construct meanings in their social interactions. In this perspective, neither data nor theories are discovered, but are constructed by the researcher as a result of his or her interactions with the field and its participants (Charmaz 2014; Bryant & Charmaz 2010). Charmaz’s constructivist approach to grounded theory is:

A constructivist grounded theory recognizes that the viewer creates the data and ensuing analysis through interaction with the viewed. Data do not provide a window on reality. Rather, the ‘discovered’ reality arises from the interactive process and its temporal, cultural, and structural contexts. Researcher and subjects frame that interaction and confer meaning upon it. The viewer then is part of what is viewed rather than separate from it. (Charmaz 2000, pp. 523-524)

I aim to see the world as CAs and CRs do – “from the inside” (Charmaz 2014, p. 24). Thus, it is acknowledged that a grounded theory analysis of the CA and CR reactions to IT implementation offers an “interpretive portrayal” of the studied phenomena (Charmaz 2014, p. 17).

The data analysis strategy in this research consisted of two phases: within- and cross-case analysis. During the former phase, in addition to studying and characterising the background of each case organisation and its IT implementation process, in-depth analysis of the collected data (interview transcripts and other evidence) was conducted to explore themes and patterns of sensemaking and social interactions within the case. In the latter phase, thematic analysis across all studied cases was conducted plus an interpretation of meanings, understandings and insights.

3.5.4.2 Unit of analysis
The main objective of this research is to understand sensemaking processes of CAs and CRs during IT implementation, and investigate how sensemaking may shape their attitudes and actions, affecting the development of resistance to, or support of, change. As sensemaking involves individuals’ interpretations, social interactions, the construction of meaning between them, and collective action
(Maitlis 2005), the unit of analysis is individual from which conclusions about individual and group reactions and behaviours would be drawn.

3.5.4.3 Data analysis method

This research follows the Grounded Theory data analysis method and adopts the coding and categorisation techniques of Charmaz (2014) to analyse the collected data. The method is a systematic, comparative and interactive process and involves multiple steps. Data analysis commenced after conducting the first round of data collection and included the following key activities (Charmaz 2014):

- **Initial Coding** – I started by performing line-by-line coding for the collected data (interviews and diaries) from CRs and CAs separately. These codes summarise and account for actions, reactions and processes (what people are thinking, saying, doing, achieving or making), changes, events, incidents, implicit meanings (initial appraisal of events and how people attribute traits and causes to events) and routines. When labelling initial codes, I followed suggestions for using gerunds and tried to answer the questions of ‘what is happening here?’, ‘what are people doing or saying?’, and ‘how people think or feel?’ (An example of using initial coding during data analysis is presented in Appendix C.) I also used collected project documents and notes to enhance my understanding of the context, events and actions, and attain other clues and evidence of interactions.

- **Focused Coding** – Identifying focused codes was the second step in my data analysis. According to Charmaz (2014), “Focused coding requires decisions about which initial codes make the most analytic sense to categorize your data incisively and completely” (p. 138). In this step, I identified and used the most significant and/or frequent initial codes to organise, synthesise, and label larger amounts of data (Charmaz 2014). I tested initial codes against other collected data (i.e. interviews, diaries or other captured evidence), sought emerging patterns of actions, relationships, conditions and consequences, and tried to find possible links between codes. I compared and analysed initial codes to find plausible groups that make the most sense and best summarise and synthesise codes or large amounts of data. This process helped me to raise initial codes to a higher conceptual level and decide on the focused codes. I further compared and re-examined the identified focused codes against data in order to refine them. (An example of developing focused codes during data analysis is provided in Appendix D. Appendix E presents the list of focused codes that resulted from the two cases for both CAs and CRs.)
• Re-Coding – In this iterative data analysis process, I continued to re-code or define new codes, compare, refine or combine existing codes, and find dimensions of identified codes.

• Memo Writing and Constructing Categories – I wrote memos to develop my ideas, noted my interpretation and understanding of the collected data and identified focused codes. Memo writing helped me to reflect on the data, analyse links and relationships between defined codes, and construct and explicate tentative categories. First, I started with the emerged focused codes from CRs. I wrote memos for each of them that could be considered as a ‘container’ for other code(s) and was raised to a category (Charmaz 2014). Then, I conducted this step for the collected data from CAs in which I elaborated the tentative categories for CAs. I investigated these categories regarding their characteristics, the conditions and context in which the categories arose, were maintained or changed, their consequences, and their relationships with other categories from both CAs and CRs. (An example of how each category is summarised in memos is presented in Appendix F.)

• Constructing Themes – I have analysed and developed focused codes and categories to construct themes that summarise larger segments of data and account for underlying meanings or patterns of those codes and categories. Using ‘constant comparative methods’ (Glaser & Strauss 1967) and following Charmaz’s (2014) guidelines for establishing ‘analytic distinctions’, I searched for similarities and differences. I read and reread data for recurring, emergent or patterns. By following this approach, the first round of data analysis allowed comparison, pattern identification, and initial themes to emerge. Then, the subsequent rounds of analysis (including systematic comparison across units of data, synthesis and classification) enriched the initial set. Further, although the development of the themes was grounded in the data, it was informed by the objectives of this research too. In other words, a determinant of a theme was my judgment of it regarding its relevance and significance to the research questions (Braun, Clarke & Terry 2014). (see Appendix G and Appendix H for the constructed themes.)

This research used the Atlas.ti (Atlas) software tool for qualitative data analysis. After each round of data collection, the researcher prepared all the collected data (including transcribed interviews, diaries, documentary information, meeting notes and memos) and imported them into the Atlas.ti.

During the data analysis process, I followed Charmaz (2014) suggestions and used different strategies and techniques (including memo-writing, diagramming, and developing comparative and summary tables) to identify significant categories and link or integrate them into themes and theory. In this
process, I also used the clustering technique to structure data, understand and reflect on data, and move into studying actions (Charmaz 2014). According to Charmaz (2014), in a constant comparative process, the researcher “choose to raise certain categories to concepts because of their theoretical reach, incisiveness, generic power, and relation to other categories. Raising categories to concepts includes subjecting them to further analytic refinement and involves showing their relationships to other concepts” (p. 139). The used strategies and techniques assisted the researcher in developing the identified categories by defining their properties, delimiting their scope, weighing and locating them in relation to each other, and delineating possible connections and relationships between them. The researcher may need to sort, compare and ‘juggle’ several categories to see how they fit together and can be integrated into a theory. Charmaz (2014) argues that:

Although tools may help, constructing theory is not a mechanical process. Theoretical playfulness enters in. Whimsy and wonder can lead you to see the novel in the mundane. Openness to the unexpected expands your view of studied life and subsequently of theoretical possibilities. Your hard work reins in those ideas that best fit the data and brings them to fruition. (pp. 135-136)

In this research, the data analysis was conducted separately for CR and CA groups of participants in a two-step process:

- First, I analysed the collected data (interviews and diaries) from CRs. By following the explained data analysis process, I constructed 21 categories in analysing two cases for CRs. (Appendix G presents the list of categories for CRs raised from the identified focused codes.)
- Second, I reviewed and analysed the collected data (interviews and diaries) from CAs. In this step, I constructed 19 categories and 7 themes. (Appendix H shows the list of categories and themes for CAs.)

The constructed categories and themes are used to present and discuss the results of within- and cross-case analysis phases. In addition, I conducted a second analysis and focused on differences and similarities between the collected data at pre- and post-IT implementation stages. I examined and compared emerging codes and constructed categories to explore themes and understand change over time. When performing this step, I tried to investigate and answer questions about what is different, what increases or emerges, what decreases or ceases, what remains constant or consistent, and what contextual and intervening conditions appear to influence and affect change (Saldaña 2003).
3.5.5 Strategy for writing up the results

This section outlines the strategy for writing up the results of within-case analysis of each of the two cases (chapters 4 and 5), cross-case analysis (chapter 6), and the discussion of the research findings (chapter 7, sections 7.2 and 7.3).

3.5.5.1 Writing up case studies

Chapter 4 presents the results of the first case study (ExMoney) and chapter 5 presents the results of the second case study (GovOrg). These two chapters are structured as follows:

- **Background to the case** – Many scholars have recognised the potential effects of context on the findings of research studies and have emphasised the importance of describing the context within which the phenomenon is occurring (Yin 2009; Stake 2005). This research provides a rich description of the case organisations, their products and services, and the context of IT implementation.

- **Details about research participants.**

- **Discussion of results** – The discussion of results of the within-case analysis includes the perspectives of CA and CR groups of IT implementation stakeholders.

The researcher has used pseudonyms for the two organisations and their related departments, sites, and systems, as well as participants to maintain confidentiality and anonymity following the ethics protocol that guided this research.

For writing up the cases, the results are presented based on the research questions. For each case, I discuss the themes that represent perspectives and reactions of CAs and CRs. The first research question (RQ1) focuses on sensemaking processes and is concerned with investigating and understanding how CAs and CRs make sense of IT implementation. To answer RQ1, I discuss the constructed categories and themes that are related to sensemaking processes of CAs and CRs (e.g. Figure 3.2 illustrates related themes used to investigate sensemaking processes of CRs).
The second research question (RQ2) is about understanding the implications of sensemaking on stakeholders’ reactions to IT implementation and change. I organise the related categories and themes to reactions to change in order to discuss the answer for RQ2 (e.g. Figure 3.3 illustrates related themes used to investigate reactions of CRs to change).

![Figure 3.2 Organisation of categories for focusing on RQ1 for CRs](image)

![Figure 3.3 Organisation of categories for focusing on RQ2 for CRs](image)
3.5.5.2 Writing up cross-case analysis

Chapter 6 presents and discusses the results of cross-case analysis in which findings from each case are compared and contrasted. The cross-case analysis aimed to seek out meaningful patterns and insights relevant to the CAs’ and CRs’ sensemaking processes and which can explain the factors that influence and shape their reactions to change during IT implementation. The seven identified themes (Developing mutual understanding, Appraising change and constructing meanings, Interacting with others, Seeking benefits, Feeling involved, Attitudes and reactions to change and Justifying reactions) served as the starting point for comparing the findings and reflecting on the similarities and differences across both cases. Further, diagrams and tables were included to present and discuss the developed categories, investigate and compare their scope, properties, relative power, and directions, and specify and demonstrate possible relationships amongst them (Charmaz 2014). They were also used to highlight similarities, differences, and associations between the two case studies in each theme.

3.5.5.3 Writing up the discussion of the research results

Chapter 7 includes the discussion of the research results. In this chapter, I return to some of the relevant ideas from the sensemaking, users’ reactions to change (including resistance and support), and other relevant studies to discuss the results of my research and show how and where my research fits or extends relevant literature (Charmaz 2014). The discussion is written under the following sections:

- Section 7.2 – Discussion of the research findings: this section discusses the findings of the research and draws together threads from the within-case (in chapters 4 and 5), and cross-case (in chapter 6) analysis under the seven identified themes. In this section, I also use cluster diagrams to show links and relationships between parts of the emerging patterns, to highlight the factors that appeared to influence the theoretical categories, and to summarise the discussion about the identified themes.

- Section 7.3 – Discussing findings from the sensemaking perspective: this section reflects on and discusses the findings of this research by adopting the sensemaking perspective proposed and elaborated by Weick (2012a, 2001, 1995). I return to the literature on sensemaking to discuss insights into CA and CR reactions to IT implementation. In this section, I apply the seven properties of sensemaking to investigate the reciprocal relationships between interpretations and actions (Maitlis 2005; Weick, Sutcliffe & Obstfeld 2005), and seek more insights into the sensemaking of CAs and CRs and their reactions.
Further, in this chapter I derive a model to present and discuss the relationships amongst the themes. The model shows how CA and CR reactions to IT implementation arise from and are shaped by social interactions, meaning construction and sensemaking both within and between the two groups.

### 3.6 Validity of research results

Considering and demonstrating validity and trustworthiness of a qualitative study is important. Scholars have suggested multiple criteria for achieving and determining the validity of research. As the nature of knowledge is different in research paradigms, the criteria for establishing and assessing validity must be appropriate and relevant to the selected research paradigm in each study (Lincoln, Lynham & Guba 2011; Morrow 2005). Lincoln and Guba (1986) propose four criteria in the qualitative paradigm to establish and ensure trustworthiness of interpretation: credibility, transferability, dependability, and confirmability. They also add a second set of five criteria as authenticity to consider the influence of context and assess the quality of the findings beyond methodological dimensions, including fairness, ontological authentication, educative authentication, catalytic authentication, and tactical authenticity (Lincoln, Lynham & Guba 2011; Guba & Lincoln 1989).

To establish trustworthiness, different strategies are explicated (Krefting 1991; Guba & Lincoln 1989). For instance, Lincoln and Guba (1985) suggest using triangulation and prolonged engagement techniques to attain credibility, following a thick, descriptive data strategy to improve transferability, establishing audit trails and examining research processes by external auditors to achieve dependability and confirmability. These strategies and techniques are recommended to “guide the field activities and to impose checks to be certain that the proposed procedures are in fact being followed” (Lincoln & Guba 1985, p. 330). (Table 3.2 presents a summary of the recommended strategies for establishing the trustworthiness of the study. Some of these strategies can be applied to achieve and demonstrate more than one of the discussed criteria.)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Strategy/Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>• Triangulation of data sources and methods</td>
</tr>
<tr>
<td></td>
<td>• Prolonged engagement</td>
</tr>
<tr>
<td></td>
<td>• Reflexive journal</td>
</tr>
<tr>
<td></td>
<td>• Peer debriefing</td>
</tr>
<tr>
<td></td>
<td>• Referential adequacy</td>
</tr>
</tbody>
</table>

Table 3.2 Summary of strategies for establishing trustworthiness (Lincoln & Guba 1985)
Throughout this study, I have used appropriate techniques to meet these criteria (including credibility, transferability, dependability, and confirmability), and establish and ensure trustworthiness and authenticity of findings that emerge from this research. The techniques are applied to ensure quality research, increase trustworthiness of the data collection and data analysis, and enhance the validity of the research results.

### 3.6.1 Credibility

*Credibility* is a fundamental construct in qualitative research and refers to the way in which the researcher presents the research settings and method, the context and the research findings. It is about the extent to which the data and data analysis are plausible and trustworthy. Charmaz (2006) states that credibility is the criterion to assess whether the research findings reflect a reasonable and plausible interpretation of the collected data from the perspectives of the research participants.

To ensure credibility in this research, the theoretical perspectives informing the study have been discussed as have the research data collection methods and data analysis approach and strategy (including the adopted coding and categorisation techniques). Further, efforts have been made to discuss the case settings for the two case studies and provide information about the research participants.

Triangulation is highlighted as an important technique in increasing the credibility of the research (Lincoln & Guba 1985). For this purpose, I applied the triangulation technique by conducting multiple data collection methods including semi-structured interviews, diaries and project documents. I also used different and complementary sources of data including several participants from both CA and CR groups pre- and post-IT implementation in two case studies.

Another technique that can help increase confidence in the research results is prolonged engagement and field experience. I arrange prolonged involvement in both case studies. I collected data over nine
months in the first case and six months in the second case, which helped me to gather more details about settings and processes, learn the work culture, and better understand interactions and relationships. I also attended public or team discussions, meetings and change related events, and took field notes of interactions, reactions, conditions and settings.

Following Lincoln and Guba (1985) and Walsham and Sahay (1999), I adopted appropriate practices (such as taking field notes, memo-writing, peer debriefing, and reflexivity) to enhance the credibility of and confidence in my data analysis. I have followed the grounded theory memo-writing strategy, especially during my data collection and data analysis processes. To review and discuss the process and outcomes, I have had several meetings with my supervisors throughout the research process. I have also maintained a reflexive journal and audit trail, in which I recorded various research activities and documented emergent ideas throughout my study.

3.6.2 Transferability

Transferability refers to the extent to which research findings can be generalised or extended to new contexts outside the actual study context, and be applicable to other groups and settings. Transferability is discussed as a considerable challenge in qualitative research due to the subjectivity of the data collection and data analysis processes (Darke, Shanks & Broadbent 1998). However, a qualitative researcher can enhance transferability and generalisability by providing information about the research context and participants, and detailing the research methods and processes. Walsham (1995b, 2006) argues four possible types of generalisations from interpretive case studies: development of concepts; generation of theory; drawing of specific implications; and contribution of rich insight. These kinds of generalisation are suggested as “explanations of particular phenomena derived from empirical interpretive research, which may be valuable in other organizations and contexts as interpretations of phenomena but which are not wholly predictive for future situations” (Walsham 1995b, p.79).

In this research, there was no intention of generalising research findings across the cases. The study was informed by understanding that stakeholders may demonstrate different emotional, cognitive and behavioural responses to change depending on their understanding and interpretation of context. However, I have applied different techniques to enhance the transferability of the findings of this research. For example, I have undertaken a multiple case study design with the aim of having a multi-faceted understanding of the CA and CR sensemaking and reactions towards IT implementation.

According to Lincoln and Guba (1985), the triangulation technique can increase the transferability of research. For this purpose, I have used multiple data sources including interview transcripts, diaries,
and IT implementation related documentation, which has helped to increase the richness of the descriptions of the research setting. Consistent with Klein and Myer’s (1999) principle of contextualisation, I tried to collect detailed information about the context, events and participants from multiple sources, for example, during interviews or when attending public or team meetings. I have attempted to provide ‘thick description’ and details about the settings and participants so that others can make decisions about the applicability of findings of this research in other contexts.

3.6.3 Dependability

*Dependability* relies on a transparent, explicit and documented research process, one that is auditable and traceable. This criterion can be accomplished and demonstrated through establishing and keeping a detailed audit trail and chronology of research procedures and activities, influences on the data collection and analysis; emerging themes, categories, or models; and analytic memos (Morrow 2005). Dependability refers to the consistency of the research findings, and the process of inquiry. It can be achieved through a process of auditing, where other researchers can track the research design, and follow and examine data collection and analysis procedures.

To ensure the transparency of the followed research process and to enhance the dependability of the findings, I have explained and discussed my research design in detail. I have tried to provide detailed descriptions of different conducted research processes, including devising the data collection protocols and data analysis approach, collecting data from various sources, and conducting the coding and categorisation cycles of the grounded theory analysis. I have attempted to establish and maintain a chain of evidence throughout the study, which would allow an external observer to follow the derivation of the findings of this research. Further, the research process and many of the resulting findings have been presented to disinterested professionals and reviewers in the IS community.

3.6.4 Confirmability

*Confirmability* is concerned with establishing and maintaining documentation in which data can be traced back to its source, demonstrating that interpretations and assertions are coherent and derived from the data, and confirming that the research findings are supported by the collected data. Confirmability is related to dependability and many of the procedures proposed to achieve dependability can be used to seek confirmability criterion. Morrow (2005) argues that confirmability “is based on the perspective that the integrity of findings lies in the data and that the researcher must adequately tie together the data, analytic processes, and findings in such a way that the reader is able to confirm the adequacy of the findings” (p. 252).
I have followed a number of strategies to improve the consistency in data collection and analysis processes, and ensure the integrity and confirmability of the research findings. First, I used the case study protocol to guide the research process. The case study protocol is argued as a key tool in increasing the reliability of case study research and guiding the investigator in carrying out case studies (Yin 2009). The protocol included the instrument (e.g. the interview questions), as well as procedures and general rules that should be followed in using the protocol. This ensured consistency in the data gathering procedures within and across cases. Second, I used the triangulation of data collection methods and sources of data. Third, I attempted to take field notes during the data collection process for future reference. Fourth, I tried to maintain a journal and audit trail throughout my study, in which I recorded events, activities and new ideas. Further, I systematically numbered, stored, and organised all interviews notes, transcripts, diaries, IT implementation-related documentation, field notes, memos, and drafts of the research notes. This approach allowed a consistent and traceable analysis of qualitative data and enhanced the confirmability of the research since the procedures and findings can be audited.

3.6.5 Authenticity

*Authenticity* relies on the quality and integrity of the research process rather than the research findings. It can be achieved by adopting an appropriate research design and demonstrating the thoroughness of the data collection and analysis processes. Authenticity (Guba & Lincoln 1994, 1989) includes:

- Fairness: requires establishing a fair stakeholder identification process, seeking different perspectives and reflecting a balanced representation of all constructions and values of participants.

- Ontological authenticity: considers increased awareness of the phenomena under study and the growth of participants’ perceptions through their research experience.

- Educative authenticity: refers to the gaining better understanding of and appreciating the perspectives and constructions of others through the experience of the research process.

- Catalytic authenticity: accounts for the extent of actions and decisions that are stimulated, facilitated or promoted by the research process.

- Tactical authenticity: assesses the effectiveness and quality of change actions undertaken by empowered participants throughout the research process.
3.7 Conclusion

The intent of this chapter was to make explicit, key decisions and justify them with regards to the conduct of this research. In this chapter, I discussed the research methodology, methods and design choices. I began by providing an overview of the interpretive paradigm as well as the rationale for its selection in this study. Next, data collection methods and process were explained including semi-structured interviews, diaries and documentary information. I then presented my data analysis approach and process including grounded theory data analysis method, and coding and categorisation techniques. Finally, thoughts on validity and trustworthiness of my research were discussed.

In the following chapters, I discuss the results that emerged from implementing the research design outlined in this chapter. Chapters 4 and 5 present the first (ExMoney) and second (GovOrg) case studies and chapter six discusses the results of the cross-case analysis.
Chapter 4

IT Implementation at ExMoney

4.1 Introduction

In this chapter, the ExMoney case study is described and analysed in detail, including an overview of case background, description of important features of the organisational context and IT implementation.

4.2 Case Study 1: ExMoney

ExMoney is a group of companies headquartered in Melbourne, Australia. Relying on two decades of business experience in financial activities, investments, currency market and the stock exchange, ExMoney is growing rapidly and becoming one of the leading currency exchange groups in Australia. Its main businesses are international money transfer and payments, currency exchange and currency trading. ExMoney has branches in Australia, Canada and Iran. It also has affiliate companies in Australia, Iran, UAE, Kuwait and China. (Figure 4.1 indicates the high-level organisational structure of ExMoney.)

Figure 4.1 Organisational structure of ExMoney
In 2012, ExMoney established a unique currency trade market, for selected currencies, by designing and developing an innovative and integrated web-based software solution in-house. This system allowed ExMoney to provide many of its services online to more than 5000 active customers. The system was developed and implemented in one year by a previous IT team. Since then, several amendments and minor changes had been applied to the system. However, this studied IT implementation at ExMoney was the first significant change and development to their previous IT systems and processes.

4.3 IT environment at ExMoney

Up until April 2015, the web-based software system of ExMoney had two subsystems: Customer Web Portal and Administration. The Customer Web Portal enables customers to conduct their money transfer or currency exchange transactions through a secure online access. This subsystem has the following modules:

- Customer profile: provides customer profile and account management functionality.
- Orders: enables online money transfer services between Australia and other countries, and serves about 15,000 accounts (customers).
- Market: allows for online currency trades.
- Currency exchange: supports online currency exchange orders for more than 30 different currencies. Through this section, customers can order their currency online and pick their order up from ExMoney stores or choose a currency delivery service.
- Reports: provides multiple customer reports and lists of orders and transactions.

The Administration subsystem manages and supports the Customer Web Portal and other services including functionality. The main modules and functions of this subsystem are:

- Customer management (profiles and accounts)
- Order management (money transfer and currency exchange)
- Market management (currency offers and trades)
- Branch management (commissions, transactions and statements)
- Payments management (bank accounts, deposits and withdrawals)
- Currencies and rates management (rates tables and charts)
• Content and website management (content, media and navigation pages)
• Reports and charts (accounts, operations and transactions).

The diversity of ExMoney’s currency trade and financial transactions has made the money process and accounting management very complex. Previously ExMoney had relied on disparate local accounting systems, which, while responsive to local business requirements, laws, and conditions, were not integrated, and this created significant problems for the business. In response to many issues the group faced, and as part of an IT infrastructure and services development plan, ExMoney decided to develop and implement a new accounting subsystem in-house, that would be integrated with the existing Customer Web Portal and Administration subsystem. The drivers for this project were as follows:

• Lack of standardisation: there are significant differences in financial policies, standards and rules across all countries with branches. ExMoney was not satisfied that a packaged software application or cloud solution could deliver on their requirement to meet policy regulations in all countries in which they traded.

• Differences in fiscal year calendars.

• Differences in tax rules, rates and calculations.

• Diversity of services provided.

• Legal requirements for currency exchange and transfer: financial legislation and considerations about currency exchange and money transfer between some countries are subjected to international laws on sanctions, limits and procedures, money laundering, transaction reports and analysis, and so on.

• The need for integration: some of the most important reasons for integrating accounting processes and aggregating financial transactions included gaining more insights into financial transactions and improving financial planning, providing integrated financial reports and analysis for the business, managing the distribution, circulation and availability of currency, providing automated functionalities, enhancing accounting efficiency and simplifying the process, and reducing costs.

• Business requirements for future development: the development plan of ExMoney into a financial institution and private bank requires considering new processes and functionalities (e.g. loan, investment and insurance) in the new system.
Figure 4.2 shows ExMoney’s existing systems structure prior to IT implementation and new updated systems.

Although the principal reason for IT implementation was to design and develop an integrated accounting system, the project included multiple changes and updates to other processes and systems. For instance, the account section, payment functionality and transactions, and reports in the Customer Web Portal needed to be updated or redesigned. Further, the payments management module of the Administration subsystem and many other financial operations and accounting processes were also being developed and moved to the new accounting subsystem.

In this project, the IT team of ExMoney included three people in Australia (project manager, a business analyst and software developer) and four people in Iran (team leader/senior software developer, software developer, system designer and database designer). The team used multiple methods of communication such as phone, email, Skype and other forms of digital communication. The project team conducted regular meetings via Skype to discuss and decide on design and implementation.
details. The project manager also coordinated regular meetings to review and manage project plans and progress with the team leader and other team members.

The employees in the ExMoney’s head office were informed about some aspects of IT implementation and change plans in weekly or fortnightly general meetings with their managers. However, there was not a well-established and effective communication process between Change Agents (CAs) in head office and employees, especially those who were in branches and offices outside Australia. Thus, many Change Recipients (CRs) had not been informed about decisions, plans, changes and the IT implementation process and impacts.

The project started in July 2014 and was due to be completed in seven months. However, due to some changes in the development plan and project scope (including separating out the accounting process for each country, expanding the currency exchange service, adding a money investment section, updating customer details and revising customer identification and verification process), the implementation was delayed and finally completed in April 2015. Table 4.1 shows IT implementation phases and primary activities at ExMoney.

<table>
<thead>
<tr>
<th>Phases</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Implementation</td>
<td>• Requirements gathering and analysis</td>
</tr>
<tr>
<td>(Jul 2014)</td>
<td>• Project and change planning</td>
</tr>
<tr>
<td></td>
<td>• Change management planning</td>
</tr>
<tr>
<td>Implementation</td>
<td>• System design</td>
</tr>
<tr>
<td>(Aug 2014 to Apr 2015)</td>
<td>• System development, update and testing</td>
</tr>
<tr>
<td></td>
<td>o Customer web application and services</td>
</tr>
<tr>
<td></td>
<td>o Administration system and services</td>
</tr>
<tr>
<td></td>
<td>o Accounting application and services</td>
</tr>
<tr>
<td></td>
<td>• Integrated accounting system deployment</td>
</tr>
<tr>
<td></td>
<td>• Training</td>
</tr>
<tr>
<td></td>
<td>• Data migration and system integration</td>
</tr>
<tr>
<td></td>
<td>• Final changes and enhancements</td>
</tr>
<tr>
<td>Post-Implementation</td>
<td>• Support</td>
</tr>
<tr>
<td>(Apr 2015 to May 2015)</td>
<td></td>
</tr>
</tbody>
</table>

IT implementation was considered successful in meeting project goals and objectives but over time failed to meet some expected deadlines. The process of establishing financial accounts, setting up
accounting procedures and changeover took place slowly, especially in branches outside Australia. However, despite some inconsistencies and issues, the system managed to deliver intended business outcomes.

4.4 Data collection for ExMoney case study

Data was collected at two stages of IT implementation (pre-implementation (Round one) and post-implementation (Round two)). The pre-implementation phase at ExMoney represents the period from the time the decision to adopt a new system was made by senior management to when the system started to be developed and was implemented. At this stage, the CAs at ExMoney began to consider the need to change IT systems, explore strategic directions, and identify IT implementation options. Also, the pre-implementation phase included determining the implementation approach, introducing change and informing CRs, gathering and analysing requirements, and planning project and change management. The post-implementation phase refers to the period in which changes were considered to be fully implemented as planned, and the new system had gone live and was being used.

Round one data collection was completed in September 2014. Round two interviews were conducted after the system was fully implemented and in use, during May and June 2015. The following list shows the data collection for this case study.

- Round one data collection
  - July to September 2014
  - 15 interviews conducted (six CAs and nine CRs)
  - 6 diaries collected (three CAs and three CRs)
  - 3 group meetings attended

- Round two data collection
  - May and June 2015
  - 13 interviews conducted (five CAs and eight CRs)
  - 6 diaries collected (three CAs and three CRs)
  - 4 group meetings attended

Table 4.2 shows interviews conducted and interviewee roles. Also, Figure 4.3 indicates where CAs and CRs were located in the organisation structure for ExMoney.
## Table 4.2 ExMoney participant details

<table>
<thead>
<tr>
<th>Codes</th>
<th>Round one</th>
<th>Round two</th>
<th>Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR1</td>
<td>XD</td>
<td>XD</td>
<td>Sales Director, Accountant</td>
</tr>
<tr>
<td>CR2</td>
<td>X</td>
<td>X</td>
<td>Accountant, System Operator</td>
</tr>
<tr>
<td>CR3</td>
<td>XD</td>
<td>XD</td>
<td>Sales Associate, System Operator</td>
</tr>
<tr>
<td>CR4</td>
<td>X</td>
<td>X</td>
<td>Sales Associate, System Operator</td>
</tr>
<tr>
<td>CR5</td>
<td>XD</td>
<td>XD</td>
<td>Branch Manager, Senior Accountant</td>
</tr>
<tr>
<td>CR6</td>
<td>X</td>
<td>X</td>
<td>Accountant, System Operator</td>
</tr>
<tr>
<td>CR7</td>
<td>X</td>
<td>*</td>
<td>Accountant, System Operator</td>
</tr>
<tr>
<td>CR8</td>
<td>X</td>
<td>X</td>
<td>Sales Associate, System Operator</td>
</tr>
<tr>
<td>CR9</td>
<td>X</td>
<td>X</td>
<td>Branch Manager, Accountant</td>
</tr>
<tr>
<td>CA1</td>
<td>XD</td>
<td>XD</td>
<td>Accounting Director, Senior Accountant</td>
</tr>
<tr>
<td>CA2</td>
<td>X</td>
<td>*</td>
<td>Developer, System Designer</td>
</tr>
<tr>
<td>CA3</td>
<td>X</td>
<td>X</td>
<td>Managing Director</td>
</tr>
<tr>
<td>CA4</td>
<td>X</td>
<td>X</td>
<td>Accounting Manager</td>
</tr>
<tr>
<td>CA5</td>
<td>XD</td>
<td>XD</td>
<td>Business Analyst, Designer</td>
</tr>
<tr>
<td>CA6</td>
<td>XD</td>
<td>XD</td>
<td>Project Manager, Senior Developer</td>
</tr>
</tbody>
</table>

**Key:**
- CR: Change Recipient
- CA: Change Agent
- X: interview has been conducted with the participant
- D: diary has been received from the participant
- *: resigned from company
Figure 4.3 Locating CAs and CRs at ExMoney
4.5 Round one: Pre-Implementation (ExMoney)

In this section, I will present and analyse the data from round one of data collection conducted at the pre-implementation stage at ExMoney. The discussion of perspectives for CAs and CRs and comments are presented across seven themes that emerged including Developing mutual understanding, Appraising change and constructing meanings, Interacting with others, Seeking benefits, Feeling involved, Attitudes and reactions to change and Justifying reactions. (More examples of CA and CR perspectives are provided in Appendix I.)

4.5.1 Developing mutual understanding

This theme covers CA and CR understandings of IT implementation and respective roles, status, needs and concerns, and attitudes and actions. It is also concerned with their expectation of being acknowledged, understood and considered by others.

4.5.1.1 CA perspectives

CAs at ExMoney expected CRs to understand and acknowledge the role and significance of IT implementation in their organisation. They explained market competition and business requirements and highlighted the positive impacts of IT on their performance and outcomes to CRs, and demonstrated its connection to their strategic IS/IT plan, which involved developing their systems to improve their services and remain competitive in the market. They expected appreciation of CRs regarding the role of IT implementation in the pursuit of a sustainable competitive advantage. Further, CAs expected CRs to understand and support their decisions and actions. CAs believed that their organisation and services were highly dependent on IT initiatives. They stated they had been investing in updates to existing systems and new IT-based business solutions for years. For instance, CA3, managing director, explained:

_We are a financial group, and we are so dependent on IT that we cannot run our business without it. It is a completely purposeful dependence ... and also a strategic plan. The major investment of our company is in IT ... [and most] of the services our company offers are based on IT. (CA3)_

Similarly, CA4, the accounting manager, emphasised the importance of this new system and hence its successful implementation in their company.

_We need to provide high-quality services and be very efficient and quick. ... IT has helped us to provide better services with lower costs, and also reach more customers in different countries and cities. ... From the accounting point of view, we need to be able to monitor, control and_
manage all transactions in an integrated system, and to see transactions of our branches and track them almost instantly. ... We need to improve our system; it is vital for us. (CA4)

CAs recognised that IT implementation would entail fundamental change in their business and accounting processes, and would involve considerable complexity, uncertainty and risks. However, they believed that change was essential to improve their position in the market and grow their business. CA3 described the competitive market as being ‘in the middle of a battle’, and thus, expected more understanding and cooperation from stakeholders in adopting the new system.

The business is going fast [growing and changing fast], we are in the middle of a battle, and we can’t stop. We have to keep going. ... We do understand our risks, and we try to manage that. ... We need to improve our IT systems, so the users are expected to participate actively and positively. (CA3)

The CAs appeared to be trying to gain trust by presenting themselves as experienced and successful, and by promoting their background and previous roles. They indicated that the management team had the experience and expertise to conduct and manage IT implementation. For example, CA3 commented that “we have a small but strong team of experts in finance and IT here to accomplish this project” (CA3). It could be noted that they were trying to assure CRs that their plans and decisions for improving the system were sound. CAs expected CRs to acknowledge them and their role, and understand their decisions and actions. Typical of the way in which the CAs promoted their experience and suitability to be driving IT implementation is the following quote (see Table I.1 of Appendix I for more quotes):

As an accountant, I’ve been involved in implementing financial and administration systems for different clients, because I was also a partner in a chartered accountant firm. So, we had clients that needed systems to be implemented. Also, I implemented a financial accounting system for superannuation ... So, I do have enough experience, I suppose, to talk about IT implementation and decide about the future changes. (CA1)

CAs explained that changes in the new system were designed to make the lives of users’ easier by better meeting their needs, resolving previous issues, considering priorities, and designing a more effective and comprehensive solution.

It is going to get better, and ... the IT people, the director, everybody is working very hard to ... make everything go smoothly, particularly because we are working with people’s money. So, we have to be very careful, and we have to take care of our customers and staff, and we need to do it [IT implementation] as smoothly and reliably as we can. (CA4)
CAs stressed the role of identifying and understanding CR requirements. CA2 explained that examining and understanding business processes, existing systems, and users’ routines would help him to better comprehend their requirements.

*As a developer, I believe that knowing more about the business processes and users’ daily routines will be very helpful for me. If I know the processes and the logic behind the system, I can realise users’ needs and conditions better. (CA2)*

CAs also described the importance of understanding the concerns of CRs. However, the challenges of successfully communicating across difference groups were evident. CA3 for example noted the importance of having ‘good ears to listen to people’ while CA4 explained that CAs and CRs must ‘understand each other’. This was a challenge for CAs because they are not always familiar with the issues CRs are concerned about and lack insights into some of the challenges of CRs’ priorities.

*I always try to work close with the IT guys as well as the users in my section, because there are two different languages between accounting and IT guys. If we can talk in one language, everything will go smoothly. Otherwise, no one understands one another. Bringing it down to one language is always hard and results in some misunderstanding, and something may happen which is not exactly what you want ... we have to be patient about this until we have the common language, so we know what users want and know what we have to provide that... then we can make a conversation easily together, and we understand each other. (CA4)*

Other CAs stressed the importance of hearing and appreciating diverse perspectives, although they recommended a cautious approach, as not all CR ideas and needs could be implemented or applied. Business conditions and other priorities could mean that some CR needs or requests might need to be deferred. Decisions about priorities were seen as a managerial responsibility and the view of CAs was that CRs would need to understand and respect such decisions.

*Everyone’s ideas need to be thought about, but it doesn’t seem proper that anybody just demands a change and that occurs ... Changes have to be confirmed by the manager and depending on the conditions and their plans, and also if it is possible for the IT section, they consider the changes. (CA1)*

The comments and perspectives of CAs suggest the importance of building mutual understanding between CAs and CRs. For example, CAs explained the significance of IT implementation in their organisation and expected CRs to acknowledge decisions and plans, understand changes, and support
them. Some CAs emphasised their efforts in identifying and understanding the needs and requirements of CRs. They believed they had tried different approaches to understanding CRs and their concerns.

4.5.1.2 CR perspectives

CRs at ExMoney expected CAs to understand and value their requirements. They expected to be heard and their concerns, needs and priorities carefully considered and explicitly responded to. Like CAs, CRs acknowledged the importance of developing mutual recognition and understanding.

I expect that they [CAs] care as much as I do about the process, my needs and the issues I encounter, and understand that this accounting system is important for me. When I find an issue in the system or inform them about a deficiency, I expect they inform me of any changes they make and the process of resolving that issue or improving it ... So that I know they are doing something ... When I don’t receive any response, I think I have done something useless. (CR6)

CRs were also keen to review and discuss requirements and changes with CAs through regular discussions about IT implementation to express ideas, provide feedback and discuss concerns. CAs were expected to listen, understand needs, and consider priorities.

I think we [CAs and CRs] should have weekly meetings, and they [CAs] just let us speak about our ideas, our needs and the system. We need to have more communication about the system. Normally we have meetings but they just ignore that part. (CR2)

The CRs expected the CAs to acknowledge their work and value their experience and knowledge.

If they [CAs] respect my ideas and care about what I say, I am willing to help and work with them to improve the system. (CR6)

On the other hand, if CRs are not understood or considered, they may feel unimportant and excluded, resulting in the subsequent development of negative attitudes toward IT implementation. For example, a disgruntled CR3 noted that her “needs have not been considered in this project, and some of my problems haven’t been fixed”. Similarly, CR1 argued that her needs and concerns were not considered in the new system implementation and they had not been aware of the plans and changes. In her diary entry, CR1 commented that “as a user, I usually become aware of it when it’s almost done”.

Most CRs at ExMoney believed that communication about change had been inadequate and they did not know about the new changes. For example, CR4 commented:
We don’t know what the changes will be, almost nothing. They have just said the development team is supposed to prepare a new accounting system, and there will be some changes to the Admin system. We don’t know any other details. (CR4)

As CRs at ExMoney became aware of IT implementation, they tried to gain more information about decisions, plans and objectives. They sought to understand events and how these changes would impact them. CRs wanted to know about their role and conditions in IT implementation process.

Sometimes we talk about these changes. I asked CR5 about the new system the other day, and he said he doesn’t know anything either. (CR4)

Because CRs did not feel they had been informed about IT implementation and objectives, they did not seem to have a comprehensive understanding of events, changes, actions and conditions. They seemed to construct different interpretations about CA decisions and actions, and developed divergent expectations that had a negative influence on their response to change.

CRs were also concerned that CAs did not have a realistic and comprehensive understanding of the needs and concerns of CRs and were critical of CAs for not considering their requirements. CRs expected CAs to involve them in change discussion, especially where more senior managers were not familiar with the specifics of day-to-day core business activities. CRs were concerned that without sound communication, negotiation and mutual understanding, ExMoney would not achieve a successful and effective system implementation.

My manager has never registered a customer, a transaction or such things in the system, or get into details. Even the system developers don’t do these things. Because my manager doesn’t register currency exchange orders, he doesn’t know exactly what is required, or the implementation team don’t have the viewpoint that I have. That's why every single detail should be discussed so that they can see if the change is ok with the user, to see if the feedback is good, bad, or make it easier for the user or harder. But if they [managers and developers] don’t talk about the changes with users and see the system from their own viewpoint, they probably would think it will become better and easier, but there will be problems and issues afterwards. (CR1)

To conclude, both CAs and CRs expressed their expectation of being acknowledged and understood by the other group. On one hand, CAs felt they had clearly explained the organisation’s requirements and priorities for CRs. Many emphasised their expertise and experience, perhaps a sign of attempting to demonstrate competence and trustworthiness. They expected, indeed assumed, that CRs shared their viewpoints on the purpose and plans for the new system. In addition, CAs felt CRs understood their
decisions and the significance and objectives of IT implementation, meaning they would cooperate and participate in progressing the change process and support the efforts of CAs. On the other hand, CRs stated their needs and concerns and expected CAs to keep them informed about the changes, and understand and consider their status and conditions. In some cases they were not persuaded that communication had been either adequate or effective. Also, that they had had reasonable opportunity to influence and inform the decision making of CAs. They sought to receive attention and support from CAs, and to be able to input their detailed knowledge of challenges of existing systems, processes and perspectives on what constituted an effective solution. Their concerns were underscored by a belief that in the main, CAs neither possessed adequate understanding of business drivers nor detailed insights into the complexities and challenges they encountered in doing their day-to-day jobs. Thus, a picture emerges that on one hand, CAs believed in their own competence and that they had developed mutual understanding with CRs through an extensive communication strategy; and on the other hand, frustrated and deeply concerned CRs, who viewed communication about change and its consequences as inadequate, questioned the knowledge of CAs about the specifics of core business processes. Perceptions of developing mutual understanding were, at this early stage of the project, somewhat one sided, and of concern, if one considers the apparent lack of CA awareness.

4.5.2 Appraising change and constructing meanings

This theme concerns how CAs and CRs appraise changes, events and actions. The data provides insights into how they evaluate change and the implementation process, construct meanings about the impacts of IT implementation, and interpret others’ reactions.

4.5.2.1 CA perspectives

CAs explained their expectations and perspectives about IT implementation at ExMoney. They introduced and considered IT implementation as a significant driver for developing business services and improving company performance. CAs were of the view that change was critical and they needed to develop and update their IT systems to remain competitive in the market. For example, CA3 explained the significance of implementing the new accounting system and web applications, emphasising change in providing new and competitive services to their customers.

Our current accounting process and system is limited and does not support our business needs. We have many issues and restrictions. We are not able to store and manage all financial transactions in all branches in an integrated system and that has caused many issues for us. We need to move on and develop our own accounting system. (CA3)
The IT implementation process was viewed as potentially quite difficult, as the accounting process at ExMoney was unique and complex. CAs recognised the need to analyse and clarify the accounting process to ensure new systems met requirements and could accommodate the required accounting process management and control.

_The accounting process at ExMoney is different. So, because of the very particular work we have to do, we need a very particular accounting system ... and that's why we have to clarify everything, what exactly we want and where the procedure is going._ (CA4)

However, there were different perspectives in this regard. Others were concerned that the proposed changes would not, in fact, resolve their problems and would not be effective and efficient for the business. Some argued that they needed to know more about the project objectives, and the implications and consequences of making the suggested changes.

_I am concerned with the accuracy of financial information, but he [CA3] is more concerned with the integration and real-time reports. My understanding is that this design isn’t going to improve things. I don’t know what will happen to our financial records, I mean whether they are reliable and accurate or not... I think we don't know the full picture._ (CA1)

### 4.5.2.2 CR perspectives

As CRs became aware of the changes, they started an ongoing process of collecting more information about IT implementation, seemingly in an attempt to make sense of change. Many CRs felt they did not have a complete view of the proposed changes and thus could not anticipate likely impacts.

_As I know, we’re going to have an ‘integrated accounting system’. I’m not quite sure what that’ll be like, what’s the plan or to what extent that’s going to impact us. ... from what I’ve seen so far, I suppose we still have a long way to go. ... I mean, this is not an easy change; it is complex and critical. We can’t afford to have issues, inconsistencies or disruptions at this level and system [accounting]._ (CR9)

When CRs did not receive adequate information about IT implementation, they tended to rely on their previous change experiences or their colleagues’ comments and opinions in assessing changes and evaluating likely impacts. In her diary entry CR3 noted: “I’ve had good experiences here with the previous updates, and I believe the new system will have positive impacts. I’m still not aware of all the plans and the future changes, though I expect the changes to be helpful” (CR3).
CR6 evaluated the changes as necessary and helpful. She was of the view that IT implementation would address many of their critical issues.

*I am positive about the new system. We work with people’s money, so the system should be designed in a way that each and every received order and transaction be checked and controlled multiple times and then be processed and registered in the accounting section. As I know, one advantage of this new system is that it checks each order and transaction several times and process them automatically, so our percentage of error is going to be very low, or maybe we will have no issues.* (CR6)

CRs were also concerned about the change process, CA expertise and approach for managing and progressing the implementation, and the level of support and companionship they would receive from CAs. It appears that the extent of trust CRs felt towards CAs, changes and the IT implementation process influenced how CRs evaluated change.

Some CRs voiced a high level of trust in CAs and their ability to understand requirements, manage change well and develop an effective new system. They trusted CA expertise and decisions and expected a successful IT implementation.

*It takes a long time to get the [accounting] data we need and then import it into MYOB, ...typically it takes one or two weeks to collect all data for a quarter and combine them, so it’s very time-consuming. This makes our job inefficient. I believe the new system can easily integrate and process all accounting data, so save our time to do that and to make it very accurate ... I know that the new system is designed to resolve this problem. I can see that they [CRs] are working hard to prepare it. They [implementation team] have an accounting consultant in their team; we also sometimes have group meetings to discuss our needs and progress.* (CR2)

In contrast, as a result of not trusting CAs and the change process, or having negative previous experiences, some CRs were not very optimistic about IT implementation and effectiveness of such change. Some of them appeared to have the feeling that the implementation team would not be able to address complex conditions and requirements. CR4 said: “*Let me tell you about the system we are using and developing, in-house system [development] is not popular in our company*” (CR4).

CRs were informed about change through their weekly meetings or interactions with colleagues and CAs. They attempted to comprehend news and information about IT implementation and evaluate how such change would affect their status. Some CRs seemed to be unaware of or lacked sufficient clarity
about change, which combined with their previous negative experiences, appeared to stimulate negative feelings and attitudes and undermine their trust in the IT implementation process.

_Tell us what is the project about! Is it about the Admin part? About the accounting? About the website? To me, all three, especially the website and the Admin. I believe the system must be tested before so that we don’t put the users in trouble. ... About Admin and Accounting [systems], they must talk to those who use it not just the manager. Here I think it's just the manager who decides and his own preferences are considered._ (CR1)

In sum, although CAs were definite and united in their view that the new system would improve performance and functionality of the accounting process, not all CRs shared their confidence. Some CRs were persuaded of the benefits of the new system, and they were realistic about the disruption that might arise from implementing the required changes. But others felt that the change process was not planned and organised well enough. Therefore, they were not very confident or optimistic about achieving change objectives and expected outcomes. Further, some of them felt uneasy about change and constructed negative meanings.

### 4.5.3 Interacting with others

CA and CR perspectives regarding their interactions and communication with others are reflected in this theme. They commented on how they shared information, conveyed their needs and concerns, and negotiated their understandings and constructed meanings through social interaction.

#### 4.5.3.1 CA perspectives

CAs interacted and communicated with CRs and shared their objectives and plans about IT implementation with them. In this way they could influence and shape how CRs understanding change and also receive feedback from CRs. CAs tried to interpret and understand CR requirements, concerns and reactions.

CAs at ExMoney emphasised the importance of having ongoing and effective communication with CRs to inform them about changes and elicit and understand their requirements. CA1 explained that communicating and clarifying plans and changes with CRs is critical and helps CAs to better understand the needs and concerns of CRs.

_It takes a whole lot of time, but I think in my experience it's better to take time to explain the changes at the beginning, than you spend whole lot of time and money and go down the track and find all that ... we get it wrong._ (CA1)
At ExMoney, there were many staff meetings at head office to review and discuss incidents, decisions and plans. CA3 expressed his plan of including IT implementation discussions at their meetings and explained that CAs could converse with CRs about changes and updates. He suggested that a person from IT implementation explain the project’s progress, new functionalities and future changes at their meetings. Thus, CRs could discuss related questions and needs, and engage in the implementation process.

*We hold weekly sessions, and I liked to have IT discussions as a fixed part of our sessions. So, a person in charge from the IT section explains and discusses the changes in detail, so that others would know what we are doing and what our goals are. We can hold a meeting on IT once every two weeks and also our colleagues in our other branches can participate using the Skype. We had a meeting about the project and I found it very effective, and we need to conduct these kinds of meetings more. I think this way they [CRs] would be more engaged.* (CA3)

CA4 believed they should find and talk a ‘common language’ with CRs. He considered good communication and interaction with users and the IT team as the basis for constructing mutual understanding.

*We have to talk in a common language. This is very important first of all to find the way we are going to communicate together with the IT guys and users ... so we know what users want and know what we have to provide.* (CA4)

### 4.5.3.2 CR perspectives

CRs at ExMoney also emphasised the role and influence of interacting with their colleagues and CAs in learning from them, developing their understandings about change, sharing their experiences and interpretations, and communicating their concerns and requirements with others. CRs attempted to clarify constructed meanings and interpretations about IT implementation through communication, relationships and interactions with others.

*We have a small workplace here and we are all aware of each other’s work ... We talk together about new changes and updates. When I encounter any problems, I immediately share it with my colleagues.... We quickly make each other aware of the changes and errors.* (CR6)

CR4 also highlighted the importance of interacting with others, getting information and help from them, or supporting others in dealing with the new system. He said: “*it is really important to be close to each other, use others’ experiences and gain more information about the changes, because we deal with similar parts, we can improve the system, we can use it better, and we can decrease errors*” (CR4).
Similarly, CR7 explained some of the benefits of having interactions and constructive relationships with others to share experiences, improve understanding and learn.

*I can comment on the sections where I'm involved in. For example, I can comment on the accounting section and say if we do this, it will be better ... I think if I have a suggestion about a section that relates to you and you must be informed of that, we should collaborate more and share our experiences. We should have deeper connections and relationships at work; I mean between staff in different branches, or between staff and the IT team.* (CR7)

CR2 emphasised their need for having consistent and effective communication with CAs to express their requirements and concerns. Although she worked in the head office and was close to the project team, she mentioned that she and her colleagues could have only a few meetings with them about the new system.

*We’ve had a couple of meetings with the IT team. It’s not enough at all, but I think it’s very necessary. It’s good for [system] improvement. I think it’s very necessary to talk about my concerns to the other people and allow them to know my needs. So, if I have a problem with using the system, I have to talk. I think it’s necessary to let people know my concerns.* (CR2)

CRs explained the importance of having direct communication and interaction with CAs and reviewing and clarifying their required processes and functionality in the new system. They expected the CAs to interact and communicate with CRs directly; however, many CRs noted that often communication from CAs came late and was lacking.

*Basically, we get informed about changes last of all. Most of such decisions (about the system changes and development) are made by CA3. The communication hasn’t been good at all. I’ve warned them about the issues. I’ve said this [change] would cause trouble; [for example, I told the CAs.] let’s not issue one-way assessment [of some financial records] because we must be able to track them later. I say all these issues, but no one listens ... It’s like I need to try hard to convince them.* (CR1)

CR4 suggested how their direct meeting with CAs had helped them to have a better understanding of the new system implementation, and also explain and clarify their needs, concerns and problems. He mentioned that the meeting had positive results. CR4 believed that the meeting helped CAs to improve both the implementation process and the system.

*That [meeting] was the first time in my working experience at ExMoney that we sat with CA3 and the team, and we discussed our needs and problems. When someone doesn’t have any
relationship with us, he can't understand and solve our problems. For example, he can't realise what our concerns and needs are exactly ... The developer should have come to me and asked about my work routines and problems. Then, I would tell him that I have problems A, B and C, so he would be able to suggest an appropriate system change for solving them. (CR4)

In sum, CAs could communicate IT implementation objectives and plans and receive feedback through their interactions with CRs. They emphasised ongoing interactions with others in order to understand their requirements, and discuss their expectations and priorities. CAs indicated their interactions with CRs as the basis for constructing mutual understanding. Further, it appeared that CRs also tried to develop and gain a better understanding of changes and actions, and construct meanings about IT implementation in their communication, relationships and interactions with others. Having effective communication with CAs also helped them to explain and clarify their needs, and inform CAs about their concerns and problems.

4.5.4 Feeling involved

This theme covers the views and feelings of both CAs and CRs regarding their involvement in IT implementation. CAs explained their perspectives on informing CRs about the changes, and involving and encouraging them to participate in the process. CRs also commented on how they felt informed, connected, engaged and involved.

4.5.4.1 CA perspectives

CAs at ExMoney stressed the need and importance of keeping CRs informed about IT implementation and change. They believed this would encourage CRs to participate in IT implementation, maintain their involvement, and motivate them to support such change. One advantage of being involved and being informed about the changes was that CRs were less likely to encounter unexpected events and uncertain situations. Also, this would equip CRs with knowledge about change and therefore have a better understanding of project initiatives and objectives. CA1 argued:

*You need to make everyone feel involved in order to create ownership of a system. From practical experience, I know that right from the start you need to get everyone involved fully. That involvement must be there in order to design and create any system you want to implement it right. We don't do enough of it here... So, we need a good sort of involvement of the people right from the start ... to be practically and fully involved, and I know that it takes time, because whenever there is a group of people involved, you have to have meetings, take them away from their work, and sit down and consult with them. (CA1)*
CA3 explained that by asking CRs to give feedback or offer opinions about change, CAs could enhance their interactions with CRs.

*I always consult with them [the CRs]. They always give me feedback. Our colleagues in other branches or the ones here call me and tell me their opinions. ... I usually ask for employees’ feedback because they have more communication with clients than I do, they work with the system and know all the details.* (CA3)

CA3 also mentioned that his strategy was to inform CRs about the project and changes gradually, and give them more detail closer to the time when they would need to face the new changes:

*My strategy to inform them [CRs] is to do so gradually. They have a general idea that we’re going to start an IT project. ... if any change affects their duties, increases or decreases their responsibilities, or if training is needed, [then] they’ll be informed, and we train them after the system has been updated.* (CA3)

This involvement strategy appeared to cause some issues. First, CRs did not have a complete view of the project. Thus, they were not fully aware of project objectives and changes. It seemed that many did not know whether they were going to be affected by such change or not. Second, CRs were mostly surprised when they saw the new functions and updates, and they did not know how to deal with them. Additionally, some CRs felt they had not been considered or involved in the change process.

4.5.4.2 CR perspectives

CRs at ExMoney expected CAs to inform them about the purpose of the change, the implementation plan and process, and intended outcomes and benefits. They were keen to know more about what would change, why and how the changes would be implemented, and what implications would affect them and their organisation. CRs stated that when they felt they lacked information about IT implementation, they felt ignored, not heard, not considered, and not involved in the change process.

CRs expected to be heard and considered. They wanted CAs to inform and consult them about proposed changes in advance, consider their concerns, use their experience, and importantly, involve them in the change process. CR5 believed that considering CRs and valuing their inputs would increase the feeling of being involved and encourage them to engage and participate in change implementation.

*As a user, your ideas and comments must be important and considered in making any changes to the system. I expect periodic meetings about the system implementation... If I know about the changes in advance, 50% of the problems would be solved, and I would be much more prepared*
and proactive. I can share my experiences and concerns with the team. Or, I would be able to offer suggestions and provide feedback. (CR5)

In addition, they attached importance to being informed, arguing that when they knew more about the change plan and the new system, they would be more prepared and better able to discuss their needs and concerns with CAs, participate in the change process, and work towards improving implementation. CR1 argued that CAs could facilitate CR involvement by informing them about change.

In my opinion, everything, all details including the change plan should be discussed with the user because the manager doesn’t know what happens [in the system] or what the problems are exactly. (CR1)

Some CRs explained that when they felt more aware about IT implementation; they felt more confident about getting involved in the change process and were more willing to participate. In contrast, CRs who were unaware of the changes seemed to feel ignored or detached.

I think I can’t get involved because it hasn’t been discussed with me. I didn’t even know the sections that are going to be changed. So, I can’t go and say, all of a sudden, ‘what happened?’ or ‘this could be done that way better’. Maybe my manager didn’t inform me about it because he didn’t want to. ... So, because it is not discussed with me, I can’t give feedback. (CR1)

Moreover, feelings of being considered and valued appear to influence CR involvement and participation. CRs at ExMoney felt connected and involved when their suggestions and opinions were heard and valued, or their concerns and feedback about system development and implementation were acknowledged and considered. For example, CR9, branch manager and accountant, expected CAs to consult with him about some project decisions and plans.

I don’t feel that I am fully involved in this project. I can immediately refer to it because we’re going to start changing the system and I have no clue what we’re going to do, because I haven't been consulted with [sic], and I don't know what the outcome would be. (CR9)

In sum, by keeping CRs informed about the changes, it appears CAs can motivate them to become involved and encourage them to participate in IT implementation. When CRs feel they are more aware of the changes (i.e. project objectives and expected outcomes, the implementation process and project progress) they are more inclined to give feedback and participate. Further, by involving CRs in the IT implementation process, they will be more willing to consider the changes, try to gain a better understanding of them, and ultimately support them.
4.5.5 Seeking benefits

This theme highlights the perspectives of CAs and CRs on seeking benefits from IT implementation and change at ExMoney.

4.5.5.1 CA perspectives

CAs at ExMoney sought to achieve several business outcomes and benefits from implementing the new IT solution. They explained that they have been planning and trying to improve the performance of their IT-based services, extend the functionality of their systems, and gain more effective and efficient financial and business processes.

ExMoney had benefited from its previous IT implementation and related changes. CAs believed they could build an innovative business platform through which they could offer efficient services to their customers, thus deriving significant business benefits through using advanced IT solutions. However, they acknowledged that in the past they had experienced some difficulties in implementing IT changes. CA3 said:

*Perhaps they [our projects] did not result in what we expected, but we tried to benefit from the outcomes and earned money out of them; we didn’t have any detrimental projects. Sometimes they cost so much, but generally, they have been beneficial. We faced many challenges, especially in our working teams who offer IT services, but we have benefited from doing those IT projects.* (CA3)

CAs appeared to be cautious but positive about IT implementation outcomes. However, they sought to enhance their business services and accounting processes through implementing the new IT changes. They highlighted the significance of change and argued that it would bring several benefits for both the business and CRs.

*We have achieved many benefits from our previous IT projects, and I think this one also will result in what we expect. ... The IT changes are planned to improve our money transfer and currency exchange services. The new system brings several benefits, such as improved interface, real-time reporting and integrated accounting. The changes help us to provide faster, more accurate and safe transactions.* (CA3)

CA4 stated that IT implementation was ‘critical’ to enhance and develop their accounting processes and address the limitations of disparate accounting systems.
This [project] includes significant changes in our accounting processes. It is critical for our company and services. Our current system and disparate accounting practices have many issues and limitations. We will gain several benefits from it [IT implementation], such as integration and consolidation of our financial data. I believe all would benefit from this change, users, managers and customers. (CA4)

4.5.5.2 CR perspectives

CRs at ExMoney tried to understand the benefits IT implementation would deliver. It appeared that in their evaluation, CRs considered the impacts of change on them and possible advantages or disadvantages of IT implementation. For instance, CR1 expressed a view that developing and implementing the new system would lead to more issues and costs rather than benefits, and this seemed unnecessary when there were already suitable software packages available.

There are some accounting systems available but they [the CAs] have decided to replicate them again. In my opinion, they are almost similar [sic] and with the same features. ... When there is a software application for a purpose, for example, for the stock exchange or accounting, why should we invent a new one and then find its issues and errors? (CR1)

Some CRs were of the view that the new changes would provide more benefits to CAs, but would create more work for CRs. They felt pressured to adopt the new system even though they were gravely concerned about some of the changes. They felt they were compelled to accept and support changes that they believed would be ineffective and counterproductive.

[The manager] thinks if it [the new integrated accounting system implementation] happens, he would be able to see the bank account records updated in real-time. But reality differs. The reality is that the records in the Admin [Administration] system’s accounts differ from records in our bank accounts, and they can’t be synced... I am quite sure that this [solution] is not right. They can’t achieve real-time accounting... But this is the management’s concern. I have requested for many other changes that we need them and I believe they will be much more helpful and beneficial, but they say that this is our priority. (CR1)

Many CRs expressed that because IT implementation could help their organisation, they would be happy to participate and support required changes and follow new practices to improve their business processes.

There are always better solutions. If a change results in less work, that is perfect. But still, if a change is crucial, even causing much work, it should happen. (CR3)
In sum, CAs and CRs emphasised the expected benefits from IT implementation but they had different perspectives on the benefits of change. While some CRs supported the positive views of CAs, others were concerned and somewhat pessimistic about achieving the desired outcomes and benefits of IT implementation.

4.5.6 Attitudes and reactions

This section provides insights into the attitudes and reactions of CAs and CRs toward change at ExMoney pre-IT implementation.

4.5.6.1 CA perspectives

CAs exhibited different feelings and attitudes toward IT implementation, and therefore made different assessments. Their emotions and attitudes changed and evolved over time and seemed to be affected by their previous experiences with IT projects, their initial understandings of IT implementation, and their existing relationships and communication with others. As IT implementation progressed, CAs constructed different meanings and attitudes towards the new system.

Some CAs described positive feelings about the changes. For example, they mentioned they are usually positive and optimistic, and deemed IT implementation to be a positive innovation that would enhance organisational performance and services. CA4 commented:

\[ I'm always an optimistic person and would like to make everything better, and I believe at the end of the day, we'll get better results [as a result of IT implementation]. (CA4) \]

CA3 drew on his previous experience of IT implementation, explaining that ExMoney has always benefited from change and its IT team have successfully implemented projects in the past. He then talked about the new system implementation positively and confidently, and expressed his satisfaction with both change planning and the process.

\[ Everything has been good so far. We have had three projects with this team, and the team has been so responsible and professional that I believe we will achieve what we expect. (CA3) \]

However, not all CAs at ExMoney were happy with the IT implementation process. Some had negative attitudes toward the change strategy and process. They seemed to doubt the efficiency and effectiveness of implementation and indicated they might not gain desired benefits. They believed that the required resources were not planned for adequately, or felt their concerns about the changes and the implementation process were not considered appropriately. For instance, CA1 was of the view that the
requirements had not been correctly understood and the change had not been appropriately planned. He criticised the change process: “to me, it’s not being followed in the right way” (CA1).

Some of the involved people don’t have enough financial and accounting knowledge ... and the total focus is on the Admin [system], hoping that something will get fed out of that system and will be OK for the accounting. Well, that needs to be tested ... and I don't know whether we are running around it, trying to design and implement it, and rush through all that, whether that provides enough accounting information or not. (CA1)

When CAs are not aware of all the changes, they may feel uncertain about some decisions or consider some changes as unnecessary, so negative emotions and attitudes may emerge and develop. For instance, CA1 was of the view that some of the new changes were unnecessary. He believed that their existing accounting process already met their requirements and they were trying to ‘reinvent the wheel’.

The accounting system is working well. The (existing) accounting system possibly cannot handle the foreign exchange. Right? But we are just duplicating what the system already does. So, to me we're reinventing it, we are trying to reinvent the wheel. (CA1)

CAs at ExMoney also talked about their attitudes and responses toward CR reactions, specifically dealing with their resistance to change. For instance, CA3 stressed their strategy of implementing new IT innovation in order to improve their services, grow their business and remain competitive in their industry. Hence, he expected all stakeholders to comply with their strategy and support the new changes.

This is our strategy to use new IT solutions. ... it is a need, and I believe in it. The ones working here are aware that the manager of this company likes everything to be ... based on IT. So, if anyone doesn’t like the system, we don’t make them stay here; we try to find people who think as we do. (CA3)

4.5.6.2 CR perspectives

A range of emotions were expressed by CRs about change. Some CRs explained they were optimistic about the new changes and felt that IT implementation would improve their work. For example, CR5 commented in his diary: “I am positive about the changes” (CR5). CR8 commented:

... The new system will make our work simpler. That’s why I am optimistic. It might be more difficult for us to work with the new system or it might increase our working hours, but later we
will have an easier job, so it's worth it. Also, after a short period, all the pressure will be gone, and everything will be normal again. (CR8)

By contrast, other CRs had negative attitudes toward IT implementation. It appeared that when they felt pressure to adopt the change, experienced multiple changes concurrently, or felt uncertain about the impacts (e.g. its effectiveness and usefulness), they tended to be more negative about IT implementation. In her diary entry, CR1 offered some negative feelings and complained about experiencing constant change, being unaware of the process, and having to deal with uncertain circumstances and procedures:

*We don’t know what the changes are, or what bugs or issues we may face. There would be a new accounting system and many new changes in the Admin [system]. So, I have to check many new things. Constant changes confuse us. Again, and again! So, you don’t have energy for a new system.* (CR1)

CR1 later explained that she has had negative prior experiences with IT development and change and therefore could not trust a new system. CR1 was not optimistic about achieving benefits from new changes.

*When I heard about the new project, I had completely negative feelings about it. I felt stressed about the new changes. I just knew I’d be surprised. I don’t know whether to say fortunately or not. This is not the first time these changes have happened at ExMoney. This has caused so much trouble. Whenever there is a change, we should try hard at least for three months to find the errors or bugs [in the system], and it takes a lot of energy.* (CR1)

CR9 had the feeling that they were forced and obliged to use the new system. He believed that the needs and concerns of CRs were not considered and addressed in the process. CR9 also referred to his negative prior experiences with IT implementation at ExMoney and lack of trust in the change process.

*We have to, [we have] no choice! ... and this affects users’ performance. We have had a lot of issues with previous changes. There may be some bugs. It [the new system] must be tested and then we use it; otherwise, we may have again a big issue like what happened during the previous change.* (CR9)

In short, it appeared that CR attitudes and reactions toward IT implementation were influenced by their previous experiences, their constructed meanings and interpretations about change, and their understanding of its impacts and benefits. Moreover, when CRs were aware of the new system’s benefits, and when they perceived that the changes were planned and would be implemented to improve
their work processes, they were more positive in supporting IT implementation. Similarly, when they felt they were considered and acknowledged in the change process, they were more willing to participate and cooperate.

4.5.7 Justifying reactions

This theme concerns how CAs and CRs validated their position and perspectives, and justified their actions and behaviours towards IT implementation.

4.5.7.1 CA perspectives

CA comments highlight a pattern of justifying decisions and actions. CAs explained they had the required experience, knowledge and skills to make decisions about the changes and manage IT implementation. For example, CA3 highlighted the importance and urgency of implementing the new accounting system and developing their current online services.

*Our accounting system is not comprehensive to cover our all branches and transactions and these new financial services. We need to develop our own accounting system as soon as possible. It is critical for us. We need real time and integrated control and reports over financial transactions and our accounts. Otherwise, we can’t provide efficient and competitive services.* (CA3)

CAs also promoted their knowledge and previous experiences when they wanted to explain and justify their decisions and plans. For example, CA1 talked about his previous experience in planning and managing a big IT project. He concluded that he had the valid expertise for being consulted about the required changes in the system and management of IT implementation.

*I expected them [the CAs] to use past experiences to improve the process... During my about 36 years of professional experience, I have been involved in a lot of system implementations. For example, I was involved in designing an accounting system for superannuation, and it needed very accurate accounting because a lot of market value is involved and it's not normal accounting.* (CA1)

Another pattern that could be seen at ExMoney was attempts on the part of CAs to promote IT implementation and justify change. They justified their decisions and actions by asserting that IT implementation would bring many organisational advantages, with the expectation that stakeholders would be supportive, even if this had a negative impact on them individually.
There are changes that … have so many benefits that it worth doing them even if they double others’ jobs. For example, the transactional approval procedure that we are going to add to the system; it adds to employees’ jobs, but it is worth it. (CA3)

CA1 emphasised the need for focusing on financial processes in IT implementation and developing the accounting system. He criticised top management’s over-consideration of Administration system development.

The feedback that the manager [CA3] is getting is that you just fix the Administration system, and it will feed through another system and the financial transactions will come out of it, but it hasn't happened for about three years. ... They didn't know what profitability or cash flow they had. ... The financial system for a financial services company is number one or as equal number one as the Administration system. (CA1)

CA1 justified his dissatisfaction with IT implementation and negative attitude towards the effectiveness and success of the new changes by explaining his previous unsuccessful experience with some IT changes at ExMoney. He also indicated the lack of recognition of their requirements and lack of consideration of the complexity of their accounting process.

We had some changes in our accounting process before. One time the result was that it took six months just to prepare six or nine months of financial records. There are not enough people with enough expertise to cover all the areas. We are so much focused on Admin and the financial system is not getting enough attention and support. (CA1)

Other CAs also highlighted the importance of developing the financial processes at ExMoney. They confirmed and supported the decision and plan of designing and implementing the new accounting system. For instance, CA6, the IT project manager, elucidated the reasons behind the change and justified the organisation’s priorities and concerns in IT implementation:

... the new system will bring integrity, security, accuracy and real-time processing. All transactions will be automatically registered in an integrated accounting system. (CA6)

4.5.7.2 CR perspectives

CRs tried to validate their position, knowledge or experience to emphasise their understandings and constructed meanings and support their attitudes. They attempted to gain more attention, explain and clarify their needs, and highlight and justify their concerns and priorities in IT implementation.

CR4 commented that CAs should acknowledge the change recipients’ experiences.
We who use it [the system] every day are the most reliable people who can criticise it and talk about its problems, advantages and disadvantages. We know the areas that can be improved. It can be made better and more features can be added to it. (CR4)

CRs appeared to explain their experiences, professional roles and responsibilities in the system to emphasise that their needs were important. They seemed to justify their expectation of CAs to consider CR concerns and priorities in system design and implementation.

I check registered requests and currency rates and operations in the system. ... A small mistake can cause significant problems and inconsistencies in our records. I need to be very cautious about both manual data entry and system functions. ... So, if there is going to be a change, I must be aware of that. ... I believe that it should be all right if I disagree with a change. (CR5)

In sum, both CAs and CRs stated and explained their needs and concerns, and tried to validate and justify their attitudes and decisions. CAs emphasised the organisation’s priorities and expressed their requirements. They argued the need for the new system and tried to justify their views and plans by stressing the benefits they could achieve by adopting the new changes. CAs also highlighted their knowledge and related expertise to support their decisions and actions. By contrast, CRs highlighted their needs, priorities and concerns to justify their reactions toward the changes, and clearly expected to have their stated requirements taken seriously, even when in conflict with the plans of the CAs.

Some discrepancies and conflicts amongst CAs and also CR appraisals and understandings of IT implementation and its impacts are evident. For example, CA1 believed that they should have been focused on the accounting system and financial processes, while CA3 expected adding more functionality and including new features and updates in the Administration system and Customer Web Portal were priorities. Alternatively, some CRs were of the view that they would not receive significant benefits from the new changes. CAs and CRs tried to negotiate their understandings and constructed meanings with each other, and justify and defend their attitudes and concerns. Also, each group expected the other side to understand and consider their needs and concerns and support them.

4.6 Round two: Post-Implementation (ExMoney)

In this section, I will review and analyse the data from the second round of data collection conducted at the post-implementation stage at ExMoney. I will also present CA and CR perspectives and reactions towards IT implementation and its impacts.
4.6.1 Developing mutual understanding

4.6.1.1 CA perspectives

In their comments, CAs highlighted the fact that they were following and considering the organisations’ priorities and requirements and trying to improve business processes. They further explained that they valued the concerns and needs of CRs. They believed CRs might recognise some of these actions as direct responses to their needs, but actions taken might have indirect impacts on CRs and benefit them in the long term. Based on these statements, CAs expected CRs to understand and acknowledge their role and efforts, and support them in the IT implementation process.

We had to do some changes to the project scope, but the project mainly progressed as planned. We understand the users’ concerns. We know what their needs are. But, there are differences in priorities, and some changes depend on conditions. ... [the change] wasn’t without its problems. There are some issues and inconsistencies, but we are working on them. (CA4)

CA4 admitted there were some issues and problems for CRs. He considered those issues were ‘normal’ and expected CRs to acknowledge the followed approach and made decisions, and further understand the challenges, difficulties and issues encountered during IT implementation.

If you don’t work, you won’t make mistakes. If you work, you will make mistakes. So always problems and mistakes come up, and this is very normal for every system development, and we have to work on that patiently, without any recklessness, and with open eyes. We have to try new things and need to understand that changes in the system come with some mistakes. (CA4)

Likewise, CA3 mentioned that due to the complexity of their accounting process and the integration requirements of their subsystems, they experienced some problems and issues. He expected CRs to understand and acknowledge the efforts and actions of CAs.

Some changes were not quite right and we faced some problems and issues, which I believe are totally understandable. This is a very complex system and process. The IT team are working on that, and sometimes there is a little bit of confusion or some technical problems. So, the most important thing is that they [the CRs] need to be patient and understanding. (CA3)

4.6.1.2 CR perspectives

In round two also many CRs emphasised their expectation of being acknowledged and understood. They wanted CAs to prevent work disruptions and support them to use the new system and changes more efficiently and effectively. CRs expected CAs to consider their suggestions and feedback, value
their requirements, and address problems in IT implementation. When CRs felt they were acknowledged and their needs were understood and considered, they were more positive about change and more willing to cooperate and use the new system. For example, CR8 said that CAs had responded to her feedback, and some of her needs and suggestions were considered and applied in the new system development. She advocated IT implementation and commented that the changes had improved their processes and addressed their reported problems.

_We had a meeting with the manager about the new system and we told him about our issues and requirements. … I know that our suggestions were considered in the new changes, and our issues are resolved._ (CR8)

CR4 emphasised the role of having discussions and meetings with CAs to communicate their needs, concerns and feedback about change. He argued CAs should acknowledge CRs knowledge and experience, and facilitate discourse for receiving comments and feedback about IT implementation.

_There are some problems in this system but through those talks and meetings, we can make it [the new system] better and better. Maybe some parts of my comments are of interest to the implementation team … they can't be in my position, dealing with customers in this country. I mean this is on our side that we touch the problems and know them in detail._ (CR4)

Knowing and understanding IT implementation objectives and the intent and purpose of CAs in conducting change could influence CR perspectives and attitudes. For example, CR8, who worked closely with the managing director and some other managers, was aware of the system details and change plans and objectives. CR8 believed that changes are implemented to improve their work and address issues and limitations of their system. When explaining their understanding of IT implementation, CRs commonly considered the changes that impacted their role and activities. CR8 was confident about the new system and advocated change, which shows the importance of having a richer understanding of change and clearer perception of its positive impacts on their status and operations.

_Yeah, the changes are mostly done to meet our needs. Since we are a financial group, accuracy is of great importance here. We had some issues with registering payments. To a large extent, the users and employees, and not the system, had to take care of these issues. Now, there is a section in the new system that controls and checks the processes and payments. So, those issues will be reduced._ (CR8)
Conversely, CR1 had a different understanding of change outcomes. She suggested that the new system implementation provided no advantages to her or ExMoney. Her understanding of IT implementation project was that the CAs were forcing users to adopt the changes, but that users were facing more issues and problems. She questioned change initiatives and commented:

*Does it [the new system] really help users? Or, it's just something that fixes one but ruins 10 ... It [the system] hasn't changed much. It wasn't worth the amount of work we did, the accounting troubles we had and the time we spent... They [CAs] just want to change what exists. (CR1)*

In summary, CAs expressed their expertise and experiences, and highlighted their efforts in implementing and improving their IT system. They expected CRs to acknowledge their role and understand their actions and endeavours and cooperate and support them in accomplishing IT implementation and adopting the new system. On the other hand, CRs also expected recognition and consideration from CAs. The more attention and support they could receive from CAs, the more active and constructive they were towards change and supported CAs and the process.

Further, having the opportunity to work closely and communicate could facilitate and improve the development of mutual understanding between CAs and CRs. Through social interaction, they could become aware of the implementation goals and process, and realise needs, concerns and priorities. They could share constructed meanings and interpretations and develop their mutual understanding of IT implementation and its impacts. It could be noted that this process of developing mutual understanding was ongoing, as CA and CR conditions and status changed at different stages of IT implementation, and their interpretations and understandings evolved.

**4.6.2 Appraising change and constructing meanings**

**4.6.2.1 CA perspectives**

Some CAs believed that although changes were critical and imperative for the business, appropriate management approaches and implementation processes were not followed. They argued that because IT implementation was going to affect their core business processes and involved fundamental changes in their accounting approaches, more consideration should be taken regarding requirements analysis and change implementation planning. For example, the CFO of ExMoney criticised change planning. CA4 reiterated the significance of IT implementation and highlighted a lack of appropriate change planning and preparation. In his view, the new accounting system did not address some of their primary problems. He believed the new system had in fact brought about more complexities and caused new issues.
The new accounting system is critical for us. We must consider many things. ... For implementing a new system, you have to do a complete study about the previous system and plan and prioritise the new changes. But we didn’t do any of these things. We jumped in[to] the middle of the project and started developing the new system and replaced the old one. (CA4)

CA3 also indicated that some of the changes might not be as effective and efficient as planned. Thus, the CRs had faced some issues, and the CAs had to redesign and redevelop some parts of the new system to achieve the desired outcomes. He admitted that the implementation process and change management were not quite appropriate and thorough.

I understand that it (the change process) was not quite right. We had to make the right process from the beginning, but we didn’t do that, we jumped in the middle of developing the new system, and this way it is always more costly than if we stop, survey, plan and do the process from the very first day. (CA3)

However, CA3 was of the view that the changes were planned and implemented to improve their core business processes. He believed that the new system could address their limitations in enhancing and developing their services.

We had some limitations and inconsistencies in our online money transfer and currency exchange processes because of the issues in our previous accounting and Admin systems. Now, many of our services are automated and can be managed centrally through IT. (CA3)

4.6.2.2 CR perspectives
The perspectives of the CRs on IT implementation process and the new system highlight their dynamic and ongoing process of considering and evaluating the changes and their different interpretations and constructed meanings about these. After the new system go-live, the CRs could collect more information about it, appraise the changes, and compare their expectations and experiences.

IT implementation at ExMoney included substantial changes in the accounting and business processes and impacted the CRs’ duties, responsibilities, relationships and practices. To cope with encountered complexities and uncertainties, the CRs attempted to collect information from various sources such as their interactions with CAs and other CRs, their previous knowledge and related experiences, or learning through working with the new system and changes. They tried to interpret events and evaluate conditions.
When they (the CAs) announced the system development, we did not know what to expect. Some of my colleagues were anxious about the feasibility of some of the changes ... [After go-live] our working process was changed completely. In the beginning, it was very confusing ... [and] we had many issues. ... It’s a significant pressure and workload that we have to deal with it. It’s getting more stable now, but we are not quite there yet. (CR5)

As the CR5 mentioned above, many of the CRs emphasised the lack of information about the new changes and poor communication between CRs and CAs, which resulted in increased ambiguity, uncertainty and anxiety. Also, it can be argued that these issues could lead the CRs’ evaluations and interpretations of the changes and events to rely more on their previous experiences or individual expectations rather than reflecting the achievement of the outcomes of IT implementation.

It appeared that the CRs had various interpretations of IT implementation and appraised changes differently from successful, effective or challenging to unnecessary, ineffective or threatening. Some CRs believed that the changes were effective and helpful to improve their practices and procedures.

I am happy with the changes. I think I could almost see what I expected from the implementation and updates, and I didn’t have any big issues. The new accounting system has made our work more trustful. It helps me do my duty more accurately. Generally, it’s been good. (CR2)

On the other hand, many CRs seemed to be doubtful, if not negative, about the new changes and the effectiveness and usefulness of IT implementation. They stressed the confronted ambiguities and uncertainties caused by extensive changes in the accounting system and other related business and administration processes. Some of them pointed to the changes to their roles, responsibilities and practices and implied their dissatisfaction of the change planning and implementation.

Now (in the new accounting system), we must reconcile bank accounts. We didn’t know about that change. Suddenly they (the CAs) announced the system is being uploaded, and we had to do bank reconciliation. ... We didn’t even know how we could do the bank reconciliation in the new system! We weren’t ready mentally. (CR9)

Many CRs explained that they had not received adequate information about the system and had faced many unexpected changes. When the CRs do not receive required details and feel uncertain about the changes, they may refer to their prior experiences or rely on their past knowledge to appraise and interpret IT implementation. For instance, CR1 appraised some changes as unnecessary.

I didn’t know about some changes (in the accounting system) at all. ... I’m responsible for customers’ transactions in Australia, but it seems that there are many changes that are not
communicated. It should be confirmed with users and tested. Otherwise, it will for sure cause trouble. ... Managers have changed the system many times, and it seems things have not got any better. (CR1)

Many CRs stated their uncertainty about the potential impacts of IT implementation and the functionality and performance of the new system because they were facing unexpected changes and experiencing several surprises in the change process. They explained that they doubted their previous understandings of the change when they became surprised with some unexpected changes. For instance, CR5 was unhappy with IT implementation process and appeared to be doubtful and distrustful of the system effectiveness.

There were many ideas proposed, and we had some discussions, but I didn’t know which one would be implemented. ... but the ones implemented looks completely different. That's why I don’t know whether this system will be what we expected six months ago, or not. (CR5)

Some CRs referred to their previous experiences with IT implementation at ExMoney or other companies to compare and appraise IT implementation.

I’ve had two different experiences in two different places. The change I experienced during my previous role in [another company], I found it a good one. ... I don’t think that here we have had such a significant and helpful change. I don’t believe that we needed some of the new changes and all these efforts. (CR5)

CR3 believed that the CAs were pushing their plans and decisions. She believed that the change process was not planned and executed well. CR3 thought that the users would face issues to work with the new system. She also explained how unplanned changes had caused disruptions and problems to their activities.

I think they (the CAs) believed that gradually everyone would adapt to the new system, and they would fix everything. They thought that they would add or remove some options and it (the system) would become what they desired. But it won’t. We will have to work more hours. (CR3)

Moreover, the CRs’ appraisal of IT implementation and their perception of its impacts could influence their feelings and shape their attitudes towards the changes. CR8 explained that she was aware of the outcomes and understood the importance of the new system implementation. She appraised the change as worthwhile and effective. CR8 argued that those who do not understand the change initiatives and their benefits usually try to avoid or resist them.
Whenever the system changes, not everybody is satisfied. ... But I think it is just an issue of time. Then later, when they find out in which sections it has made their jobs easier, they would be more satisfied with it. And as the system errors are reduced the users’ satisfaction increases. ... I knew what problems we had and I knew how important it was to resolve them. But some users weren’t aware of ... the benefits of making these changes to the system. That’s why the changes weren’t pleasing to them. (CR8)

In sum, CRs tried to assess events, changes and issues that could influence them and their work on an ongoing basis. They also considered actions and responses of CAs, and attempted to interpret IT implementation and construct plausible meanings for change. It was interesting to note that the lack of appropriate and interaction and communication could increase ambiguity and uncertainty and impede the processes of constructing shared understandings and meanings among stakeholders, thus lead to divergence between CAs’ and CRs’ appraisals and interpretations of the changes. For instance, some CRs struggled to make sense of the changes, or some CRs’ interpretations and understandings of IT implementation and its outcomes were inconsistent or even contrasting to the CAs’ objectives and meanings.

4.6.3 Interacting with others

At ExMoney, some project meetings between CAs and CRs took place to discuss IT implementation progress and planned changes. CRs emphasised the worthiness and effectiveness of those meetings in having the opportunity to communicate directly with CAs. They believed that through their interaction and engagement, they would learn more about the new changes, communicate their requirements, share their experiences and provide feedback, informing CAs in turn about their concerns and problems.

4.6.3.1 CA perspectives

CAs commented on the importance of information exchange, communication and positive relationships with other CAs and CRs in enhancing mutual understanding, clarifying and exchanging expectations and interpretations and reducing uncertainty. CA3 was of the view that having direct communication with CRs had helped him to improve system development. He offered examples of communicating business needs, plans and changes with others and receiving their feedback and comments.

Sometimes I make some decisions, but after discussing [them] with others, I come to this conclusion that it’s better not to do it. We have close relationships here. A while ago, I had an idea to divide the rates into two categories. But when I consulted with others, I found out that CA1 [one of the senior accounting managers] didn’t agree, CR1 [the sales manager] believed it
would confuse the clients, and CA4 [the CFO] simply said ‘no’. So, I decided not to do that. (CA3)

Through consistent interactions, the CAs and CRs can exchange their concerns, needs and priorities, and discuss IT implementation and new changes. CAs can explain the implications of change and CRs can communicate their requirements and expectations. In addition, direct communication with CRs and the provision of reliable, accurate and relevant information about change reduces uncertainty and increases trust.

During the early stages of IT implementation at ExMoney, CAs conducted some group meetings to inform CRs about the project and upcoming changes and elicit their suggestions and feedback. However, these meetings were not held during IT implementation. Some CAs stated the benefits of having direct interaction with CRs including discussing change implementation, collecting feedback, receiving practical ideas and suggestions, building trust and increasing CR participation and engagement.

*In our meetings with users, we came up with many practical ideas. Regular meetings ensure we hear from users and improve trust. They provide great opportunities for users’ participation and gaining feedback. Unfortunately, we didn’t have enough time to have regular meetings with them, especially with those who are overseas… [In our meetings] we tried to discuss what the project team was doing and what the new changes were. (CA5)*

Lack of communication amongst stakeholders appears to increase ambiguity and uncertainty about change. Some CAs indicated lack of regular and direct interaction with all CR groups. As emphasised by CA5 above, CA6 stated his concerns about too few meetings and limited training sessions with CRs to review and discuss the new system and changes.

*We don’t have regular meetings with users. I have had only a couple of short meetings with some key accounting users to discuss their requirements and changes, which I found very helpful. I believe we should have more meetings with users. … In our meetings, I found out that they [the CRs] are not aware of the implementation plan and some changes. Sometimes they were shocked to hear about the changes we were working on. (CA6)*

At ExMoney, CAs also published an internal website before the new system deployment to collect CR feedback and requests. Through the prepared website, the CRs could submit their suggestions or report their issues. The CRs could also track the status of their requests or reported problems.
We couldn’t have face-to-face meetings with all users... [So,] we asked them to report their issues through the website. We also encouraged them to share their suggestions or send us their requirements. I think it has been quite effective and helpful. They could report their issues directly to us. We’ve also received useful feedback and practical suggestions. (CA6)

4.6.3.2 CR perspectives

Similar to their comments in round one, CRs again emphasised the significance and role of having consistent communication with their colleagues and CAs in developing understanding about change and conveying their expectations and needs. Further, CRs stated the importance of working in groups, and being able to communicate and interact with others to share their experiences. In their groups, they could share both their knowledge and understanding of the new system and changes.

When there are new changes in the system, we [she and her colleagues] talk about them. But, I think an important problem is the lack of communication with other branches and the implementation team. ... We always get informed very late here. (CR6)

Some CRs also mentioned they usually discuss changes, talk about their experiences of the new system, or share their ideas or concerns with colleagues during informal conversations and discussions. For example, CR3 indicated that informal social interactions with colleagues had led to a deeper and richer understanding of the new system, and she had learnt more.

I’ve learnt about the new process mostly through informal talks with my colleagues. I think we had only one short meeting about the new system with the IT team and managers. But the rest has been through colleagues. ... If I have a problem or don’t know how to use a function, I just ask my colleagues. (CR3)

CRs expected regular and direct communication with CAs. CR5 commented in his diary: “There are some inconsistencies and misunderstandings. I believe we should have had some form of formal and regular communication, such as regular project meetings, to know more about the project plans and objectives, to learn about the new changes, and to provide feedback.” (CR5). CR perspectives indicate that regular communication and meetings could enable more informed appraisal of IT implementation, achieving more consistent interpretations, and improved understanding of others and the changes. CR2 also explained:

Unfortunately, we don’t have those weekly or monthly meetings about system implementation anymore. In those meetings, we could talk about our needs or the things that could be improved. (CR2)
Many CRs criticised the communication approach taken by CAs. For instance, CR1 held the view that the concerns and needs of CRs were not heard, understood or considered in decisions about system implementation and change. She suggested group discussions between CAs and CRs to share experiences, negotiate needs and expectations, and evaluate and clarify changes.

*In my opinion, the manager has to explain what he wants, and at least a user should be there, because the developer doesn’t know the details, or the manager. ... The manager comes up with an idea, which can be right or wrong. The user approves whether it is practical or not.* (CR1)

CRs at ExMoney were of the view that they had not been provided with adequate information about IT implementation. For instance, CR5 was surprised at not being informed earlier about some important changes. The logging mechanism was implemented to improve system security and reliability. CR5’s comment also suggests that when CRs are not informed about the aims and rationale for change and the consequences, they may misinterpret them and construct inconsistent and incomplete meanings. Also, it appeared that lack of adequate and effective communication decreased trust between CAs and CRs.

*I accidentally learned about some new changes in the system over an informal chat with CA5 [a system developer] that I had no idea about them. ... [For instance,] he [CA5] said that there is a new logging mechanism [in the new system] that keeps track of transactions and records details of their related actions, changes and updates. ... I [also] found [out] about some other changes during the talks we’ve had [with other CAs and CRs].* (CR5)

Many CRs pointed to lack of direct face-to-face communication which prevented them from having effective information sharing and collaboration which caused some misunderstandings. Due to the distribution of ExMoney offices across various countries and differences in time zones, many CRs could not have direct and quick contact with implementation team members or their colleagues in other offices.

*Sometimes there have been some strange problems, and because of the time difference between our country and Australia, I couldn’t make a call, because there wasn’t any colleague working at that time in Australia.* (CR6)

CR6 also explained her positive experience of having an opportunity for a direct meeting to discuss concerns with the director of ExMoney and CA members on the implementation team during their trip to their office.
CA3 and CA6 had a trip to our office recently. They encouraged us to tell them the deficiencies of the system. They also asked for our opinions. We discussed some of our critical needs and problems… I found the meeting very helpful and constructive. (CR6)

In sum, comments by CAs and CRs regarding their interactions with others emphasised the role and significance of having consistent and effective communication and relationships. CAs highlighted disseminating change information and promoting IT implementation objectives and outcomes in their interactions with CRs. They aimed to clarify and manage expectations and interpretations. Also, CRs enhanced their understanding of the new system and impacts of changes, and communicated and negotiated their concerns and expectations with CAs.

At ExMoney, it appeared CAs were not very successful in organising and conducting adequate and effective communication with CRs. There were multiple comments by CRs about lack of information, direct and regular communication and discussions about change and IT implementation. Many CRs also raised challenges in contacting CAs, communicating their requirements and concerns, and reporting issues.

4.6.4 Feeling involved
This theme covers CA and CR comments and perspectives on being valued and informed, and provides insight into feeling involved in the IT implementation process.

4.6.4.1 CA perspectives
CAs at ExMoney explained that obtaining opinions and feedback from CRs had helped them to engage and involve them in the change process and thus achieve better results. CA4 argued that by considering CR comments and concerns pre- and post-IT implementation, CAs could ensure they were on the right track to achieving a successful change or not.

We need to get users’ feedback to improve the system, so we’ve always encouraged them to send us their comments or complaints. If you get more and more complaints, you have to worry that something is going wrong but if you get complaints in a normal manner and after that, you get less and less complaints, so you can see that things are going better. (CA4)

CA6 explained that when CRs were more informed about the change process, they were more willing and interested in considering new changes and being engaged. In his view, CRs felt they were being recognised and consulted, and therefore contributing to change implementation.
We had a meeting about the new system with them [the CRs]. We discussed some changes and asked them [the CRs] to give feedback and tell us their suggestions and opinions. After that, they seemed more interested, and they began to engage more proactively... They felt involved in the project. (CA6)

Apart from engaging CRs, some CAs also commented on their own involvement in IT implementation and highlighted their expectation of being informed about objectives and plans, so they were consulted about the new changes. CA4 indicated that middle managers and CAs must be informed appropriately about all plans and changes, and should be involved in the decision making and implementation process as much as possible, to reduce uncertainty and confusion and increase participation and support.

In small companies, usually the director is involved with most of the changes, and he makes the decision. ... Sometimes we face some changes after they have happened, and then we have to find out why they have happened or how they are going to affect us. So, sometimes it’s a little bit confusing for us. (CA4)

4.6.4.2 CR perspectives

At ExMoney, most CRs were of the view that they were not adequately informed about IT implementation. They attributed this lack of knowledge and clarity to being passive regarding IT implementation, being reluctant to explore and understand changes and new functionalities, not being able to participate and contribute proactively, and adopt and use the new changes effectively. CRs argued that they could provide more helpful feedback or suggestions in advance to counteract issues, if they were informed about implementation details.

I could just give a few general suggestions. ... But, I couldn’t talk about the details because I didn’t have much information about the changes. ... When I see the new system now, I tell myself “I knew that this wouldn’t work this way”. I could be more specific, and help to reduce issues. I mean I could be more influential. (CR8)

CR comments indicate the role of being informed in facilitating effective involvement and participation in improving the IT implementation process and the new system. Many CRs felt they were not involved and could not contribute to the implementation process because they had not been informed about the changes.
I think I need to know more about the project. ... So, I can participate and be more effective.
When we are aware of the [new system implementation] details, we all get the impression that this is something that we can participate [in]. (CR6)

CRs expected CAs to collect and consider their suggestions, concerns and feedback. CR4 felt he had been ignored and isolated. His perception was that CAs had not recognised his role and experience, and did not believe he could contribute to change implementation.

... no one asked for our ideas or feedback. For example, no one came to me to ask for the advantages or drawbacks of our current system, or how to make it better. (CR4)

When CRs perceive that their concerns or requirements are neglected, they do not try to participate and get involved in the implementation process. At ExMoney, many CRs argued that because they had not been informed with more detail, they could not provide useful suggestions or feedback, and participate in IT implementation. Some CRs said they had tried to express some of their concerns or needs, but many of their requirements had not been appreciated or considered by CAs. Therefore, they were not willing to participate. For instance, CR1 said:

*Once they [the CAs] encouraged us to do that [give feedback or suggestions]. And we did. ... Some of them [needs or suggestions] were considered, many of them were ignored. I believe some of them were of high importance and priority for us, but they were not considered.* (CR1)

In contrast, it appeared that when CRs were asked to give feedback, and when they perceived that their needs and concerns were recognised or considered, they felt more involved. They felt they could influence change, and were more willing to participate. For instance, CR2 felt she had consulted and therefore participated. She felt her comments had been heard and responded to. CRs who felt recognised and involved paid more attention to IT implementation, and made an effort to evaluate and understand the impacts of change and the concerns and requirements of others. They appeared to engage in the change process and collaborate more actively.

*The section that I do my tasks, such as processing currency transactions or creating [accounting] reports, really needed some changes. I’ve suggested them [those required changes]. Or in the customer’s section, there were some bugs [in the system] ... I asked for changes and they made them. My requests have been fulfilled to some extent. I’m pleased to see my effective role.* (CR2)

When CRs discussed their concerns with CAs, they appeared more confident and involved. Some CRs indicated that having the opportunity to communicate and interact with CAs motivated them to participate more actively in system implementation and improvement.
In our meeting [with the CAs] they asked us to provide feedback. So, we talked about our problems and discussed some features. ... I felt like I’m a member of this project. ... I am more conscious now and try to send my ideas about the system deficiencies to the team. (CR6)

In short, although CAs expressed the importance of and need for involving CRs in IT implementation, many comments highlight CR reluctance to participate and collaborate. The majority of CRs at ExMoney did not feel like they were involved in change implementation. Their perception that their roles, requirements and concerns were not recognised and considered appropriately by CAs indicated they felt ignored. Many CRs also stated they were not informed about the new changes adequately, and therefore did not have the opportunity to discuss their interests and priorities. Interestingly, it appeared CRs who felt they were involved and valued played a more proactive role in IT implementation. They engaged in social interactions to appraise and understand the new changes.

4.6.5 Seeking benefits

CA and CR comments in this theme highlight their ongoing considerations about IT implementation outcomes and their attempts in identifying and understanding the benefits of change.

4.6.5.1 CA perspectives

Many CAs remarked upon the importance and benefits of the new changes and emphasised their efforts in achieving intended outcomes of IT implementation. CA3, the managing director of ExMoney, reiterated the significance of IT implementation and stated their success in achieving planned project objectives and outcomes. He also argued that IT implementation had significant benefits for CRs.

*We accomplished a very important IT project, and we achieved almost all of our goals. ... I can see the positive effect of the project on the performance of the teams, and errors have been significantly reduced.* (CA3)

In her diary entry, CA6, the project manager, underlined the positive impact of IT implementation and commented: "This change has improved the way this company works” (CA6). He believed that CRs were gradually coming to terms with positive outcomes and benefits of IT implementation, despite their initial concerns and problems. CA6 also highlighted CA efforts in addressing CR issues and preparing a stable and effective system. He and other CAs indicated their expectations of CR understanding, cooperation and support in reaping the benefits of change.

*It takes some time to see all the advantages of this new system... We expect them [the CRs] to understand and cooperate. It’s more stable now and some important issues have been resolved.*
I know that a stable system is necessary to realise the full benefits of the new changes. There is always room for improvement, but I think we have taken some serious steps now. (CA6)

Similarly, CA4 believed that the new changes benefited the organisation and in the long run CRs would be satisfied with IT implementation.

I think we should see the long-term benefits of IT implementation. We faced some issues and inconsistencies at the beginning; however, there are many new features and improved processes. We now have an integrated accounting system and all the transactions are being managed centrally. This is a significant outcome. Now, management can monitor and control records and create integrated reports almost instantly. And many of our previous problems are resolved. (CA4)

4.6.5.2 CR perspectives

CRs evaluated IT implementation and considered the possible opportunities or threats of it on an ongoing basis. They tried to identify what IT implementation meant to them, and how it might affect their role and position, duties and relationships. They appeared to compare their perceptions and experiences of change with their expectations and previous understandings. For instance, CR6 indicated they were told that the new system would address their issues and limitations, and ease and enhance their work. However, her perception was that the presented benefits of IT implementation had not been fully realised.

They [the CAs] said that the system is improved. ... But the system isn’t changed or improved as they told us. I expected more useful changes; I mean new functionality that could help me in doing my job, in preparing accounting records and reports. (CR6)

CRs mentioned some discrepancies or deviations between the presented objectives and plans and their experiences. Some of them explained, considering the challenges faced, extra work and complexity, they have not gained any significant benefits from IT implementation.

Some processes have changed in the new system, such as confirming money transfer requests and registering accounting transactions. But I believe they are more complex now. I think now generating accounting records and documents are done in a separate module. The previous system was much easier to use. The results are the same, in my opinion. So, I think these changes didn’t have significant positive outcomes. (CR4)
CR expectations and understandings of the benefits of change appear to influence their engagement and participation. CR3 mentioned she was fairly certain that some of the changes would bring more complexities and issues than benefits. She felt they were being forced to comply with the new changes.

_We have to do something [doing work using the new system], which we believe is incorrect! Every day I wonder why I should do such a thing while I can do it easier with my previous method. Definitely, it affects my performance._ (CR3)

Other comments by CRs also indicate their uncertainty about the anticipated benefits of change. Some seemed to distrust CAs or the IT implementation process. For instance, CR9 was of the view that many CR requests and concerns had not been considered in the new system implementation.

_Unfortunately, I haven't seen anything [advantages] significant. ... We had a couple of discussions with the [CAs], and I was very strong in terms of pushing our issues regarding how we should move and how we should operate. Because that would be a clear example of a system that is designed not the way we as users want it, but the way that probably they [CAs] think is good to have._ (CR9)

CR1’s comment also shows her uncertainty about change outcomes and benefits. She expected improvement and enhancement in her work and practices. To understand the desired consequences of IT implementation, she tried to compare her experiences and interpret events and changes. Her question was “what’s in it for me?” In her view, as she could not perceive any significant changes to her status, role or activities and she and her colleagues had been faced with some challenges, system change was not meaningful or beneficial.

_I don’t think that the change benefits outweigh these extra works and issues. I think we gained almost nothing... Maybe I didn’t have problems [with the legacy system]. So, it is still the same for me, and I don’t see much difference. So, it is not worth it that they changed the accounting [system]. (CR1)_

Nevertheless, some CRs were of the view that change had made their working processes more efficient and desirable. For instance, CR2 emphasised some of the benefits and performance improvements they could achieve through IT implementation in comparison to their legacy system, and thus argued the effectiveness of the new changes.

_Now, we can generate integrated reports, which is very useful for us and less time-consuming. It’s about our time, so there is more efficiency for me. In the old system, creating an accounting report could take at least one week, because we needed a lot of details and it [the old system]_
didn’t have records of, for example, transactions of the other branches. So, right now because everything required by the system is centralised, it is quite easy. So, this is a significant improvement. (CR2)

In sum, both CAs and CRs sought to receive benefits from IT implementation. They also explained their perspectives on and perceptions of project consequences and achievements. CAs believed that the new system was a significant step forward, although it might be accompanied by some drawbacks. CRs had altogether different understandings of the change results. They tried to interpret change and understand how the new system would influence their status and practices. It was interesting to note that some CRs had a tendency to focus on the potential threats or negative impacts of IT implementation, or what they might lose by adopting the new system, rather than the positive aspects and benefits of the change, or what they might gain through IT implementation. They were of the view that the goals and advantages that CAs were looking to achieve were not realised.

Furthermore, it appeared that CAs and CRs had different expectations of IT implementation with regard to how it would affect them or their organisation, and their focus in seeking and considering outcomes was different. CAs seemed to mainly focus on organisational benefits. They stressed the importance of the new changes and stated their objectives of improving performance and functionality of their systems and enhancing their services. CRs, however, tended to consider and pursue individual gains. Many CRs commented on personal advantages or the threats and challenges faced in doing their duties with the new system.

4.6.6 Attitudes and reactions

CA and CR feelings and attitudes post-IT implementation are discussed in this section. I also review how they reacted to the new changes and others’ behaviours and actions.

4.6.6.1 CA perspectives

CAs stated their positive feelings and attitudes towards the new system implementation. They presented and promoted their approaches and achieved outcomes, and believed that the new changes had been fruitful and effective. For instance, CA3 expressed his satisfaction with IT implementation and supported the new changes and attained results.

*IT implementation definitely has improved our work and services. There have been some small issues, which have been addressed or resolved. But overall, I am satisfied with the project.* (CA3)
CA5 also stated his positive feelings and attitude about the new changes in his diary entry. He believed CRs had had a smooth and satisfying experience with IT implementation. He also stressed CA assistance and consideration in providing a supportive environment to facilitate change.

So far, it’s good. So far, the new system works very smoothly without any hassle. It goes with no problem... The project team are supporting the system. It is a very supportive environment for the users. (CA5)

A few CAs seemed unsatisfied with the new changes and achieved outcomes. For instance, CA4 seemed to be unhappy with the change implementation process and some of the challenges faced, and expressed his feeling of being overwhelmed by continual change.

There has been a lot of change [to our system] over the past years. And, I think this is not going to be the last change. ... So, we have to spend quite a bit of time and effort to keep track with new changes. ... Even the smallest changes can affect the whole system... We are not an IT company; we are a currency exchange company. (CA4)

CA6 indicated some CAs and CRs, who were concerned about the new changes, did not trust the new system and were uncertain about the consequences for users. He explained that some avoided change and instead insisted on using the old process and system. CA6 referred to the issue of communication, which led to a significant divergence in CA perceptions and interpretations of IT implementation. It appeared that divergent or dissimilar interpretations of change had stimulated favourable or unfavourable attitudes and reactions towards change.

We designed and implemented the new system based on the approved plan and ExMoney’s requirements. I heard some accounting staff are concerned about the system’s capability to handle the accounting processes. They [some CAs and CRs] say that the system needs to be tested and reviewed more before being used... They argue “how a newly developed accounting system can be as accurate as a system that has been used by many other companies for years! We cannot trust it”. But, I think they do not know what this system does exactly. (CA6)

CA1 appeared to doubt the project’s success and the achievement of planned outcomes. He indicated that the new accounting system could not help them to address problems, and hence would not be effective and efficient for their business. CA1 insisted on continuing to use their old accounting approach or run the two systems in parallel for a period of time to try out the new changes, resolve probable deficiencies and inconsistencies, and ensure accuracy and appropriateness.
I just stood back, because to me it [the new system’s process] was unacceptable. I left the meeting [a review meeting before go-live], and I walked away ... I'm not saying what others are saying. Instead of being supportive and saying yes to what they [the managing director and other CAs] say, I was saying this is not going to work, don't even talk about it. I felt that rejection, and I thought that's ok, I've said what I have to say. And I walked away. Not that I don't care, I do care. But I believe we are not building on our current system, we are ruining it, and we won't achieve it [the integrated accounting system objective]. (CA1)

4.6.6.2 CR perspectives

CRs at ExMoney manifested various reactions in response to IT implementation ranging from supporting change to resisting it. In some situations, their reactions appeared to be compound and dynamic. Some CRs were positive about a part of the new system or felt content with the impact of change, while they also explained they were disappointed with another change or disagreed with a part of the implementation.

Many CRs expressed their satisfaction and confidence. They supported the new system implementation and argued that it met with their required functionality and resolved many of their previous issues and deficiencies. CR2, for instance, had the view that the changes have made her job easier and resolved many of her previous problems. She felt positive and confident about change.

The new system is very accurate, and I can easily print the lists and use them. So, it is really helpful for the reconciliation. The old system had some issues, so they [the team] just resolved them... I’m so confident about the change; I believe it’s made our job easier. (CR2)

Similarly, CR8’s perception was that change had been successful and the system had improved. She conveyed her trust in the CAs and their actions. CR8 mentioned that, based on her understanding of the CA expertise and experience, she expected effective implementation and change.

I have witnessed system improvement, since I’ve been working with it for two years. [Compared with the old system], it [the system] is now working more smoothly and has definitely improved. There are new sections added to the system... There are a few issues, but they can be improved and I am sure they will be. (CR8)

Other CRs also stated their satisfaction with the IT implementation process and provided support. CRs explained being contented and confident because their requirements had been considered and the implementation team had supported them in resolving their issues.
The changes have caused progress, and there hasn’t been any significant disruption. ... We’ve also had fewer errors. ... I believe the team has improved the security, functionality and performance of the system. (CR4)

In contrast, some CRs stated negative attitudes about IT implementation effectiveness. Some explained that they had become cynical about the change process. They either felt under pressure to adopt change or were resentful of several changes. It appeared their attitudes were influenced by their interpretations and experiences of IT implementation and its impacts, their relationships, and their understanding of others’ actions. For example, CR3 commented in her diary: “It’s something that has come down from the top [management] and we have to do it” (CR3). Likewise, CR9 was unhappy with the increase in their workload and the difficulty that they had with understanding and using the new procedures and functions.

I think he [the director of ExMoney] believes that gradually users adapt themselves and everything will be sorted out. ... We have to learn the new process and check the system; we have to check everything because we are in charge. (CR9)

IT implementation at ExMoney involved several changes in their systems and processes. This brought about uncertainty, complexity and extra work for users. Many CRs were unhappy with change complexity and pressure. They explained they did not have a clear and comprehensive understanding of IT implementation and its consequences. They felt disconnected and confused.

I am not sure if all the changes have been efficient or useful. Previously, when we confirmed an amount [of a money transfer order request], the accounting document was generated at the same time. But in the new system it is changed and, in my opinion, it’s more difficult. So, the same results are gained through a more difficult job. It’s not rational, or maybe I don’t know the reason why it’s changed. (CR6)

CR6 also commented on the views of some of her colleagues about the new system. She stated that their dissatisfaction of IT implementation and their negative feelings about the efficiency, appropriateness and necessity of some changes had affected their attitudes, impaired their performance, and diminished their motivation and participation.

Some of them [her colleagues] are not satisfied with the new system, and it affected their performance. Because they believe that the implemented [accounting] approach is not right. They believed they will encounter difficulties in finalising financial accounts. (CR6)
The feelings and attitudes of CRs towards IT implementation appear to be influenced by how they evaluate and interpret the impacts of change on their status and work. Some CRs felt uncertain or pessimistic about change outcomes, and hence they were unwilling to participate and use the new system.

*To me, the difference isn’t much. I don’t think it has been so great that we’ve spent so much time, money and energy... It’s not worth it because I don’t see a considerable difference with what it was.* (CR1)

CRs had various reactions to IT implementation, which were influenced by their feelings and attitudes about the new system. Some of them had negative feelings and attitudes. For example, they were uncertain about the impacts of change, and were dissatisfied or did not have a positive perception of project outcomes, experienced multiple changes and issues, had undergone extra workload and pressure, felt like they were being ignored, encountered unexpected consequences, or lost trust. Those CRs appeared to manifest dysfunctional or resistance behaviours including inaction, lack of interest, refusal and procrastination.

*For some reason, I haven’t engaged myself much in the process. Many of the new functions don’t seem beneficial enough for us to use them. So, I don’t engage myself much, and I think they [the CAs] can make better decisions.* (CR1)

CR9, a branch manager at ExMoney, reported that some CRs refused to accept the changes and did not utilise the new system as expected. He also explained there had been several mistakes or issues caused by inefficient or improper use of new applications.

*They [the accounting system’s users in his branch] seemed to be dissatisfied with this new system, and I think that was because the changes hadn’t been explained to them. So, they got baffled while using the system, which resulted in working less efficiently with the system. They’ve had many issues. There are also many mistakes, which could be avoided... They don’t use many parts of the new system, or maybe they don’t know how to make the most of it, which is not good to me.* (CR9)

CR5 seemed to avoid using the new system or delay applying changes to his practice. He was requested to register and check their accounting settings and transfer some of their initial data. However, he procrastinated. He expressed his feelings of being uninformed and uncertain about the new processes and systems.
I haven’t used the new system yet. I don’t know what to do with it. If I use it, do I fall behind? Is it going to be changed again soon? We haven’t done anything with it, and we haven’t been able to work with it as such. We are still using [the local accounting system] as our primary system. (CR5)

Similarly, CR9 postponed the new system tests and reviews and rejected its use, because he expected a formal confirmation and sign-off on the system completion from top management. He also mentioned being busy and lack of time as the reasons for postponing the system test and adoption.

I need the senior management to sign off on it before I use it. I know it [the accounting system] was given to us earlier to test and work with, but I don’t know should I or shouldn’t I. We have been so busy that we haven’t signed off on it and we haven’t discussed it. (CR9)

CR3 emphasised the problems faced in testing the new system and mentioned she did not believe implementation had been completed or the system was ready to be operationalised.

To me, that [the new system] is still in the development phase. I’m not convinced that it’s finished and that’s the system to use. There are still issues that need to be resolved… [and] because of no formal sort of communication about it, we’ve just left it to one side. (CR3)

On the contrary, many CRs at ExMoney supported IT implementation. They demonstrated a range of supportive behaviours including complying with and participating in the implementation process and helping to improve the new system. The supportive CRs gave feedback and constructive suggestions and cooperated with CAs to identify issues and deficiencies in implemented software applications. Some also promoted the new changes and helped other CRs to utilise the system better. CR4 compared the new accounting system with their legacy one and expressed his satisfaction with IT implementation.

This new accounting system is better than the previous system, but it can be improved. … I’ve tried to talk about the deficiencies or issues to help the team to solve them. I believe we won’t have a serious problem, and the new changes have been helpful. (CR4)

CR6 also supported the implementation process and said “I have tested some changes. I would like to participate more and help to improve the system” (CR6). Some other CRs also highlighted some enhancements and improvements in the system and their working processes and supported change. It appeared CRs were more concerned with direct impacts of change on their own status or work, and referred less to the consequences of IT implementation on other groups or their organisation. One reason for this could be lack of information on the part of CRs about change and its objectives, which seemed to lead to incomplete and divergent appraisals of change outcomes.
I am happy with the new system. I have used the newly added sections of the integrated accounting. It is easier now to do our work, and I am confident that the outcome is more accurate [comparing to the legacy system]. We have had some issues, but we inform our manager immediately... We sometimes have team meetings, and I have tried to help other team members to work with the new sections. (CR8)

In summary, it appeared that reactions (i.e. emotions, attitudes and behaviours) from both CAs and CRs were affected by their constructed meanings and interpretations about IT implementation and its impacts, and their understanding of the others’ reactions. CAs highlighted the necessity and significance of the integrated accounting system for their organisation and aimed to adopt the changes successfully. They stated their efforts and support in obtaining planned outcomes. CAs also had some negative feelings and attitudes toward change (e.g. they did not believe in the appropriateness of particular changes), or they were reluctant to participate in and support the project.

Similarly, CRs expressed several feelings and attitudes about IT implementation and this manifested in different reactions. It can be noted that those who had the impression that they had been considered and supported in the change process, were more willing to participate and cooperate. Further, CR understandings and interpretations of IT implementation appeared to shift or evolve over time. When CRs became aware of the positive consequences of the new system and perceived that changes were planned and implemented to improve their work processes, they seemed to be more interested in and motivated to support the new system. There were also CRs who perceived change negatively and resisted it. They appeared to have negative feelings and attitudes about certain changes, processes or outcomes.

4.6.7 Justifying reactions

This section explores CA and CR comments on rationalising their interpretations and perspectives and justifying their attitudes and actions towards IT implementation.

4.6.7.1 CA perspectives

In round two, CAs explained and justified their actions toward IT implementation. They tried to validate their attitudes and responses to reactions and behaviours of CRs. CAs were of the view that they had succeeded in managing and accomplishing change. They argued that their decisions and actions were valid and relevant, they had considered important business and requirements of CRs, and conducted the project without any major issues.
CA3 commented on the process of reviewing and approving requirements and addressing issues. He responded to the criticism of some CRs who believed they had not received appropriate consideration and support for their needs and concerns by CAs. CA3 tried to justify their decisions and indicated that CAs had sought both business and group priorities in planning change and resolving associated problems.

*We review requests and issues periodically, and in our change planning, we’ve tried to give proper priority to critical problems and business needs... If the issue is critical to the system or is very important, we inform the IT team and resolve it immediately. Otherwise, it will be checked later. For example, when we have a plan to change the [currency] market accounting process, if a user says that a chart does not work, we will put it on our schedule and fix it later. (CA3)*

CAs also explained the problems and disruptions related to IT implementation and attempted to justify their approach and actions.

*We created an internal website for reporting issues... Users faced some problems, which, I suppose it’s inevitable. It’s a big change, and they may encounter unexpected issues or inconsistencies. But, we are prepared to support them, as before. (CA6)*

Many CAs believed IT implementation did not encounter any major problems and the new systems went live “as expected”. CA5 was of the view that the minor inconsistencies or problems they faced were outside their control, caused by external factors, or were due to the confusion or incompetence of CRs in using the new functions and processes.

*They [the CRs] reported some issues, and we are going to review them because many of them are not actual system bugs. Usually, they are results of external problems or users’ confusion ... The system had a few minor bugs, which we have fixed ... I believe the system works as expected and without any major problems. (CA5)*

It appeared that, particularly when there were issues or disruptions, CAs tried to defend their position and role and validate their actions. Some of them tried to project responsibilities onto others, emphasising the role of external barriers or issues, or explaining unwanted circumstances or limitations.

*I tried to be involved but, because this company is growing so fast and I’m a multi-task person in the company, I missed that. I wasn’t able to attend the [project] meetings... and unfortunately, this was out of my hands. I was very busy, and I couldn’t help it. (CA4)*
Further, it could be noted that CAs also tried to defend their decisions and justify their expectations by criticising CR attitudes and behaviours. They blamed negative or opposing views and arguments. Some reasoned that because IT implementation was planned to improve their software applications and processes and aimed to enhance their business services, they expected CRs to accept the change, participate in the implementation process and support it. For instance, CA4 commented that some CRs did not consider positive project outcomes and disregarded the efforts of CAs.

They [the CRs] always start to nag about the system and complain. They say this system is not working, or this part is not right... People always complain but at the end of the day, they must accept that the changes will make the business better, not make it worse. (CA4)

4.6.7.2 CR perspectives

CRs tried to explain and highlight their interpretations and constructed meanings to rationalise and justify their positions and reactions. They stated different reasons to validate, legitimise or defend their understandings, attitudes and behaviours. For example, some CRs emphasised lack of information about new functions and procedures to justify their reluctance to use the system. CR6 commented: “We weren’t aware of some changes, and that caused some issues...” (CR6).

CRs complained about not having a complete view of IT implementation and change. They criticised the ineffective communication process and explained that they expected CAs to provide them with more details about the IT implementation process and planned changes. For instance, CR1 commented in her diary:

I just get surprised with the changes that are not communicated. Users must be informed, trained and supported in using the new system. We just couldn’t use some functions, because we didn’t know how to use them, or sometimes we weren’t quite sure about the result. A small mistake can cause a lot of damage ... [and] we are responsible. (CR1)

CR1 also argued that because they were reaching the end of the financial year in Australia, and they had to prepare and finalise their financial records and transactions, they could not start using the implemented system. She and other CRs explained they were under pressure and busy, and changes were applied during peak work periods. Thus, they were not able to dedicate expected time and effort to review, test or utilise the new system.

We were very busy finalising the financial records and accounts, and at the same time, they [the CAs] told us that we are going to switch to the new system. I had tested some of the new forms before, and I was almost sure that we would face some critical issues. I said this change at this
time of the year would put us in trouble. We need to postpone it. But they said [if] we are going to prepare integrated reports and lists, we need to migrate all data now. Simply, it meant we have to work more. And we had many problems, and we had to enter many records manually because we didn’t test it [the new system] completely. (CR1)

Similarly, some CRs criticised the IT implementation schedule and plan. CR4 was of the view that user priorities, urgent requirements or critical issues had not been considered and addressed in some situations due to restrictions and dependencies imposed by the implementation plan and process for change.

The time it takes to apply the changes may be one of the problems. Sometimes it is better to address issues as soon as possible. They [the CAs] argue that some changes are concerned with the accounting section and that section is of crucial importance’. But, I don’t agree with it [this view] to defer resolving an issue. Even a small defect may ruin the whole system. (CR4)

Other CRs explained they were not willing to participate in the change process, communicate their concerns and/or report their issues because they felt that CAs did not value and consider their role, expertise or experience.

When we faced an error or needed a change, my manager must confirm it first. He must also submit a change request so that they [the CAs] review it, so they might accept it or not. It’s like we must try hard to convince them to check an issue or consider our requests. I mean most of the time, they [the CAs] want to impose their beliefs. (CR3)

Some CRs were not satisfied with the IT implementation process. They criticised change planning and management for encountered inconsistencies and flaws in system analysis and design and disruptions in the implementation process.

Small businesses usually want to save money... without understanding that saving costs sometimes results in spending more money. I believe some critical steps in this project are neglected. Some of our critical needs are not considered very well; users are not trained; [and] we see hasty changes. (CR9)

There was also criticism about the process of gathering and analysing user requirements. Some CRs explained they were not consulted in the process of designing and implementing the new system.

It seems that we don’t have some of the useful features in the new system. ... Some changes have made the system more complex ... [and] it has affected our performance. I expected [the
implementation team] to ask us about [system] design and required functionality, to spend some time with us and see how we do our work. (CR6)

CRs also explained their reasons for having positive feelings and attitudes toward change and tried to defend their support of IT implementation. For instance, some CRs argued that many of their requests and concerns had been addressed in IT implementation. CR2 mentioned that “it [the new system] looks promising... I could see that almost all of our requirements have been applied in it” (CR2). Alternatively, CR8 expressed her trust in CA actions and her satisfaction with the received support:

The IT team is professional and experienced, and I trust their work... The system was developed professionally and the IT team has been very supportive throughout the project. (CR8)

In sum, CAs and CRs justified their attitudes and actions and tried to explain and rationalise their perspectives and interpretations. CAs highlighted their reasons for decisions and changes and defended their actions and IT implementation process. They also tried to justify the complexities encountered and stated they had considered important business, CR requirements and concerns and conducted the project without any major issues. They expected the CRs to cooperate and support the new system.

CRs commented on their experiences of IT implementation, explained their situations and conditions, and maintained negative or positive attitudes and actions. Some of their justifications for non-supportive or resistance reactions included dealing with unexpected changes, experiencing issues, the fear of facing disruption, losing productivity, being busy and under pressure, doubting system benefits, and having more responsibilities. CRs also conveyed justifications for their favourable or supportive reactions toward changes, including being considered and valued, believing in the benefits of IT implementation, experiencing effective changes and performance improvements, and trusting change management.

Also, it can be noted that CA and CR justification for their reactions influenced further change appraisals, understandings and actions. In the process of justification, they tried to share and negotiate their interpretations and constructed accounts, and develop their understandings of others. Furthermore, explanations and arguments by both CAs and CRs seemed to be logical considering their (individual or organisational) positions, conditions and requirements. Their rationale and accounts were based on their experiences and interpretations of change.
Chapter 5
IT Implementation at GovOrg

5.1 Introduction
This chapter presents the GovOrg case study in detail and discusses results of analysis of the collected data and the perspectives of change agents (CAs) and change recipients (CRs), commenting at two stages of IT implementation. An overview of case background, description of important features of the organisational context and IT implementation are presented.

5.2 Case Study 2: GovOrg
GovOrg is a government organisation that supports the state government’s pro-business policies and programs and the development of innovative industries. It includes several key functions and services that drive economic growth and development in different sectors across the area. (Figure 5.1 is a simplified presentation of the organisation structure of GovOrg.)

Figure 5.1 Organisational structure of GovOrg
GovOrg consists of multiple business groups and inside each group, several business divisions and sections. Up until March 2015, GovOrg had more than 2500 employees working in about 100 locations and offices in the state.

The IT and corporate services support the organisation’s critical business functions and services and conduct projects or provide advice to drive performance and improve the productivity of the organisation. This section manages and develops IT infrastructure and services according to the organisation’s IT strategy, and is responsible for planning and conducting IT implementation. For implementing IT projects, an internal team in this section works with one or more IT service providers or vendor companies. In some situations, the IT services section may conduct multiple concurrent projects across different business groups and divisions or the whole organisation.

5.3 IT environment at GovOrg

IT implementation was initiated to deploy Windows 7 64-bit operating system to the existing GovOrg operating environment and upgrade the IT infrastructure and systems. The project involved the operating system upgrade of all desktops and laptops for more than 1500 users in multiple locations, and with different work practices and settings.

Besides the Windows 7 rollout, other updates and enhancements were also planned and implemented. These changes included upgrading network infrastructure and services, deploying information classification solution (enabling protective marking for emails and digital documents), updating software applications (upgrading 32bit software tools to 64bit versions, updating productivity suite, browsers or other related tools to the latest versions) and hardware systems (improving workstations, updating servers). The project also was planned to achieve some other objectives including:

- providing a single Whole-of-Government (WoG) provision and delivery approach;
- obtaining a single standard for desktop productivity software;
- enabling a Standardised Operating Environment (SOE);
- enhancing the level of security and implementing an integrated access management system;
- improving the scalability of desktop and remote access solutions;
- facilitating future developments and the use of newer technologies; and
- reducing maintenance and support costs.
The project team comprised of a project manager and some IT section members from GovOrg and a co-project manager and implementation and technical teams from the vendor. Apart from general project management responsibilities, GovOrg’s project manager was responsible for planning and monitoring the implementation process, organising and managing project communication and liaison, and reporting the project status and progress. The vendor’s project manager was responsible for managing technical teams and activities. (Table 5.1 shows the project phases and its primary activities.)

The Windows 7 rollout project started in September 2014 and was due to be completed by the end of December 2014. (Figure 5.2 illustrates the proposed Windows 7 deployment stages.)

![Figure 5.2 GovOrg Windows 7 Deployment Stages](image)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Activities</th>
</tr>
</thead>
</table>
| Pre-Implementation     | • Information gathering including user details, workstation details and hardware, and installed applications and software packages  
                          | • Infrastructure and software systems readiness review                                           |
| (Sep 2014)             | • Requirements analysis and change planning                                                      |
|                        | • Deployment and change management planning                                                      |
| Implementation         | • Pilot project                                                                                  |
| (Oct 2014 to Dec 2014) | • Network infrastructure and services upgrade                                                     |
|                        | • Integrated security and network access management system implementation                       |
|                        | • Windows 7 rollout, workstations upgrade (hardware and software)                                |
|                        | • Information classification implementation                                                       |
|                        | • Final changes and enhancements                                                                  |
| Post-Implementation    | • Delayed workstations upgrade                                                                   |
| (Jan 2015 to Feb 2015) | • Transition and support                                                                         |
In this project, users were divided into groups based on their division and location (building and storey). Each group comprised about 50 to 100 workstations. The implementation time for each cluster was three to four days including one day before the rollout for preparation, one day for all upgrades and changes (including the Windows 7 rollout and network updates), and one or two days for finalising (performing further changes and updates) and immediate support. To improve the efficiency of the implementation process and to enhance the consistency of the changes, the project team packaged and tested an image of the Windows 7 Enterprise operating system and required software applications and updates as the single desktop SOE platform (The design and layers of the prepared SOE are presented in Appendix J.1.). Further, the System Centre Configuration Manager (SCCM) software suite was used to deploy the prepared image, and manage the changes and settings.

The communication with CRs was mainly carried out through emails. Initially, CAs informed CRs about the change through some emails and newsletters, and requested them to complete and return some forms to report their special needs. CRs were notified plus a short document about getting started with Windows 7, and some of the new features and updates. Before change deployment, each staff member was sent an email that requested they confirm the details of their workstation and current installed software applications. The email message also contained a short document about getting started with Windows 7, important new features and planned changes (see Appendix J.2 for a sent email message). During and after IT implementation, CRs also had access to a telephone line for reporting their issues or asking for support.

5.4 Data collection for GovOrg case study

Similar to ExMoney, in this case study data was collected at two stages: pre-implementation (round one) and post-implementation (round two). The former phase represents the period of time needed to make the decision to upgrade the operating system and conduct the change project by GovOrg to the time when the new changes and updates began to be deployed. At this stage, CAs at GovOrg began to consider the need to refresh and develop their IT systems, explore strategic directions, and identify the required changes and enhancements. Further, the pre-implementation stage included gathering and analysing workstation details and user requirements, reviewing infrastructure and software systems readiness, and planning project and change management. The latter phase (post-implementation) signifies the period in which the deployment of upgrades and changes was completed and new systems and practices were in use. Round one data collection was completed in October 2014 and round two was conducted in March 2015. The following list outlines the data collection for this case study:
• Round one: Pre-implementation
  o October 2014
  o 14 interviews conducted (four CAs and 10 CRs)
  o 5 diaries collected (three CAs and two CRs)
  o 1 group meeting attended
• Round two: Post-implementation
  o March 2015
  o 12 interviews conducted (four CAs and eight CRs)
  o 5 diaries collected (three CAs and two CRs)
  o 1 group meeting attended

Table 5.2 lists interviews conducted and interviewee roles. (Figure 5.3 shows the locations of CAs and CRs in the diagram of the organisation structure of GovOrg.)

<table>
<thead>
<tr>
<th>Codes</th>
<th>Round one</th>
<th>Round two</th>
<th>Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR10</td>
<td>X</td>
<td>X</td>
<td>Manager, Normal User (IT)</td>
</tr>
<tr>
<td>CR11</td>
<td>XD</td>
<td>XD</td>
<td>Power User (Business)</td>
</tr>
<tr>
<td>CR12</td>
<td>X</td>
<td>X</td>
<td>Manager, Normal User (Business)</td>
</tr>
<tr>
<td>CR13</td>
<td>X</td>
<td>*</td>
<td>Manager, Normal User (Business)</td>
</tr>
<tr>
<td>CR14</td>
<td>XD</td>
<td>XD</td>
<td>Normal User (IT)</td>
</tr>
<tr>
<td>CR15</td>
<td>X</td>
<td>X</td>
<td>Normal User (IT)</td>
</tr>
<tr>
<td>CR16</td>
<td>X</td>
<td>X</td>
<td>Normal User (Business)</td>
</tr>
<tr>
<td>CR17</td>
<td>X</td>
<td>X</td>
<td>Power User (IT)</td>
</tr>
<tr>
<td>CR18</td>
<td>X</td>
<td>*</td>
<td>Power User (IT &amp; Security)</td>
</tr>
<tr>
<td>CR19</td>
<td>X</td>
<td>X</td>
<td>Power User (Business)</td>
</tr>
<tr>
<td>CA7</td>
<td>XD</td>
<td>XD</td>
<td>Project Manager (GovOrg)</td>
</tr>
<tr>
<td>CA8</td>
<td>XD</td>
<td>XD</td>
<td>Project Manager (Vendor Company)</td>
</tr>
<tr>
<td>CA9</td>
<td>X</td>
<td>X</td>
<td>CIO</td>
</tr>
<tr>
<td>CA10</td>
<td>XD</td>
<td>XD</td>
<td>Manager (IT)</td>
</tr>
</tbody>
</table>

Key:
- CR: Change Recipient
- CA: Change Agent
- X: interview has been conducted with the participant
- D: diary has been received from the participant
- *: resigned from company

Figure 5.3 Locating the CAs and CRs at GovOrg
5.5 Round one: Pre-Implementation (GovOrg)

This section reviews the collected data of the pre-implementation stage of IT implementation at GovOrg. Similar to the previous case study, the analysis of the CA and CR perspectives and comments are discussed and presented in seven themes including Developing mutual understanding, Appraising change and constructing meanings, Interacting with others, Seeking benefits, Feeling involved, Attitudes and reactions to change and Justifying actions. (More examples of CA and CR perspectives are provided in Appendix K.)

5.5.1 Developing mutual understanding

5.5.1.1 CA perspectives

At GovOrg, CAs stated their expectations of CR understanding and cooperation in conducting IT implementation. They highlighted the size, complexity, sophistication and required resources of the project, and explained the importance of change in their organisation. CAs expected CRs to acknowledge their role and efforts, appreciate the changes, and understand the implementation process and its implications. For instance, CA8 emphasised that despite limited project time and resources, they tried to review, plan and prepare changes to minimise probable problems and disruptions. She and other CAs expected CR understanding and participation.

We are going to do a significant organisational change over a short period of time. The project includes several changes and updates and is going to affect existing systems and services... We are working on a big project, and we need to do many upfront preparations and tests. [for example] there are a lot of documents and paper works need to be created in a very limited time... So, I expect the users to understand this. (CA8)

CA7 also anticipated CR cooperation. She said that CAs had to be strict and deploy the changes as planned. She admitted there might be some disruptions or issues, but she expected business managers and users to understand the project’s objectives and support them in achieving intended outcomes.

This project (IT implementation) is not personal. I’m not doing it to users because I’m trying to make their life difficult. I’m doing it because this is the better thing for the organisation. (CA7)

CAs also expected CRs to acknowledge their experience and expertise, and accept and support their decisions and plans in managing IT implementation. Similar to CAs at ExMoney, they explained that they had the required knowledge, experience and skills to manage the changes and progress IT implementation. They expected CRs to trust them and cooperate. Many CAs at GovOrg stated their
position and background, and highlighted their previous experience and expertise in conducting and accomplishing successful IT projects. The following example is typical of the way CAs promoted their role, experience and suitability for driving IT implementation.

The role of [the] CIO is, essentially a role that is responsible for the delivery of the IT infrastructure and web online services, records management, IT telecommunication and procurement. We have successfully managed and delivered several projects. As a CIO, I’m pretty much responsible for managing the projects office as I did previously in my previous role, but I’m very much involved in key project initiatives that impact the organisation. (CA9)

IT implementation at GovOrg affected almost all employees at different working levels, and groups and departments. Due to their various types of work and different levels of IT use and dependence in their jobs, CRs had diverse conditions and demands. CAs stated they had tried to understand different requirements and consider various concerns and priorities of CRs. They had attempted to involve business managers and power users (users who have special needs or conditions in using IT systems) in each group from the beginning of the project to gain more comprehensive understandings of CR requirements, and business practices and intricacies. By identifying needs, priorities or constraints, CAs were able to plan and organise changes more efficiently and minimise possible disruption. This approach could also help CAs connect to and have more interaction with CRs.

It’s the business managers that know about the division or the business that they do, the users within that area and the types of programs that they use. So, it is really getting that business insight and that I think laying out essentially what we expect from them in terms of their role and what they could expect from us and the change. … That knowledge of the organisation and business is key because we don’t know where the intricacies of the business are. (CA9)

Further, CA9 expressed the need for hearing and understanding CR concerns and requirements in achieving successful IT implementation:

... you really need to place the users in the forefront particularly in IT change projects. You need to understand their circumstances. (CA9)

5.5.1.2 CR perspectives

It appeared that understanding change rationale and consequences could develop the feeling of being valued and considered. For instance, CR18 argued that because they were to be affected by changes, CAs must explain their plans, change objectives and outcomes, and the IT implementation process.
They [the CAs] need to spread awareness and set the results of the change, so tell us this is why we are doing it [IT implementation], this is the goal, this is what you will get, and this is the plan. (CR18)

The conducted initial system audit process and the pilot project appeared to enhance interaction between CRs and CAs and facilitate the development of mutual understanding. On the one hand, CRs could gain more information about, and a better view of, change objectives, process and outcomes. They could interact with CAs and realise their plans. CRs also appeared to feel involved in change by reviewing changes and discussing their needs and interests. On the other hand, CAs could improve their understanding of the demands and priorities of CRs, and explain their goals and expectations.

For instance, CR13 highlighted the role of the pilot project in gaining more knowledge about IT implementation, getting the impression that their requirements and concerns were understood and acknowledged by the CAs, and becoming more confident about the changes.

*I think when we go through pilots, we can test out the planned changes and check the new functionality. ... Although things are expected not to go too flat, as what they are in the pilot project and in a controlled environment, but people are more confident about the changes.* (CR13)

CR12 highlighted the initial system audit process and its role in identifying and clarifying CRs’ requirements. The CRs were asked to audit their systems and list their special needs, required software tools or configurations.

*Some people need additional software, and are required to list them when they do the audit. Just recently everybody was asked to send information about their needs. So, we are going to audit our own machine and then send that information back.* (CR12)

The conducted initial system audit process and the pilot project appeared to enhance interaction between CRs and CAs and facilitate the development of mutual understanding. On the one hand, CRs could gain more information about, and a better view of, change objectives, process and outcomes. They could interact with CAs and realise their plans. CRs also appeared to feel involved in change by reviewing changes and discussing their needs and interests. On the other hand, CAs could improve their understanding of the demands and priorities of CRs, and explain their goals and expectations.

Many CRs expected CAs to acknowledge and understand their role and needs and inform them about change details and possible disruptions or issues.
Some groups use special software. ... But I think with any change, as long as people realise what it involves and how it impacts them, people will look more comfortable and will be more forgiving [for encountered disruptions]. ... if you can say to them [CRs] 'look, I anticipate it’s going to take a full day’, then they ... anticipate the delays and have the opportunity to plan around it. (CR13)

CRs highlighted their relevant knowledge and past experience. As such they expected CAs to consult with them about the changes and take on board their suggestions and feedback.

When we came here [GovOrg], we kind of downgraded to XP. We’d actually gone through this process [migrating from Windows XP to Windows 7] once before. ... So, we already know that certain things [would] work or not, because we’d already tested them. (CR11)

Some CRs asserted use special software applications and require particular settings or access in their IT systems to be able to accomplish their jobs and duties. At GovOrg, the project was designed as a single ‘standard’ implementation process including a set of pre-planned activities for updating specific hardware and software systems and networks. CAs intended to apply similar procedures and configurations for all CRs. However, some CRs were using ‘non-standard’ software tools and packages (referred to as ‘non-standard’ or ‘power users’). Those CRs expected CAs to understand their special requirements and concerns and to be provided with appropriate resources and support during the IT implementation process.

We had another meeting about our needs this morning [with CAs], so it’s an ongoing saga. I hope they [CAs] will consider the requirements for what they call non-standard settings. (CR10)

CR19, business manager and power user, was of the view that his and his section’s role and requirements were not fully understood.

I think primarily because we [his group] are different and that they [CAs] base everything on the standard package, which doesn’t fit for us, so it’s going to be a real issue. (CR19)

Non-standard CRs believed that CAs did not listen to their requests and did not value and consider their concerns and requirements, which appeared to cause them to feel isolated and unsupported.

I’m not optimistic. They [CAs] don’t listen, because we are not seen as major stakeholders. We are just seen as peasants, you know, with things like operating systems. You have to do them, you’ve got no choice, [and] it’s just how much of a pain it’s going to be. (CR11)
CRs also commented on their understandings of decisions and actions by CAs toward IT implementation. Some CRs expressed their empathy and support for the efforts of CAs in conducting implementation. It appeared that the acquaintance and relationship of CRs with CAs influenced their perceptions of the role, conditions and actions of the latter.

*I think they [CAs] will go well. I know the project manager and she does a good job in terms of IT projects, and just making sure she gets on with people. Because I’ve worked on a different project with her before and I’m pretty confident she’ll get it done.* (CR13)

Similarly, the previous experiences of CRs in IT implementation and their knowledge of the change process appeared to influence their understandings of decisions and actions taken by CAs.

*… it’s a huge organisation [in which] they [CAs] are going to roll out [the new systems]. There are certain issues that they need to address, and it takes more time. … With respect to this volume and their small team, I think it takes time, and they are doing well.* (CR17)

In sum, CAs believed that the changes planned would improve the productivity and performance of their organisation and reduce costs. They were of the view that IT implementation would bring positive outcomes for all stakeholders. CAs explained they had considered the needs and priorities of CRs. They expected them to acknowledge their efforts in improving user practice and work quality.

CRs also tried to understand IT implementation and the extent to which it would influence their status and job. They sought to understand the roles and actions of CAs and the change plan, process and outcomes. Some CRs felt the new changes would constrain their autonomy and authority and diminish their performance. They believed that some of their requirements and concerns were not acknowledged and considered, and the approach taken by CAs in managing the project was not effective and efficient. Other CRs perceived that the upgrade and improvement of their IT systems were necessary and positive. They acknowledged CA plans and appreciated their actions in conducting IT implementation.

### 5.5.2 Appraising change and constructing meanings

#### 5.5.2.1 CA perspectives

CAs at GovOrg emphasised the importance of updating their IT systems and implementing the new changes. They explained that the planned updates were critical and they had to implement them to prevent future support limitations, reduce maintenance costs and ensure the performance and security of their IT systems and networks.
Microsoft will withdraw support for XP soon ... and we would need to pay a substantive amount of money for any Microsoft support of XP moving forward... We had looked at an upgrade much earlier than this, but we had circumstances, which prevented us from doing that sooner. (CA9)

Many CAs believed that IT implementation would involve several significant changes to systems, computer networks and IT-related processes at GovOrg. In his diary, CA10 indicated an ongoing discussion among CAs about the extent and impacts of the project. He mentioned “We have had some discussions on the side effects of the OS upgrade and the network infrastructure changes. I believe there are some areas that are not considered and tested thoroughly.” (CA10)

They believed that the project would involve complex changes across different systems which could cause disruption in business services and CR activities. They explained that many of the potential impacts of the changes were understated and many stakeholders were not aware of them. For instance, CA7 mentioned the extensive effort required and resources for progressing the project, deploying the new infrastructure and systems, and at the same time, managing the old network and applications.

We are going to roll out Windows 7 to the whole of GovOrg. But we’re not just changing their [CRs] desktops. We’re moving them from one network to another network. So, that involves a lot more work than just rolling out Windows 7 ... Because we’re doing it over a transition period, we’ve got to make sure that we don’t break [disrupt] it for the people who are still left behind on XP while we move the new ones to Windows 7. (CA7)

CA10 believed that CAs should explain the plans, IT implementation process and probable consequences of the change for CRs, and guide them with regard to better evaluation and anticipation of events and actions.

There would be some disruptions, and I would say, in some circumstances, we may experience long disruptions. We need to explain it to them [CRs]. ... So, we need to set the expectation that they [CRs] could lose some hours. (CA10)

In contrast, some CAs appraised change as a standard process of upgrading the operating system and other software applications for their workstations. For example, CA9, the CIO, was of the view that IT implementation would entail small changes and updates, and thus CAs would not need to plan extensive preparation or training programs.

We typically make an assessment and a judgment call around the necessity for training. In this instance, we won’t provide for classroom training. ... because the change is purely at the OS level, we deemed that isn’t required. (CA9)
CAs also evaluated CR actions and tried to interpret their attitudes and behaviours towards IT implementation. They appeared to consider the previous conditions and reactions of the CRs as their reference for further interpretation and response to CRs. For instance, CA8 commented that CRs who had moved from another organisation and would experience repeated change would be unwilling to participate and accept the new changes.

*There is a group of people that went from [Windows] XP to Windows 7, and then they got moved into here and were back to XP, and they are going to be on Windows 7 again. So, they are quite dissatisfied people because they keep on having to move. I think the majority of people would be happy with the changes. But, you always get resistance to change.* (CA8)

### 5.5.2.2 CR perspectives

CRs sought to gather information to evaluate IT implementation and understand its potential impact on their work and status. As they became aware of Windows 7 rollout, they tried to appraise the new changes and interpret CA plans and actions. CRs expected to be informed about the necessity, significance and outcomes of IT implementation.

*I don’t think people know the reason for the change. Even I would ask them [CAs] ‘what is the need for it, apart from Microsoft stopping the support for Windows XP and pushing everyone to go on with Windows 7? What are the outcomes of the change? Why is this change necessary?’ These questions come to everyone’s mind.* (CR18)

Some CRs doubted or questioned change initiatives. Their interpretation was that IT implementation was an obligation to reduce the support and maintenance costs of the organisation and this would not have significant outcomes for CRs. In her diary, CR14 noted: “I’m not sure about the project outcomes, but I’m assuming the objective is to get us onto Windows 7 from an expired Windows XP” (CR14). These CRs commented that there would not be any noteworthy change to their processes and activities, or if there were, they would not be aware of such outcomes or improvements.

*... with Windows upgrade, it isn’t really to make staff’s working life easier or better. I think it is because the OS and some applications are outdated and no longer supported... To me personally, it doesn’t actually make any difference.* (CR13)

Due to the diversity of services and specialities in the divisions of GovOrg, CRs in each division could have distinct working practices and settings and use different IT-based systems and software tools. From using standard productivity tools, such as Microsoft Word and Excel, to exploiting sophisticated and complex software packages and data processing and analysing applications, CRs have
very different dependencies on IT systems. Thus, it can be noted that the importance of IT implementation was different for each group of CRs. For example, they had different appraisals of IT implementation, from perceiving it as a small operating system upgrade with no or limited impacts on their activities, to considering it as a large-scale project with significant impacts on their work and the organisation’s IT systems, processes and infrastructure. They also appeared to interpret change based on their dependence on IT systems and services.

Many CRs appraised IT implementation as ‘just an upgrade’ and expected a standard and smooth change with minimum or no disruptions to their work processes. For instance, CR15 commented in her diary “I suppose Windows 7 I’ve been using [it] at home for like many years, so I don’t have great expectations on whether it will change my life” (CR15). CRs seemed to have limited information about IT implementation and hence evaluated the changes based on previous experience.

Everybody would be fine. It’s just an upgrade ... I have Windows 7 at home, so it doesn’t bother me at all. So, I’m used to using it, and I think everybody else just seems fine about it. I don’t think it’ll change the way they [CRs] do their job. (CR12)

CRs who had more interaction with CAs could obtain more detail about changes and appeared to have a more comprehensive understanding of IT implementation implications and outcomes. For instance, CR17, a power user in the IT section, stated some of the benefits of the project and defended IT implementation.

We had some discussions with the project team and I know that the new changes would really save the network from any injection of virus and all these things. So, it’s really worth doing them... I mean, the network would be tightly controlled and much safer. (CR17)

Many CRs expected a well-planned implementation and anticipated an efficient and smooth change process. This expectation appeared to stem from their view that IT implementation would involve standard upgrades and small changes that could be managed and accomplished by CAs without difficulty.

I expect to log in the day after deployment, and I should all be perfect. ... It should just really be smooth for us. (CR16)

Another group of CRs held a different view. They were mostly ‘power users’ who used sophisticated software tools and IT-based technologies. They believed that IT implementation would have significant impacts on their systems and processes. Thus, they expected a well-planned approach and carefully tested and prepared procedures for conducting the changes and implementing new systems. For
instance, CR10 described IT implementation as a significant change at GovOrg. CR10 was responsible for the development and maintenance of the TSystem at GovOrg, which was going to be impacted by the Windows 7 rollout significantly.

*It [the Windows 7 rollout project] is probably one of the biggest projects that the organisation will undertake. It touches everybody’s desktop. I think it’s a significant change, which will impact many of the other applications in the organisation. It affects the TSystem, and there are some changes that should be made prior to implementation commencing. They [CAs] should also pay a bit more attention to having the appropriate number of staff, I think, to support and manage the rollout.* (CR10)

CRs also commented on CA plans and actions. Some of them expressed their uncertainty and frustration about CA actions and the IT implementation process. They (particularly power users) believed their requirements had not been considered by CAs. For example, CR11 pointed to divergence between expectations and concerns of CAs and CRs.

*They want to get it [IT implementation] done on time and on budget, [and it] doesn’t matter how many people they muck around on the way. They just use those metrics to measure success.* (CR11)

In sum, CAs and CRs explained their evaluation and interpretation of IT implementation and each other’s perspectives and actions. They expressed different appraisals of the new changes based on their interactions and relationships, and their knowledge and understanding of change impacts on their organisation and their work. CAs stressed the importance of upgrades and new changes in improving their systems and reducing their costs, and they stated their expectations of CRs in achieving planned objectives and outcomes. CRs assigned different meanings to change, which also appeared to be influenced by their dependence and use of IT systems in their work processes. Some CRs appraised the project as more significant to their performance and status and thus expected more consideration and support from CAs.

5.5.3 Interacting with others

5.5.3.1 CA perspectives

CAs interacted and communicated with CRs to inform them about change objectives and plans and explain the implementation process. CAs at GovOrg stated different communication approaches and methods including: sending emails, management announcements, information packs and change forms;
conducting surveys; providing intranet information pages and newsletters; and organising meetings with business managers and key stakeholders.

There has been some communication from the CEO to say that this [change] is going to happen. He sent some initial information out to senior managers to push it [information] down to all employees. When they [CRs] get the information, we sent them a survey. They need to fill out the survey and say what PCs and applications they use and so on. We sent out some emails to say this is what’s going to happen. We put a similar message onto the intranet. We also have a once-a-month e-newsletter that has been sent around to all employees, and there is a similar message in that. So, everybody is very aware that this [change] is going to happen. (CA7)

CAs explained their interactions with CRs as a two-way approach for exchanging concerns and expectations. Through early and consistent communication, CAs could inform CRs about the new changes, clarify actions and the IT implementation process, and collect CR requirements and feedback.

We advise them [CRs] early about our upgrade intentions... [and] when we intend to touch their desktops and what the process is involved in, what they need to do and their responsibilities to make it successful and what our responsibilities are. (CA9)

CAs at GovOrg conducted a multi-layered staged communication approach. They organised different interaction and communication activities with diverse groups of stakeholders such as middle managers, key CRs and/or normal users. CA7 commented: “I’ve got a responsible person from each of the divisions that is usually the communication person within that division” (CA7). CAs involved business managers and key CRs in the change process and communicated with them to elicit their needs and concerns.

We engage business managers from the different divisions, and they help us quite a bit. The business managers are the ones that work to get the information for us around, what applications they use, or validate the users that are within their divisions. They are the touch point in terms of us communicating with their divisions, and they assist the project team throughout that process of rolling out changes. (CA9)

CAs emphasised their approach of communicating ‘early and often’, consistently, and keeping CRs informed about changes. They asserted the efficacy of planned communication and provided information.

Our approach is to communicate early and often. We’ve prepared some communication packs. ... So, they [CRs] are continuously getting updates. (CA8)
Consistent and early communication with CRs appeared to encourage the latter’s engagement and enhance their participation in the IT implementation process. CA10 commented in his diary: “We must keep them [CRs] informed about the new changes, and try to build up enthusiasm for the change” (CA10).

CAs mentioned conducting surveys using some forms for capturing users’ requirements and settings. They also tried to engage CRs in the change process by assigning tasks and making them responsible for basic or initial change preparations. It was apparent that this approach helped CAs to develop their interactions and communication with CRs.

*We have sent users some forms and instructions and asked them to do some initial work. We’ve asked them to fill out a survey, tell us what they have got on their desktop, what applications they use mostly, or what they need to have.* (CA9)

CA8 mentioned their interactions and relationships with other similar organisations to acquire knowledge and learn about Windows 7 rollout and related changes, discuss their concerns and problems and share experiences. CA8 considered those interactions and discussions as sources of learning.

*We are lucky to some degree because we are not the first organisation to go from XP to Windows 7. So, we are able to leverage on what some of other organisations have done. So, we attended a workshop and contacted some of them. I think we’ve learned many lessons from them.* (CA8)

5.5.3.2 CR perspectives

At GovOrg, CRs stated their expectation of having direct and regular communication with CAs. Through their interactions with CAs, CRs could acquire more knowledge about new changes, discuss events and actions, clarify their uncertainties, and develop their understandings of IT implementation and its objectives and impacts. For instance, CR19 emphasised the need for communication and to be provided with details, plans and procedures regarding change. He explained they had several ‘unanswered questions’ plus uncertainties or concerns that needed to be communicated, discussed and clarified with CAs.

*We got an email telling us the project will start soon... There is a lot of unanswered questions about changes. ... So, we are given ample information about the fact that the project is happening. How it is going to happen is another thing.* (CR19)
Close relationships appeared to enhance obtaining guidance and support from others. For example, CR13 emphasised her frequent and ‘strong communication’ with the project team. CAs helped her to be informed about the change process in advance and she received updates about the new systems.

*I have had a strong communication with the Windows 7 team. ... as business managers, we’ve always given a heads-up about the change details well in advance...* (CR13)

CR12 also mentioned her good relationship with the project manager (CA7) and the implementation team, which allowed her to contact them and discuss her concerns and issues easily. Close relationships and the development of mutual understandings between CRs and CAs appeared to facilitate more effective interaction and easier exchange of information between them.

*We had a little issue around... So, I spoke with CA7 [project manager] about it and also my other concerns. I thought that could become a big problem, but it’s been sorted out. She also explained to us the [new] plan and changes.* (CR12)

In contrast, lack of connection and positive relationships between some CAs and CRs appeared to be a barrier to having active and constructive interaction.

*In this organisation, it’s not easy to talk to them [CAs], unlike when we were in [XOrg], and it had like maybe five or six hundred people in it, and so people got to know each other. Then we came on board, and there are too many people for them [CAs] to cope with. So, I think some of the processes have fallen down, like communication. I should be able to call them.* (CR11)

Some CRs at GovOrg criticised the project’s communication strategy. They emphasised ineffective communication and not receiving adequate information about IT implementation and its impacts. For example, in her diary, CR14 stressed the lack of communication and stated she and her colleagues had not been notified and informed of the extent to which IT implementation would influence their working processes and services. She mentioned: “*We haven’t been advised about the impacts of the project on our services to our customers. They [CAs] must explain their plan and changes to our network, and storage access and external cloud services*” (CR14). CRs expected direct and frequent interaction with responsible CAs to be able to convey their concerns and to discuss their special needs. They believed that ‘face-to-face discussion’ with CAs would facilitate information exchange and improve mutual understanding.

*They [CAs] hire contractors. The contractors can act as a buffer between us and them [CAs]. And therefore, I can’t share my concerns with top management. My message will never go through to the higher level because they are not having a face-to-face discussion with me.* (CR11)
In summary, although CAs stated they had announced and communicated the project commencement and implementation process through multiple emails, newsletters or formal or informal interactions, CRs felt that the information provided was too general and inadequate. Many CRs were unsatisfied with the communication process and highlighted a lack of effective interaction and knowledge about the new changes.

It appeared that active and persistent interactions and communication among CRs and between CRs and CAs could enable negotiation to facilitate the development of mutual understanding. Through social interactions, stakeholders could acquire more knowledge about events and actions, exchange their experiences and evaluations of change, and collectively construct and maintain meaning about IT implementation. Further, CRs who had closer relationships and thus more communication and interaction opportunities with CAs were more informed about the new systems. They also provided CAs with more information about their needs and concerns. Thus, CAs better understood their requirements and conditions.

5.5.4 Feeling involved

5.5.4.1 CA perspectives

CAs emphasised the significance of and need for CR involvement in change implementation and argued that involving CRs would have multiple advantages. For instance, some CAs stated they could receive more support and contributions from CRs in gathering requirements, planning the process, and testing the changes. For instance, CA8 explained that CAs could use key users’ experiences and knowledge to develop better understandings of required resources and efforts in adopting change.

*We need super users. We need our administrators to do the testing ... because we don’t really know their applications. I don’t think we have a complete understanding of how much effort is required.* (CA8)

Some CAs highlighted CR involvement as a driver for gaining and sustaining their buy-in for achieving change objectives. CA9 suggested that the IT implementation process was a ‘team effort’, which needed the engagement and participation of all stakeholders to reach its goals.

*I think the key thing is really around buy-in from the users. And we really need to involve them [CRs] and encourage them to be part of the change process, and it’s a team effort. We need their help to make it successful.* (CA9)
Involving CRs and ‘early engagement’ with them could, on the one hand, enhance communication about change and facilitate the development of CR understandings of IT implementation, while enabling CAs to obtain more comprehensive ‘business insight’ and understandings of CR requirements and concerns.

The key thing is early engagement with stakeholders and of course proper identification of who they are and finding the key roles within the organisation that can assist us with what we need. ... They know about their business processes, and they can help us in identifying their needs and at the same time assist their business area with the change implementation. That is why it’s important to get their involvement. (CA9)

5.5.4.2 CR perspectives

CRs commented on their involvement in IT implementation by explaining how they communicated and engaged in interactions and by evaluating how well they were informed about change. Further, informed CRs appeared to be more willing to interact and participate in change implementation. Many CRs expressed their expectation of having direct communication with CAs to be informed about updates and events regularly.

[CAs] should try to communicate with all the users ... and inform them of what will happen. I think they should also try to have face-to-face sessions with all the users. They should assure the users that things are working in the background and progressing. When people are aware, they are more receptive... (CR18)

Many CRs indicated they had not received adequate or relevant information about the changes and their impact on their work activities and conditions. They increasingly felt that their roles and requirements had not been recognised, valued or considered by CAs. Some CRs appeared to have negative feelings such as being ignored or disregarded and not involved in IT implementation. CR11 commented in his diary: “I haven’t heard anything about the [project] plan. They [CAs] talk among themselves, not to us” (CR11). Similarly, CR17, a power user in the IT department, commented:

I was informed about the basic work. They [CAs] provided us with a welcome pack, but it had just the general information, things like when you are a new user how to log into Windows, or if you have a problem what to do. (CR17)

They expected to be informed about related events and actions in advance and thus have the opportunity to participate in change planning, preparation and implementation. CRs expected to be given the opportunity to comment on change, offer their suggestions and discuss their concerns with
CAs. CR14 commented: “We are not informed about the new changes, and we are not asked to comment on the changes and plans” (CR14). Similarly, CR11 explained his expectation of having regular discussions and information exchanges with CAs.

[I expect CAs to] tell us what the project plan is ... and run fortnightly meetings ... because we want actually to contribute to that project plan, and about what has to be done. So, we need to see it and be a big part of it and even get to be a stakeholder that approves changes. Here, none of that happens. (CR11)

Some CRs were of the view that engaging CRs early in the process and informing them about plans and new changes would improve their buy-in and ensure more comprehensive understandings of IT implementation. CR10 suggested conducting ‘power user forums’ for facilitating more effective information sharing and discussions about IT implementation.

I suggested holding what we call ‘power user forums’ so that they [CAs] constantly meet users and explain and discuss the changes, directions and impacts. They need to engage staff prior to the change implementation. That helps them, from even before they start the project, to get a whole lot more buy-in to the change process. (CR10)

In sum, CAs highlighted the role and significance of CR involvement and argued that their engagement and participation should be sought ‘early’ before the start of IT implementation. They believed CRs should be aware of the new changes and get involved in the initial stages of the project such as change, decision making and planning. They also stated their attempts to gain CR buy-in and enhance cooperation and participation. CAs explained engaging business managers to communicate project information to their staff, asking CRs to state their requirements and conditions, and encouraging them to assist in the test and pilot processes.

With regards to CRs, it appeared that they had a feeling of being considered, valued and involved when they felt well-informed about IT implementation and what it would entail. Conversely, when they were not aware of change objectives and plans and had not been informed about project impacts, negative feelings and attitudes could develop, including feelings of being ignored or forced to adopt new changes.
5.5.5 Seeking benefits

5.5.5.1 CA perspectives

CAs stated that the Windows 7 rollout was crucial for GovOrg and believed that both the organisation and CRs would benefit from IT implementation. For example, CA8 mentioned that a primary motivation for change was to reduce the significant cost of maintaining GovOrg’s legacy IT systems.

"[Windows] XP environment ... is no longer supported by Microsoft. If GovOrg does not upgrade its systems, it’ll get charged over a million dollars in support to continue. ... So, we’re going to deploy Windows 7 and upgrade some other applications. (CA8)"

CA9 also emphasised the importance of upgrading the IT systems at GovOrg. He commented: “The current OS and some of the related systems are expensive to maintain and are designed and developed using technologies that are outdated and inefficient” (CA9). The CIO of GovOrg further explained their goal of improving their IT solutions and services, and reducing security and operational risks in using obsolete technologies and outdated systems.

"To make sure that we minimise the risk exposure on the aging platform of the operating system we decided it was time for us to upgrade to a new operating system and we are in the process of rolling out Windows 7 across the organisation. (CA9)"

CAs stated that the process of upgrading their IT infrastructure was essential to derive value and this would enhance operational benefits for their IT systems and services. CA10 indicated it is the responsibility of CAs to review the IT systems and make sure they are up-to-date and perform as expected.

"I would say that the expiration of the support by Microsoft certainly accelerated the upgrade process ... we do need to modernise our systems. We need to make sure that we get to derive benefit from keeping our IT systems up-to-date. (CA10)"

The view of CAs was that IT implementation would bring significant benefits to their organisation and CRs. They argued that the positive consequences of change outweighed its potential risks or costs. For example, CA7 stated some of the changes and improvements.

"Besides the Windows 7 rollout, we are going to update or improve many of other related systems and processes. We are going to improve the network storage and access policies, upgrade servers and old PCs, update the old software packages and roll out new releases, and many other"
changes. We aim to apply the necessary changes for the good of the organisation. These changes would help people [CRs] do their jobs more efficiently. (CA7)

5.5.5.2 CR perspectives

CRs explained their views on seeking and gaining benefits from IT implementation. They tried to understand the impacts of change and gauge whether it would improve or disrupt their work. However, their expectations regarding outcomes and benefits of IT implementation appeared to be shaped by their level of reliance on and interaction with IT. The more relevant and important the changes were to their status and work, the more CRs collected information, appraised potential impacts of change and seek benefits. CRs at GovOrg appeared to have different motives, and hence there were various opinions and expectations about IT implementation and outcomes.

Some people [CRs] know about the change benefits, some people don’t. Some people don’t really care, other people say ‘yeah, this is great’, ‘this will be better for my job’. [and] other people just go ‘as long as I can do my job’. So, it depends on the individual. We’ve got a really diverse workforce... and they all react differently to IT. So, at the end of the day, if it doesn’t impact their job, if they don’t see any problem using the system to do their job, they’re fine. If it falls over, that’s when they get a bit upset. (CR12)

Many CRs were of the view that the new changes would not influence them significantly. They neither expected to experience significant issues or disruptions nor anticipated receiving substantial benefits or remarkable improvements from IT implementation. One could speculate that some of them were not aware of the details of plans and changes, or they assumed that the potential impacts of the project would be irrelevant to their work status.

In terms of impact on my work life, I don’t think I would see much difference. I think it is Windows XP, and later it will be Windows 7. [This is] Because we mainly work on applications, security and a few other things related to [the] organisation, for example, risk management. So, for me, being on a system largely used for Word, Excel, PowerPoint and those kinds of applications on my desktop, it doesn’t really matter [whether] it’s 7 or XP. (CR18)

CRs who had limited knowledge about the changes appeared to be doubtful about the significance and benefits of IT implementation. For instance, CR14’s comment suggests lack of information and understanding about change objectives and benefits.

I’m a little bit aware of some of the objectives [of IT implementation]. I think the main one was that Windows XP was running out of servicing from Microsoft, and that really forced the
department to upgrade to Windows 7. Any other reasons, I’m not quite aware of them, maybe some minor, I guess, improvements around desktops and extra security and those aspects are concerned, but outside of that I’m not really certain if there are any other reasons. (CR14)

Further, some CRs believed that changes had been already decided without considering their requirements and concerns. They commented that they would not benefit from IT implementation and they would have to accept and adopt the new changes and systems. For instance, CR19 seemed to doubt the effectiveness of the project and felt that CRs would be forced to comply.

This is a sort of change where you don’t actually have a choice in. It’s a change that’s going to be forced upon you. You have to accept it. As I said, it’s one of those things where you don’t get a choice, [you have] just got to make the best of it, and work through any of the issues that may arise and hopefully they [CAs] will resolve them fairly quickly. (CR19)

In sum, although CAs emphasised the significance of IT implementation and its positive outcomes and consequences and improving CR performance and their working environment, many CRs perceived they would not gain noteworthy results from the new changes. In other words, the need for change seemed to be more urgent for CAs than CRs. CAs explained seeking benefits from the project, including upgrading the software and hardware systems and improving the performance of their business processes and services, incorporating new technologies and systems and enhancing the CRs’ practices, and ensuring continued maintenance and support services for CRs and their systems. Whereas CRs commented that the project would not lead to significant benefits for them. They sought benefits from IT implementation; however, some argued that their interests and concerns had not been considered and they were forced to comply.

5.5.6 Attitudes and reactions

In this section, the attitudes and reactions of CAs and CRs toward IT implementation are reviewed and analysed.

5.5.6.1 CA perspectives

At GovOrg, CAs expressed positive feelings and attitudes towards the IT implementation process. They believed that the new systems and updates would improve their performance and increase their efficiency. They explained understanding the importance of change in their organisation and therefore stated their support for IT implementation. For instance, CA7 commented in her diary: “I completely
understand the significance of the new changes, and I am for it’” (CA7). CA8 also explained her positive attitude towards the project’s consequences and outcomes.

*I believe this project is critical for [GovOrg]. I see positive impacts of the new changes on saving costs, reducing issues, and more, so I believe it is the path to improving efficiency and organisational performance. (CA8)*

They also commented on attitudes and actions of other CAs, which appeared to influence their feelings and reactions towards others and IT implementation. Some stated that supportive and constructive CA interactions and relationships had encouraged them to further engage in the process and enabled them to improve IT implementation. For example, CA7 commented:

*In the project team, we support each other a lot. [CA8] and I help each other to manage this change process better. I think we both are, kind of, enjoying ourselves. I think I do enjoy what I do. If I didn’t, I wouldn’t do this, because it’s extremely hard work, and it’s pressured and very stressful. I enjoy working with [CA8]; she’s great. (CA7)*

It appeared CA feelings and attitudes were shaped by their interpretations of actions, events or change outcomes. Some mentioned instances of having negative emotions or attitudes about decisions or actions of other CAs or reactions of CRs to IT implementation. Some of them expressed: being unhappy with some project plans or the change progress; being unsatisfied with some actions or others’ support; feeling stressed, under pressure or not knowing what to do; or feeling frustrated, unmotivated or exhausted. For example, CA10 felt that some of his concerns about the change had not been valued or considered by top management, which appeared to lead to his lack of interest in engaging and participating in the change process.

*Unfortunately, I’m too busy and can’t engage [in the implementation process]. Actually, I didn’t have time to give feedback [to the implementation team] also, and I think it won’t make a difference anyway because they [top management] have decided what to do. (CA10)*

Some CAs criticised IT implementation plans and project management, communication and support approaches. For example, CA10 seemed to be cynical and pessimistic about the effectiveness of some actions and changes.

*I don’t know whether it [change] would be successful or not. It will be implemented, and people will suffer. ... I don’t believe we are going to hear ‘the communication was excellent; I was well informed, my needs were considered, and [CAs] responded back and helped us’... They [CRs] will get Windows 7, they’ll suffer, and they will do it. (CA10)*
CA7 felt under pressure and stated her concerns about unexpected conditions faced, lack of resources and time constraints for conducting pre-implementation preparations and deploying new changes. She implied her doubts about the accomplishment of the change objectives and her attitude was negative towards the project plan and decided schedule.

We are trying to do too much too quickly. ... I told them that we have to reschedule some locations. You know, I had to say ‘no, we can’t do it’. It’s too much too quickly. (CA7)

5.5.6.2 CR perspectives

Some CRs discussed their positive feelings and attitudes towards IT implementation. It appeared that being informed about change objectives, and understanding and trusting the constructive impacts and benefits of adopting the new systems could enhance positive feelings and attitudes and encourage participation and support. CR17 commented: “[IT implementation] is worth it. In the long run, it gives the return. Our systems would be safer and more efficient” (CR17).

CRs were more likely to accept and support a change they perceived as beneficial and helpful for their status and work, or their organisation’s processes and services. For instance, IT implementation could affect the systems and processes that some CRs were responsible for maintaining. It appeared that those CRs were more supportive of the new changes and tried to participate in IT implementation. Although some indicated they were not content with some plans or decisions, they nevertheless cooperated with CAs in improving the process and accomplishing change. CR10 commented on his support towards and active participation in IT implementation.

As a senior application owner and manager of the TSystem application, I would be the first one on the list for supporting and assisting any improvements, upgrades or implementation of new software that my application may be part of. ... I got involved with the Windows 7 upgrade to make sure that my application actually integrated and worked properly within that Windows 7 environment. ... I’m sort of, a part of the team. I am going to participate in the initial testing, user testing and integration testing. (CR10)

CRs also mentioned their negative feelings and attitudes towards IT implementation. Some doubted the need for or significance of change. Others were pessimistic about change effectiveness or the achievement of intended outcomes. For instance, CR14 commented in her diary: “I don’t think it’s going to be a huge change, it’s just a mandatory upgrade of the old OS” (CR14). Some CRs were distrustful of change decisions and plans. They were of the view that their needs, concerns and conditions had not been considered or addressed in IT implementation.
... they [CAs] don’t want to hear your problems because your problems will mean that they won’t hit [meet] their date [deadline]. (CR19)

CR experiences with past IT changes or CA decisions and actions appeared to influence their attitudes and reactions towards IT implementation. For example, some CRs were not happy with previously conducted projects and services provided by the external vendor and contractors. For instance, CR11 indicated his lack of trust towards change management and commented: “You cannot put yourself up against a brick wall” (CR11). He also criticised the change implementation process and lack of consideration of CR requirements and concerns by the vendor team.

[In this project] they’ve got contractors. When it’s a staff member and you’ve got a problem, then you probably going to know who to get back to, whereas here that contractor leaves. So, you don’t know who to speak to. That makes it a lot more difficult because there is no responsibility; the responsibility doesn’t carry on. If the same person was here, you could go back to him and say ‘can you help here?’ There will be none of these people [contractors] here. (CR11)

CR interpretations of IT implementation and their appraisal of the impacts of the changes on their status and work appeared to influence their reactions. For instance, some CRs were concerned with losing their productivity, authority or autonomy, and not being able to proceed with their responsibilities and duties. Therefore, they were not willing to support some changes.

There will be some major changes in the access level and permissions on the new system ... which is not exactly related to Windows 7 upgrade. I believe the planning and preparations haven’t been done appropriately, which will cause issues in our services and systems. So, I don’t agree with the plan of doing them. (CR18)

CR19 believed that CAs should have consulted with CRs and considered their needs before planning and conducting IT implementation. He emphasised his team’s issues with some changes and expressed his frustration with the change plan, and the test and implementation processes.

They [CAs] haven’t prepared a practical test. Test machines are nothing like the production machines, which is why I push back on doing the testing because it’s a waste of time. They didn’t ask what we need ... (CR19)

Another issue that appears to stimulate negative feelings and attitudes towards change is lack of interaction between CAs and CRs. This can lead to lack of information sharing and increased levels of uncertainty and ambiguity, which in turn can increase the likelihood of occurring misinterpretations.
and misunderstandings between and amongst the two groups. For instance, some CRs appeared to be unaware of, or otherwise misperceive, some critical change procedures and required actions, such as auditing their systems, and reporting their individual and group needs and conditions. They did not attend to the audit and requirements gathering processes appropriately, and consequently, some of their conditions and needs were not considered and planned for in IT implementation.

\[I\ \text{think people are not aware of the plans and procedures. Some of them ignored the audit or did not do it accurately, and later they said that some of their necessary tools were not included in the test and implementation plan. It is actually a part of their job to do the audit and report their required settings and tools. (CR12)}\]

In sum, CAs and CRs manifested various reactions to IT implementation or responded to others’ actions. It appeared that their feelings, attitudes and behaviours were influenced by their relationships with others, their previous experience and interpretations of events and settings, and their understandings of change and outcomes.

CAs stressed their efforts in planning the implementation process and confident in managing the project and achieving intended outcomes. Many also stated they were satisfied with change planning and preparation. CRs also commented on IT implementation decisions and plans, and explained their feelings and attitudes. They had different reactions towards the new changes. Some were positive about project consequences, optimistic about benefiting from change, and therefore supported the implementation process. Others were not certain about the impacts of the new systems. They doubted the necessity for change or the effectiveness of the plans. Some disagreed with particular decisions or practices, avoided or delayed some implementation procedures, and/or did not actively participate in the process.

5.5.7 Justifying reactions

5.5.7.1 CA perspectives

Similar to ExMoney, CAs at GovOrg highlighted their knowledge and expertise, and promoted their experience and competency in conducting IT implementation to achieve intended objectives. For example, CA8 stated:

\[I\ \text{have been in IT project management for more than seven years. I have managed and accomplished many ... similar projects. I believe we have planned it [IT implementation] quite well and have a great team here. (CA8)}\]
CAs believed they had organised and completed the required tests and preparations for implementing new changes. They argued that their strategy and plans were well studied and comprehensive. In her diary, CA7 commented:

_We spent a lot of time on analysing the environment and auditing the existing systems and applications. We’ve planned all the required upgrades and the change process. The process and the changes are in line with industry best practice. I believe it’s a sound plan, which is necessary to improve [GovOrg’s] systems and infrastructure._ (CA7)

CAs also sought to rationalise and justify their decisions and respond to critiques of their approaches and actions in planning and managing IT implementation. Some CAs explained there had been unexpected problems, undesirable situations, or external constraints that were out of their authority and control. For instance, CA7 argued that considering the conditions of their organisation and the size and complexity of the project, experiencing some shortcomings or unexpected changes would be normal and acceptable.

_It’s a big project in a large organisation. There are always tweaks that have to be made along the way, and that’s part of the project management as you have to identify those, work out what the impact is, and how best to implement them._ (CA7)

Some CAs tried to validate and defend their expectations and actions by commenting on or criticising CR attitudes and reactions toward IT implementation. For instance, they emphasised lack of engagement and participation on the part of CRs as an obstacle to timely and effective implementation of the changes. CAs explained their expectation of CRs to be involved in different aspects of the project such as requirements gathering, change preparation and pre-implementation test processes. CA8 commented: “We are working on a big project and some of them [CRs] are going to delay it in any way” (CA8).

_You always have users that don’t like change. They [CRs] think you’re just causing them drama in their work that they don’t need, and they don’t see any reason why they should meet your timeframe. They don’t want to participate no matter how or what you do._ (CA7)

CAs were of the view that some CRs had negative feelings and attitudes towards the new changes and resisted IT implementation regardless of outcomes or CA competence, efforts and supportive actions. CA9 explained:
... you'll always have some users that are unhappy with whatever you do. But, is that reflective of what the true outcome of the project is? ... no matter how successful you are, it’s just the nature of those individuals. (CA9)

Some CAs attributed lack of support and participation to the tendency of CRs to maintain the status quo. They tried to defend the IT implementation process and their change management approach by arguing that some CRs were not willing to change their ‘way of working’, and preferred to stay with the systems, functions or interfaces they were used to working with.

*The difficulty with the upgrades of [operating system and its associated software] is that people are used to their existing systems, so they generally resist new changes.* (CA10)

### 5.5.7.2 CR perspectives

Similar to CAs, CRs rationalised their views and justified their reactions towards IT implementation. They commented on the project plan and explained their perceptions of CA approaches and actions in preparing and organising the implementation process.

Many CRs criticised the IT implementation process to justify and defend their attitudes and behaviours. Some questioned the expertise and experience of CAs in managing different aspects of change. Others expressed their doubt about the appropriateness of project planning and management. For instance, CR10 believed they did not have a strong and powerful project management team behind IT implementation.

*There should be a proper change management process; having a change manager, having a communication manager, having a training manager to provide some form of training as a part of the upgrade, and having a technical manager as such to keep on top of any technical issues that are discovered. These [considerations] are critical.* (CR10)

Some other CRs complained about project plans and pre-implementation practices and activities. For example, CR13 criticised the change implementation schedule, arguing that many CRs could not actively engage and participate in the change process.

*In my opinion, it isn’t a right decision to do the project at the end of the year. ... Some people would be very busy because of their workload and deadlines. They won’t have time to do such upgrades.* (CR13)

CRs commented that the lack of effective communication between CAs and CRs, particularly during requirements gathering and change planning, caused some misunderstandings and inconsistencies and
contributed to the lack of buy-in and engagement. For example, CR19 highlighted the issue of being informed.

*It is very hard to get information about the new changes. We don’t know what they have considered for change and how they are going to upgrade the systems. It seems like somebody had an idea to upgrade us to Windows 7 but nobody thought of the process of how they are going to do it.* (CR19)

Some CRs appeared to be cynical about IT implementation and approaches and actions of CAs. For instance, CR11 believed that CAs had mostly considered and prioritised their interests and objectives. He reasoned that because they had not acknowledged and valued his and his team’s needs and concerns, he was not willing to engage and support the change process.

*... they don’t liaise with us very much, they don’t care whether we think it’s necessary or not. So, if you don’t hear, you’re like a king in a tower; you don’t hear what the peasants are saying; you don’t want to listen to them either. Of course, they think they’re doing a good job until the revolution comes.* (CR11)

CRs at GovOrg, similar to those at ExMoney, explained and justified their understandings and interpretations. Some expressed negative attitudes about change and tried to rationalise and defend their views and reactions by highlighting perceived inconsistencies or possible issues and disruptions they might encounter. For example, some raised the issue of losing authority and control over their IT systems and application. Alternatively, CR18’s perspective was that planned changes in access management policy and procedures would restrict or prevent them from doing their job.

*As I could see in the pilot, there would be a big difference ... Access restrictions will cause some problems for us to be able to use some of our tools and do our work ... So, I don’t agree with the plan of doing them [changes].* (CR18)

Furthermore, CRs criticised CAs for not consulting with them about change and not considering their concerns and suggestions for IT implementation. They explained their IT background and emphasised having the relevant knowledge and expertise to justify their expectation of being involved and considered in deciding and implementing changes.

*They [CAs] didn’t ask for our views or feedback. ... I have been in this field for many years, and I know the systems I am working with. I know how we can upgrade our tools or use them under the new OS and network infrastructure.* (CR19)
In sum, CAs had planned and organised what was needed for conducting IT implementation and improving their systems. They explained they had analysed and considered the requirements of CRs and tried to assist them in preparing for the new changes. Although they criticised some of the decisions made by senior executives for not allocating expected resources, they defended their project management and emphasised their efforts in planning for change and providing services as anticipated. Some CAs also commented on CR actions and blamed their lack of participation. CAs expected CRs to understand and acknowledge their efforts, trust their expertise and experience, and support and assist them in planning and preparing for implementation.

In contrast, many CRs appeared to criticise the plan for IT implementation and CA actions. They argued various points on different grounds and tried to explain their interpretations of the new changes, validating and rationalising their behaviour about project participation and support. Some argued some reasons for their negative feelings and attitudes including: inappropriate project plans and schedules; inadequate communication and not being informed about the change impacts; not being valued and involved in the processes of deciding, planning and organising the new changes; and not trusting CAs and achieving constructive outcomes and improved conditions after the IT implementation.

5.6 Round two: Post-Implementation (GovOrg)
This section provides round two data collection at GovOrg. It reviews and discusses post-implementation comments and reactions from both CAs and CRs towards new IT systems and changes, and further presents the analysis based on identified themes.

5.6.1 Developing mutual understanding

5.6.1.1 CA perspectives
In round two, many CAs commented that their work and efforts had not been recognised and acknowledged by others during IT implementation. Some emphasised the scope and significance of the change and argued that they expected top management to understand their challenges, concerns and priorities, and in turn support them in the implementation process. They mentioned that the implementation team required more resources, authority and support to be able to accomplish its duties and progress the project, as planned.

[CA7] needed more support. ... communication was massive, getting testing done and all that sort of thing was massive and required significant effort... They [top management] probably didn’t understand how much effort was involved. (CA8)
CAs also expected acknowledgement and support from CRs. A lack of understanding of the role and responsibilities of CAs in addressing issues and conducting IT implementation appeared to diminish participation and collaboration by CRs.

*I don’t think they [CRs] really had an understanding of how much effort was required, and that probably slowed us down, getting people motivated, and getting people in there to do it.* (CA8)

In round two, CAs emphasised the significance of establishing and maintaining mutual understanding between them and CRs. Based on their experience of IT implementation and their interpretation of CR reactions to change, some CAs argued the need for understanding the consequences of such change. CA7 commented that:

*... at the end of the day, the business is the business, and the users are impacted by that [change]. So, we need to understand and be sympathetic as to what impacts would occur there, and treat them as valued customers.* (CA7)

CA10 explained that CAs should have consulted with CRs and conducted UAT (User Acceptance Testing) to understand and exchange expectations, get feedback and ensure requirements were met.

*We don’t really do the proper UAT, particularly with power users with special needs, and ask them about their requirements or expectations, [and] ask them “are you guys good? I’m testing to get feedback”.* (CA10)

CAs believed that having a more comprehensive understanding of CR conditions and priorities had enabled them to improve the efficiency and effectiveness of IT implementation and support processes. For instance, CA8 explained some of the reasons CRs gave for avoiding or deferring change, stating the need to understand CRs and acknowledge their concerns regarding IT implementation.

*Some of them [CRs] were not happy, because ... So, we need to understand where they are coming from with their conditions and workload, and get a timeframe that suits them.* (CA8)

Furthermore, many CAs argued that they had been aware of and understood CR concerns and conditions and had endeavoured to support them through the change process. However, they also expressed their expectation of CRs to acknowledge and understand status, plans and constraints of CAs. For example, CA9 explained:

*I knew people were busy generally, but we did make sure we provided enough time. I think we’ve been generally fairly cooperative in terms of not forcing the issue and allowing users to defer their upgrade even though it’s not in the best interest of our project to do that. They should*
understand it, because clean up and catch up is often a lot harder, because you have pockets of people in different areas and in different locations that you need to service, and then you have to revisit them. So, it’s almost like doing it again. (CA9)

5.6.1.2 CR perspectives

CRs explained their understanding of the CA role, and their decisions and behaviours during IT implementation. Many CRs perceived that CAs had been positive, helpful and constructive. For example, CR12 believed that IT implementation was conducted professionally and they could use new improved systems without any disruption. She spoke of her trust in the project manager’s expertise, experience and confidence in a successful change process.

*I think it [the change process] has been really well done. CA7 [project manager] is very good at this stuff. She knows how to run a project … If you have good project managers these things [changes] are easy. Well, they appeared easy to me … and that’s what we wanted, and that’s what has happened.* (CR12)

Furthermore, different factors appeared to contribute to CR understandings of CA actions and behaviours. For some CRs, their IT background, knowledge and previous experience with IT implementation seemed to facilitate their understanding and appreciation of the role and efforts of CAs.

*I understand because I come from [an] IT background. It’s OK for me, it happens. I know the process… But if you ask a normal user, then probably a different answer comes out.* (CR18)

Those who explained having relevant IT knowledge and expertise appeared to show understanding and sympathetic towards CAs and IT implementation challenges. For example, CR10 referred to his previous IT implementation experiences. He supported the actions of the project manager and other CAs. And he acknowledged CAs in implementing change and improving systems.

*I’ve never been really involved in a project where the total results from the lab testing had been able to be replicated in real life. So, I believe [GovOrg] as such did as well as they could and as far as the testing was concerned, but once it hit the actual user’s desk there were some unexpected issues. So, there are a lot of unknowns when you get out to the general populous. … I think CA7, as the project manager, ran herself into the ground to try and keep going with the project. I don’t believe that she herself could have done anything more to make this [IT implementation] go any smoother.* (CR10)
In round two, CRs explained their perception of being acknowledged and understood in IT implementation process, which appeared to influence their evaluation of and opinions about the role of CAs. Some CRs commented that their role and status had not been acknowledged appropriately, and hence some of their requirements and concerns had been ignored or received less considered than expected. They criticised CAs for their lack of understanding of the work status of CRs, which, in their view, had resulted in inefficient change implementation and encountering some issues and disruptions. For instance, CR19 explained:

*A lot of the users are not standard users. So, we ended up loading a lot of software and resetting everything up again, so it took us a long time to get the PC operational. ... they haven’t given people permissions that they were supposed to have .... So, it wasn’t a straightforward process.*  
(CR19)

This lack of understanding appeared to lead to an incomplete evaluation of CR conditions and requirements. For example, power users were of the view that CAs had not recognised or considered their non-standard conditions and special needs.

*I think there was lack of understanding about access and changes to the way PCs were going to be managed. So, I think that went quite wrong. As far as the project is concerned, I personally know a handful of people that needed to be given non-standard PCs. Unfortunately, it wasn’t rolled out as a non-standard PC and then it became a problem, and they [non-standard CRs] had issues with their ongoing applications. So, I think that was one of the major problems that recurred throughout the project.* (CR10)

In sum, by considering the comments and perspectives of both CAs and CRs post-IT implementation, the importance of developing mutual understanding was noted. Both groups expressed their expectations of being acknowledged and understood. On the one hand, CAs understanding of CR status and role appeared to improve CA evaluation, recognition and perceptions of CR conditions and expectations. On the other hand, CRs commented on their understanding of the new changes and CA actions during IT implementation, which appeared to shape their reactions. The process of appraising and understanding changes and actions appeared to be ongoing, which could be influenced by different factors such as CR interactions and relationships with CAs. And further, CRs who had been informed about project objectives and consequences, and who had previous experience with similar projects or IT expertise and background, appeared to have better perceptions about the project, and expectations and actions of CAs.
5.6.2 Appraising change and constructing meanings

5.6.2.1 CA perspectives

In round two, CAs at GovOrg explained their appraisals of IT implementation and the extent of its impacts. They evaluated the change process, commented on conditions and events, and stated their interpretation of perceived outcomes for change implementation. Many CAs believed that the project had encountered several unforeseen conditions and changes, which had caused some unexpected issues such as inefficient change deployment and inadequate resources and support. For instance, some CAs discussed the issue of inaccurate assumptions and initial appraisals to do with the scope of changes and consequences. And thus, inadequate preparation and planning for efficient and effective completion of IT implementation was apparent.

*The rollout was not just an upgrade of the OS. We had to change other things at the same time, such as the domain name and network settings... When you change the domain settings, it affects [network] drives, browsers, applications, accesses and even cloud applications. So, we’ve faced all of these kinds of issues. We didn’t plan for such changes.* (CA10)

CA10 further commented in his diary that CAs needed an in-depth audit of IT related services and infrastructure and change impacts. He stressed the need for assessing and considering CR requirements and investigating the implications of IT implementation in their business environment and services.

*We needed to do a more in-depth audit right at the very start and to investigate different aspects including non-standard requirements and the business services and IT infrastructure. We needed to assess whether they were capable of being run in the new environment.* (CA10)

A lack of comprehensive and accurate appraisal of change appears to lead to a lack of convergence of interpretations and expectations of IT implementation, and lack of clarity about each group’s roles and responsibilities. Some CAs commented that change plans and the implementation process had not been devised and established comprehensively, which resulted in some misinterpretations of requirements and priorities and caused deficiencies in change preparation, implementation and support processes.

*If I could improve something, it was just giving everybody roles and responsibilities. Probably that wasn’t done correctly at the start to get everyone moving as quick as we needed to get it done ... and say this is what your expectations are, this is what our expectations are, this is our schedule, [and] this is how much resource we need for testing...* (CA8)
There appeared to be some divergence between some CA appraisals in round one. For example, although the implementation team and some managers had stressed the magnitude and complexity of the changes and the need for further resources to minimise issues and disruption; top management had not considered their concerns and expectations. Top management seemed to be unaware of the complexities of change or overlooked the required resources. After IT implementation, some CAs highlighted inadequate coordination and support due to a lack of consensus or common interpretations about change and its consequences.

We needed more resources than were available to us for doing comprehensive audits, tests and planning. We spent some time auditing the environment here, and that audit showed up that we had over a thousand applications. ... Also, some parts of the infrastructure and network weren’t capable of running in Win 7. So, we had to upgrade servers, update firewall access and so on. (CA7)

CAs also commented on reactions to change by CRs. They tried to evaluate and interpret CR actions and behaviours. Further, it appeared that the perspectives, interpretations and constructed meanings of CR reactions influenced CAs future responses and actions. For instance, CA9 mentioned that some CRs resisted change deployment and postponed system updates by reasoning that they were busy or had other commitments. Thus, CAs had to exert pressure on those CRs to force them to comply with the change process.

We gave them [CRs] quite a bit of time ahead and advance notice. But people do things at the last moment and do it when someone stands in front of them and says that [they have to do it]. People generally say that they are busy. It is really people’s response in terms of when they do it. I think that’s the issue. (CA9)

CA10 believed that CRs avoided IT implementation because they were used to their existing systems and process. His view was that some CRs resisted the new changes or complained about the implementation process because they were not familiar with those changes. Thus, CA10 argued that complaints and avoidance tactics by some CRs were normal, and they would eventually get used to the implemented changes and accept them over time.

[The CRs] are used to certain IT systems, and when this is changed, they are to move into newer ways of working. So, people are generally not happy with any upgrades in particular. It’s about getting used to new changes, and it takes time. ... We have had plenty of resistance, but then once they get used to it, they will like it. That’s the process. (CA10)
CA7 stated they could assess change success and effectiveness based on CR reactions and responses. In her view, a decrease in the number of complaints from CRs could be interpreted as progress and improvement of implementation and support services.

*The change success is not actually what they [CRs] say, but what they don’t say. The less they complain, the better job you’re doing. ... People forget to say it’s a good job if it’s gone smoothly. They only remember to complain if it’s gone badly. ... But they still smile at me when I walk around the building. So, it can’t be bad, they all know who I am. It shows that the change has been successful. (CA7)*

5.6.2.2 CR perspectives

Many CRs initially were of the view that the changes would not impact their work and systems significantly. They expected a standard process of upgrading their existing software systems. However, after IT implementation, many expressed different evaluations and viewpoints about change and its impacts. For instance, CR14 explained that she expected a set of planned changes and the deployment of packaged software applications that were tested and prepared pre-implementation. However, contrary to what she and many other CRs thought and expected, IT implementation involved unplanned changes, and they encountered several unexpected issues and disruptions.

*I expected things just to be updated. For most parts, we had packaged apps, and I expected that they would work. [For example,] I expected that the drive mapping would work because I supposed that process had to change a little bit. So, largely I didn’t really expect that much would change. (CR14)*

CR18 mentioned that he could not access and use his essential tools and applications.

*I didn’t expect any significant disruption. I thought we would make normal progress and all the software packages would be updated or reinstalled. ... They [CAs] told me that I couldn’t have some of my critical applications on the new platform due to some problems. (CR18)*

Unexpected and unplanned changes appeared to make CRs feel surprised and annoyed. Some criticised change planning and the implementation process. For example, CR15 indicated the unexpected inclusion of the information security and document classification scheme and other project changes.

*We [CRs] were surprised because there wasn’t only the Windows 7 rollout. There were a few other changes ... like the [documents] classification scheme, which they basically gave us a*
brochure and said here it is. ... Certainly, sticking change on top of change, [is] not such a great idea. (CR15)

Lack of information about IT implementation or inaccurate and inconsistent assumptions about change and its consequences appeared to result in some differences between CR expectations of the new changes and their perceptions and experiences. Further, those differences appeared to cause CRs to feel frustrated and distrustful about the effectiveness and efficiency of the change process and achieving IT implementation outcomes. CR10 commented that some CR expectations were neither accurate nor realistic.

Expectations were high to start off with and most people at the start of it [IT implementation] were looking forward to a system that they’re either using at home or had used in another organisation. ... but I think that opinion is quite dramatically shifted pretty much 180 degrees to most people being fairly frustrated with the rollout. (CR10)

Some CRs did not know what to expect from IT implementation, how to adopt the new changes, and how to deal with the challenges and issues. When CRs are not aware of the conditions and new processes, it diminishes their effort in appraising changes. Thus, they may attain incomplete views of or assign inaccurate meanings to events, circumstances or actions, which can influence their performance and actions.

We experienced some issues ... because the staff weren’t really aware of the changes or didn’t know how to do what they needed to do. Some of them [the issues] were not really project’s problems, but the users’ perspectives of what they were expecting, and it did affect all staff for a while ... (CR10)

It appeared that CRs who had participated in the pilot project had a more comprehensive view of IT implementation and a better understanding of the possible impacts. Although they also encountered unexpected issues and disruptions, they seemed to be ‘more prepared’ to deal with those problems. Moreover, the pilot appeared to enhance interaction between CAs and CRs. The pilot users had the opportunity to communicate with CAs, report their concerns and issues, and receive more information or assistance before actual implementation.

We did the pilot, and we could have a kind of awareness. So, we were more prepared. ... [W]e could check our applications and test them to see if there was any issue or anything that might impact our work or other projects. And, we identified several issues. (CR17)
In addition, it seemed that the extent of CR understanding of the CA role, responsibilities and efforts could influence CR appraisals of change and outcomes. For instance, CR12’s evaluation of the IT implementation process was positive. She advocated CA actions and decisions and stated that considering the size and scope of the project and available resources, CAs had been successful in managing and conducting change.

_It’s a big organisation, and they [CAs] are upgrading a lot of workstations. I think they couldn’t have done it any better... [and] at the moment it [implementation process] seems to be working well. They staged it [process] well, so they worked within their limitations. Everything seems ok to me._ (CR12)

CRs also commented on the IT implementation process. They noted inconsistencies and hurdles during the rollout process. For example, CR11 explained his evaluation of IT implementation progress and the change process in his diary, and he indicated a relatively average success rate, as CAs managed to implement updates and new systems.

_They [CAs] managed to upgrade the systems, and we’re still there, haven’t gone back. So, I guess it [change process] was a success, but if I had to score it out of ten, I’d say probably six or seven, because things have been worked out, but not as expected._ (CR11)

Appraising change and constructing meaning appeared to be dynamic. CRs sought to evaluate new changes and the attainment of their ongoing expectations and needs by considering project impacts and comparing their conditions with expected outcomes. For instance, CR16 appraised IT implementation as ineffective and unsatisfactory based on his perception of change results.

_What I was expecting is not yet fully in place, because I still have access restrictions that do restrict me from doing my work. I still have many problems in using the applications that my work depends on them, and I am not sure what will happen next. It’s not satisfactory._ (CR16)

Furthermore, CR evaluations of IT implementation appeared to change and evolve as they became more familiar with the new changes. And over time they could achieve clearer and more comprehensive views of the consequences of IT implementation on their status, role and work. CR18 commented:

_Some applications were slow in loading. We also had some problems in using our apps, I guess, because of the network updates or changes. I couldn’t do some of my tasks, and I was completely dissatisfied with the new changes. But gradually they [CAs] improved the configuration or whatever it was. Now, I can see performance improvement._ (CR18)
Some CRs mentioned it took some time for them to become proficient users and familiar with the available options in the new systems. CR17 explained that once they learnt how to perform the required changes and customisation and became used to the new procedures and systems, it was easier to do their normal work.

*Initially, I did really not know how to install my required applications, use the network file storage and all those things. ... It took a bit of time to get used to some of those changes.* (CR17)

In sum, it could be seen that change appraisal and meaning construction processes were dynamic. CAs and CRs sought to evaluate and interpret others’ actions and dealt with evolving events and conditions. In round two, some CAs stated that they needed more interaction with CRs to identify, assess and understand requirements and concerns.

CRs also sought to resolve uncertainties and tried to evaluate change and its related events and actions. They compared and evaluated their status, system settings and relationships by referring to their previous experiences and constructed meanings. Some CRs stated divergent appraisals of the project. They expressed that they had experienced unplanned changes and unexpected issues, which influenced their evaluations of IT implementation and its consequences. Some were surprised by events and actions not expected and in turn felt frustrated or annoyed. Others distrusted the change process and were pessimistic about achieving intended outcomes. Further, having more interaction with CAs, being informed about impacts in advance, and becoming familiar with the new systems appeared to enhance change appraisal and facilitate common understanding.

### 5.6.3 Interacting with others

#### 5.6.3.1 CA perspectives

After IT implementation, CAs further emphasised communication and interaction with others. From conducting a pilot project to performing implementation surveys and sending out feedback forms for collection, they stated they had tried to establish and develop interaction with CRs at different stages of IT implementation. For example, CAs explained that the conducted pilot and test programmes provided communication opportunities that could help them improve their understanding of CR requirements and conditions.

*We did a pilot right at the start of the project and we asked involved users to provide feedback on the whole experience. ... That helped us to demonstrate important changes and test some*
critical applications. We also identified some issues that we addressed before starting the rollout.

(CA9)

During IT implementation, CAs considered direct contact with CRs to elicit their suggestions and experiences before and after major changes and events. For example, CR8 commented in her diary: “I had people on site to do a walkthrough and talk to people [CRs] so that I get an idea” (CA8). Through direct communication with CRs and offering ‘one-on-one’ support, CAs were able to gain a more comprehensive understanding of CR concerns and problems, and explain the changes, project status and constraints.

We tried to do [provide] one-on-one talk to the users. ... We usually go back the first days [after the change] to talk to users and see if any of them have got issues, then CA8 [vendor’s project manager] and I usually go there straight away to see what the problem is. (CA7)

CAs attempted to engage business managers, key users and enthusiastic individuals in different divisions and sections to maintain and enhance the project communication process. For instance, CA7 commented in her diary:

I’ve communicated with business managers as responsible liaison persons so that they have been aware of what is happening and it is their role to disseminate information within their group. They’ve helped me gather information about users and their systems. (CA7)

At GovOrg, CA approach to communication was to engage ‘power users’ in order to use their assistance in disseminating change information and conveying CR needs. For example, CA10 believed power users could ‘act as a bridge’ to enhance interaction and information exchange between CAs and CRs. This approach appeared to help CAs improve CR awareness and understanding of IT implementation and enhance involvement and participation of CRs.

I think it is almost impossible for [project managers] to meet with all the users directly and regularly. So, they should break down 1500 members into the power users from different departments and divisions and bring them up to speak with them. The power users would get back to their individual staff meetings in their business unit and convey the message. ... So, they would act as a bridge and disseminate that information to their groups perfectly. (CA10)

Furthermore, forming and maintaining close relationships and positive interactions amongst CAs helped them better understand each other’s problems and needs and collaborate. In round two, the two project managers at GovOrg explained their interactions and the project team members very helpful and constructive. For instance, CA8 commented:
We, CA7 and I, had obviously worked well as a team. We didn’t allow the problems to get in our way, so it was a very successful project. … That stands on the relationship and communication among the team and how everyone worked together, so that’s probably the reason why this project went so well and we got through it. (CA8)

Similarly, CA7 (GovOrg project manager) highlighted her positive relationship and supportive interactions with CA8 (vendor’s project manager). She explained they had attempted ongoing communication and to inform one another about the implementation process and status, share their knowledge and experiences, and support and ‘complement each other’ in conducting the project.

I work with CA8. We regularly communicate to keep each other in the loop. … She’s a lot more technical than I am and she’s not a people person … and I’m more structured than she is. … So, we complement each other quite nicely I think. (CA7)

Despite apparently close relationships and ongoing interactions between the two project managers, they indicated a lack of effective communication with other CAs, particularly top management. Through regular communication, they could inform top management or other CAs about encountered impediments and develop a common understanding of the implementation conditions and requirements. CA8, for instance, mentioned a meeting with top management in which they could communicate their challenges and gain more resources and support for completing the project.

That meeting with the CEO, CIO and some other top managers was really great; just having key decision makers and stakeholders in the room and delivering the right messages. I mean in that project control board those issues and risks were raised and we could discuss our plans to deal with them. They understood what our challenges had been and then they could help us by providing extra resources… (CA8)

5.6.3.2 CR perspectives

In round two, CRs highlighted the positive impacts of having close relationships and direct interactions with CAs, through which they could exchange information and share their interpretations and reflections. For instance, CR17 commented on his positive relationship with the implementation team that provided the opportunity for him to discuss his concerns, communicate his issues, and receive more assistance and support from CAs.

If I have any issues, I just check with them [implementation team]. I sit close to them, so I’m really getting the chance to have direct contacts with them. Every time there is an open discussion about the project progress or issues, I join in, and sometimes I could help also. I have some
issues, which are not resolved yet, so that's why I just keep in touch with them to fix those things.

(CR17)

CR18 explained that he could learn about change impacts by participating in the pilot project and having frequent interactions with CAs. He could also inform teammates about potential problems and assist them in getting prepared for change or resolving issues.

\[...\] During that [the pilot], we had multiple meetings with the [implementation] team to review and discuss the changes and possible problems. That was actually good because I could work out what some of the issues I faced were. So, when they rolled it out to the larger team, I could anticipate them, and I could tell people what to do, what not to do, or what would they experience. (CR18)

Similar to round one, many CRs also criticised communication processes pre- and post-IT implementation. They believed there was a lack of adequate and effective interaction between CAs and CRs. Apart from getting informed about the general project information, CRs expected CAs to organise and facilitate ongoing and direct interaction to improve information exchange and enable CRs to communicate their needs and concerns. For example, CR19 argued that CAs should have conducted regular sessions for keeping CRs informed about the details of IT implementation and to further explain the consequences.

They should have had the information sessions; they should have had training sessions ... telling staff what’s different, how it’s going to be run compared to what they were used to ... (CR19)

The more CRs perceived they would be impacted by IT implementation, the more they expected to be informed about change details and outcomes. For instance, some CRs, particularly power users, were of the view that regular change meetings should be organised for key CRs, so they could become more aware of change and implementation details, and discuss their issues or special needs with CAs.

I wasn’t very happy with the communication. I would have run fortnightly meetings for us [power users]. Some groups may not have needed that ... The more you run [non-standard systems], the more you need communication about the details. (CR11)

CRs sought different approaches to communication with CAs, to obtain details of changes they perceived relevant to their status and work, and to express their requirements and concerns to CAs. As some CRs indicated, lack of a well-established and effective communication approach appeared to cause them to contact CAs individually to pursue their needs, and ask for more consideration and support. These direct interactions and individual relationships seemed to be inefficient in several
situations and could waste time and energy on the part of CAs in responding to small issues and requests.

Generally, I log the call, but I also know where the project team sits and I know most of the people on the project team. So, after I’ve logged the call, I go directly to the project team and discuss the issues that we’re having, or we just found out about them. So, I guess for me it [this communication approach] is more of a two-way attack [by which] we are trying to resolve the problem. (CR10)

Group meeting and discussions could be more effective and efficient in exchanging project information and needs, and reviewing encountered problems and inconsistencies. For instance, although CR14 had received CA consideration for some of her requests; she suggested conducting group meetings for enhancing interaction and collaboration amongst different groups and gaining more support for group requirements or issues.

I actually spoke to the implementation team directly on the phone. Once, I just rang them up, so they came around to visit us. I told them about our other issues as well, because as they were rolling out [the new systems], different issues came up. So, I usually ask for support by calling the support team. If I have a serious problem, I just rang CA7 and explain it… We haven’t had group meetings for reviewing issues, which I believe could be more efficient. (CR14)

Likewise, CR10 suggested facilitating ‘two-way forums’ and ongoing interactions between CRs and CAs. Through reciprocal communication and discussion, CRs could not only express their concerns, explain their issues and share their experiences, but also hear more about the detail and rationale for plans and actions.

We needed regular discussion sessions around the new changes. I suggested having forums for power users and other staff to share their experiences and bring up and discuss their issues. The power users also tell [CAs] things they probably don’t want to hear, but it’s something that they need to keep in the back of their mind as well. So, it should be a two-way forum between them and the power users. (CR10)

In sum, post-IT implementation, CAs admitted some inconsistencies in their communication, expressed the need for organising regular discussions and information exchange meetings with CRs, and to inform them of change details and impacts. CRs also highlighted the significance of having consistent and direct communication with CAs. As stated, communication was expected to be more than just disseminating change news and information. CRs sought reciprocal relationships and two-way
interaction to discuss their priorities and interests and explain their needs and concerns. It appeared that
regular and reciprocal interactions between CAs and CRs could facilitate change appraisal, the
exchange of experiences and interpretations amongst stakeholders, and enhance the development of
mutual understanding. Further, ongoing communication between CAs and CRs appeared substantial in
clarifying and setting mutual expectations.

5.6.4 Feeling involved

5.6.4.1 CA perspectives

CAs believed change could not be implemented successfully without the active involvement and
participation of CRs. Similar to ExMoney, they highlighted the significance of engaging CRs in the
change process and receiving their comments, suggestions and feedback during and after IT
implementation.

In round two, some CAs commented that keeping CRs informed about the new changes had enhanced
CR involvement and participation in IT implementation process. When CRs were aware of plans, events
or changes that might impact them, they felt they were considered by CAs and involved in the process.
Thus, they seemed to be more willing to participate and assist with change implementation. For
instance, CA8 explained that they had informed CRs about the plan for some critical changes and they
involved some users in testing and reviewing existing systems before implementing those changes:

... a lot of our applications might not work in the 64-bit environment ... So, we informed the
users about those changes, and asked the business owners and the users to test them. It’s been a
lot of pre-[implementation] work, and I worked with those business owners to do that. They were
aware of what was happening ... (CA8)

CA7 mentioned that by keeping CRs informed about likely issues or disruptions, CAs could involve
CRs in the change process and receive help and cooperation in improving and progressing IT
implementation and addressing problems.

We informed users about those possible issues before rollout and gave them also some
instructions about how to deal with those problems or how to report their issues. We tried to
keep them [CRs] informed. So, they could help us find and resolve those issues. (CA7)

CAs tried to give CRs some formal or informal roles, responsibilities or tasks to motivate and
persuade them to participate in the change process and become involved. For instance, CA9 mentioned
that CAs delegated some basic or initial tasks to some CRs. He also conducted surveys at different
stages of IT implementation to collect CR feedback and concerns. CAs attempted to make CRs feel more involved and enable them to contribute to IT implementation.

*There’s been some upfront work that we asked the users to do them, such as filling out the survey forms ... They needed to send us a list of their applications and inform us about their special needs ... We wanted to engage them in the process, so we sent the users some instructions about how they should backup their documents ... (CA9)*

Involving CRs in the change process in round two appeared to have positive impacts regarding progress and effectiveness of IT implementation.

Furthermore, the approach on the part of CAs to involving CRs in the change process and their attempts to enhance and develop their interactions with CRs in round two appeared to yield positive results for progress and effectiveness of IT implementation. CAs indicated achieving multiple benefits from engaging CRs such as obtaining their assistance and support with different IT implementation processes and CR buy-in to the change.

*They [CRs] have helped us gather information and to make sure to have the right user and application settings in their sections. The users informed us about what they use, what they need to have, and that sort of information. So, they’ve participated, helped us with gathering information and supported rolling out the new systems. (CA10)*

5.6.4.2 CR perspectives

In round two, CRs expressed different feelings and perspectives about their involvement in the change process, from being informed and involved to vice versa. Some CRs stated they had not been aware of plans or they had not been advised of the process and consequences. They seemed to have feelings of not being valued, informed and involved. CR11 believed that he and his team could not participate in the project because they had not been ‘taken as serious stakeholders’. They felt ignored and were of the view that their requirements and problems had not been considered or addressed, and therefore they could not do their duties and maintain responsibilities.

*They’re not telling us what they’re doing. That’s just ‘we’ll do it for you, and then we’ll tell you at the end that it’s done’. They have not considered our needs or listened to our concerns. So, we are not taken as serious stakeholders... (CR11)*

Lack of direct and regular interaction with CAs appeared to increase negative feelings of being isolated and ignored amongst CRs. They expected to be valued and involved in communication such
as change discussions and post-implementation review meetings. CR19 argued that group discussion could be beneficial in exchanging information and experiences and importantly, learning from past issues and shortcomings.

We didn’t have much contact with them [CAs] or other users [in other departments]. We didn’t get invited to group meetings. There was no post-implementation review also, so representatives weren’t invited to talk about the implementation, [and] to get together and talk about the problems. So, how they’ll ever learn from their mistakes, I’ve got no idea. (CR19)

CR10 highlighted organising and conducting training sessions as an effective approach for informing CRs about IT implementation, and facilitating their engagement and participation. In his view, through training and discussion sessions, CRs could be informed and become familiar with new functions or updated systems, develop their understandings of change impacts and consequences, and discuss their concerns and share their experiences.

With the Windows 7 upgrade there was actually no training. There were some small staff information sessions for some divisions only. Training could improve the users’ knowledge of the change and increase their participation. There were no training sessions held on different functions or how it [the upgraded OS] now runs or how it’s now managed or whatever. (CR10)

It appeared that lack of interaction between CRs and CAs contributed to a feeling of being uninvolved or separated. CR14 indicated a ‘bureaucracy’ in their relationships with CAs in the process of communicating and discussing their needs and concerns. He felt he was ignored and not involved in IT implementation. CR14 suggested having ‘IT forums’ through which CRs could interact with CAs, share their perspectives, develop their understandings of new changes and conditions, and have the opportunity to influence the process.

I think here [GovOrg] is a bureaucracy. So, we’re feeding them up feedback, and it just gets ignored... They [CAs] haven’t surveyed us, so they are not interested in our feedback. If they knew what we were saying, they might change their mind. We don’t have forums here, such as ‘IT forums’ where there would be a few people from IT [CAs] and some of us [CRs]. So, we would have the opportunity to find out what [everyone] really thought about the change. (CR14)

In contrast, feeling informed about change, being aware of the plans and actions in advance, being asked to review change and give feedback, and participate in discussions and the overall change process appeared to increase feelings of being recognised and involved. For instance, CR16 stated that he felt informed of and prepared for the new changes that related to him and his work. Further, his comment
suggests the influence of the perception of relevance, adequacy and clarity of the provided information on CR feelings of being informed and considered. CRs noted information and changes that were more relevant and applicable to their roles and activities.

They [CAs] informed me well in advance. I got some emails and documents about the rollout and the changes that related to me, and I think I was well informed. So, I was prepared for it [IT implementation]. (CR16)

CRs who had more interaction with CAs could acquire more information about the new changes and appeared to feel valued and involved. For instance, CR17 felt he was aware of IT implementation and its consequences and was more involved in the change process. Those CRs who felt informed appeared to feel more confident and ready for IT implementation.

I was involved in the initial testing team. I, sort of, had some meetings and information sessions and the like prior to the rollout and during it. So, I think I was fairly well informed about ‘why and how’ of change and what sort of effect and implications [IT implementation] would have on users and the organisation as a whole. So, I was ready for it. (CR17)

CRs expected CAs to communicate constantly and inform them about events and changes. For example, CR10 expected CAs to organise regular meetings and involve power users to share their experiences, discuss their concerns, and provide feedback. He believed this approach could increase CR participation and support for change.

I believe they [CAs] should have constant communication with power users from before starting the project until now that the rollout is completed and they are providing support to staff. They should inform them [power users] about all the details, and sort of involve them in the implementation. (CR10)

In brief, as CAs highlighted the significance of CR involvement in effective implementation of the new changes, they mentioned different approaches they had practised to encourage CRs to engage and participate actively in change processes. Some CAs stated they had involved power users in the pilot project with the aim of informing CRs about the necessary changes, collecting their requirements and obtaining their cooperation in IT implementation. Furthermore, CAs emphasised communicating with and involving business managers and key stakeholders to disseminate change information and keep CRs informed about IT implementation, which appeared to enhance and develop CR buy-in and support. CRs also expected to be informed about project progress and be involved in the change process. Some CRs mentioned lack of direct and regular communication with CAs during and after IT
implementation as the reason for feeling uninvolved or ignored. They believed that through their interactions with CAs, they could acquire more details about events and actions, express their needs and concerns, and have the opportunity to participate. Further, CRs who were informed felt more valued, considered and involved. Thus, they were more willing to engage with others around change topics and events, share their experiences, and improve their understandings of change and outcomes.

5.6.5 Seeking benefits

5.6.5.1 CA perspectives

In round two, CAs re-emphasised positive consequences of IT implementation and explained the benefits of the new changes they were seeking to achieve for their organisation and CRs. CA9, for instance, reiterated the significance of the project for GovOrg and indicated some advantages of IT implementation.

This project is very important from the point of view that we’ve had quite a bit of complaint over the years around our ageing systems, and the organisation has been very conservative in updating the OS for a number of reasons. It [IT implementation] has led to substantial improvements and efficiencies, which means significant savings to the organisation. It’s resulted in much fewer maintenance costs. (CA9)

Some CAs highlighted the anticipated benefits of IT implementation for their own activities and duties. For instance, CA8 mentioned the positive impact of upgrading the legacy platform on their support and maintenance processes and practices. Thus, she argued she and her colleagues could provide better services for CRs.

It’s going to be much easier for us to maintain the updated systems and support the CRs. I believe the users would have fewer issues and experience better performance with their upgraded PCs and new changes, and they would be more satisfied. (CA8)

CAs also believed CRs had benefited from IT implementation, and argued that one of the primary objectives of change was to increase the CR efficiency and productivity and provide better work experiences for them.

The [new] operating system is certainly a lot quicker. That is one of the objectives of the project. I believe we’ve been successful in achieving the project goals, and more importantly, improving the users’ experience and work environment. That’s my view, and I’m sure that others have similar views. (CA7)
Many CAs were of the view that CRs had perceived the positive impacts of change and were satisfied with the process and outcomes. CA7 explained CRs were evaluating change objectives and consequences and looking for potential benefits from IT implementation for their own work and organisation over time. Although some CRs doubted the significance of change and have negative appraisals as to its effectiveness, she argued that when they could see the useful results of IT implementation, they grew confident and were satisfied.

They [CRs] see the benefits of the new changes in terms of the improved performance or new functions. Some people complained about the faced challenges, but as the rollout proceeded and their problems resolved, they could see the positive impacts of the change in their work, and their evaluation of project outcomes improved. (CA7)

Some CAs argued that CRs should seek and consider long-term benefits of IT change. For instance, CA10 suggested that CAs should give CRs more time to get used to the new systems, and thus perceive constructive change in their status and practice.

Users need some time to get used to the new systems and to realise the benefits of the change in their day-to-day work. There have been some issues that are being addressed. So, I think we should consider long-term impacts of the project. The changes are delivering benefits to the organisation and staff in the long term. (CA10)

5.6.5.2 CR perspectives

The CRs highlighted their view of seeking to receive more benefits from IT implementation. They expected to achieve better results and experience more constructive changes rather than facing multiple issues and disruptions that hindered their regular work. It appeared that knowing about change objectives and outcomes and believing they would gain benefits from the project could motivate CRs to participate and cooperate. As CR12 commented, those who knew that changes would benefit them or their organisation appeared to be more willing to support the implementation process.

So, let me see what the changes are, and if they are better than the way I can do my work, and maybe some other benefits like that money saving effect on the organisation, I’m one of the first to stand in line for changes to occur. (CR12)

In round two, some CRs stated their uncertainty about IT implementation gains and the worth of change and reaped rewards. They indicated the changes or results they expected to achieve such as less workload, better support service or more advanced hardware and software facilities. Further, it appeared
that failure on the part of CAs to deliver planned outcomes and benefits could diminish CR trust and positive attitudes toward change.

*We were sort of promised that the hardware of our existing PCs would be upgraded, and we would get more memory and stuff, but we didn’t get it. They [CAs] also promised some software changes but they didn’t do them.* (CR19)

It appeared that not being informed about IT implementation and lack of insights about the change impacts and consequences could lead to negative feelings of uncertainty and doubtfulness. CRs tried to evaluate the benefits and costs of change. Some considered short-term inconveniences and disadvantages of adopting new changes rather than long-term gains, and thus appeared to doubt the effectiveness of IT implementation. For example, CR11 did not believe he had received significant benefits, but he had to do his everyday practices in a less efficient and more complex way post-IT implementation.

*I’m not sure that we have benefitted from the change. I was doing my job well just before the upgrade, and afterwards, I have to go through some other way to get my job done; not an easy cut. I don’t see any benefit really.* (CR11)

Similarly, CR14 emphasised experiencing some issues and inconsistencies in their operational access to their systems and resources, and argued that the new changes had brought more restrictions, complexities and inefficiencies than privileges and improvements in the short term.

*Because of the new restrictions, we don’t have access to install and configure our software tools. We can’t add or manage our external cloud applications or services. We need to request for a non-standard access or a support service, which takes a while to get a response.* (CR14)

Some CRs were of the view that their interests and concerns had not been acknowledged and considered and they were therefore forced to adopt the new changes. CR18 argued that CRs who felt they were obliged to comply with the new policies and procedures appeared to be unwilling to participate in the change process and avoided the new changes.

*... I think users don’t accept change such a way [by being forced]. If they get forced, there would always be yes or no kind of complaints around. They [CAs] can’t tell people ‘it’s a change, so you have to accept it anyway, it’s a new thing’. I believe having proper rights to install and update the software was one [comment] I could hear around the floor.* (CR18)
In sum, similar to ExMoney, CAs at GovOrg sought benefits from IT implementation and attempted to achieve specified goals and objectives for change. Although there were obligations (such as reaching the end of operating system maintenance and support services) in planning and deploying some changes, CAs also explained their aim to improve business processes and increase productivity and performance. CRs also sought advantages from adopting the changes. For this purpose, they were constantly trying to understand the consequences of IT implementation by appraising new changes and through their interactions with others. Some stated they did not receive some of the promised or expected outcomes. They doubted the effectiveness of the project and argued that adverse impacts of change and encountered issues, disruptions and inconveniences outweighed improvements and advantages. It appeared that CR perceptions of change benefits influenced their interpretations and understandings of events and their feelings, attitudes and behaviours toward IT implementation.

5.6.6 Attitudes and reactions

5.6.6.1 CA perspectives

CAs manifested different reactions during and after IT implementation, which appeared to be complex and influenced by their conditions, understandings and interpretations of CR comments and behaviours and those of other CAs. Some CAs indicated positive feelings and attitudes towards some changes, while they criticised other changes, decisions or actions and expressed their dissent.

In round two, understanding of the consequences of change appeared to influence CA reactions. Post-IT implementation, CAs expressed positive views about project outcomes, and conveyed their sense of accomplishment and success. Many believed the project achieved its planned objectives and supported the implementation team’s efforts in conducting and completing the project. For instance, CA8 felt confident about and satisfied with IT implementation.

*I think we did quite well in terms of change ... [and] we were able to implement all the changes that we needed. ... It was a good project, and it was a good team of people, and we obviously did a great job to get it done on time and on budget.* (CA8)

It appeared that this positive perspective together with effective interactions amongst CAs and teamwork had developed a cooperative environment for effective and efficient change. For example, CA10 highlighted close collaboration between internal and vendor teams.
... All the rollouts were done exactly as planned. That’s a very good thing to achieve and they [vendor team] kept the timetable. So, we could also do our work as scheduled. That was a great collaboration. (CA10)

In round two, improved relationships amongst and between CAs and CRs appeared to facilitate collaboration on progressing IT implementation. Through teamwork and ongoing and constructive interaction, CAs could reduce inconsistencies, increase positive attitudes towards change and enhance CR buy-in.

... overall, this project went very well. We, CA7 and I, had obviously worked well as a team. ... and [the CRs] were happy with the outcome. That stands on the relationship and how everyone worked together, and once we got that user buy-in, the doors opened up. We got the help from them. (CA8)

In contrast, some CAs expressed their dissatisfaction or disagreement towards some decisions, plans or actions. They commented on lack of communication, inappropriate change planning, lack of adequate resources, and lack of top management consideration and support. CA comments appeared to reflect some dissonance between expectations and experience. For instance, CA9 pointed to the project scope, limited resources and experienced pressure.

It could be ideal for us to have more resourcing, technical resourcing for us to do the rollout in a quicker manner, but also to relieve the burdens of staff who provided technical support. Because, it was very hard work day in and day out every week, every day for several months. (CA9)

Similarly, CA7 criticised change planning and commented in her diary: “It’s all been very rushed, and I have been under pressure” (CA7). Later, she emphasised the high level of stress and anxiety she and her team had experienced during IT implementation and indicated her disagreement with some plans.

I had to sort out a lot of things myself ... so I was putting in 12-14 hours a day, and only about a month ago I said ‘stop, I’m not doing this anymore’. ... I should have put my foot down long ago and said ‘no, I’ve been trying to kill myself’. (CA7)

CAs also commented on CR attitudes and reactions. It appeared that CR appreciation of and positive attitudes and reactions toward plans and the CA actions could enhance CA commitment and motivation to provide better services and give more consideration and support to CRs. For instance, CA7 appraised
IT implementation as effective based on her positive interpretation of CR reactions to the new changes. She felt satisfied and proud of what they had achieved.

*Quite a few people have said the change was like a non-event. They came in the next morning, and they signed on, and it was all working again. That’s what we wanted. When you put in a project like this, it’s not actually what people say, but what they don’t say. The fewer people that complain, the better a job you’re doing... [CRs] still smile at me when I walk around the building. So, it [IT implementation] can’t be bad. (CA7)*

CAs believed in the benefits of IT implementation for their organisation and expected CRs to accept and support the changes. Thus, CAs were surprised and somewhat disappointed with negative feedback and the pushback from some CRs. For example, CA9 argued that some CRs avoided change and this was unjustifiable and discouraging.

*It did catch me by surprise that we had a lot more people who chose to defer the upgrade recently. I haven’t seen that in the past. I think, in the past, we probably had fewer people that opted that, but this time, unfortunately, we’ve had more than what we had expected. (CA9)*

CA interpretation of CR behaviours appeared to influence further decisions and actions. CAs constantly tried to appraise and understand CR attitudes and reactions towards the events and changes. Moreover, it appeared that as CAs had different interpretations and understandings of the CR conditions, roles and reactions at different stages of IT implementation, their responses and actions towards CRs were different. For instance, CA8 expressed his perception of some CR reactions and interpreted their second request for deferring change as resistance. She mentioned her approach in forcing those CRs to adopt the new changes.

*There is resistance. There are some users who don’t like to have the new system, but they don’t get a choice. They have pushed back once, but we’ll come back and have to do it the second time. So, they’ve got no choice. Their managers will take their machines away if they don’t do it. (CA8)*

CA10 mentioned that some CRs resisted because they did not have a clear understanding of the new changes. In contrast to CA8’s perspective, he believed CRs needed more time to get used to the new systems.

*I noticed plenty of resistances initially, but once they got used to it [changed system] they liked it... People just didn’t know where had gone some functions and features that they needed to use. They couldn’t find them. They got used to it gradually. (CA10)*
5.6.6.2 CR perspectives

In round two, many CRs stated positive views and experience of IT implementation. They highlighted benefits and constructive impacts of the project and further supported the change process and CA actions. For instance, CR17 explained some of the achieved outcomes and improvements and expressed his satisfaction in adopting the new changes.

*I am happy with the changes. They [CAs] updated our systems to 64bit, and a lot of my applications are faster and very smooth. They also gave a lot of control to admin, so the network is also faster...* (CR17)

Although CRs indicated some inconsistencies and disruptions during IT implementation, they explained they were satisfied with overall results of change. For example, CR18 had experienced some issues with the network access settings, but nevertheless he supported change. He argued that the new changes had improved the security and performance of their computer networks and systems. CR18 believed that complications and difficulties were ‘worth it’ and they would benefit in the long term.

*There were access issues, but at the end of the day, the business services are improved with that security. Yes, it took around three or four days to get the access and get my things to work. For a week we weren’t able to work properly, but that’s worth it. Waiting for a week would be better than getting so many emails and so many viruses into the system and spoiling it.* (CR18)

When CRs perceived their needs, requests and concerns had been heard, considered or responded, they appeared to be more satisfied with the change process. CR16 stated he could receive the expected service and support from CAs.

*[The change] was as I expected. I believe that they [CAs] have understood my requirements, and to a large degree I get all the help and support that I need, or ask for, in most cases.* (CR16)

Furthermore, CRs appeared to be more supportive of the new changes when they could see CA efforts in conducting IT implementation, improving the processes and providing support to CRs. In round two, those CRs who were informed about the changes and understood the events and conditions (e.g. the size/scope and complexity of the change) appeared to appreciate CA decisions and actions, and develop both sympathy and tolerance for the problems and disruptions they had endured. For instance, CR17 was aware of the changes and implementation process, and understood the complexities and conditions. He acknowledged CA expertise and experience and appreciated the project team’s endeavours in addressing the issues.
There were some IP conflicts and network problems. They [CAs] tried to solve them urgently, but it took some time until they found the solution and addressed those problems. I could see a big team was involved and they tried hard to evaluate the impact very well before changing settings. (CR17)

While issues and unexpected disruptions could develop negative feelings and attitudes, CR perception of being understood and supported in the change process could reduce and neutralise those negative reactions, or even promote positive attitudes. One factor that could foster an affirmative sense of being considered and valued appeared to be CA efforts in improving the IT implementation process. CRs seemed to have positive feelings that their role, needs and concerns were understood and considered when CA endeavours in providing better services, addressing problems and inconsistencies, and preventing future disruptions were apparent. CR15 indicated that CAs managed to learn from their previous problems, improve IT implementation and support processes gradually, which resulted in more satisfying user experiences.

I think most of the issues were found and pretty much resolved where the last few changes went quite smoothly in comparison. I can say the second half [of the project] was better. So, I think that was the best part of the rollout: the lessons learnt during the rollout on a group-by-group basis. (CR15)

During and after IT implementation, CRs gained a better understanding of CAs and change conditions. In round two, some CRs indicated their trust in CA expertise and efforts in resolving problems and accomplishing change. Hence, they supported CA actions and the IT implementation process. For example, CR17 argued that considering the project size, they should have been more patient, cooperated with CAs and allowed more time for addressing issues.

... People should have a little bit more patience for issues to be addressed because it’s a huge organisation and they [CAs] are rolling out multiple changes. Sometimes it takes more time to address certain issues. But, the team is very well trained; they know what to do. (CR17)

There were also CRs who discussed negative feelings and attitudes towards IT implementation, including confusion and uncertainty, feeling under pressure or being forced to comply, not feeling considered or supported, and a sense of frustration or dissatisfaction with change outcomes and impacts. For example, some CRs blamed the change process and indicated inappropriate project planning as the reason for experiencing confusion and encountering problems. They commented that CAs had not
informed CRs about some issues, and had not explained plans and actions in addressing inconsistencies, which seemed to increase uncertainty and dissatisfaction amongst CRs.

*I'm blaming the Windows 7 project and mediocre planning. We still don't know the full reason behind those issues ... We had quite a number of meetings about those issues with the [CAs and vendors] staff, and they were sort of running around in a circle to try and work out what had caused the problem. (CR10)*

Some CRs complained about the support process and indicated they had not received proper assistance during and after the project. They expected CAs to consider users’ conditions and needs. For instance, CR14 argued change must be evaluated based on CR acceptance and satisfaction.

*I am not happy with the support, if they [CAs] come here the next day [after rollout], do a floor walk and think they’ve resolved all the issues. But not all problems appear on that first day, especially if people aren’t here. So, to me, it’s not done until it’s done with users and for them, not just based on a date. (CR14)*

Further, CRs who expressed negative emotions and attitudes towards IT implementation appeared to be unsupportive of new changes. Some manifested dysfunctional behaviours and actions such as refusing to provide the required information or participate, delaying implementation, avoiding some changes, or resisting using new practices.

CR10 indicated that some CRs were concerned about losing productivity and were not being able to do their normal work. They were afraid of undergoing disruptions and unexpected problems. Thus, they tried to delay their systems’ upgrade or avoid some changes. It appeared that their past negative experiences of encountering disruption and ineffective changes had contributed to the development of their cynicism and scepticism about the advantages of IT implementation.

*There were some issues initially that almost affected all the staff. So, they got a little bit frustrated as it took about three weeks to resolve those issues. The staff got frustrated after a week of not being able to do what they were used to do. ... I think that opinion of experiencing a smooth change was quite dramatically shifted pretty much 180 degrees to most people being fairly frustrated with the rollout. So, many of them didn’t want to do it. (CR10)*

Some CRs felt uncertain about the impacts of IT implementation on their work and status. The uncertainty and ambiguity amongst CRs about project outcomes appeared to reduce and undermine trust and confidence and increase unsupportive reactions to change. For instance, CR19 stated that some CRs did not want to get disrupted by facing multiple issues and unplanned changes, so they refused to
accept the upgrades. Those CRs constructed negative meanings such as productivity loss, unexpected issues, and extra work and responsibility.

... I said ‘no, I’m using my system, so you can’t upgrade it on that day’. Also, there were a few guys in [another department] that had a massive project running and, because of their timelines, they just couldn’t afford to have a few days not doing anything. (CR19)

In his diary entry, CR11 stated other CRs who resisted change and postponed the upgrades.

I’ve heard that a lot of people just didn’t do it, didn’t upgrade, and there are also people in our group that don’t want to do it. (CR11)

Furthermore, CR negative feelings and attitudes, such as frustration and dissatisfaction, appeared to result in some dysfunctional reactions and behaviours including avoiding or rejecting changes, or not being willing to participate and cooperate. CR18 commented that, instead of finding the cause of CR unfavourable feelings and attitudes, CAs forced change implementation, which appeared to lead to more negative reactions and less participation and engagement.

So, at the time of deployment date they [some CRs] said ‘no, not now, next week’ or ‘not next week, I’ll be on leave’. So, they pushed back to some other dates. They tried to push the deployment as far as possible. I would not say they resisted, but they delayed the changes. I think management decided in the end to force them and update their systems. (CR18)

CR11 also mentioned that although CAs were able to push the changes and complete system upgrades on time, some CRs were still not satisfied with the implementation process and outcomes. He commented in his diary: ‘It [change] was a frustrating success!’ (CR11).

In sum, CAs and CRs explained their feelings and attitudes towards IT implementation. In round one, many CAs seemed confident about the change plan, and expressed their satisfaction with project teamwork and CR cooperation and participation in the requirements. However, in round two, CAs appeared to be dissatisfied with some decisions and plans, such as resource allocation. Further, many complained about pressure. Some argued that the lack of effective interaction with and proper understanding of requirements and concerns by top management had caused some challenges in engaging CRs and conducting IT implementation. Although the project was in fact completed on time and on budget, some CAs criticised the change management approach.

CRs also expressed various feelings and attitudes towards change ranging from negative and unsupportive to positive and constructive. Their feelings and attitudes appeared to be influenced by
their appraisal of events and actions, their understandings of the implementation process and its impacts, their perceptions of outcomes and benefits of change, and their interactions and relationships with others during IT implementation. Many CRs were positive about the new changes and stated they had achieved the expected improvements. However, power users, who had special needs or required non-standard settings, criticised the plans and project support. They believed they had not received due consideration or assistance and felt frustrated with change outcomes. Further, CR feelings and attitudes impacted their behaviour and further actions. As CRs experienced unexpected changes and more inconsistencies, they appeared to become more distrustful and critical of the new changes, and seemed to be resentful of participating in or accepting change. Moreover, CAs and CRs tried to explain their understandings and constructed meanings of events and to justify their reactions. It seemed their justifications and interpretations influenced future decisions, actions and behaviours.

5.6.7 Justifying reactions

5.6.7.1 CA perspectives

Post-IT implementation, CAs explained the project management process, highlighted their strategies and efforts in supporting CRs, and tried to justify and defend their actions. Many stated that, despite the relatively large size, scope and complexity of the project, limited time and allocated resources, and other external and unexpected issues, they had managed to conduct and accomplish the project successfully. CAs also contended that CRs had received appropriate consideration and support in the change process.

CA8 argued for IT implementation success by stating some of the positive impacts and achievements of the project and comparing performance of CR systems and applications with their conditions prior to the new changes. She tried to highlight her role and that of other CAs in achieving positive change outcomes.

I always do a walk around the day after deployment, and most people are happy. They have faster and more reliable systems ... There have been incidents too where PCs haven’t worked, or their apps weren’t tested. Those people are obviously unhappy. But, we just need to do a little bit of work on their system to go right. I think most of them [CRs] are happy. (CA8)

In round two, CAs expressed different interpretations of events and change, and highlighted various reasons for justifying and defending their roles and responsibilities. In particular, they seemed to maintain and promote their views and support their actions when they were criticised for the inconsistencies or issues faced. For example, CAs responsible for the pilot project defended their
preparations for change, arguing that the required tests had been carried out as planned, and ‘quite well’. CA7, the internal project manager, commented:

*I think the testing went quite well because we’ve had very few issues with the applications that we’ve packaged. I think that went really well.* (CA7)

However, some CAs questioned the effectiveness of the test phase. For instance, CA8, the vendor’s project manager, was of the view that some CRs had encountered some critical issue because some changes had not been considered properly and some applications had not been tested comprehensively. She tried to explain and justify her team’s responsibilities and efforts and defended their actions. This debate also suggests some conflicts caused by different CA understandings of the implementation process and divergent interpretations of their roles and responsibilities.

*Some areas weren’t tested properly by the other team. So, the issues got found out a little bit late. Everyone just assumed the changes would work and then we rolled out and found out very quickly that they didn’t. Some of those issues were critical and everybody in the whole organisation [was] affected. ... We tested everything from our end. So, I asked them to test other changes, but we ran out of time.* (CA8)

CA10 also criticised some decisions and actions by the vendor’s team in planning and conducting change. His view was that their lack of familiarity with existing settings, systems and services at GovOrg had given rise to some challenges and issues.

*Once you change the [network] domain, it becomes completely different, and the configuration is different. The guys who came and did the rollout [vendor’s team] were assuming it to be a brand-new organisation introducing Windows 7. That’s not the case. We’ve got an existing platform, and we have service providers who give us share drives and other services.* (CA10)

To justify problems and defend their position, CAs indicated other reasons or conditions. They tried to give reasons for their views and interpretations, and justify their decisions and actions. For instance, CA7 highlighted government and organisational structure changes and the unplanned relocation of employees to explain miscommunication or lack of effective interaction with departments and some CRs. She further argued that such external issues and pressures had caused some delays and unexpected problems in the implementation process.

*The schedule for preparing and finalising information packs was set several weeks ago. But there’s been a lot of modifications to the communication [materials and approach] due to*
government changes, due to some divisions being so busy, so we’ve had to do them on the fly. (CA7)

Likewise, CA8 mentioned project constraints to explain problems and inconsistencies she encountered, and validate her position and approach. She criticised top management and expressed lack of authority in controlling conditions, and insufficient resources and time for organising and managing change.

A member of CA7’s team, unfortunately, had pulled down right in the middle of the project. So, that put us behind. They [top management] probably didn’t understand how much effort was involved. Maybe [the vendor company] didn’t enlighten them enough on the [IT implementation] processes, what they needed and what they had to do. (CA8)

CA7 also complained of lack of support from top management and maintaining the balance between project activities and workload. She indicated the size, scope and complexity of the project to justify disruptions, and defended her and her team’s efforts in performing their duties and supporting CRs.

We were trying to do too much. I think everybody was pushed too far, and I had a lot of the staff going off sick because they just couldn’t deal with the pressure anymore. It was a huge pressure on us. It was constant, week after week after week, and it caused delays, inefficiencies and dissatisfaction. (CA7)

Furthermore, CAs appeared to justify issues and undesirable outcomes by criticising CR reactions to change. For example, in round two, they blamed some CRs who avoided the IT implementation process and tried to postpone the new changes. CAs argued that change avoidance and lack of participation and cooperation on the part of CRs was a major obstacle in conducting and accomplishing changes as planned.

We were supposed to finish early December but we couldn’t because we were having a lot of dropouts, because they [some CRs] were busy or were on leave. We had about twenty to thirty percent fallout rate on each section, and we had to go back to them later. We didn’t think that batch [of the remaining users] was going to be as big as it was, and we didn’t take it into account enough. So, that’s why we needed the extra weeks; we had to reschedule. (CA7)

CA9 later stated that CAs had to take ‘stricter’ action in dealing with some CR pushback on or resistance to the new changes. He tried to rationalise CA approaches and actions in organising IT implementation. It appeared that some CAs referred to unfavourable responses by CRs and criticised
their attitudes and behaviours in order to validate the appropriateness of their strategies and decisions. They sought to support and emphasise their efforts in managing change and achieving outcomes.

Clean up and catch up is often a lot harder because you got pockets of people in different areas [and] in different locations that you need to service, and then you have to revisit them. So, it’s almost like doing it again. So, we had to control [the situation], and we were a lot stricter and would say sorry you need to upgrade, but we haven’t forced them. (CA9)

5.6.7.2 CR perspectives

CRs expressed various reasons for their attitudes and behaviours towards change and tried to justify their reactions. It appeared post-IT implementation that many of their reasons were related to change implementation and support processes. For instance, CR19, a business manager and power user at GovOrg criticised planning and project resourcing approaches. He seemed to have a negative attitude towards the change management process and achieved outcomes. He was of the view that CAs had not managed to conduct the project, and provide the required support and services.

In a lot of instances, there was too few staff to be able to deliver, provide and upgrade the computers that needed to be replaced or needed to be re-imaged. So, I think the project was too large and just didn’t have enough staff to service what’s required. It was bigger than what they had actually expected. (CR19)

CRs considered CAs responsible for proper and effective change management, and hence they criticised CAs for creating multiple issues and disruptions and failing to deliver promised results. For example, CR10 blamed CAs for their lack of success in involving CRs in testing and preparing for new changes, which he believed had resulted in low levels of readiness for change, and increased inconsistencies and issues.

They [CAs] needed to do more in-depth testing by the users. Several issues were discovered after the rollout when the implementation had started. They were responsible for ensuring a smooth change and [were] supposed to deliver better results. (CR10)

To justify their negative attitudes towards IT implementation and rationalise their reactions, CRs also gave some other reasons. For instance, CR19 seemed to doubt the expertise and competencies of the implementation team in conducting the new changes. He explained his concerns with the implementation process and criticised change management and support, due to frequent problems and disruptions.
There are still several problems that we continue to run into... I think the project had to be cut up into smaller projects to make sure that they [CAs] could actually manage the process. (CR19)

Some CRs appeared to be dissatisfied with change results and sought to justify their view by evaluating project outcomes and comparing their conditions and status pre- and post-IT implementation. In round two, they highlighted losing authority and dealing with unexpected issues as their reason for being negative about some changes and thus criticised the implementation process. For example, CR14 argued that CRs had been confronted with several shortcomings in accessing their essential tools and performing their work post change. She believed that CAs did not have a proper understanding of CR needs and concerns, and had not planned and provided for required settings and services.

I was able to install our applications on all our PCs and run them. After the Windows 7 upgrade, I didn’t have the appropriate privileges anymore. They [CAs] were trying to control, as much as possible, the security of the administrative rights to PCs. ... So, I ended up having to run around and contact them and get their assistance to install those applications, which took a number of days. I think that is where I found the biggest bug [issue] there as part of this project. (CR14)

Many CRs questioned communication, the support strategy and process. For instance, CR18 was frustrated with the lack of support from CAs. He believed CAs needed to ensure clear implementation and support, interact with CRs, and inform them about change plans, procedures and responsibilities.

A level of clarity is required that who will take the responsibility of support. I think [the vendor team] probably don’t fully support our systems. So, we have to contact the [internal] implementation team for several issues, and I’m not sure who to contact in case something happens. For example, for an issue in [a system] I called up, and they [the vendor team] said it’s not our matter. (CR18)

CR11 highlighted the lack of a well-planned and organised mechanism for collecting users’ needs and feedback, which prevented some CRs from receiving essential services and assistance. Similar to CR18, his justification for not contacting CAs was that he believed their requests were being ignored, or not properly taken into account and addressed.

They [CAs] say ‘you contact such and such, and you’ll go well’, but I don’t. What I want to do is to go to a website or have an email that I can send my request or report my issue, my job gets logged in a queue, and then I get support. I don’t want to ring [a support team member] and hope that he’s around. That to me is not good enough. (CR11)
Some CRs were concerned about losing productivity, hence they avoided changes that could impact their performance and activities. CR17 commented that “when we have issues or something that’s going to impact the productivity, many people go crazy” (CR17). CR18 mentioned some reasons that his colleagues expressed for not complying with the IT implementation plan including fear of losing productivity and encountering delays in their work routines.

They [CRs] feared their systems would slow... maybe that’s one of the reasons that they were saying ‘no, no, not now’. They were not sure whether they would get the hardware that supports the new OS and applications. (CR18)

CRs also mentioned positive reactions towards IT implementation. They explained their justifications for cooperating with CAs or participating in the change process. For instance, CR12 appreciated CA efforts and supported their actions in managing the project. He believed that considering the allocated project resources and time, the team had completed possible actions to progress implementation and complete the project as expected. In round two, it appeared that CR positive relationships and effective interactions with CAs could increase their trust in management and enhance supportive reactions.

There are a number of people that under very difficult circumstances are doing a very good job to try and keep it going the way it is, but they are struggling big time to try and keep up with what they need to do in the time they have been given. (CR12)

Similarly, CR16 explained the improvements to the change process in order to state and defend his appreciation of CA endeavours in learning from past consequences, and reducing issues and disruptions. He seemed to be satisfied with change management and had a positive view towards IT implementation.

What was going well about the project, in my opinion, was that from each group that they rolled out [the new changes] to, they learned about mistakes and problems and attempted to fix them before they went to the next group. (CR16)

In sum, it appeared CAs maintained their position, promoted their roles and experiences, and defended and justified their decisions and actions for conducting IT implementation. For them, some highlighted external causes and factors, such as government and organisational structure change, unplanned relocation of employees, and vendor’s issues and limits. Some others criticised the organisation’s top management actions and mentioned experiencing inconsistencies in project planning.
and progress, dealing with pressure due to limited allocated resources and an inappropriate implementation schedule.

CRs also discussed their interpretations of the change process and outcomes, and CA actions. They tried to promote and rationalise their views and understandings, and highlight and validate their feelings and attitudes. In round two, a pattern of criticism about project management and the implementation process was evident in CR comments, especially those who were unhappy with change outcomes. Many CRs were not happy with inappropriate planning and management by CAs. This was their rationale for encountering issues and disruptions and thus their dissatisfaction with IT implementation. In contrast, some CRs appeared to have positive attitudes about IT implementation and supported CAs. CRs who considered they had participated in the change process understood the project size, scope and complexity. They appreciated CA efforts, and believed they would gain positive outcomes. They emphasised improvements in the implementation process and highlighted achieved benefits of change, to justify and maintain their support and participation.
Chapter 6
Cross-Case Analysis

6.1 Introduction

Chapters 4 and 5 presented the within-case analysis for each of the two case studies based on the two rounds of data collection and included the analysis of the findings from them. In this chapter, a thematic analysis is followed across the two case studies (Creswell 2012, p. 75; Yin 2009). The purpose of this chapter is to compare and contrast, explore similarities and differences and find associations between the two case studies. The themes established in the within-case analysis are again used here, enabling me to identify patterns and to generate further insights into the reactions of change agents (CAs) and change recipients (CRs) to respective IT implementation.

6.2 Theme 1: Developing Mutual Understanding

CA perspectives in both cases highlight the significance of developing mutual understanding between CAs and CRs, in which each group acknowledges the role, status and concerns of the other group. Apart from explaining their expectations of CRs, CAs commented on the importance of comprehending CR practices and requirements. They stated that the more information they could gather about CR working processes and conditions, the better they understood the CR needs and priorities. Thus, they could improve both the design and functionality of the new systems (ExMoney), or enhance the efficiency and effectiveness of the IT implementation process (GovOrg). CAs used different strategies to developing their understandings of CRs. At GovOrg, for example, they emphasised the pivotal role of business managers and key users in obtaining ‘business insights’ and knowledge about CR working processes and priorities. CAs at ExMoney referred to establishing close relationships with CRs and seeking a ‘common language’, hearing different perspectives, and acknowledging CR positions and views. However, one may question the effectiveness of their approach, as there seemed to be some CRs who felt they were ignored (ExMoney) or separated from the requirements process (GovOrg).

Further, CAs expected CRs to understand their status and circumstances and recognise their role and efforts. Many argued that plans and actions were decided upon and carried out to fulfil the organisation’s priorities and requirements, which could cause some unfavourable impacts on CRs in the short or long term. They expected CRs to acknowledge them, consider the group and organisational outcomes, and cooperate with them in conducting and completing IT implementation. At ExMoney,
CAs emphasised the complexity of developing and integrating their accounting processes and systems. They argued that encountering some issues and disruptions would be ‘normal’ and inevitable, and expected CRs to understand “problems and mistakes” that they may face with change. CAs at GovOrg explained the project size/scope, complexity and limited resources in implementing new changes. Some highlighted unexpected external (e.g. government and organisational structure changes) or internal (e.g. new updates or modifications) events and hurdles, which they argued had had negative influences on project progress or inhibited them from providing appropriate services and support to CRs (GovOrg).

An interesting difference between the two cases was the involvement of top management in the implementation process and their understanding of change. When top management was part of the CA group, they seemed to have a better understanding of change plan and actions and required resources to carry out IT implementation more effectively and efficiently (ExMoney). However, in a large organisation, where top management may not be responsible for organising, managing and progressing the IT initiative directly, CAs appear to have some challenges in conveying more comprehensive understandings of their status, approaches and actions to top management, and thus, in obtaining their active involvement and support. For example, some CAs appeared to encounter difficulties in acquiring resources and facilities (GovOrg). They seemed to expect top management and other stakeholders to acknowledge and appreciate their endeavours in planning and conducting change, and to support their decisions and actions.

For the CRs, they expressed their expectation of being acknowledged and understood in both cases. They expected CAs to listen to their requirements and concerns and respond to their requests. At GovOrg, CRs explained they had specific needs and requested some ‘non-standard’ settings to be able to do their work. They anticipated understanding of their circumstances and support by CAs in adopting new changes. However, some CRs felt they had been ignored, had not received a ‘response’ from CAs, and/or their requests had been rejected. At ExMoney, CRs argued they had detailed knowledge about their business processes, which had not been considered by CAs. They explained their experience with regards to required considerations, changes or improvements in their working practices and related system functions. However, they seemed to have the feeling that CAs had not appreciated and used their knowledge and experience in IT implementation. They expected CAs to value their status and role, consult with them about their routines and conditions, and understand and consider their requirements and priorities. Further, CRs described other reasons for not feeling they had been acknowledged or understood by CAs. Their reasons included communication not being adequate, not
being involved in the planning and change process, not being asked to comment on the new changes or give feedback (provide input), or not being able to express their suggestions and needs (Figure 6.1).

Figure 6.1 Some factors that appeared to influence the feeling of being understood

At ExMoney, as some CRs stated, their direct interaction with CAs and involvement in the discussion meetings appeared particularly influential in improving the understanding of CAs with regard to their needs and status. They felt they were heard and valued when they could convey their requirements to CAs or give comments. And they felt acknowledged when they could see CA actions in response to their feedback or addressing their concerns. At GovOrg, the initial system audit activities and the pilot project were emphasised in enhancing CR engagement, and promoting their understanding of IT implementation and CA expectations and priorities.

Moreover, considering the context of the organisation and IT implementation in both cases, the level of mutual understanding appeared to vary. In a small organisation, stakeholders seem to have closer relationships, direct interaction and frequent communication, and consequently had better understanding of the other group’s roles, conditions and requirements (ExMoney). In contrast, in a large and distributed organisation, lack of direct communication and information exchange opportunities seems to decrease the level of clarity, connection and understanding between CAs and CRs (GovOrg). (Table 6.1 presents factors that appeared (either ExMoney or GovOrg or in both cases) to facilitate the development of mutual understanding between CAs and CRs.)
Table 6.1 Factors that appeared to facilitate the development of mutual understanding

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Implementation:</td>
<td>Pre-Implementation:</td>
</tr>
<tr>
<td>• Having close relationships</td>
<td>• Participating in the requirements gathering process</td>
</tr>
<tr>
<td>• Having direct contacts</td>
<td>• Knowing about the others’ work and priorities</td>
</tr>
<tr>
<td>Pre-Implementation (both cases):</td>
<td></td>
</tr>
<tr>
<td>• Having positive perceptions of the background and expertise of others</td>
<td></td>
</tr>
<tr>
<td>• Knowing about change objectives and consequences</td>
<td></td>
</tr>
<tr>
<td>Post-Implementation:</td>
<td>Post-Implementation:</td>
</tr>
<tr>
<td>• Having direct contacts</td>
<td>• Participating in pilot/test activities</td>
</tr>
<tr>
<td>• Participating in change discussion or review meetings</td>
<td>• Knowing about the others’ work and priorities</td>
</tr>
<tr>
<td>• Participating in training sessions</td>
<td></td>
</tr>
<tr>
<td>Post-Implementation (both cases):</td>
<td></td>
</tr>
<tr>
<td>• Having ongoing communication with others</td>
<td></td>
</tr>
<tr>
<td>• Knowing about change conditions and the IT implementation context (settings, available resources, constraints or considerations)</td>
<td></td>
</tr>
</tbody>
</table>

To conclude the discussion on theme 1, mutual understanding seemed to be twofold. First, it involves the understandings of CAs about CRs and vice versa. Thus, developing mutual understanding appeared to be about achieving a more comprehensive understanding and convergent perceptions of identities, requirements and actions of the other group’s members. Second, it includes perceptions of understanding from CRs and vice versa. In other words, each group expected the other group to understand their roles, responsibilities and status. They anticipated acknowledgement and consideration of their status, concerns and interests. Developing mutual understanding, in this respect, appeared to be about the development of perceptions of being heard, understood and supported by the other group.

Both cases appeared similar regarding CA and CR emphasis on being understood and their expectations of being acknowledged and supported; however, there were variations in the level of understanding about the other group’s concerns, needs and priorities. They also stated different approaches in sharing perceptions and developing mutual understanding.

6.3 Theme 2: Appraising Change and Constructing Meanings

While CAs in both cases emphasised the significance of IT implementation in their organisation, they explained different reasons and objectives for conducting the project. CAs at ExMoney highlighted the
need for developing and improving their IT systems to enhance the performance of their processes, extend the functionality of their services, strengthen their market position, and grow their business. At GovOrg, although the project deemed to be initiated to upgrade their existing IT infrastructure to reduce maintenance and support costs; CAs believed that change would increase the performance and efficiency of their systems and processes. CAs in both cases argued that IT implementation would bring substantial outcomes for both their organisation and CRs.

An interesting variation amongst CAs appeared in terms of appraising the IT implementation process and its consequences on business processes and CRs. CAs at ExMoney evaluated IT implementation as a complex project that required careful planning and precise design. They argued more consideration should be taken into account for gathering and analysing requirements, clarifying and prioritising changes to business processes and functions, and managing the implementation process. At GovOrg, CAs had different evaluations of the IT implementation and change process. They were of the view that it was a straightforward process for upgrading their existing systems and software applications, and CRs would not experience significant impacts or major disruptions. Another group, mostly IT managers, believed that the project would entail fundamental changes in their IT infrastructure and systems. They argued that not all requirements and aspects of change had been assessed, analysed and considered thoroughly. Moreover, the divergence of CA initial appraisals of change influenced their assessment of the IT implementation process and provoked different interpretations of consequences and outcomes. For instance, in round two, some CAs indicated lack of comprehensive change planning and preparation (ExMoney) and lack of adequate resources for conducting the project (GovOrg), which caused some complexities and issues, and resulted in inefficient and thus ineffective change implementation and support.

CAs were aware of the need for more comprehensive appraisal of IT implementation and its impacts. They explained their perspectives on the approaches that could lead to shared understanding of project objectives and implications amongst CAs and CRs. Some of them suggested involving CRs in different stages of IT implementation, particularly in identifying and assessing requirements or evaluating and planning the new changes (GovOrg). Other CAs indicated allocating more time for analysing and discussing business processes and clarifying the project size/scope, objectives and requirements with CRs (ExMoney).

CRs, in both cases, appeared to have various appraisals and understandings of IT implementation and its impacts. At GovOrg, many CRs viewed change as straightforward for upgrading their existing systems, assuming change would not significantly affect their work and status. Also, some CRs were
concerned about consequences of change and worried about potential issues and disruptions. Those CRs were more dependent on IT systems (e.g. use of sophisticated software applications that needed particular configurations and software settings) and believed the project would affect their working processes and conditions considerably. In this case, the divergence in CR evaluations of IT implementation seemed to be linked to change relevance and/or the level of direct or indirect change on their work or status. At ExMoney, CRs had different interpretations regarding the significance of change and objectives. Many indicated IT implementation as fundamental in developing their services and assumed it as effective in addressing issues and deficiencies in their systems. Some were of the view that many new changes were not necessary or noteworthy, arguing they would lead to complexities and disruptions rather than considerable improvements and efficiencies. These variations in CR constructed meanings of change seemed to be influenced by their level of knowledge and understanding of change objectives and plans. (Table 6.2 presents other factors that appeared to facilitate or inhibit CR appraisal of change which influenced their interpretations of consequences and outcomes over time.)

Table 6.2 Factors that appeared to influence CR appraisals of IT implementation

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Implementation:</strong></td>
<td><strong>Pre-Implementation:</strong></td>
</tr>
<tr>
<td>• Expecting benefits</td>
<td>• Being made aware of change objectives and the</td>
</tr>
<tr>
<td>• Knowing about CA expertise and experiences</td>
<td>rationale behind decisions and actions</td>
</tr>
<tr>
<td>• Trusting CA actions in helping CRs</td>
<td>• Understanding the role of CAs</td>
</tr>
<tr>
<td>• Feelings of being considered and involved</td>
<td>• Trusting CAs</td>
</tr>
<tr>
<td>• Considering others’ comments and perspectives</td>
<td>• Feelings of being able to discuss needs and</td>
</tr>
<tr>
<td></td>
<td>concerns</td>
</tr>
<tr>
<td>Pre-Implementation (both cases):</td>
<td>Pre-Implementation:</td>
</tr>
<tr>
<td>• Being informed about the new changes and</td>
<td>• Becoming aware of the rationale behind</td>
</tr>
<tr>
<td>the IT implementation impacts and</td>
<td>decisions and actions</td>
</tr>
<tr>
<td>consequences</td>
<td>• Understanding CA efforts and actions</td>
</tr>
<tr>
<td>• Being informed about change process</td>
<td>• Feelings of being able to discuss needs and</td>
</tr>
<tr>
<td>• Having relevant background and knowledge about change</td>
<td>concerns</td>
</tr>
<tr>
<td>• Comparing previous change experiences</td>
<td></td>
</tr>
<tr>
<td><strong>Post-Implementation:</strong></td>
<td><strong>Post-Implementation:</strong></td>
</tr>
<tr>
<td>• Being supported by CAs and receiving service</td>
<td>• Becoming aware of the rationale behind</td>
</tr>
<tr>
<td>• Feeling of being considered and involved</td>
<td>decisions and actions</td>
</tr>
<tr>
<td>• Considering others’ comments and perspectives</td>
<td>• Understanding CA efforts and actions</td>
</tr>
<tr>
<td></td>
<td>• Feelings of being able to discuss needs and</td>
</tr>
<tr>
<td></td>
<td>concerns</td>
</tr>
</tbody>
</table>
Furthermore, stakeholders’ past experiences appeared to influence their appraisals of change. Many of CAs and CRs in both cases referred to their past knowledge and experience with similar IT changes to evaluate and interpret IT implementation and its consequences. (Table 6.3 provides some examples of stakeholders’ retrospective change appraisal and meaning construction.)

**Table 6.3 Examples of stakeholders’ retrospective change appraisal**

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Implementation:</strong></td>
<td><strong>Pre-Implementation:</strong></td>
</tr>
<tr>
<td>• CAs: In their past system development experience, requirements, design and function were not analysed and clarified comprehensively. Thus, some CAs were concerned about the implementation process and functionality, reliability and accuracy of the new system (see CA4’s and CA1’s comments in section 4.5.2.1).</td>
<td>• CAs: In section 5.5.2.1, CA8 mentioned a group of CRs who had moved from another organisation and were dissatisfied with experiencing the Windows 7 change again in their new work. Based on her experience of those CRs or similar groups, she appeared to label them as resisting users.</td>
</tr>
<tr>
<td>• CRs: A few CRs did not trust CA decisions and actions (e.g. CR1 explained that the unplanned and rushed changes had caused some troubles for them in the past). However, many of CRs appeared positive with regard to the project, as they had received improvements and constructive developments in past IT implementations (see CR3’s and CR8’s comments in section 4.5.2.2).</td>
<td>• CRs: Many of CRs seemed to be of the view that the IT implementation was a straightforward system upgrade and would have no or minor impacts on their status and activities (see CR12’s and CR15’s comments in section 5.5.2.2).</td>
</tr>
<tr>
<td><strong>Post-Implementation:</strong></td>
<td><strong>Post-Implementation:</strong></td>
</tr>
<tr>
<td>• CAs: Some CAs explained lack of a detailed requirements analysis process and admitted the encountered inconsistencies in the project plan and process and some experienced disruptions and issues (see section 4.6.2.1).</td>
<td>• CAs: CAs appeared to indicate different reasons for the encountered disruptions and inconsistencies such as lack of CR participation, lack of a comprehensive change audit and planning, and insufficient resources (see CA9’s and CA10’s comments in section 5.6.2.1).</td>
</tr>
<tr>
<td>• CRs: Some CRs appeared to doubt change effectiveness. They explained facing multiple issues and disruptions in their work (see CR5’s comment in section 4.6.2.2).</td>
<td>• CRs: Many CRs appeared to be surprised or feel frustrated of experiencing several issues and disruptions, as they did not expect many of changes in their IT systems and processes (see CR14’s and CR18’s comments in section 5.6.2.2).</td>
</tr>
</tbody>
</table>
In both cases discrepancies or conflicts between CR evaluations of IT implementation and CA perspectives appeared to have negative impacts on CR feelings and attitudes, particularly when CRs had less positive or favourable perceptions of the new changes. At ExMoney, some CRs felt confused or uncertain about the implementation process. They expressed a lack of confidence in the new systems’ functionality and performance when they faced changes in their work processes that were ill-informed so they were ill-prepared. Some seemed cynical about change arguing that CAs had considered their own priorities and interests and disregarded CR needs and concerns. At GovOrg, CRs felt frustrated about change process and distrustful of gaining constructive outcomes when they encountered unexpected issues and disruptions or unanticipated hindrance to their practice. Some criticised the change management approach for encountered inconsistencies and problems. (Figure 6.2 shows a summary of the consequences of difference between CA and CR change appraisals and interpretations.)

![Diagram showing discrepancies in change appraisals](image)

**Figure 6.2 The consequences of discrepancies in change appraisals**

To conclude the discussion of theme 2, change appraisal and meaning construction appeared to be dynamic and ongoing processes, in which CAs and CRs considered, interpreted and reinterpreted the new changes that seemed to be associated with and/or influenced their role and status over time. Further, the comments from CAs and CRs suggest there were some discrepancies between their appraisal of IT implementation and its consequences. Although CAs highlighted the significance and constructive impacts of change for their organisation and for CRs, a considerable number of CRs in both cases seemed to have different or even contradictory interpretations of the objectives or perceptions of project outcomes. Also, various factors emerged that appeared to influence stakeholders’ change appraisal and thus increase or decrease the divergence of their constructed meanings about change.
6.4 Theme 3: Interacting with Others

In both cases, CAs highlighted the importance of organising and conducting consistent interactions with CRs for several reasons. At ExMoney, they conducted weekly project review sessions with CRs to explain and discuss new changes and updates. CAs emphasised meetings with CRs as an effective way of receiving their concerns, suggestions and feedback and also engaging them in the IT implementation process. At GovOrg, CAs communicated with CRs to identify their needs, to clarify the impacts of the new changes on their practices and conditions, and to inform them about project plans and actions. In this case, in addition to sending multiple information emails to CRs and providing them with some change documents and newsletters, CAs tried to have direct contact with business managers and key users to facilitate CR understanding of the new changes and their anticipation of project impacts and outcomes. CAs also stated other reasons for the need to have ongoing interactions with CRs (see Table 6.4).

Nevertheless, there appeared to be some constraints and challenges in having consistent and effective interaction with CRs in each case. At ExMoney, CAs had to communicate with CRs in multiple offices in different locations and across various time zones, which seemed to limit their relationships and diminish effective communication. Many CRs could not attend project meetings or have direct, face-to-face interactions with CAs. Further, some CAs argued that communication with all CRs was time-consuming. And due to their increased workloads and non-project-related tasks, they could not convene meetings on a consistent basis. At GovOrg, size of the organisation and large number of CRs were emphasised as an obstacle for organising consistent communication and regular project meetings. Furthermore, several business groups and divisions with different backgrounds, responsibilities and needs were going to adopt new changes, which seemed to make the relationships and project communication very complex and difficult to establish and manage. Some CAs also stated they did not have the required resources for organising regular meetings with all CRs and conducting group discussions or training sessions.
### Table 6.4 Summary of CA reasons for interacting with CRs

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Implementation:</strong></td>
<td><strong>Pre-Implementation:</strong></td>
</tr>
<tr>
<td>• Discussing new changes</td>
<td>• Clarifying new changes and their impacts</td>
</tr>
<tr>
<td>• Understanding CR practices and requirements</td>
<td>• Explaining change process and establishing CR roles and responsibilities</td>
</tr>
<tr>
<td>• Setting expectations</td>
<td>• Gathering CR requirements and settings</td>
</tr>
<tr>
<td>• Negotiating concerns and priorities</td>
<td></td>
</tr>
<tr>
<td><strong>Pre-Implementation (both cases):</strong></td>
<td></td>
</tr>
<tr>
<td>• Informing CRs about change objectives, plans and implementation process</td>
<td></td>
</tr>
<tr>
<td>• Collecting CR requests</td>
<td></td>
</tr>
<tr>
<td><strong>Post-Implementation:</strong></td>
<td><strong>Post-Implementation:</strong></td>
</tr>
<tr>
<td>• Hearing CR concerns and problems</td>
<td>• Informing CRs about IT implementation news and events</td>
</tr>
<tr>
<td>• Enhancing CR understanding of new processes and functions</td>
<td>• Achieving CR enthusiasm for change, and gaining their participation</td>
</tr>
<tr>
<td>• Gaining CR engagement in change</td>
<td></td>
</tr>
<tr>
<td>• Reviewing change progress and discussing issues</td>
<td></td>
</tr>
<tr>
<td>• Managing expectations</td>
<td></td>
</tr>
<tr>
<td><strong>Post-Implementation (both cases):</strong></td>
<td></td>
</tr>
<tr>
<td>• Collecting CR feedback</td>
<td></td>
</tr>
</tbody>
</table>

CAs explained different approaches to develop their interactions with CRs and facilitate information exchange. At ExMoney, CAs tried to discuss the IT implementation process and new changes in their weekly staff meetings. They used email and Skype to communicate with CRs located in other locations. During the final stages of the project, CAs also prepared an internal website for announcing project news and collecting CR feedback, suggestions and requests. At GovOrg, CAs planned a staged communication strategy. They engaged business managers and power users to liaise for communicating CA messages to CRs, disseminating IT implementation information, and gathering requirements and requests from different sections of their organisation. They stated that a ‘communication person’ had been chosen in each division to facilitate the connection between CAs and CRs. CAs argued that this approach was appropriate and efficacious in providing the required communication with CRs, considering the organisation’s circumstances and available resources. Furthermore, the engagement of CRs in requirements gathering, the initial system audit and test, and the pilot project appeared to enhance interactions and information sharing between CAs and CRs. (Table 6.5 summarises CA approaches and methods to enhance their relationships and develop their communication with CRs.)
Table 6.5 CA approaches and methods for developing interaction with CRs

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Implementation:</strong></td>
<td><strong>Pre-Implementation:</strong></td>
</tr>
<tr>
<td>• Organising weekly project meetings for reviewing and discussing decisions, plans and changes</td>
<td>• Sending change information and project documents to CRs through emails</td>
</tr>
<tr>
<td>• Exchanging information and requests via email</td>
<td>• Organising staged communication and engaging business managers and power users</td>
</tr>
<tr>
<td>• Conducting online meetings via Skype with remote CRs</td>
<td>• Appointing a communication person in each division</td>
</tr>
<tr>
<td>• Having direct contacts with key CRs</td>
<td>• Organising early communication</td>
</tr>
<tr>
<td></td>
<td>• Involving CRs in the pilot project</td>
</tr>
<tr>
<td></td>
<td>• Conducting a test and review process and involving selected CRs</td>
</tr>
<tr>
<td><strong>Post-Implementation:</strong></td>
<td><strong>Post-Implementation:</strong></td>
</tr>
<tr>
<td>• Setting up an internal website for announcing new changes and project events</td>
<td>• Conducting surveys for collecting CR concerns and feedback</td>
</tr>
<tr>
<td>• Preparing online forms for collecting CR feedback, suggestions and requests</td>
<td>• Setting up an assistance hotline</td>
</tr>
</tbody>
</table>

Despite these solutions, many CRs appeared to be unhappy with the communication and argued for the ineffectiveness of CA approaches for various reasons. Many CRs felt they had not been informed about the new changes and IT implementation impacts adequately, or had not been asked or provided with the opportunity to express their requirements and opinions. Some seemed to be surprised when they saw some of the new functions or changes in their practices and systems. There appeared to be several misunderstandings about change objectives and plans or misinterpretations of actions and change implications, which seemed to be caused by lack of consistent interactions and adequate information sharing between CAs and CRs (ExMoney). Some CRs believed that communication was one-way, and they had mostly received some general information about IT implementation through emails and newsletters. Although the adopted communication approach seemed relatively effective for informing CRs about upcoming changes and events in the early stages of the project, their perspective suggests it was inadequate. CRs were dissatisfied with not having the opportunity to express their needs and requests, explain their conditions and priorities, or convey their suggestions and feedback. In fact, lack of direct interaction with CAs seemed to cause some CRs to feel that their requirements and concerns had not been collected, understood or considered (GovOrg).
CRs appeared to have various communication expectations. They expected early and consistent communication with CAs that could help them gain a better understanding of IT implementation and its implications and resolve their uncertainties. At ExMoney, CRs particularly expected to have regular meetings with the project team, and be informed about and involved in discussions about change related to them. Their main concern with the communication process appeared to be lack of information exchange, clarity and understanding. At GovOrg, CRs expected to have two-way, interactive and proactive communication in which their roles were recognised, their needs and priorities heard and considered, and they could comment on the new changes and implementation process. Some suggested organising ‘two-way forums’ and ‘discussion sessions’ for this purpose. In fact, an issue that had been highlighted by the CRs in both cases was the lack of training programs about the new systems and processes. The CRs expected to be provided with regular change discussion, information exchange, and training sessions during and after the IT implementation.

To conclude the discussion on theme 3, ‘consistent and effective’ interactions amongst stakeholders appeared to facilitate the development of mutual understanding, and enhance change appraisal and constructing common meanings. The comparison here suggests that consistent and effective communication approaches were those that provided stakeholders with ongoing and appropriate ‘two-way’ opportunities to exchange adequate and relevant information, share interpretations, and discuss their concerns and interests with each other. It appeared that, through interacting with CRs, CAs could develop their knowledge and understanding of the environment, business processes and activities, including CR needs and priorities. Similarly, CRs could receive more information about IT implementation, explain their requirements and discuss their perspectives. In other words, through interaction, CAs and CRs could negotiate their expectations and share their experiences.

Moreover, although CAs explained some of their approaches in developing their interactions with CRs, CR comments suggest the inadequacy or ineffectiveness of experienced communication approaches and information exchange processes. In both cases, CRs seemed to expect more relationships and direct interactions with CAs. They highlighted the positive impacts of having close connections with CAs in facilitating communication and achieving a better understanding of respective conditions and requests.

6.5 Theme 4: Feeling Involved

Comparing CA perspectives on ‘involving CRs’ in both cases highlights the significance and constructive implications for IT implementation. At ExMoney, CAs argued that by involving CRs in
change process they could collect more details about business processes and practices, gain a better understanding of the requirements and conditions, and consequently improve system design and implementation. In their view, CR involvement could facilitate the development of a sense of ownership amongst CRs, and encourage them to participate in project activities and support the new changes. At GovOrg, CAs emphasised the importance of gaining and maintaining CR buy-in through keeping them informed and actively involving them in the IT implementation process. Further, they tried to disseminate project information and promote change through involving business managers and key CRs. (Table 6.6 summarises perceived impacts and benefits of involving CRs in change process.)

Table 6.6 Summary of perceived impacts and benefits of ‘involving CRs’

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Implementation:</td>
<td>Pre-Implementation:</td>
</tr>
<tr>
<td>• Reducing uncertainty and surprises (giving CRs the big picture)</td>
<td>• Gaining ‘business insights’ (improving the understanding of business processes &amp; conditions)</td>
</tr>
<tr>
<td>• Enhancing the feeling of ownership</td>
<td>• Gaining a better understanding of change impacts and consequences for CRs</td>
</tr>
<tr>
<td></td>
<td>• Gaining buy-in</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Pre-Implementation (both cases):</td>
<td>Pre-Implementation (both cases):</td>
</tr>
<tr>
<td>• Improve CR understandings of change and its objectives</td>
<td>• Facilitating and sustaining buy-in</td>
</tr>
<tr>
<td>• Gathering CR needs and concerns</td>
<td>• Facilitating CR support and cooperation</td>
</tr>
<tr>
<td>• Disseminating change details and promoting it</td>
<td>• Identifying and resolving issues</td>
</tr>
<tr>
<td>• Enhancing CR engagement and participation</td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Post-Implementation:</td>
<td>Post-Implementation:</td>
</tr>
<tr>
<td>• Enhance the feeling of being recognised and consulted</td>
<td>• Facilitating and sustaining buy-in</td>
</tr>
<tr>
<td>• Increase the feeling of contributing to change</td>
<td>• Facilitating CR support and cooperation</td>
</tr>
<tr>
<td>• Gaining CR feedback and comments</td>
<td>• Identifying and resolving issues</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Post-Implementation (both cases):</td>
<td>Post-Implementation (both cases):</td>
</tr>
<tr>
<td>• Improving CR understandings and appraisals of change and its outcomes</td>
<td>• Improving CR understandings and appraisals of change and its outcomes</td>
</tr>
<tr>
<td>• Facilitating the construction/development of mutual understanding</td>
<td>• Facilitating the construction/development of mutual understanding</td>
</tr>
<tr>
<td>• Enhancing interactions and exchange of interpretations</td>
<td>• Enhancing interactions and exchange of interpretations</td>
</tr>
</tbody>
</table>

CAs in both cases appeared to have different strategies for involving CRs in IT implementation. At ExMoney, the approach appeared to be giving CRs the big picture of change, involving them only in parts of the project relevant to their roles and responsibilities, and informing them about related details gradually. However, some CAs seemed to disagree with this approach. They suggested that CRs should be informed about different aspects of change and be provided with opportunities to comment on any
part of IT implementation. They argued that CRs should be able to express their concerns and CAs should hear their opinions, although CAs could decide on considering or implementing received requests and ideas based on the project’s objectives, size/scope and priorities. It appeared that CAs were not quite successful in obtaining CR involvement, particularly in the early stages of IT implementation. Many CRs criticised project communication and stated they were neither informed about the new changes nor were they involved in explaining their working processes and requirements. CAs later seemed to revise their perspective on involving CRs by improving and developing their communication with them and facilitating the process of collecting comments and feedbacks from CRs. They attempted to enhance CR participation in various aspects of the project. At GovOrg, the CA approach was to inform CRs about plans from the early stages of the project, and involve them in collecting information and identifying requirements. This approach appeared to be relatively effective to facilitate the engagement of CRs and increase their participation. However, during the rollout of new changes, CAs mostly communicated with business managers and key users (e.g. power users), which appeared to develop the feeling amongst CRs of being ignored or separated from IT implementation. (Table 6.7 shows other approaches CAs mentioned for facilitating and developing CR involvement.)

Table 6.7 Some approaches in facilitating CR involvement

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Implementation:</td>
<td>Pre-Implementation:</td>
</tr>
<tr>
<td>• Informing CRs about change and explaining plans to them</td>
<td>• Involving key stakeholders and managers early</td>
</tr>
<tr>
<td>• Improving relationships with CRs and spending more time with them</td>
<td>• Engaging CRs in the decision making and planning process</td>
</tr>
<tr>
<td>• Avoiding politics and fake involvement</td>
<td>• Communicating with CRs consistently and on an ongoing basis</td>
</tr>
<tr>
<td></td>
<td>• Informing CRs about change objectives and the implementation process</td>
</tr>
</tbody>
</table>
**Post-Implementation:**
- Keeping CRs informed about change actions, progress and outcomes
- Facilitating CR contributions in change process
- Improving communication and organising more meetings
- Asking CRs to comment on change process and outcomes
- Collecting CR suggestions and feedbacks
- Responding to CR requests or considering their concerns and requirements

**Post-Implementation:**
- Improving relationships and interactions with CRs
- Informing CRs about the possible issues and change impacts/results
- Organising project discussion meetings and forums (question and answer sessions)
- Giving CRs responsibilities and roles in change process (identifying/specifying requirements and conditions, doing small tasks related to their work such as backing up documents and custom settings)
- Organising surveys and review sessions for getting more information from CRs and their work conditions/environment
- Acknowledging and valuing CR comments and requests, and facilitating the feeling of ownership

In both cases, many CRs explained their perception of not being involved in IT implementation for different reasons. A frequently mentioned reason was ‘not feeling informed’. They argued they were unaware of the new changes and the potential impacts of adopting new systems on their practices and status (ExMoney). Alternatively, they felt they had not been informed about the implementation process and change events relevant to them (GovOrg). This issue of feeling uninformed about changes was more evident at ExMoney, and the context and the process of the project appeared to be quite influential. In this case, newly designed and developed systems were deployed in a short period for all CRs. Thus, besides the apparent lack of appropriate communication processes, CRs seemed to have no or little opportunity to obtain information about project outcomes and consequences, exchange experiences with each other, or discuss their concerns and requirements with CAs. At GovOrg, initial tests and pilot project had helped CRs to gain more information about updates and new systems. Besides, changes were deployed gradually in different groups and divisions, which appeared to provide an advantage for CRs to use the experience and knowledge of previous tests and deployments, and thus feel more informed and familiar with new modifications to their systems and processes. (Table 6.8 summaries some of the reasons that CRs highlighted regarding their perceptions of ‘not’ being involved in IT implementation.)
Table 6.8 Summary of CR reasons for not feeling involved in change process

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Implementation:</td>
<td>Pre-Implementation:</td>
</tr>
<tr>
<td>• Not being asked to give opinions</td>
<td>• No direct contacts with CAs</td>
</tr>
<tr>
<td>• Not being asked to comment on the plans</td>
<td>• Not being consulted about the new changes</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Pre-Implementation (both cases):</td>
<td></td>
</tr>
<tr>
<td>• Not being informed about the new changes and project plans and objectives</td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Post-Implementation:</td>
<td>Post-Implementation:</td>
</tr>
<tr>
<td>• No opportunity to express their needs, interests and priorities</td>
<td>• No direct contact with CAs</td>
</tr>
<tr>
<td>• Not being asked to comment on the new changes, give feedback or sharing their experiences</td>
<td>• Receiving only basic information</td>
</tr>
<tr>
<td>• Not receiving a response to their requests, suggestions or concerns</td>
<td>• Not being involved in project meetings</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Post-Implementation (both cases):</td>
<td></td>
</tr>
<tr>
<td>• Not receiving adequate or relevant details about changes and their impacts</td>
<td></td>
</tr>
<tr>
<td>• Not been able to communicate their needs and issues, or their concerns had not been heard, valued or considered by CAs</td>
<td></td>
</tr>
</tbody>
</table>

The perception of not being involved in change appeared to influence CR interpretations and understandings, and also provoked negative feelings and attitudes. Some CRs explained that CAs had not asked them to share their experiences or knowledge about their business processes. They felt they had not been consulted about changes related to them or could affect their work. Those CRs were of the view they were ‘not taken as serious stakeholders’ (GovOrg) and their roles, needs and concerns had not been recognised, valued and considered (ExMoney). Thus, they felt ignored or isolated. At ExMoney, some CRs appeared to be reluctant to take responsibility and engage in implementation, while others resisted using the new systems. At GovOrg, they appeared to be less interested in participating in the process (e.g. unwilling to cooperate with CAs) or avoided adopting change. In contrast, CRs who felt they were informed and involved in IT implementation felt more confident and ready, and they appeared to be more willing to participate and adopt the new changes (GovOrg and ExMoney). (Figure 6.3 shows some positive impacts of ‘feeling involved’.)
Furthermore, CRs expressed their expectations of being involved in change process. They expected to receive communication about IT implementation plans and actions, and be informed about the impacts of the project on their work and status. At ExMoney, they wanted to know about the new changes to be able to use the new system and functions more efficiently. They suggested getting involved in project discussions and activities to be able to share their experiences and knowledge with CAs, and comment on change plans and decisions. In their view, by getting involved in the IT implementation and becoming informed about the project, they could provide more useful feedback for improving these new processes and reducing inconsistencies. At GovOrg, CRs expected to be recognised and considered in change plans and to be provided with necessary services and support. They wanted to be involved and to be able to discuss their concerns and requirements so they could influence the change process.

To conclude the discussion, theme 4 ‘feeling involved’ appeared to be a perception of different factors including communication and being informed, consulted or asked to give feedback, including having the opportunity to influence change, or being able to participate. Although the two cases were different in terms of CA approaches in involving CRs in pre- and post-IT implementation stages; the comparison however highlights constructive consequences of involving CRs regarding their reactions to IT implementation. Also, the perspectives of CRs in both cases suggest that a lack of the above factors, particularly lack of the perception of being informed about change and its impacts, could diminish CR feeling about being involved, discourage them from interacting with others and considering change, and stimulate negative feelings and attitudes towards CA action and IT implementation. Further, feeling involved appeared to motivate CRs to seek and follow their interests and concerns about change, and interact with others to discuss their perspectives and requirements. In other words, those who felt informed about and involved in IT implementation appeared to be more willing to engage, interact and participate.
6.6 Theme 5: Seeking Benefits

CAs in both cases argued that they had planned changes for the benefit of both the organisation and CRs. At ExMoney, they highlighted their goal of improving the performance of the business services and extending the functionality of their systems. Besides explaining the necessity and importance of IT implementation for business continuity and facilitation of their future growth and development; CAs corroborated significant positive impacts of change on CR work and status. For instance, CAs argued that integrating and automating accounting functions and adding new reports would benefit both CAs and CRs by reducing accounting process time, improving accuracy and bringing ease to system use. At GovOrg, CAs emphasised different project benefits including reducing the cost of maintaining systems, upgrading legacy systems and infrastructure, and improving the efficiency of IT services plus reliability of their systems. For example, CAs explained that the deployment of more current technologies, systems and infrastructure would help CAs provide better support services for CRs.

CA perspectives on the challenges of change for CRs appeared to be different pre-and post-IT implementation in both cases. Before implementation, some CAs anticipated the project would entail issues and disruptions, causing extra work. However, they expected CRs to consider overall positive outcomes and planned business values of the new systems, understand those challenges, and cooperate with CAs (ExMoney). Other CAs believed that change would bring several benefits and CRs would not experience any significant issues. They explained that CRs may only face some minor or ‘normal’ difficulties during the project, although CAs would provide appropriate support and assistance (GovOrg). After IT implementation, the CA perspective was that CRs should be patient, to see more enhancements and positive consequences over time, while their systems and processes stabilised and encountered issues would be addressed and resolved (ExMoney). Some CAs mentioned that it takes time for CRs to get used to new changes, and to realise the long-term benefits of change in their status and practice (GovOrg).

While CAs emphasised their goal in considering CR requirements and interests in change planning and implementation, various factors appeared to influence CR perspectives in gaining benefits. One important factor was the context and implication of IT implementation in each case. The project at ExMoney seemed to be more complex, and included major changes and developments regarding business processes, services and practices. This apparent complexity apart from limited conveyed information about change objectives and plans had caused CRs to doubt they could achieve positive project outcomes and benefits, and fearful of encountering issues and disruptions post change. In this atmosphere of uncertainty and ambiguity, more discrepancies between CA and CR understandings were
evident. Some CRs were pessimistic about gaining any significant advantages. They argued that change was planned based on CA concerns, priorities and interests, and they would face increased workload and more issues. In their view, regarding seeking benefits, some CRs seemed to disagree with change initiative, arguing that the organisation could obtain an off-the-shelf software solution for addressing needs and problems. At GovOrg, although IT implementation seemed to be less complex with fewer impacts on CRs and business processes, some other factors appeared to influence CR perceptions about gaining benefits from the project. For example, many CRs did not have a fruitful experience of IT-related change in their organisation, and some were concerned with employing external vendors and a project team for implementing changes. It appeared that many CRs doubted the effectiveness and appropriateness of the IT implementation process.

The analysis of CR comments in both cases would suggest they continuously tried to evaluate promised changes or expected impacts from past experience or preconceived outcomes to understand the benefits of change. Some CRs explained comparing their new systems and processes with previous ones, or considering encountered complexities or difficulties in their services and processes at different stages of IT implementation (ExMoney). Other CRs tried to interpret the consequences of change for their roles and status and highlighted losing authority, productivity and/or performance (GovOrg). As their experience of issues appeared to change at different stages of the project, CR perceptions about gaining improvements or benefits seemed to be either evolving or diminishing. CR understandings of the impact of the project at ExMoney seemed to change and become sharper and more evident than those at GovOrg. At ExMoney, although CRs appeared to have the view that the project comprised significant changes in IT processes and systems and CAs had promised several enhancements and advantages initially; CRs had not perceived substantial benefits and positive outcomes of the project in the short term. Instead, many CRs experienced several issues and disruptions or encountered heavy workloads immediately after the deployment of the new systems. At GovOrg, because the project was mostly about upgrading existing IT systems, many CRs did not expect to see significant changes or developments. Thus, they perceived they were not going to gain significant benefits.

Some CRs in both cases stated they had cooperated with CAs or had tried to participate in IT implementation because they believed in, or could see some positive impacts of, change on their organisation’s services and business processes. Although many had experienced difficulties in or disruptions to their practice (ExMoney) and had faced restrictions and inefficiencies (GovOrg), they were willing to support change and contribute to the process. They seemed to be informed about project
objectives and its necessity, and appeared to be more confident about long-term improvements and constructive outcomes of change for them and their organisation.

To conclude the discussion on theme 5, CAs and CRs sought to gain benefits from change, and accordingly they tried to understand change and its impacts. The more CRs perceived the positive impacts of change on them or their organisation, the more they appeared to be willing to participate in and support IT implementation.

6.7 Theme 6: Attitudes and Reactions

In both cases, CAs and CRs manifested various feelings and attitudes towards IT implementation. At GovOrg and pre-implementation, some CAs were doubtful about change process and outcomes, and a few of them appeared to be cynical about the consequences for business processes and CR work. These CAs were concerned about the project plan and allocated resources for carrying out the new changes. They argued that lack of project resources could cause some disruption and exert pressure on the implementation team to complete the project on time. Apart from this concern, CAs seemed to have positive feelings about the new upgrades. They believed that IT implementation was necessary and would help them to improve their systems and processes. Post IT implementation, although a few CAs at GovOrg criticised the lack of adequate resources, almost all of them expressed their confidence and satisfaction with the achieved outcomes. They corroborated the accomplishment and effectiveness of the project. At ExMoney, many CAs discussed their positive attitude towards developing their IT systems. They supported the plan to improve their services through implementing and using new IT solutions. However, perhaps contrary to expectation, a few CAs stated neutral or negative views towards IT implementation and seemed to disagree with the need for change. For instance, CA1 criticised change for its focus on the Administration system, its lack of adequate consideration of analysis, and design of the new financial processes and functions. Although not explicitly stated, the root cause for their disagreements appeared to be their lack of detailed information about change and project plans, lack of trust in the knowledge and expertise of other CAs, and not being actively involved and consulted in system design and implementation.

Furthermore, a number of reasons appeared to influence CA feelings, attitudes and behaviours towards IT implementation. Constructive and supportive relationships and communication amongst CAs seemed to stimulate positive feelings such as teamwork, being acknowledged, and being considered and assisted with project challenges. CAs with positive emotions appeared to be more motivated to collaborate with others, participate in the process and support change (GovOrg). Lack of
clear and common understanding of change objectives and results seemed to lead to negative attitudes towards IT implementation and gave rise to opposing or conflicting views or expectations. For instance, a few CAs at ExMoney were of the view that requirements and conditions had not been analysed and planned appropriately. One CA particularly argued that change was unnecessary and they were trying to ‘reinvent the wheel’. (Table 6.9 summarises some of the identified reasons that appeared to influence CA reactions to IT implementation. These reasons were emphasised in one or both cases.)

**Table 6.9 Some identified reasons that appeared to influence CA reactions**

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Implementation:</strong></td>
<td><strong>Pre-Implementation:</strong></td>
</tr>
<tr>
<td>• Having positive experience with previous IT implementations</td>
<td>• Having close and effective relationships and supportive interactions with other CAs or CRs</td>
</tr>
<tr>
<td>• Having common understanding of the purpose and significance of change</td>
<td>• Feeling of teamwork and a collaborative environment</td>
</tr>
<tr>
<td>• Having clear understanding of CR requirements and concerns (CAs)</td>
<td>• Having close and effective relationships with other CAs or CRs</td>
</tr>
<tr>
<td>• Trusting CA knowledge and expertise (CRs)</td>
<td><strong>Pre-Implementation (both cases):</strong></td>
</tr>
<tr>
<td></td>
<td>• Being informed about change objectives and implementation plans</td>
</tr>
<tr>
<td></td>
<td>• Having a clear and positive understanding of change and its consequences</td>
</tr>
<tr>
<td><strong>Post-Implementation:</strong></td>
<td><strong>Post-Implementation:</strong></td>
</tr>
<tr>
<td>• Being actively involved and consulted in change decision making and change design and implementation processes</td>
<td>• Having close and effective relationships and supportive interactions with other CAs or CRs</td>
</tr>
<tr>
<td>• Having a common understanding of change outcomes</td>
<td>• Being assisted by others in addressing the encountered challenges or issues</td>
</tr>
<tr>
<td></td>
<td>• Feeling considered (their needs and conditions are heard and considered) by others</td>
</tr>
<tr>
<td><strong>Post-Implementation (both cases):</strong></td>
<td><strong>Post-Implementation (both cases):</strong></td>
</tr>
<tr>
<td></td>
<td>• Feeling understood, acknowledged and supported by others (including top management)</td>
</tr>
</tbody>
</table>

CAs also explained their reactions to CR attitudes and behaviours, which appeared to be influenced by their understandings of the consequences of CR reactions relating to their work and status and the IT implementation process. When CAs felt their work and efforts were appreciated and when they received feedback on CR satisfaction about change process and outcomes, they were encouraged to provide more and better services. They were motivated to support those CRs with project challenges. They interpreted those CR attitudes and actions as sympathetic and constructive. CAs appeared to be
more receptive and positive towards CR requests and feedback (GovOrg and ExMoney). In some cases, CAs seemed to interpret some CR reactions as negative. For one group of CRs, CAs construed their views and behaviours as unfavourable, but not destructive to change implementation. Some CAs in both cases suggested that, to deal with that group, they could tolerate some CR excuses and delays in complying with new procedures, provide more assistance and support, postpone some of changes and project actions, and give those CRs more time to get used to the new systems and be able to embrace change. Further, CAs interpreted some CR reactions as negative, not constructive or resistant. They were of the view that those CR behaviours were counterproductive and could be harmful to others’ status and benefits. They were likely to react to those CRs with defensive attitudes, try to exert pressure on them and force them, for example, to comply with the implementation process and adopt change. For instance, one CA commented that ‘[those resisting CRs] don’t get a choice, and this [change] is what’s going to happen’ (GovOrg). Some CAs reiterated the significance of change and stressed their expectation of CRs to cooperate, support IT implementation, and accept and adopt the new changes. For example, one CA explained that ‘[it] is our strategy to use the new IT solutions … so, if anyone doesn’t like the [new] system, we don’t make them stay here’ (ExMoney).

Different factors also appeared to influence CR reactions to IT implementation. For instance, initial evaluations and understandings of change appeared to be quite influential in shaping CR feelings and attitudes. At ExMoney, many CRs seemed to be unaware of the scope of IT implementation and new changes, particularly during the early stages of the project. When CRs do not have a clear understanding of change, they use their prior experience and knowledge or other sources of information as their reference for appraising and interpreting events and actions to achieve more meaningful understanding of IT implementation. Prior to the new system deployment, CRs seemed to refer to their past experiences of IT implementation in their organisation, which were indicated as less effective and successful projects or less satisfactory for many. Thus, CRs appeared to be cynical towards change and doubted the benefits, and perhaps they did not trust CA actions and the implementation process. Another factor that intensified negative attitudes was a feeling of not being involved or considered. Many CRs interpreted change as ‘we have no choice’, dictated by top management for the interest of managers, or not encompassing and valuing users’ concerns and needs. Unless CRs could perceive positive impacts and advantages in IT implementation or enhancements to their work activities and status, they seemed to remain negative about change. Further, past negative experiences, lack of communication and information sharing, uncertainties and lack of clear understanding about change cast dark clouds over the perception of the appropriateness of IT implementation, or CA expertise and capability in achieving expected outcomes. Those CRs were likely to be unwilling to participate in the
process, reluctant to cooperate with CAs, and/or resistant to change. In contrast, CRs who felt involved in and informed about the project appeared to be more willing to cooperate and accept change. They seemed to ‘feel ready’ to adopt and use the new systems. Further, seeing some signs of progress, perceiving some improvements, or receiving assistance in resolving their issues appeared to increase their confidence and enhance their support of and participation in IT implementation.

At GovOrg, although CRs had been notified about the upcoming Windows 7 rollout and related changes (such as upgrades of computer servers and networks), many stated their uncertainty about the impacts of those changes on their work and status. They appeared to be anxious about the negative consequences of such changes and they were doubtful they would gain significant improvements or advantages. They seemed to be fearful of losing productivity, encountering issues and disruptions, and not being able to do their work. This fear or anxiety was emphasised by those CRs more dependent on using IT systems and computer networks (e.g. power users), or their responsibilities were connected to effectiveness and success of the project (e.g. teams maintaining and developing other IT systems). Further, lack of information about change outcomes and impacts appeared to instigate negative feelings of uncertainty, doubt and anxiety, and hence, lead to some avoidance by CRs in adopting the new changes (e.g. delaying their systems update). Post-IT implementation, CRs tried to compare and evaluate their status and privileges, and appraise the new changes to achieve a clearer understanding of the consequences. Many appeared to be frustrated with the project, stated some discrepancies between their expectations and experienced impacts, and argued that encountered issues and disruptions were ‘not worth it’. (Table 6.10 summarises some of the reasons that appeared to influence or shape CR reactions to change.)

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Implementation:</strong></td>
<td><strong>Pre-Implementation:</strong></td>
</tr>
<tr>
<td>• Understanding project objectives and the new changes</td>
<td>• Being informed about change details</td>
</tr>
<tr>
<td>• Understanding CA goals and priorities</td>
<td>• Understanding the impacts and outcomes of change for them</td>
</tr>
<tr>
<td>• Comparing prior IT implementation experiences</td>
<td>• Understanding CA concerns and roles</td>
</tr>
<tr>
<td>• Feeling involved and getting informed about the new changes, feeling ownership (being consulted about needs and conditions)</td>
<td>• Feeling acknowledged and consulted</td>
</tr>
</tbody>
</table>
Post-Implementation:
- Understanding change impacts, feeling confident about the advantages of change
- Perceiving helpful changes (e.g. having less issues, experiencing improvements and increased performance)
- Trusting CAs, believing in their expertise and knowledge
- Feeling considered, getting supported
- Having direct communication with CAs

Post-Implementation:
- Evaluating change process and outcomes (e.g. perceiving improvements in their status and privileges)
- Being asked to give feedback
- Feeling valued and considered, feeling getting supported
- Understanding CA actions and efforts

To conclude the discussion on theme 6, CA and CR attitudes and reactions to change appeared to be complex. CAs generally expressed positive feelings and thoughts towards IT implementation. However, some criticised decisions and actions, raising their concerns about change process and consequences. In both cases, some of the key factors that appeared to influence CA reactions were feeling involved in the decision-making process and being consulted about change implementation, having constructive and supportive interactions with others, and having clear and common understanding of change objectives and outcomes. CRs also manifested various reactions to change pre- and post-IT implementation, from positive and constructive (e.g. participating in change process, cooperating with CAs, and using the new system) to negative and non-constructive (e.g. doubting the need for or effectiveness of change, being reluctant to participate in the implementation process, and resisting change). Further, various factors appeared to influence the reaction of CRs to change including their initial and ongoing appraisal of change, their feeling of being involved and considered, their perception of gaining benefits, and their understanding of CA roles and actions.

6.8 Theme 7: Justifying Reactions

In both cases, CAs explained their perspectives and attitudes and emphasised various reasons to justify their actions. For example, they responded to discussions about the necessity of IT implementation or effectiveness of plans, by stating the positive impacts of change on their business processes and the advantages for stakeholders. They tried to defend their decisions and actions in initiating and conducting the project. In different situations, CAs seemed to highlight their expertise, previous experience, and their knowledge and understandings of systems and processes to validate and promote their perspectives and attitudes. For instance, although they acknowledged and defended the significance and necessity for change in their organisation, some appeared to have different views on project size/scope and objectives or the implementation process. At ExMoney, some CAs believed that
IT implementation was supposed to focus on the development of accounting processes and financial functions instead of redesigning the customer’s portal and Administration system. They argued that their organisation was a financial and money exchange service provider. Hence, they emphasised the role and significance of the accounting system in their organisation, and the need for enhancing its performance, functionality and reliability as a core objective of the project. At GovOrg, there seemed to be some contrasting views and debates about the IT implementation approach and processes. CAs explained the size and conditions of their organisation, highlighted the complexity of the new changes and some external obstacles and constraints, and emphasised lack of required resources and role clarity in project team organisation. They seemed to defend their actions and efforts in implementing new changes and responded to some debates regarding the efficiency and effectiveness of the process.

CAs also commented on CR attitudes and behaviours to explain, justify or legitimise their decisions and actions towards IT implementation or in dealing with CRs. For instance, some CAs at ExMoney expressed their expectation of CRs to support the project, participate in the implementation process and cooperate with the project team to achieve desired objectives and outcomes. To justify and defend their expectations, they emphasised the positive consequences of change and argued that ‘changes will make the business better’ ultimately. Based on this argument, some CAs blamed CRs for criticising IT implementation. They were of the view that those CRs were ‘nagging’ and complaining about potential difficulties and had not engaged as expected. Similarly, some CAs at GovOrg blamed lack of participation of some CRs for encountering issues and disruptions or for experiencing problems in conducting IT implementation as planned. Thus, to explain and rationalise inconsistencies in plans or delays in change process, they indicated CR lack of cooperation in identifying and collecting the requirements or avoidance in adopting the new changes. Some CAs seemed to interpret some CR reactions as ‘resistance’ and therefore dysfunctional and destructive to their plans and efforts in achieving project objectives and gaining positive outcomes for both CRs and their organisation. Thus, they explained and justified the need for becoming ‘strictter’, opposing resistance attitudes and behaviours of those CRs, and pushing change implementation. CAs justified that those CRs had delayed or resisted IT implementation in order to further their individual interests instead of considering and supporting group or organisational benefits in the long term. (Table 6.11 summarises CA justifications for their perspectives, attitudes or actions. The table also shows the researcher’s speculation on a broad classification of CA justifications and reasons as the justifications for negative or positive reactions towards change.)
Similar to CAs, CRs also expressed various reasons and justifications for their reactions to IT implementation. At ExMoney, some CRs justified their reluctance to support change by explaining their negative experiences of previous IT projects and lack of trust in change effectiveness. Also, lack of communication, not having a clear and complete view of change plan and objectives, and not being informed of the new functions and systems were emphasised as the reasons for many CRs unwillingness to engage in implementation. Some CRs explained their lack of participation in change process on the grounds that neither requirements nor concerns had been collected and considered, nor had they been involved in deciding and planning the new changes. Further, experiencing ‘hasty changes’, seeing flaws and inconsistencies in the implementation process or the new system design, and encountering system functionality issues appeared to diminish or erode their trust. Some CRs later tried to justify their resistance towards future change as they argued that IT implementation was not what they had expected and they did not trust the effectiveness and performance of the new systems (e.g. see CR9 and CR1 comments in subsection 4.6.7.2). At GovOrg, some CRs expressed their doubts about CA expertise and
knowledge in appropriate planning and implementation. Some CRs seemed to be reluctant to support change, arguing they were not optimistic about experiencing a smooth and efficient implementation process. Further, the fear of losing authority and privilege, not being able to perform their work duties, and facing difficulties in getting support for their issues appeared to be justification by some CRs for deferring the adoption or use new changes.

CRs in both cases highlighted their expectation of CAs to understand their conditions and needs, and hear and value their concerns. However, many CRs stated their dissatisfaction with the requirements analysis process. They seemed to have negative feelings of being ignored or not involved in IT implementation, which appeared to lead to low (or lack of) engagement and participation. For instance, some CRs complained about being busy with their workloads and responsibilities (e.g. end-of-financial-year accounting procedures and duties at ExMoney and end-of-year jobs and deadlines at GovOrg). They expected CAs to consider their conditions and duties. Some of them seemed to try to maintain their view of not being able to cooperate with the implementation team and justify their avoidance of adopting or using the new systems.

CRs also tried to emphasise and justify the need for being involved in IT implementation. Some explained their roles and status and emphasised their identity as ‘responsible’ stakeholders in order to validate and support their anticipation of being informed about change, being considered in the decision making and implementation process, and/or being able to criticise plans or even disagree with some modifications (ExMoney). In their view, they had detailed knowledge and understanding of their existing business processes, the issues or deficiencies of their legacy systems, and the ways in which IT implementation could improve and evolve their practices and services. Thus, they expected to be valued and consulted about planning new changes. Some CRs argued they have relevant experience and technical expertise in relation to IT implementation. Other CRs perceived they would be impacted by change more than others. And they tried to justify their expectations of receiving more consideration from CAs (GovOrg). Further, they attempted to defend their anticipation of being acknowledged and involved in IT implementation process.

In both cases, many CRs expressed positive feelings and attitudes towards change and supported IT implementation. Interestingly, the level of supportive attitudes and actions appeared to be influenced by the strength and significance of their reasoning and their confidence in justifying their reactions. CRs who believed in gaining substantial benefits from change and experiencing significant enhancement in their processes and systems appeared to be more supportive of IT implementation (ExMoney). They appeared to be more willing to participate in change process than CRs who had the
view that the project was about rolling out some ‘normal’ upgrades and small changes (GovOrg). Further, CRs discussed their trust in CA plans and actions, and their confidence in IT implementation and its advantages for them or their organisation as their reasons for engagement, cooperation and commitment (ExMoney and GovOrg). (Table 6.12 summarises CR justifications for their reactions to change. The table also shows the researcher’s speculation on a broad classification of CR justifications and reasons as the justifications for negative or positive reactions.)

**Table 6.12 CR justifications for their reactions to change**

<table>
<thead>
<tr>
<th>ExMoney</th>
<th>GovOrg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Implementation:</strong></td>
<td><strong>Pre-Implementation:</strong></td>
</tr>
<tr>
<td>• (–) Fearing of facing disruption</td>
<td>• (–) Losing productivity</td>
</tr>
<tr>
<td>• (–) Losing productivity</td>
<td>• (–) Not trusting the implementation team</td>
</tr>
<tr>
<td>• (–) Doubting system benefits</td>
<td>• (–) Doubting achieving positive outcomes and improved conditions after the project</td>
</tr>
<tr>
<td>• (+) Believing in the benefits of IT implementation</td>
<td>• (+) Believed in gaining improvements</td>
</tr>
<tr>
<td>• (+) Trusting change management</td>
<td>• (+) Trusting CAs</td>
</tr>
<tr>
<td>• (+) Having strong relationships with CAs</td>
<td></td>
</tr>
<tr>
<td><strong>Post-Implementation:</strong></td>
<td><strong>Post-Implementation:</strong></td>
</tr>
<tr>
<td>• (–) Dealing with unexpected changes</td>
<td>• (–) Experiencing inappropriate project plan/schedule</td>
</tr>
<tr>
<td>• (–) Experiencing issues</td>
<td>• (–) Experiencing inadequate communication and not being informed about change impacts</td>
</tr>
<tr>
<td>• (–) Having more responsibilities</td>
<td>• (–) Not being valued and involved</td>
</tr>
<tr>
<td>• (+) Being considered and valued</td>
<td>• (–) Encountering issues due to inappropriate planning and management</td>
</tr>
<tr>
<td>• (+) Experiencing effective changes and performance improvements</td>
<td>• (+) Understanding project size, scope and complexity</td>
</tr>
<tr>
<td></td>
<td>• (+) Perceiving and appreciating CA efforts</td>
</tr>
<tr>
<td></td>
<td>• (+) Perceiving positive impacts of change</td>
</tr>
</tbody>
</table>

**Key:**  
• (–): justifications for negative reactions  
• (+): justifications for positive reactions

(Table 6.13 also lists some examples of CA and CR justifications for attitudes and actions.)
<table>
<thead>
<tr>
<th>Justification pattern</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Emphasising and validating evaluations and understandings  | • Our accounting system is not comprehensive to cover our all branches and transactions ... We need to develop our own accounting system … Otherwise, we can’t provide efficient and competitive services. (CA3, Round 1)  
• I believe some critical steps in this project are neglected. Some of our critical needs are not considered very well … [and] we see hasty changes. (CR9, Round 2)  
• The process and changes are in line with industry best practice. I believe it’s a sound plan, which is necessary to improve [GovOrg’s] systems and infrastructure. (CA7, Round 1) |
| Defending and maintaining interpretations and perspectives  | • We had some changes in our accounting process once before, and the result was that it took six months just to prepare six or nine months of financial records. (CA1, Round 1)  
• … people are used to their existing systems, so they generally resist new changes. (CA10, Round 1)  
• In my opinion, it isn’t a right decision to do the project at the end of the year… Some people [CRs] would be very busy because of their workload and deadlines. They won’t have time to do such upgrades. (CR13, Round 1) |
| Highlighting identity and role                            | • We who use it [the system] every day are the most reliable people who can criticise it and talk about [it] … (CR4, Round 1)  
• The IT team is professional and experienced, and I trust their work… (CR8, Round 2)  
• We’ve carried out the required steps, but it’s their managers’ responsibility to push their employees, not our responsibility. Our responsibility is to provide the service… (CA8, Round 1) |
| Rationalising expectations and requests                   | • So, being a little bank, because the money is dealt with like a bank, I thought we should have a smart system that accounts for every cent. (CA1, Round 1)  
• Some changes have made the system more complex … [and] it has affected our performance. I expected [CAs] to ask us about the [system] design and the required functionality, to spend some time with us and see how we do our work. (CR6, Round 2)  
• They [CAs] didn’t ask for our views and feedback. … I have been in this field for many years, and I know the systems that I am working with them. (CR19, Round 1) |
| Supporting intentions and reactions                       | • We review requests and issues periodically, and in our change planning, we’ve tried to give proper priority to critical problems and business needs. (CA3, Round 2)  
• We were very busy … I said this change at this time of the year would put us in trouble. We need to postpone it. (CR1, Round 2)  
• Access restrictions will cause some problems for us to be able to use some of our tools and do our work… So, I don’t agree with the plan of doing them. (CR18, Round 1)  
• … everybody was pushed too far… it was a huge pressure on us… and it caused delays, inefficiencies and dissatisfaction. (CA7, Round 2) |
| Criticising or blaming others’ positions and actions      | • The feedback that the manager is getting is that you just fix the Administration system, and it will feed through another system and the financial [transactions] will come out of it, but it didn’t [happen for] about three years. (CA1, Round 1)  
• You’ll always have some individuals that are unhappy with whatever you do… (CA9, Round 1)  
• … it’s like they [CAs] have set themselves up in an ivory tower… they don’t care whether we think it [change] is necessary or not. (CR11, Round 1) |
To conclude the discussion for theme 7, it appeared that CAs and CRs in both cases attempted to explain their status and interpretations, rationalise their demands and expectations, and justify their responses to others and their reactions to IT implementation. They seemed to maintain their perspectives and obtain acknowledgement, consideration and support from others. CAs appeared to defend their decisions and actions in planning and conducting the new changes. Besides, they tried to establish and emphasise the need for active participation and support of CRs in progressing IT implementation and achieving planned outcomes. CRs sought to explain and defend their requirements and concerns. In sum, they tried to validate their stance towards change, rationalise their expectations and justify their reactions. It also appeared that the focus of explanations and reasons was different in both rounds. Before IT implementation (Round 1), CAs and CRs often referred to their past experiences, roles and expertise to justify their attitudes and actions, while after IT implementation (Round 2), they frequently highlighted their perceptions of the consequences of change and actions and their experiences of the implementation process. Furthermore, lack of effective relationships, communication and information sharing between the two groups appeared to increase inconsistency and incoherence regarding their arguments.

6.9 Concluding remarks

In this chapter, cross-case analysis for ExMoney and GovOrg were discussed, and key similarities and differences were investigated and analysed in terms of identified themes. Further, associations and relationships were explored and discussed to gain further insights about CA and CR sensemaking and the development of different feelings, attitudes and behaviours towards change pre- and post-IT implementation.

To conclude, comparison of the two case studies using cross-case analysis shows that reactions are influenced by social interaction and mutual understanding between CAs and CRs, guided by their meaning construction and processes. It appears that stakeholders reflected on past knowledge and experience as well as their expectations and consideration of potential implications of IT implementation and others’ actions for their status and work, which shaped reactions. Further, CAs and CRs tended to rationalise and maintain their perspectives, defend their expectations of change and others, and justify their reactions to change. However, when they were able to develop, or be provided with a more plausible explanation for a different change appraisal or a more compelling justification for a different view and action, their positions and reactions were likely to alter. For instance, some CRs appeared to be negative or neutral towards change initially; however, when they could perceive some substantial benefits of change and improvement in their work processes post IT implementation,
they appeared to become more supportive of the project and thus more inclined to participate and use the new system.

Furthermore, the findings across both cases suggest that CAs and CRs manifest various feelings, attitudes and behaviours towards IT implementation ranging from functional to non-functional. Tables 6.14 and 6.15 show the researcher’s speculation on CA and CR reactions pre- and post-IT implementation (i.e. the extent to which CAs and CRs appeared to positively or negatively react). To simplify the findings, CA and CR reactions in these tables are categorised into two broad groups: positive (including compliance and support) and negative (including non-compliance and resistance). Cross-case analysis also revealed various factors that appeared to influence CA and CR attitudes and reactions to change. As discussed in section 6.7 and summarised in the following tables, some CAs and CRs seemed to have different reactions to change pre- and post-IT implementation.

Table 6.14 CA reactions to change

<table>
<thead>
<tr>
<th>Case studies</th>
<th>Participants</th>
<th>Round one reactions</th>
<th>Round two reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExMoney</td>
<td>CA1</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>CA2</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>CA3</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>CA4</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>CA5</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>CA6</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>GovOrg</td>
<td>CA7</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>CA8</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>CA9</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>CA10</td>
<td>–</td>
<td>+</td>
</tr>
</tbody>
</table>

Table 6.15 CR reactions to change

<table>
<thead>
<tr>
<th>Case studies</th>
<th>Participants</th>
<th>Round one reactions</th>
<th>Round two reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExMoney</td>
<td>CR1</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>CR2</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>CR3</td>
<td>+</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-----</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>CR4</td>
<td>–</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>CR5</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR6</td>
<td>+</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>CR7</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR8</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>CR9</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR10</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>CR11</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>CR12</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>CR13</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR14</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>CR15</td>
<td>–</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>CR16</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR17</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>CR18</td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR19</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
</tbody>
</table>

**GovOrg**

Key:
- **CR**: Change Recipient
- **CA**: Change Agent
- **+**: positive reaction
- **–**: negative reaction
- *****: resigned from company

The next chapter discusses the findings of this research to gain more insights into CA and CR sensemaking and its impact on their reactions to IT implementation. Further, it presents and discusses research contributions to theory, implications for practice, and limitations and suggestions for future study.
Chapter 7
Discussion, Conclusions and Recommendations

7.1 Introduction
As discussed in chapter 2, the objectives of this interpretive research study were twofold. First, this research sought to investigate and understand how change agents (CAs) and change recipients (CRs) make sense of IT implementation. This study was interested in exploring sensemaking processes that influence IT implementation. Second, this research sought to understand how these processes shape CA and CR reactions. This study attempted to derive deeper insights into CA and CR feelings, attitudes and behaviours towards change, and to investigate how different reactions (including resistance and support processes) emerge and develop pre- and post-IT implementation.

This research study posed the following research questions to achieve the above objectives:

- RQ1: How do CAs and CRs make sense of IT implementation over time?
- RQ2: What are the implications of sensemaking of CAs and CRs for the way they react to IT implementation?

CAs and CRs are stakeholders in the IT implementation process and they are both affected by its outcome, and therefore they are referred to as ‘stakeholders’ collectively in this chapter.

7.2 Discussion of the research findings
This section discusses the findings of this research and the themes that emerged from the data analysis in chapters 4 and 5. Through an inductive process of analysing data collected from two cases, seven themes were identified. The themes are:

- T1: Developing Mutual Understanding
- T2: Appraising Change and Constructing Meanings
- T3: Interacting with Others
- T4: Feeling Involved
- T5: Seeking Benefits
- T6: Attitudes and Reactions
- T7: Justifying Reactions
The following diagram (Figure 7.1) illustrates the model for the seven identified themes and their relationships. In this diagram, the themes are shown in bold and arrows indicate potential influence.

Figure 7.1 Identified themes and their relationships

As shown in this model, besides stakeholders’ reasons and justifications for their reactions, ‘seeking benefits’ and ‘feeling involved’ in change were two significant factors that appeared to influence their appraisal of events and changes, their understanding of self and others’ identities and roles, and their subsequent actions and responses towards IT implementation.

In the subsections that follow, I draw together threads from all previous analysis and discussion of the two cases to present a more general understanding of stakeholders’ reactions. Further, I explain in greater detail and discuss the above proposed model of the identified themes and emerged relationships amongst themes. In this process, I use the clustering technique (Charmaz 2014). Further, I included multiple clustering diagrams to illustrate, and facilitate the discussion of, how different identified theoretical categories connect and relate to other phenomena.

7.2.1 Constructing common meanings

Appraising change emerged as a process of considering, evaluating and interpreting change-related information and actions from which stakeholders were able to construct and develop more individually
or socially meaningful understandings. IT implementation in both cases involved various changes in systems, processes and CA/CR relationships and conditions. Those changes were often accompanied by ambiguity and uncertainty, which led to meaning construction, which enabled participants to process and reflect on change. Stakeholders attempted to understand what change meant to them, their group or their organisation, and hence reduce their uncertainties. They appraised the impacts of IT implementation against their status and work, and assessed potential challenges of implementation to understand the degree of threat or opportunity, and losses or gains from the new changes.

Change appraisal and meaning construction appeared to be dynamic and ongoing. Initially, stakeholders referred to and used their previous experience or relevant expertise to evaluate change. Subsequently, they appraised and labelled anticipated or encountered events over time based on their existing views and information received from various sources, including communication with others and interaction with the new systems and the environment. In this ongoing process, the previous appraisals and constructed meanings influenced the subsequent evaluations and interpretations of change and its outcomes.

Lack of appropriate and ongoing communication between CAs and CRs emerged as a significant factor that led to divergent or opposite perspectives and meanings. The way stakeholders came to understand change appeared to be shaped and evolved in social interaction amongst stakeholders, where they could achieve ‘common understandings’ and ‘shared meanings’ about IT implementation and develop perceptions that were more consistent with and supportive of change objectives and process. Thus, in their interactions, stakeholders could emphasise meanings for and expectations of new changes linked to their individual or collective points of interest. Scholars have noted that stakeholders develop shared meanings through the social processes of interaction (Maitlis 2005; Balogun & Johnson 2004; Weick 1995). However, the findings of this study suggest that social interaction between CAs and CRs is more appropriate and effective in the development of common understandings when stakeholders have a sense of being involved and their interests and benefits are considered and valued.

The level of relevance to and dependence on change and change outcomes influenced stakeholders’ interpretations. CAs and CRs assigned more value to changes that related to their work and status, thus they tended to engage more actively and tried to appraise and understand aspects and impacts of those changes. CAs generally stated their focus on achieving broad business objectives and concerns and considering the requirements of CRs. However, some CAs appeared to evaluate change based on the concerns and interests of their team. They were more directly affected by IT implementation, and hence, labelled change as necessary or redundant, or interpreted change as effective or counterproductive
based on individual or group needs and circumstances. For CRs, interpreting change in terms of their work practices and status was a concern. They tended to appraise IT implementation, its objectives and potential consequences in order to understand values (e.g. more accounting accuracy and better process performance through the new system at ExMoney) or threats (e.g. loss of control, authority or performance at GovOrg). They wanted to know “what will happen to them” and whether advantages in adopting the new changes were worth the challenges and disadvantages. Hence, ‘seeking benefits’ appeared to be a driver for appraising change and change impacts.

Another factor that appeared to influence CAs and CRs appraisal of the IT implementation and its process was their perceptions of each other’s roles, expectations and conditions. The more stakeholders were aware of the other group’s activities, requirements and concerns, the more comprehensive understandings and more convergent views they seemed to develop. On the one hand, understanding CR work practices, duties and priorities improved CA insights regarding project requirements, the change implementation process and support required. Also, CAs gained more insight into CR requests and reactions. On the other hand, awareness about CA challenges and endeavours appeared to improve CR appraisal and perceptions of decisions and actions. Similarly, knowing about organisational circumstances and business priorities or project constraints (e.g. limited project resources at GovOrg) and imperatives (e.g. new procedures or more workload for preparing records due to the accounting integration process) facilitated CR understanding and their sympathetic meaning construction towards planned changes and IT implementation. (Figure 7.2 shows a clustering of factors that influenced change appraisal and meaning construction.)
7.2.2 The need for and influence of developing mutual understanding

Both CAs and CRs highlighted their expectation of being understood and acknowledged. On the one hand, CAs tried to demonstrate their competence and trustworthiness in organising and managing IT implementation. They emphasised their endeavours in implementing the new systems to bring improvements and benefits for both their organisation and CRs. Thus, they expected CRs to trust them and support their plans and decisions in achieving the project objectives and outcomes. CAs assumed that because the new changes were necessary ‘for the good of [their] organisation’, CRs must cooperate and participate in the process, even though there might be some difficulties or extra work. They expected CRs to buy into their view and support change. On the other hand, CRs referred to their detailed knowledge and experience of existing systems and processes, their background, and their role and responsibilities in order to highlight their expectation of being acknowledged, listened to and considered. Some believed they knew about the inconsistencies, constraints or issues of their current systems more than CAs. Therefore, as they were going to use the new functions and were responsible for the efficient use of the new processes for doing their jobs, they needed to be consulted and involved throughout the IT implementation process, including decision making, planning, designing and deploying the new changes. They expected CAs to hear their requests and suggestions, understand their roles and conditions, and consider their requirements and concerns.
Although both CAs and CRs were of the view that they had understood and valued the needs and priorities of the other group, the emergence of some negative feelings (such as feeling ignored or not trusting the other group’s attitudes and actions) suggest some discrepancies in their perceptions and lack of mutual understanding. One factor that appeared to have significant impacts on the development of mutual understanding was the level of interactions and relationships between the two groups. Communication was often perceived as inadequate or ineffective as CAs seemed to be unsuccessful in informing CRs about change objectives and processes. Many CRs appeared to be uninformed about the reasons behind decisions and plans or the advantages of new changes in their work and organisation, thus they seemed to be doubtful of the appropriateness or effectiveness of these changes. Some questioned CA understanding and consideration of their requirements and priorities or even CA efforts and competencies. For CRs, lack of consistent and direct communication meant lack of reasonable opportunities to explain their needs, discuss their concerns and issues, give feedback, and influence and inform IT implementation. Thus, they appeared to feel not heard, not understood or not involved in the change process. In both cases, some CRs felt ignored and sidelined, particularly when they had not received any response to their requests and concerns.

Mutual understanding appeared to facilitate change appraisal and meaning construction. CRs who felt that their role and issues had been recognised and understood, their suggestions had been heard and valued, and their requirements and concerns acknowledged and considered by CAs, seemed to be more willing to engage in IT implementation and interact with others to gain more information. They appeared to be more actively engaged in change. Also, positive feelings of being understood and supported appeared to build constructive meanings about and supportive attitudes towards change and the implementation process. Moreover, the development of mutual understanding of roles and responsibilities emerged as a facilitator in further strengthening stakeholders’ relationships and improving the effectiveness of interactions between CAs and CRs, and hence appeared to enhance the development of shared meanings and common understandings around change.

Developing mutual understanding was dynamic and ongoing as CAs and CRs understanding of their status and identity was shaped and developed by others’ expectations and reactions, and their interpretation of others’ roles and responsibilities was constructed and reconstructed through interactions with them during IT implementation (Figure 7.3). For CRs, feeling informed about change, feeling involved by being able to discuss their concerns and to input their knowledge and experience, and getting attention and responses from CAs, appeared to influence their perception of their roles in the project and the feeling of being recognised and understood. Having more interactions with CAs and
obtaining more information about their intentions and actions seemed to facilitate and improve the understanding of CRs toward CAs. CAs similarly expected CRs to acknowledge and understand their role and efforts, and to support their decisions and actions. Further, interactions between CAs and CRs, their relationships and information exchange appeared to enhance mutual trust and improve group understanding of responsibilities, status and reactions.

Figure 7.3 Developing mutual understanding through interacting with others

7.2.3 Dynamic processes of meaning construction and reactions

A number of factors appeared to guide stakeholders’ reactions including their appraisal of change and their expectations and understandings of others’ roles, responsibilities and actions. As discussed in the previous sections, these factors also appeared to be influenced by stakeholders’ interactions and relationships with others, feeling involved and understood, and their perception of gaining benefits, which could indirectly affect their reactions to change.

Meanings that stakeholders construct about change and its related consequences appear to influence their feelings and attitudes and guide their behaviours. For instance, those who understood the necessity or significance of the IT implementation and its intended outcomes and felt confident and satisfied with change plan and management approach were more likely to support it. In contrast, those who doubted the appropriateness or effectiveness of the new changes, or were cynical about achieving planned improvements and benefits seemed to be less willing to participate; some appeared to delay or avoid the change implementation process. Some stakeholders were of the view that their individual or
organisational needs and concerns had not been appropriately considered in the change plan, they had not experienced expected implementation process and support, or they had encountered unexpected disruptions or challenges. Hence, they explained negative feelings of frustration, doubt or dissatisfaction. Stakeholders with negative feelings and attitudes towards change and its outcomes were unlikely to participate actively in the IT implementation process.

Moreover, discrepancies between CA and CR expectations of IT implementation and their perceptions and experiences of outcomes and consequences appeared to increase uncertainty, provoke distrust, and stimulate adverse or unfavourable reactions. Social interaction amongst stakeholders could help them to exchange information, share their thoughts and perceptions, develop their understandings of others’ concerns and expectations, and construct common meanings and identities. Furthermore, the development of common meanings appeared to facilitate reactions that were more aligned with and supportive of project objectives, processes and outcomes. For instance, lack of ongoing communication between CAs and CRs seemed to lead to lack of or inadequate information about change on the part of CRs. It could raise inaccurate expectations of IT implementation and outcomes, and thus result in negative feelings and attitudes. Furthermore, constructive and supportive relationships and interactions appeared to facilitate more informed and insightful appraisals and interpretations of actions and changes, and stimulate positive feelings and attitudes towards IT implementation.

The findings of this research support the existing literature (van Offenbeek, Boonstra & Seo 2013; Piderit 2000; Coetsee 1999) and suggest stakeholders’ responses to IT implementation as a continuum of reactions ranging from resistance to support. In the two studied cases, different feelings, attitudes and behaviours emerged. Stakeholders expressed positive and constructive attitudes, such as feeling confident, optimistic, supported and satisfied, or conveyed negative attitudes such as doubt, distrust, frustration, feeling obliged or under pressure to change, and thus dissatisfaction. They also manifested supportive behaviours such as participation and collaboration, or resistive and dysfunctional actions such as reluctance, postponement, avoidance and refusal. Moreover, this study extends the work of van Offenbeek, Boonstra and Seo (2013) and suggests that stakeholders’ reactions to IT implementation are complex and dynamic. The findings of this research indicate that CAs and CRs may demonstrate different feelings and attitudes pre- and post-IT implementation (see Tables 6.14 and 6.15 in chapter 6 for CA and CR reactions) depending on their understanding of their and others’ status and identity, their evaluations of actions and events, or their expectations and interpretations of the consequences of change. Also, they may support some changes while expressing their dissatisfaction or disagreement.
with other plans and actions. (Figure 7.4 shows a clustering of factors that appeared to influence CA and CR reactions to change.)

Figure 7.4 A clustering of the factors that appeared to influence stakeholders' reactions

7.2.4 Justifying reactions

Justifying reactions emerged as explaining and defending a taken position or action. Stakeholders demonstrated their understandings and interpretations as ‘sensible’ and thoughtful. They sought to rationalise, validate or support their feelings, attitudes and behaviours toward IT implementation. This process of justifying reactions was particularly apparent when stakeholders had divergent interpretations of change and they were questioned about their stand or view, or when there were discrepancies or conflicts between their expected actions and consequences and their experienced conditions and outcomes. In both cases, some patterns of justification could be noticed. They included: emphasising and validating evaluations and understandings; defending and maintaining perspectives and constructed meanings; highlighting identity and role; rationalising expectations and requests; supporting or promoting intentions and reactions; and criticising or blaming others’ positions and actions. (See Table 6.12 in chapter 6 for examples of stakeholders’ justifications.)

When there were differences in their appraisal and interpretations of IT implementation, CAs and CRs seemed likely to highlight and justify their understandings. They gave reasons for rationalising their views and constructed meanings for others, seemingly in an attempt to achieve others’ consideration, acknowledgement or acceptance. For instance, CAs sought to gain CR buy-in and
support for their decisions and plans by explaining the necessity and importance of change, and justifying its objectives and outcomes. They highlighted the significance of IT implementation and its constructive consequences for their organisation and for CRs. Also, CRs emphasised their work processes, duties and conditions to justify their priorities and concerns and receive more consideration regarding their requirements. Further, discrepant views appeared to bring different justifications which seemed to diminish achieving common understandings and meanings and result in conflicting reactions.

Stakeholders’ reasons for justifying reactions can be classified into two categories: related to self and their own group or related to others (Figure 7.5). In the first category, stakeholders highlighted their own role and responsibilities (individual identity), efforts and actions or they relied on their group’s status and experience (group identity) to justify their concerns and expectations. For instance, CAs explained their expertise and background to validate their decisions and defend their knowledge and competence in conducting and managing change. Similarly, some CRs referred to their previous change experiences or detailed knowledge of their existing systems and functions to justify their expectation of getting involved in decision making or change implementation. Other CRs emphasised their duties or the significance of the position and work of their group in the organisation to rationalise their ‘special needs’ and priorities. In the second category, stakeholders commented on or criticised others’ identity, attitudes and actions to explain and rationalise their status, view and reactions. For example, on the one hand, some CAs blamed lack of participation and cooperation of a group of CRs and indicated this was the reason for encountering some delays in the project or some issues and inconsistencies. On the other hand, some CRs expressed their doubts about sufficient CA knowledge regarding requirements and adequate considerations of CR conditions and concerns. Hence, they tried to defend their cynicism about the appropriateness of change plan. They seemed to argue lack of achievement of meaningful outcomes and increasing issues and disruptions to legitimise their avoidance of adopting new changes. Some of them criticised change management and blamed it on lack of effective communication as the reason for being uninformed about IT implementation, and perhaps for not getting engaged in or supporting change. Further, the explanations and reasons, whether they were related to self or others’ roles and situations, appeared to be based on their plausibility, relatedness and consistency in justifying and supporting views and reactions to change.
Figure 7.5 Examples of stakeholders’ reasons for justifying reactions

Justifying reactions not only appeared as a process of validating and supporting attitudes and actions, but also seemed to guide stakeholders in maintaining or developing their existing views and constructing new meanings based on or related to their reactions. In other words, stakeholders’ reasons and justifications for their reactions appeared to influence their subsequent interaction with and understanding of others, appraisal of change and interpretation of events, and actions (see Figure 7.6). For example, CRs who expressed their negative experience of previous IT implementations appeared to be unwilling to participate in IT implementation. Before implementation, they seemed to emphasise negative aspects or disadvantages towards change or highlighted probable problems and disruptions to justify and defend their lack of interest or reluctance to participate. After implementation, they explained encountered issues and inconsistencies, and some seemed to downplay the effectiveness of the project or whether it would achieve results, in order to justify and rationalise change avoidance or resistance. Further, through justifying reactions, stakeholders could validate, consolidate, adjust or build upon their feelings, attitudes and behaviours towards change retrospectively.
It appeared that when stakeholders could find or be provided with a more plausible reason for a different assessment or a more compelling and stronger justification for a different perception or even an opposite view, their meanings about and reactions to change could be influenced and altered. For instance, some CRs with unpleasant previous experiences regarding IT implementation, when they were involved in the implementation process and were informed about the advantages and positive consequences of the project on their work and status, or when they perceived improvements, they appeared to be more positive and supportive towards change, and tried to engage and participate more actively. Also, stakeholders could explain and share their rationale and justifications (including their experiences and perceptions of change and its impacts or their comments and criticism of others’ identity and reactions) in their interactions with each other and influence the meaning construction of others. Thus, one can infer that stakeholders’ justifications could influence others’ understandings, interpretations and reactions.

7.3 Discussing findings from the sensemaking perspective

In this section, I discuss and reflect on the findings of this research by adopting the ‘sensemaking’ perspective proposed and elaborated by Weick (2012a, 2001, 1995).

As explained in section 3.5.4.1, sensemaking theory is used in this research to “to create a sensible theoretical basis to inform the topics and approach” (Walsham 1995b, p. 76) and ‘scaffold’ the initial empirical work. This scaffold is removed in the subsequent empirical work and data analysis to avoid being constrained by sensemaking framework and remain open to field data. Further, the sensemaking theory and its seven characteristics (Weick 1995) provided me with a way to inform my empirical work.
for investigating and understanding stakeholders’ reactions to IT implementation. In this section, I return to sensemaking perspective and some of the relevant ideas from the adopted theory and other literature to discuss the results of my research.

As discussed in chapter 2, sensemaking is a social process in which stakeholders make sense of change through their interactions and construct meanings that serve as a basis for their actions (Weick, Sutcliffe & Obstfeld 2005). Thus, a sensemaking perspective helps to focus on social interactions and meaning construction processes (Guiette & Vandenbempt 2014; Blatt et al. 2006) and provide insights into stakeholders’ reactions to change (Dixon et al. 2017; Fellows & Liu 2017; Sandberg & Tsoukas 2015; Weick 1995; Gioia & Chittipeddi 1991).

According to Weick (1995), sensemaking is understood as a process that is grounded in identity construction, is retrospective in nature, based on enacting sensible environments, social, an ongoing process, focused on cues extracted from the environment, and driven by plausibility rather than accuracy. (See Table 2.9 in chapter 2 for a summary of sensemaking properties.) These seven characteristics “serve as rough guidelines for inquiry into sensemaking in the sense that they suggest what sensemaking is, how it works, and where it can fail” (Weick 1995, p. 18).

In this research, the sensemaking perspective is adopted to consider stakeholders’ reactions to IT implementation. For this purpose, the seven properties of sensemaking are applied to investigate the reciprocal relationships between interpretations and actions (Maitlis 2005; Weick, Sutcliffe & Obstfeld 2005), and seek more insights into the sensemaking of CAs and CRs and impacts on the progress of relationships and social interactions, the development of mutual understanding amongst stakeholders, change appraisal and meaning construction, the negotiation of interpretations of change and stakeholders’ reactions.

7.3.1 Sensemaking is grounded in identity construction

In this research, identity construction appeared to be guided by the development of mutual understanding between CAs and CRs. It appeared as an ongoing and reciprocal process, in which their understanding of self in relation to others, their interpretation of the behaviours that others exhibit towards them, and their perceptions and expectations of others’ roles and responsibilities seemed to continue to interpret and shape their identity of self. In both cases, CAs and CRs explained their understandings of their status throughout the IT implementation process. They highlighted their needs and concerns in relation to the project and explained their understandings of their positions pre and post change. CAs emphasised their experience, knowledge and expertise, and used their understanding of
their roles to defend their decisions and plans. Similarly, CRs indicated their background and detailed knowledge of the systems and system functions, mentioned the importance of their activities in the organisation in using their existing and new IT processes, and defended their concerns and interests seemingly in order to build their status in the change context. Further, they sought to understand the impacts of change on their status and relationships, and maintain or promote their position and authority.

Both CAs and CRs discussed their expectations and understandings of respective groups’ identities, roles and responsibilities in relation to IT implementation. CAs considered the need for CR involvement in change and the significance of CR participation and cooperation in effective adoption. CRs also explained their assumptions of CAs. They argued their anticipations of CA considerations and favourable actions in addressing CR requirements and supporting them in the change process.

Further, stakeholders’ perceptions of how others react towards them may impact how they develop their own identities. They may assume conditions for themselves or may refer to roles that, perhaps in their opinion, are meaningful to and understandable by others. For instance, some stakeholders mentioned ‘being a manager’, ‘acting as a responsible person’, ‘being a system user’ or ‘being an expert’ (having required knowledge and experience) to define their identity and maintain their status and perspective. The findings of this research suggest that CAs or CRs may define their position and work duties and explain their status and priorities in relation to others’ views and expectations. For example, some CRs argued that due to their roles and work duties, their requests should be acknowledged and considered. At ExMoney, one CR explained that because of her responsibility in finalising financial records and accounts before the end-of-financial year, CAs should give high priority to her needs. Some CRs at GovOrg indicated that because they needed special access privileges and requirements to accomplish their tasks, they anticipated being recognised as ‘power users’ and to receive extra consideration and support. Thus, their perception of identity (e.g. acting as the project manager or being a power user) seemed to influence expectations or understandings of others. In addition, stakeholders appeared to have the desire to construct and maintain identities that support their status, reinforce their relationships or assisted them in gaining benefits. This finding shows some support for previous research (Cascón-Pereira, Chillas & Hallier 2016; Walsh & Gordon 2008), that is, stakeholders try to construct positive identities in their interactions with others. Figure 7.7 presents reciprocal identity construction between CAs and CRs. In this figure, the arrows indicate the influence of CA perceptions and expectations of CR roles and responsibilities on their understanding of self and identity construction, and vice versa.
Figure 7.7 Reciprocal identity construction between CAs and CRs

Stakeholders seem to construct their identities in a continuous process of evaluating their status and defining and redefining their roles and responsibilities through their interactions and associations with others. To determine their identity, they consider competencies that confer their position and status, and support their interpretations, which may attach to or distinguish them from other identities based on the level of alignment or enhancement of their perspectives and ‘values’ (Walsh & Gordon 2008). In both cases, stakeholders seemed to develop various identities including individual, work-related, change-related and organisational identities (see Figure 7.8). Further, their perception of their identity and its values appeared to influence their understandings and expectations of others’ roles and responsibilities. Also, they associated various identities based on their interpretations of others’ status and views. For instance, at GovOrg, some stakeholders’ interpretations of the ‘vendor team’ were that they were not aware of or committed to the organisation’s concerns and norms. Similarly, at ExMoney, some CAs highlighted their relevant background and extensive experience and expected appreciation and acceptance from other CAs or CRs for their views and decisions.
In some situations, stakeholders seemed to emphasise one or more various identities to highlight their concerns and support their attitudes and actions. In many instances, group identity appeared to be central as they could explain their circumstances and requirements for IT implementation. The findings of this research suggest that when stakeholders understand values and competencies of a collective identity and perceive themselves as members (feeling involved), they are more willing to assume that collective identity, affirm its responsibilities and support its obligations, even if it does not reinforce their individual status directly.

Stakeholders’ consideration and interpretation of others’ thoughts and understandings about their identities were also important in this research. For instance, some CAAs were of the view that the constructed image of them by others was neither accurate nor complete (nor was it different to how they saw themselves). Thus, they attempted to validate and promote their status, perspectives, roles and responsibilities by explaining their expertise and highlighting their relevant experience. They seemed to emphasise their competencies to defend their identity. In some cases, however, the perception of an individual or group identity seemed to be affected by previous experiences with that individual or members of that group. For example, the vendor team appeared to be assigned a negative identity at GovOrg due to the poor service that many CRs had received from the vendor in their previous projects.
Similarly, some initial negative interpretations about the IT team competencies at ExMoney were apparent due to unfavourable outcomes in previous IT projects. In the two abovementioned examples, CAs tried to explain their efforts and actions, and emphasise their expertise and experiences to enhance the perception of their identity amongst CRs.

Identities are dynamic and constituted through an ongoing process of social interaction (Brown 2015; Weick 1995). Stakeholders appear to constantly discuss and negotiate their status and roles with others and explain their perceptions of self and others to define, confirm and reconfirm their identities (Maitlis 2005). In both cases in this study, interactions between CAs and CRs seemed to, on the one hand, help them to gain a better understanding of the other group’s perspectives and circumstances, and on the other hand, facilitate the establishment and maintenance of their roles and responsibilities in relation to the other group. Thus, through their interactions, they could influence others’ perceptions and expectations by explaining their background, conditions, views and actions. Moreover, as Dutton, Roberts and Bednar (2010) reported, work or change-related relationships seem to contribute to the development of collective identities. In contrast, lack of communication amongst stakeholders appeared to increase ambiguity about or cause inaccurate perceptions of the roles, perspectives and identities of others. For example, lack of direct and ongoing communication amongst CRs (in separate offices of ExMoney or distinct business groups and divisions of GovOrg) or between CRs and CAs seemed to restrict the construction of coherent change-related or organisational identities; hence CRs appeared to have divergent interpretations of project objectives and outcomes or CA perspectives and decisions.

Stakeholders’ identity appeared to influence their appraisal of change, as different identities (e.g. CAs and CRs) seemed to have different understandings of change and various interpretations of the consequences of change. Weick (1995) states that “depending on who I am, my definition of what is ‘out there’ will also change … Once I know who I am I also know what is out there” (p. 20). Stakeholders consider and evaluate changes they expect and are prepared to perceive (Jensen, Kjærgaard & Svejvig 2009; Mills & Weatherbee 2006). Consistent with previous studies, change appeared to be seen differently by and have various meanings and levels of importance for diverse individual or group identities. For instance, many CAs in both cases highlighted the significance of business outcomes, while several CRs seemed to be mostly concerned with the impacts of change on their work practice. Alternatively, some CRs (e.g. accounting users at ExMoney or power users at GovOrg) interpreted IT implementation as essential and brought several enhancements, while others did not expect any substantial changes in their work activities (e.g. sales staff at ExMoney or normal users at GovOrg).
Conversely, stakeholders’ accounts of change, or shared meanings they construct to interpret and explain change (Stensaker, Falkenberg & Grønhaug 2008), influence their identity (Mills, Weatherbee & Colwell 2006). IT implementation in both cases brought about various change in roles and responsibilities of stakeholders and affected relationships amongst them. Therefore, stakeholders tried to understand the consequences of change on their status and role, which appeared to shape their perception of ‘who they are’ and ‘who they will become’. For instance, CRs attempted to determine whether their requirements had been considered regarding change and whether they had been informed and acknowledged as ‘serious stakeholders’ or not. Also, stakeholders who felt under-informed about the objectives of change, or who felt unclear or doubtful of its consequences, appeared to be uncertain about their roles and responsibilities. (Figure 7.9 presents the relationship between constructing identity and constructing accounts of change.)

![Figure 7.9 Constructing identity and accounts of change](image)

Stakeholders’ constructed identities seem to determine how they interact with and respond to others and to IT implementation. Their constructed identities influence their understandings of others and interpretations of change, shape their roles, responsibilities and status in relation to change, and thus appear to impact how they feel, think and behave (act). Walsh and Gordon (2008) explain that “roles derived from their associated identities, provide individuals with a sense of meaning and purpose, as well as dictate how they can and should act” (p. 55). In their reactions, stakeholders seemed to consider their identities to decide what actions would be justifiable and how to respond to others or expect others to consider them. For instance, CA1 seemed to highlight his role at ExMoney and explain his previous background to defend his view and actions towards IT implementation (see chapter 4, subsection 4.5.1.1). Furthermore, having the perception that change would enhance their individual or group identity, stakeholders appeared to construct positive meanings and manifest supportive reactions. They seemed to appraise IT implementation by considering its consistency with their perspectives and how it would improve their roles and status. This argument also suggests that stakeholders consider the potential benefits of change for their identity (i.e. seeking benefits for their status or position) in the process of appraising that change and constructing meanings. Hence, some stakeholders appeared to
view change as an opportunity when they could perceive its constructive impacts on their identities. Others however seemed to perceive change as a threat when they interpreted it as violating their identities. For example, some CRs at GovOrg appeared to have negative attitudes towards IT implementation as they seemed to have the perception that change would have negative impacts on their professional identity and status, and thus reduce their authority and control over their work activities (see chapter 5, subsection 5.5.7.2).

In conclusion, it appears that stakeholders’ identity plays a significant role in interpreting change and reacting to it. According to Weick (2001, 1995), sensemaking is grounded in identity construction, and by considering and exploring individual and group identity construction for stakeholders, this research offers a better understanding of sensemaking processes. Constructing identity influences how stakeholders engage in making sense of IT implementation, and how their constructed accounts of change inform and shape their attitudes and behaviours. The findings of this research suggest that the development of mutual understanding (i.e. understanding and being understood by others), change meaning construction, and interactions with others depend on and are consistent with the identity of stakeholders.

7.3.2 Sensemaking is a retrospective process

Sensemaking occurs when stakeholders perceive a difference between expected and experienced change, events or status (Maitlis & Christianson 2014; Weick, Sutcliffe & Obstfeld 2005; Weick 1995). Thus, stakeholders draw on their past experiences as the frame of reference to evaluate and interpret change and construct sensible meanings. In the process of making sense of ‘what is occurring’ (Mills, Thurlow & Mills 2010), they reflect on the past and compare IT implementation with similar or familiar changes to improve clarity and reduce ambiguity. In both cases, stakeholders mentioned their previous experiences with IT implementation changes to explain and support their perspectives of new changes. They seemed to ‘label’ change in an ongoing retrospective meaning construction process and tried to connect their past experience and knowledge with encountered events, which appeared to shape their present and future appraisal of change. For instance, before IT implementation, some CRs at ExMoney labelled the new changes as ‘necessary’, as they seemed to have had a positive experience with previous IT projects with improvements and new, helpful functions. Thus, they expected ‘positive impacts’ from new changes and enhancements in their business processes and system functionality. After IT implementation, their experiences of change implementation and encountered disruptions or issues seemed to have considerable influence on their meaning construction. (See Table 6.3 in chapter 6 for other examples of stakeholders’ retrospective change appraisal.) It appeared that more recent
experiences, which seem to be easier to recall, explain and share with others, may have more impact on stakeholders’ appraisals and interpretations. Further, these common experiences seem to facilitate collective meaning construction and sensemaking amongst stakeholders.

Some stakeholders in both cases explained some negative experiences with IT changes in relation to the past or during IT implementation. From experiencing ineffective changes or unsuccessful projects to encountering disruptions, issues, extra work and complexity, or loss of productivity and authority, those negative references appeared to increase doubt, scepticism and reluctance to engage with the process. Stakeholders thus seemed to construct and ascribe meanings according to their previous experiences of IT change. Further, having the perception of being exposed to multiple undesirable changes over time seemed to have a cumulative negative impact on stakeholders’ perspectives and augment their negative reactions. For instance, some expressed feeling overwhelmed by experiencing multiple changes. This also suggests the impact of bias in hindsight (Gover & Duxbury 2017; Cassar & Craig 2009; Weick 1995), so some stakeholders appeared to reflect on their past experiences and constructed meanings about current IT implementation without considering whether those changes may have different consequences for them. For example, having the view that many previous changes to the accounting system at ExMoney had not been fruitful, some stakeholders labelled the IT implementation process as ‘hasty’ and doubted its effectiveness initially. Subsequently, many admitted that the outcomes of the project had been constructive. Thus, in situations like this, past experiences may be drawn upon to understand events; however, during or after IT implementation, many of these appeared to be misguided given the positive outcomes achieved.

In contrast, the pilot project, system tests and training discussions before the commencement of the deployment appear to be enlightening and helpful with regards to informing an understanding of change, as they can facilitate more relevant and accurate retrospective comparison and learning. Stakeholders seem to acquire knowledge and experience from others who they can rely on to appraise how the change process will be and what they can expect from IT implementation. For instance, stakeholders involved in the pilot project at GovOrg expressed the feeling of being ‘familiar’ with the way updates were being rolled out and the likely challenges of change in their work practice. This familiarity also appeared to develop a sense of readiness and confidence in coping with the new changes.

Weick (1995) states that “people can know what they are doing only after they have done it” (p. 24). Thus, stakeholders have a sense of understanding of what to expect from IT implementation and attach meaning to their interactions with others, or their experience of change only once it has been
experienced. This also suggests the dynamics of understanding and how states and events may be interpreted and labelled, and how constructed meanings may be revised after being seen or experienced over time. What stakeholders understand about themselves or others appears to be established based on their previous perspectives and experiences. However, it may change after they ‘see’ what they or others say and experience about events and actions (Weick, Sutcliffe & Obstfeld 2005; Weick 1995).

Retrospective accounts of change appeared to have various impacts on reactions to IT implementation. According to Weick (1995), prior experience and understanding of events and actions guide stakeholders’ subsequent actions. The findings of this study suggest that this process may build favourable or unfavourable attitudes and behaviours towards the project. It may have constructive implications for the change process by improving clarity, reducing uncertainty and facilitating stakeholders’ understanding, or may have non-constructive impacts by bringing about divergent perspectives and meanings. For instance, the experience of encountering unexpected changes and disruptions after the new system deployment at ExMoney appeared to cause some stakeholders to label the system as ineffective or incomplete. Hence, they seemed to avoid participating in the change process or using the new functions. Although other CAs and CRs liked the new functionality of the system, they entertained alternative interpretations of project outcomes. Further, their lack of commitment in turn appeared to provoke others (particularly CAs) to interpret their actions as resistance to change. This difference in perspective could worsen stakeholders’ experiences and cause the development of negative accounts of IT implementation. It could bring about further undesirable feeling and reactions such as feeling forced to comply with the new changes, feeling ignored and not getting adequate consideration, or resisting change. By contrast, the conduct of the pilot project and the gradual rollout of the new changes at GovOrg appeared to enable both CAs and CRs to learn from and use their previous experiences to better understanding the project, and react more favourably.

To conclude, past experiences were inputs for stakeholders’ present and future change appraisals, and thus formed the basis for their feelings, attitudes and actions towards IT implementation. Further, the perceptions of the consequences of their reactions informed and shaped their subsequent interactions and meaning construction. Thus, stakeholders tried to justify and support their attitudes and responses by referring to and explaining their previous perspectives and actions.

7.3.3 Sensemaking is enactive of sensible environments

Stakeholders construct meanings about change that make sense of their perceptions of their environments. In both cases, stakeholders appeared to make sense of change over time. Some sensed a threat (e.g. being forced, not gaining any benefits, losing authority or performance, encountering
disruptions and issues, or facing pressure and extra work), while others perceived change as an opportunity (e.g. improving functions, enhancing productivity, making works easier and faster, providing more control, improving the accuracy and reliability of services, allowing better maintenance and support services, or facilitating up-to-date technologies and systems).

The way stakeholders understood and labelled change or others’ actions appeared to influence how they defined their own situation, which in turn seemed to affect how they reacted to ongoing situations and others’ decisions and actions. For instance, CA1 was concerned with lack of requirements and change analysis in the new system implementation at ExMoney. He seemed to doubt the appropriateness of the new system in ensuring sound accounting processes and reliable financial records. On occasion, he appeared to be unwilling to actively participate in change implementation. His reference to his past experiences of ineffective changes in their accounting system and the supposed lack of detailed information about project objectives appeared to shape his reactions to change (e.g. his doubt or unwillingness) seem ‘plausible’ and defensible (Mills, Thurlow & Mills 2010). Before IT implementation at GovOrg, some CRs were of the view that the new changes would have negative impacts on their work practices and status. They seemed to be afraid of accepting the rollout, and hence they tried to postpone change. Again, those CRs appeared to sense change as a threat and presume the conditions and consequences that maintain their attitudes and actions towards IT implementation as rational and valid.

Stakeholders’ reactions may be restrained if they find themselves in an environment where they do not feel well-informed, involved or in control, or having an opportunity to express their needs and expectations and receive adequate attention and consideration from others. The development of mutual understanding between CAs and CRs and the construction of shared meanings can engender common sense about what and how changes need to be enacted. Thus, they try to understand what is best for them (seeking benefits), and based on that approach, set their expectations about the new changes and determine future actions.

In both cases, stakeholders appeared to act in ways that supported their assumptions and understandings of change and others (enacting). For instance, CAs at GovOrg highlighted the positive significance of IT implementation in their organisation. Hence, they seemed to label CRs who tried to postpone the update as resisting change. CAs then sought to pressure or force CRs to cooperate and accept the new changes. However, CRs highlighted their roles and work duties and seemed to doubt project effectiveness, expressing concerns about losing their authority, disruptions, and not being able to perform their work. Thus, they seemed to try to avoid change. Furthermore, stakeholders in both
cases appeared to rationalise their reactions. In addition to explaining and supporting what they were doing and why they were doing it, they also seemed to rationalise and reinforce subsequent meaning construction and reactions to change. By justifying their reactions, stakeholders appeared to clarify and extend their accounts of change or construct new meanings in order to maintain and provide direction for subsequent enactments. (Figure 7.10 shows the reciprocal relationships between stakeholders’ socially constructed environment and their reactions to change.)

Figure 7.10 Reciprocal relationship between constructed environment and reactions

In sum, through sensemaking stakeholders construct interpretations, meanings and the environment that can reinforce or restrain subsequent actions and sensemaking (Sandberg & Tsoukas 2015; Maitlis & Christianson 2014; Maitlis & Sonenshein 2010). In this process, stakeholders’ appraisal of change and their understanding of others organise and shape their environment, and they may perceive it as an opportunity or constraint on their status and actions.

7.3.4 Sensemaking is social

Feelings, attitudes and behaviours toward IT implementation appeared to be shaped by social interaction in two ways. First, constructed meanings about change seemed to be influenced by understandings and relationships with others. Through social interaction, stakeholders constructed meanings about how their status, perspectives and reactions were acknowledged and understood by others, and others’ responses and actions. For instance, some CRs at ExMoney discussed their interpretations of CA decisions and argued that CAs lacked understanding and consideration of CR needs and concerns. Inadequate interactions between CAs and CRs or amongst CRs appeared to lead
to inconsistent interpretations of change. Thus, before IT implementation, some CRs were of the view that they would not gain significant benefits, while post-IT implementation, some others seemed to have the feeling of being forced to adopt the new changes they believed were unnecessary for their work. Likewise, a group of CRs at GovOrg were critical of a lack of communication and information sharing process during IT implementation. They were of the view that CAs had mostly prioritised their own interests and ignored the requirements and concerns of CRs, which was blamed on lack of mutual understanding due to ineffective or inadequate communication between both parties. These situations highlight the social aspect of individual sensemaking in the way that stakeholders make sense for themselves and also attempt to influence the sensemaking of others in their interactions.

Ongoing social interaction between CAs and CRs appeared to have positive impacts on the development of mutual understanding between them. Although they seemed to have various perspectives, their communication and relationships facilitated the construction, sharing and negotiation of interpretations and understandings of their own and others’ identities, attitudes and expectations in both groups. Thus, stakeholders could discuss and deepen their understanding of their roles and responsibilities in relation to IT implementation or what others could expect from them. For instance, they seemed to accept the challenges of change or others’ actions in part because they understood that the others had been trying to improve their organisation and their work by implementing the new IT systems. Alternatively, stakeholders could achieve a more comprehensive understanding of others’ status, what concerns or interests they have, and how they feel and think. For example, CRs appeared to trust CAs and cooperate when they were informed about the project, its constraints and allocated resources, and when they perceived CA efforts in improving the change process and resolving issues. Thus, CA expectations and requests for participation and cooperation seemed to make sense to CRs in those situations.

Second, social interaction amongst stakeholders facilitates the development of shared understanding and the construction of common sense (Ford & Ford 2009; Stensaker, Falkenberg & Grønhaug 2008), and hence enables collective reactions to IT implementation (Maitlis 2005; Weick, Sutcliffe & Obstfeld 2005). In both cases, stakeholders communicated and shared their interpretations and experiences of change, negotiated perspectives, and arrived at common meaning and solutions. On the one hand, CAs could inform CRs about change objectives, process and outcomes, and listen to CR requirements and feedback. On the other hand, CRs could communicate their needs and encountered difficulties, and also inform CAs about their concerns and interests. Thus, stakeholders could exchange and clarify their expectations and perceptions of change. Further, ongoing communication amongst stakeholders
appeared to enhance such exchanges and support construction of more consistent and functional meanings. For instance, CAs and CRs could discuss their concerns and anticipated benefits and develop their understandings of the others’ status and expectations. Social interaction seemed to align stakeholders’ feelings, attitudes and responses, and strengthen their cooperation and collaboration. Therefore, they could work together and devise collective preparations and actions for improving the IT implementation process. This discussion also confirms and extends previous research (Drummond et al. 2017; Merkus et al. 2017; Sonenshein 2010) by highlighting the significant role of social interactions between CAs and CRs during IT implementation to facilitate collective sensemaking.

In sum, sensemaking is a social process (Weick, Sutcliffe & Obstfeld 2005; Weick 1995) in which stakeholders construct meanings through their interactions with others, develop their understandings of self, others and the environment, and react. In this process, stakeholders’ feelings, attitudes and actions appear to be influenced by the presence of others and the sense that they construct through ongoing interactions. Furthermore, interacting with others appeared to facilitate collective sensemaking, which comprised shared understandings and accounts, and negotiated and convergent reactions.

7.3.5 Sensemaking is an ongoing process

The findings of this study highlight that stakeholders ‘constantly’ evaluate change and try to understand its impacts through their interactions with others and their environment. This appeared to be an ongoing process of constructing and reconstructing meanings, neither of which had a clear start or end, and connected the past to the present to the future (Weick 1995). For instance, CRs at ExMoney emphasised some previous ineffective changes to their accounting system, and tried to assess and explain the implications of change for their current work. As they were becoming aware of the new changes, they tried to gain a better understanding of the possible benefits or losses that IT implementation would bring. They continuously considered events, circumstances and actions that, they felt or thought, had or would impact them. Likewise, CRs at GovOrg, particularly those who had had a similar experience with the operating system upgrade in their previous organisation, constantly evaluated and judged change and its consequences, and tried to understand how this would affect their roles, privileges and performance. Further, they seemed to focus on events and changes that they were informed about them and interpreted these as important when compared with previous experiences that evoked similar feelings.

As discussed in subsection 7.3.4, stakeholders appear to achieve better understanding of each other’s identity, expectations and perspectives through ongoing social interaction. In both cases, they could explain their status, discuss their concerns and interests, and exchange and clarify their assumptions.
and impressions with others regarding roles and responsibilities or the IT implementation process. Hence, developing mutual understanding was an ongoing process in which stakeholders continuously constructed, shared and negotiated their interpretations and understandings of their own or others’ identities, attitudes and expectations.

Stakeholders in both cases had different roles and were responsible for different activities. IT implementation would bring about (as they interpreted it) or had caused (as they experienced it) unknown situations, changes or disruptions to their continuous projects. Sensemaking is an ongoing process that is triggered by “discrepancies and equivocality in ongoing projects” (Weick, Sutcliffe & Obstfeld 2005, p. 414), or whenever stakeholders’ perceptions of their projects are different from their expectations. They seem to pay attention to various views and work flows and any interruptions to aspects that involve their projects including identities, conditions and work practice. Further, stakeholders experienced several changes and interruptions, which they interpreted as positive and functional or negative and dysfunctional. Those interruptions appeared to elicit emotional reactions, and influence their sensemaking activities.

Stakeholders seemed to manifest positive emotions when change enabled the resumption of their projects or facilitated the completion of their plans and tasks. For instance, some CRs at ExMoney expressed being optimistic and positive towards IT implementation, as they were of the view that the new changes would make their jobs easier and would improve their business processes. Other CRs discussed positive feelings of being confident and satisfied post IT implementation, as they perceived change had enhanced the security, functionality and performance of their system. Those positive emotions appeared to increase CR engagement and participation, contribute to their sensemaking activities, and improve the development of their understandings of change and CAs. In contrast, stakeholders seemed to have negative emotions when change impeded their plans or prevented the resumption of activities. For example, some CRs at GovOrg explained their negative feelings of dissatisfaction and frustration due to concerns about losing productivity or privileges, and not being able to fulfil their responsibilities and duties. Similarly, some CRs at ExMoney mentioned negative emotions such as not being able to provide service to the customers, feeling afraid of facing multiple disruptions and inconsistencies, feeling frustrated about not being supported to resolve issues, and being ignored and not receiving a response to their needs.

The findings of this research demonstrate that stakeholders appear to constantly consider interruptions to processes and conditions that matter to them, and changes perceived as influencing their identities and status (seeking benefits). Also, their involvement in the change process and
awareness of the causes and consequences (being involved and informed) seem to facilitate searching for explanations and solutions for resumption, and hence, moderating their emotions (Maitlis & Sonenshein 2010; Weick 2001).

7.3.6 Sensemaking is focused on extracted cues

When stakeholders in both cases became aware of IT implementation in their organisation, they tried to seek out and gather information about change. They appeared to consider details and cues that they perceived as important or relevant to their identity, status and activities. These were garnered through their interactions with others (e.g. in formal or informal meetings and discussions) and from project announcements and documents, rumours, or conditions and cues from their environment. However, not all data or information was noticed, and stakeholders ‘heard’ or noticed only aspects that seemed relevant, important or threatening to them. These bits of information and extracted cues provided ‘points of reference’ (Weick 1995) that stakeholders appeared to use for appraising potential impacts and the significance of IT implementation, making sense of what changes were happening, and taking appropriate action.

The findings of this research indicate that stakeholders may attend to certain cues for various reasons. For example, they noticed, bracketed and constructed meaning from cues that seemed beneficial to them. Furthermore, stakeholders’ understandings of their own and others’ identities, and their appraisals of change appeared to impact on the consideration of cues that were more relevant. For instance, CAs seemed to emphasise business needs and organisational objectives. At ExMoney, CAs paid particular attention to improving the performance of their business processes and adding new services. Likewise, CAs at GovOrg were concerned with on-time and on-budget implementation of updates and focused on reducing maintenance and support costs. By contrast, CRs at ExMoney highlighted their focus on improvements in functionality and interface of the new system that related to their work, while at GovOrg, they stressed changes to their access privileges, authority and work conditions.

Another influence was stakeholders’ feeling of involvement. Feeling involved in the IT implementation process seems to enable and encourage stakeholders to engage, seek details of the new changes and pursue objectives and project outcomes. Information and cues about change appear to be more salient in terms of relevance and importance when stakeholders feel involved, considered and when they have influence. For instance, CRs in both cases who felt informed about and involved in the change process appeared to be more willing to participate in discussions, and exchange their experiences and knowledge with others. This is in contrast with those CRs who felt ignored or not
informed, and who seemed to feel that they could not participate, or were reluctant to cooperate or even know about project progress and outcomes.

Inadequate or ineffective communication may prevent stakeholders from noticing and extracting relevant cues and can lead to misunderstandings and mistrust of others, or change. In both cases, stakeholders repeatedly explained that they needed more details about IT implementation. They sought to gain more information and cues about the impacts of change on their identity and status, and also about preparations and actions they needed to undertake. One can suggest that ongoing communication between CAs and CRs enhances the negotiation of their concerns and interests and sharing their interpretations of cues (individual focus), increases clarity, and facilitates the construction of consonant meanings of change (collective focus). Thus, they are more likely to establish public points of reference, concentrate on common and important aspects and requirements, and build ‘consensus’ around change (Tallon 2014). For instance, meetings between CAs and CRs appeared to enable CRs to better understand business implications and outcomes of IT implementation and to become aware of CA goals and expectations. Hence, they could collectively achieve more comprehensive and realistic understandings of change and its impacts. (Figure 7.11 shows the factors that appeared to affect stakeholders’ processes of extracting and focusing on cues based on themes that emerged in this research.)

Figure 7.11 Factors that appeared to influence extracting and focusing on cues
7.3.7 Sensemaking is driven by plausibility rather than accuracy

Stakeholders in both cases expressed various interpretations of the new changes and seemed to construct different meanings about IT implementation. Although stakeholders who constructed those meanings argued that their appraisals and interpretations were reasonable and meaningful, other stakeholders considered those meanings to be inaccurate, incomplete or inconsistent at different stages of the project. For instance, as CR6 commented (see chapter 4, subsection 4.5.2.2), some CRs at ExMoney were of the view that change would improve the accuracy and reliability of their work and address their accounting problems. In contrast, CR1 seemed to have negative feelings and attitudes towards system implementation. She explained that change would cause disruptions and was not worth their time and effort. She argued that some off-the-shelf packages could instead address their needs, and that CAs did not have a comprehensive understanding of the requirements of accounting functions and processes (see chapter 4, subsections 4.5.1.2 and 4.5.4.2). She referred to her previous experiences of system changes that were ineffective and had caused her and her colleagues extra work (see chapter 4, subsection 4.5.6.2). Further, as stakeholders become aware of change, they constantly seek and extract clues and details until they reach consensus (Tallon 2014), or give explanations that seem coherent, stable and justifiable and also make sense to them in their context. They focus on and consider cues that validate or support their identities, past experiences and knowledge, past and future status, or expectations in their social context and in relation to what has occurred (Weick 2001). Thus, they feel confident that their interpretations and views are ‘plausible’ and foster ‘common sense’ (Berente et al. 2011; Weick 1995).

Furthermore, what appears to be plausible to a group of stakeholders (e.g. CRs) may be less plausible (or implausible) to another group (e.g. CAs) (Maitlis & Sonenshein 2010; Weick, Sutcliffe & Obstfeld 2005). In the above example from ExMoney, CAs seemed to have a different perception of the project. They highlighted IT implementation as significant to their business and necessary for the development of their accounting processes. According to Weick (1995), constructed meanings are not necessarily accurate; however, they are plausible and coherent because they are based on stakeholders’ retrospective interpretations and past expectations, they resonate with others’ perspectives, and they can be used to explain and clarify changes and reactions (pp. 60-61). At GovOrg, CAs emphasised the problems that the organisation and CRs would encounter if they did not upgrade the “ageing platform of the operating system” (CA9). Besides, they indicated several improvements or new functions that CRs would gain in order to highlight the significance of IT implementation and justify their decisions and actions (see chapter 5, subsection 5.5.7.1). CRs also tried to explain their responsibilities and work conditions and further sought to validate and stress their system support requirements. Hence, each
group appeared to emphasise some cues and promote their own reasons, give convincing arguments and create ‘plausible stories’ to influence the other group (sensegiving), and gain and sustain others’ buy-in and trust.

Stakeholders appeared to extract and focus on cues that were relevant to their desires or goals, supported their views, and preserved the rationality and coherence of their constructed meanings and actions. Thus, in some situations, they seemed to neglect or ignore some of the cues and explanations that might be accurate or practical and instead relied on information and reasons that could be exaggerated, incomplete or even flawed. For instance, some CRs at GovOrg seemed to have negative attitudes towards change on various grounds including: CAs were going to decrease or control their access privileges and authorities (e.g. see CR14’s comment in chapter 5, subsection 5.5.7.2); updated systems were not tested comprehensively; they would encounter disruptions and issues; or the new systems would need more hardware resources and thus reduce their performance. Other CRs appeared to be very positive about IT implementation and perceive change as straightforward and as easy as upgrading their home PCs. In both these instances, CRs seemed to have the feeling that their appraisals and views of change and outcomes made sense and were plausible, confirmed their desires, or were consistent with their past experiences and expectations. However, post IT implementation, it appeared that their understandings were incomplete or unrealistic (e.g. see CR14’s and CR10’s comments in chapter 5, subsection 5.6.2.2).

In sum, it appeared that stakeholders rely upon plausible stories to understand change and react towards it. During IT implementation, stakeholders may receive varying levels of information about the new changes, and extract and focus on various cues. They may interpret change differently, and hence construct multiple meanings with different degrees of accuracy. However, according to Weick (1995), accuracy is not necessary. Instead, stakeholders seek a defensible and coherent story that makes sense to them, and provides them with enough information and clarity to act. Further, different perceptions of change and considering plausibility rather than accuracy may lead to inconsistent and dissonant sensemaking processes amongst stakeholders. Nevertheless, social interactions appeared to facilitate more consistent and consonant sensemaking. Through ongoing communication, stakeholders could share and negotiate their past experiences and interpretations, develop mutual understandings based upon consensual information, and construct meanings that “make common sense and encourage coordinated action” (Weick 1995, p.82). Further, meanings and stories seemed to become more ‘substantial’ and credible when they were related to, or accepted and used by, collective or significant identities (Weick, Sutcliffe & Obstfeld 2005).
7.4 Conclusion

Figure 7.12 shows the proposed theoretical model which enables the researcher to address the two research questions. This model shows that CA and CR reactions to IT implementation arise from and are shaped by interactions, meaning constructions and sensemaking both within and between both groups. The meanings that stakeholders construct about change are derived from needs and benefits they seek and are moderated by the feeling of being involved in change over time. CAs and CRs construct meanings influenced by their social interaction with others, understanding their own identity and status, and their perceptions of others’ roles and responsibilities. Meaning construction is also built upon their appraisal of the consequences of change that may affect them and shaped depending on past experiences and current expectations. Further, CAs and CRs may manifest complex reactions from positive and supportive to negative and resistive, and their feelings, attitudes and behaviours toward change may be different pre- and post-IT implementation stages.

Figure 7.12 Theoretical model
Furthermore, CA and CR sensemaking appears to be consonant or dissonant. The development of mutual understanding between the two groups and the construction of common meanings through ongoing social interaction seems to facilitate the emergence and development of consonant sensemaking processes, and collective and supportive feelings, attitudes and actions. Conversely, a lack of mutual understanding and dissimilar accounts of changes appear to lead to dissonant sensemaking and provoke negative and unfavourable reactions to IT implementation. These processes are dynamic and ongoing and may initiate constructive or non-constructive self-exacerbating cycles. For instance, consistent and direct communication between CAs and CRs appear to improve mutual understanding, facilitate informed evaluations and interpretations of actions and changes, and develop positive feelings and attitudes towards IT implementation, thus promoting collaboration and support. This, in turn, seems to enhance constructive and positive interactions and further development of consonant sensemaking processes.

7.4.1 Concluding remarks on the answers to the research questions

This section highlights a summary of the major findings of this research in relation to the two research questions. RQ1 was proposed to investigate and understand how CAs and CRs make sense of IT implementation. The objective was to consider sensemaking activities of stakeholders during change, and gain insights into their interactions and processes that they negotiate their interpretations and construct meanings. The key findings that emerged relating to this research question are:

- The processes through which CAs and CRs make sense of IT implementation appear to be similar. Stakeholders appraise IT implementation to understand the implications of change and make sense of the extent of threat or opportunity it affords them, their group or their organisation. They construct more socially meaningful understandings in an ongoing interaction process with others. In this process, before the IT implementation, their sensemaking is influenced by their previous change experiences, while after the IT implementation, stakeholders appraise the change implementation process and its consequences. Further, their experiences, change appraisals and constructed meanings influence their subsequent evaluations and interpretations of IT implementation.

- The sensemaking of CAs and CRs appear to be interrelated. The two groups may have divergent interpretations and interests. However, more effective social interaction between CAs and CRs facilitates the construction of common meanings about change, enhances the development of mutual understanding of identities and conditions, and promotes consonant
sensemaking processes. Frequent and reciprocal communication and direct negotiation between them strengthen relationships and help the development of a common language, which improves mutual understanding. In contrast, a lack of effective social interaction increases divergence in understanding and raises discrepancies between expectations and perceptions, and hence, lead to dissonant sensemaking processes.

- ‘Feeling involved’ in and informed about IT implementation influences the construction of accounts of identities and change, and ‘seeking benefits’ drives meaning construction. Further, stakeholders actively engage in sensemaking processes by considering, interpreting and seeking meaning about changes they are informed of, and they perceive those changes as important or relevant to their identity and status.

RQ2 focused on investigating and understanding the implications of sensemaking of CAs and CRs with regards to their reactions to IT implementation. Key findings that emerged relating to this research question and the development of stakeholders’ feelings, attitudes and behaviours during change are as follows:

- Stakeholders’ reactions appear to be complex. They may manifest inconsistent feelings and attitudes pre- and post-IT implementation as part of their ongoing sensemaking processes, which are influenced by their appraisals of change and their mutual understanding of others’ status and identity and their own. Further, the accounts that CAs and CRs construct and reconstruct (based on their reflections of previous experiences, their expectations and considerations of the potential implications of change, and through their interactions with others and the environment) are interrelated, and as this study attests, guide and form their reactions over time.

- Consonant sensemaking processes between CAs and CRs appear to promote positive feelings and attitudes and lead to collective and supportive action. Conversely, dissonant sensemaking processes seem to give rise to unconstructive and resistance reactions to IT implementation, and discourage participation and collaboration.

- CAs and CRs appear to demonstrate and maintain their constructed meanings as ‘sensible’ and thoughtful, particularly when they encounter inconsistencies in constructed accounts of change or notice discrepancies between their expectations and perceptions. They seem to defend their identity and status and justify their attitudes and actions in order to gain consideration, acknowledgement or acceptance. Further, their justification, whether it be
emphasising or supporting their identity and actions, or in criticising or blaming others or the situation, seem to persuade and steer their subsequent interactions with others, their meaning construction, and their reactions to change.

- Plausible reasons and ‘sensible’ justifications appear to foster convergence in interpretations and constructed meanings, and influence sensemaking processes and subsequent reactions to IT implementation.

7.4.2 Contributions and implications

This section presents key theoretical contributions plus practical and managerial implications about stakeholders’ reactions to IT implementation in organisations.

7.4.2.1 Contributions to theory

This research states that the process of ‘justifying reactions’ connects stakeholders’ interpretations and actions, makes their ‘attitudes and reactions’ meaningful and sensible, and motivates and guides their further interaction and meaning construction. Stakeholders try to explain and maintain their perspectives, rationalise their demands and expectations, and justify their responses to others and their reactions to IT implementation. Further, this research proposed a theoretical model (see Figure 7.12) that demonstrates the relationships amongst identified factors that appeared to evoke and influence CA and CR reactions over time, including ongoing processes of ‘developing mutual understanding’ and ‘appraising change and constructing meanings’ through ‘interacting with others’. The model embodies ongoing sensemaking processes of CAs and CRs during IT implementation that lead to different feelings, attitudes and behaviours from functional and supportive to non-functional and resistive. As demonstrated in the model, ‘seeking benefits’ and ‘feeling involved’ affect stakeholders’ relationships and negotiations, and influence the processes of appraising events and actions and developing understandings.

Furthermore, the findings of this research contribute to sensemaking and the IT implementation literature in two important ways. First, this study contributes to the understanding of sensemaking processes during IT implementation by investigating and gaining insights into how CAs and CRs make sense of change. To my knowledge, CA perspectives together with CR views and understandings have not been previously explored. One of the most interesting findings from this study is that the sensemaking processes of these disparate groups are remarkably similar. As stakeholders become aware of change, while considering their past experiences and current knowledge, they try to appraise consequences of change by noticing and extracting cues and information. They perceive those details
as important or relevant to their individual or collective identity, status and activities. Through social interaction, they share and negotiate their experiences and interpretations. They try to construct coherent, plausible and meaningful accounts to understand and make sense of and act upon change. Another important finding of this research is that CA and CR sensemaking processes are interrelated, and their appraisals and interpretations of change are influenced by social interaction and mutual understanding. Stakeholders may have different evaluations and interpretations of change. However, consistent and direct communication amongst and between CAs and CRs develop mutual understanding, and facilitate construction of common meanings and consonant sensemaking processes.

Second, this research contributes to the understanding of implications of CA and CR sensemaking in the way they react to change. The meanings that stakeholders construct about change influence their feelings and attitudes and shape their actions and behaviours. Consonant sensemaking processes and the development of common meanings may stimulate positive emotions and thoughts and facilitate actions more aligned with and supportive of IT implementation. In contrast, dissonant sensemaking processes and the emergence and development of discrepancies between CA and CR expectations of change may create unfavourable responses such as apathy or resistance. Furthermore, CAs and CRs justify their reactions to make their feelings, attitudes and actions meaningful. Their interpretations are sensible and they explain and defend their position and action. Contributing to previous studies (e.g. Maitlis 2005; Weick, Sutcliffe & Obstfeld 2005), this research attests that meanings motivate and guide actions which involve the construction of justifications and meanings, and this reciprocal relationship between meaning and action continues throughout the IT implementation process. The findings affirm and extend understandings of sensemaking processes (e.g. Dixon et al. 2017; Drummond et al. 2017; Balogun, Bartunek & Do 2015; Lewis, Mathiassen & Rai 2011) during IT implementation and state that stakeholders’ interpretations of and reactions to change need to be understood as a dynamic and iterative process where understandings and interpretations are negotiated and constructed accounts updated socially on an ongoing basis, and hence, reactions change accordingly over time.

This research makes other theoretical and methodological contributions. It contributes to the existing literature by adopting a sensemaking perspective to investigate and understand CA and CR sensemaking processes during IT implementation. The use of sensemaking as a “sensitizing device” (Klein & Myers 1999) in this study allowed for an interpretive exploration and explanation of stakeholders’ social interactions, meaning construction processes, and their feelings, attitudes and behaviours towards change. This study considered and applied the seven characteristics of sensemaking to operationalise sensemaking theory, inquire into and discuss the research results, and gain rich
insights into how CAs and CRs make sense of change. And further, how their socially constructed accounts influence their reactions (see section 7.3 for a detailed discussion). In addition, the application of the seven properties of the sensemaking shows the potential for the use of a sensemaking perspective in facilitating analysis and understanding of stakeholders’ interactions, interpretations and reactions to improve change management.

A methodological contribution to this research is the adoption of an in-depth case study approach (see chapter 3, section 3.5 for the adopted interpretive case study method) to capture events, actions and stakeholders’ perspectives. This study responds to the call for taking “a step toward a deeper, more thorough understanding of innovation implementation” in organisations by conducting two case studies (multiorganisational) and collecting data from both CA and CR groups (multilevel) and in pre- and post-implementation stages (Klein & Sorra 1996, pp. 1076-1077). By collecting and analysing data at two stages of IT implementation in both case studies, this study has attempted to shed light on CA and CR sensemaking processes and better understand how the two group’s interpretations and reactions to IT implementation were influenced or changed over time.

7.4.2.2 Implications for practice

In this section, a number of implications for practice, drawn from the findings of this research project, are discussed.

People involved in implementing IT change could consider the following suggestions for promoting CR engagement, support and commitment to change and improving the effectiveness and efficiency of the IT implementation process, in order to achieve intended outcomes.

First, it is important that CRs have an appropriate understanding of their role and status in IT implementation. Their understanding of their identity plays a significant role in their interpretation of change and shapes their reactions. CAs should provide opportunities for dialogue, information exchange and transparent relationships in which CRs can gain a better understanding of their roles and responsibilities and the consequences of change for their identity. It is suggested that CAs maintain consistent communication with CRs and consider direct and open information sharing approaches during IT implementation. In this way, they will be able to inform CRs about changes and events, hear and respond to their requests, and exchange concerns. In both cases, many CRs highlighted their position and expressed their expectation of CAs to acknowledge their experience and status, and to further understand and support their requirements. This study suggests that, instead of labelling CRs as static identities and assuming pre-defined conditions for and response from them, CAs should keep
CRs informed about IT implementation and listen to their concerns and responses. CAs should consider involving CRs in a reciprocal process of setting and adjusting expectations about change and each group’s roles and actions. In sum, this research affirms the significance of considering ongoing social interactions and effective communication between CAs and CRs in facilitating the development of mutual understanding and constructing common meanings.

Second, managers and CAs need to pay attention to variations in stakeholders’ interpretations plus discrepancies between CA and CR constructed meanings about expectations of change over time. In both cases, stakeholders appeared to have various appraisals and understandings of IT implementation and its impacts. They also seemed to have different perspectives on the adequacy, appropriateness and fairness of the new changes. This research revealed that the construction of shared meanings and the development of common understandings between CAs and CRs have significant implications for facilitating collective and consonant sensemaking processes, which can make change implementation more effective and sustainable. Lack of common understandings can have negative impacts on stakeholders’ reactions, stimulate unfavourable feelings and attitudes towards change (such as cynicism and scepticism), and diminish stakeholders’ participation and support. CAs should understand and consider CR roles, their information requirements and expectations, communicate relevant, required and expected details of the new changes, and provide them with rationales for change actions and procedures. This study affirms that through constructive social interaction, CAs can help CRs in more comprehensive appraisals and coherent understandings of the potential outcomes and benefits of change for different groups of stakeholders and organisations. Further, involving CRs in the IT implementation process and making them aware of the consequences of change appears to encourage them to engage more actively and cooperate.

Third, although managers and CAs in the two studied cases highlighted the significance of interacting with CRs, they seemed to underestimate the quality, depth and frequency to which communication was needed during IT implementation. Communication, as was previously discussed and emphasised, helps to reduce uncertainty, facilitate understanding and the construction of common meanings, and promote collective and supportive actions. CAs should aim to organise frequent and direct communication with CRs throughout the change process, provide consistent and detailed information, and actively listen to their concerns and feedback. Direct and regular interaction between CAs and CRs increase transparency, reduce misunderstanding and misinterpretation and enhance mutual trust. Besides, open and two-way communication (such as change-related forums and discussion sessions) provide
opportunities for sharing interpretations and discussing concerns and interests, which appear to develop a sense of being recognised, valued and involved and facilitate participation and collaboration.

CAs may consider and adopt various strategies for interacting with CRs; however, they need to consider the appropriateness, adequacy and effectiveness of their tactics in communicating change information, developing their relationships with CRs, and encouraging their active attention and involvement. For instance, if CAs believe that conducting training is not necessary or beneficial for change initiative (as CAs in both cases argued), they should seek other approaches for enhancing social interaction and information exchange. They should provide the opportunity for CRs to engage and be able to express their requirements and perspectives more openly. Some of the approaches mentioned in the two conducted case studies include conducting pilot projects, organising group meetings and change review sessions, arranging open discussion forums, having direct contact with CRs, engaging business managers and power users as communication links and facilitators, and using online suggestion and feedback forms and surveys.

Fourth, this research highlighted that ‘justifying reactions’ influences meaning construction, guides mutual understanding and shapes reactions (see subsection 7.2.4). For instance, the explanations and reasons provided to CRs about the rationale for and significance of IT implementation appear to promote constructive and positive feelings and attitudes towards change and encourage their supportive actions. Similarly, hearing and understanding CR comments about their priorities and requirements, and grounds for their expectations and actions seem to increase sympathy and support from CAs. Therefore, CAs should facilitate an open and ongoing exchange of reasons and justifications for actions and changes. In the first place, they need to communicate outcomes of IT implementation and explain their decisions and plans, so CRs feel confident that the project brings about improvements to their status and processes. When CRs are kept informed about change and believe it is of benefit to them and their organisation, they are likely to accept change and contribute. Further, CAs also should demonstrate that they value and consider CR perspectives, concerns and requirements. It is suggested that they respond to CR needs and queries actively, and if they have to decline a request or defer an action, they need to provide an explanation or compelling arguments.

In addition, this research also offers some suggestions for the professional development of project managers and other CAs. As demonstrated in this study, CAs can use sensemaking as an approach for improving their understandings of CR conditions and interactions with others and the organisational environment. Through sensemaking, CAs may gain a deeper and more comprehensive insight into ‘what is going on’ during IT implementation, and hence improve change management process. This
study suggests that change agent practitioner development should emphasise social aspects of project management and incorporate the set of skills that extends CAs sensemaking capabilities.

Professional development should consider enhancing knowledge and skills for understanding and managing sensemaking processes of CRs during IT implementation. As discussed previously, CRs may manifest various feelings, thoughts and behaviours towards change over time as part of their ongoing sensemaking processes. Further, their reactions are enabled and formed by their ongoing processes of developing mutual understanding and constructing accounts of change through social interaction with others. Thus, a deeper understanding of sensemaking may well provide insights into a better understanding of dynamic and complex reactions of CRs during IT implementation and hence improve the change management process. For this purpose, knowledge about the seven properties of sensemaking can shed light on and facilitate CR sensemaking processes. For example, sensemaking is an ongoing process, so a project manager’s job, for instance, in promoting social interactions, enhancing information exchange and developing mutual understanding never stops. Also, soft skills such as communication, active listening or relationship building can facilitate the construction of common meanings. Project managers should give proper credence to understanding the stakeholder groups’ roles, concerns and constructed meanings, as that appears to improve understanding and management of their expectations and actions regarding change.

7.4.3 Strengths and limitations of this study and suggestions for future research

In this section, the strengths and limitations of this research project are discussed, and areas for future study are suggested.

This research comprised two in-depth case studies that allowed additional comparative analysis. Adopting an interpretive case study method provided detailed and rich insights into particular IT implementations. The researcher also attempted to consider multiple sources of evidence (semi-structured interviews, diaries and documentation) and variety among the research participants (from both CA and CR groups with various roles and responsibilities) to gather more comprehensive and richer data (Liamputtong 2009) and establish a chain of evidence (Yin 2009). In-depth interviews, as the primary method of data collection, enabled the researcher to elicit rich information from the perspective of participants and seek an understanding of their interpretations and reactions to change. The study involved 54 interviews with 29 participants (19 CRs and 10 CAs) at two stages of IT implementation (pre- and post-IT implementation).
This research is not without its limitations. Several issues or limitations may influence the research; however, analysis provides opportunities for improvement, and leaves the door open for future investigations. I started out as an inexperienced researcher. Although I have learnt a lot during my study, I am relatively inexperienced in using data analysis techniques (e.g. coding and establishing totally mutually exclusive categories), and must therefore acknowledge that this may have limited my ability in dealing with the large amounts of qualitative data and interpreting that data as effectively as someone with much experience.

Some potential limitations may exist related to the research methodology and design. For example, due to the nature of case study research, the findings of this research are contextualised and may not be applicable to a broader context; therefore, they are presented as somewhat tentative. In chapter 3, strengths and weaknesses concerning the adopted methodology and design were discussed and arguments put forward to alleviate perceived limitations in this research. For instance, the strengths and weaknesses of interviews and other adopted data collection methods in this research were noted in chapter 3, subsection 3.5.3. In addition, in section 3.6, the researcher considered various solutions and criteria and applied appropriate techniques in order to ensure quality research, to increase the trustworthiness of the data collection and data analysis processes and outcomes, and to enhance the validity of the research findings (Lincoln, Lynham & Guba 2011; Guba & Lincoln 1994).

While multiple approaches were presented and applied to address these limitations, future studies can supplement them with periods of observation during IT implementation. The direct observation method (Yin 2009) allows the researcher to observe interactions between participants during the course of their daily routines and activities, and gain a deeper understanding of their behaviours, conditions and settings. Due to some impediments in finding opportunities for using this method and performing observations to the groups of participants, the application of this method was not possible for the conducted case studies. Observation could provide opportunities to investigate and understand how stakeholders engage in sensegiving activities. Future research may use the direct observation method in a longitudinal study to examine how CAs and CRs influence sensemaking of each other over time and shed light on the dynamics of sensemaking and sensegiving processes between the two groups.

Another potential limitation relates to the implications of the adopted longitudinal data gathering approach in this research for the selection and involvement of the participants. At ExMoney, IT implementation took nine months to complete, and at GovOrg, it took four months. Because there were two rounds of data collection (pre- and post-IT implementation stages) in each case study, this research was unable to include employees who had begun working in these organisations after round one. In
addition, the researcher had to exclude the first round of collected data from participants who were not available for the second round. Although their participation and perspectives might be valuable, including one round of data could lead to challenges regarding the comparability of data, as one of the interests of this research was to investigate the sensemaking processes of stakeholders and their reactions over time.

The findings of this research might have benefitted from collecting data throughout the IT implementation in the two studied cases. However, conducting interviews during the IT implementation was not consider feasible in this study due to the following reasons: a) the implementation time was short in the two studied cases (particularly in GovOrg); b) I was an outsider, and thus not able to engage in casual observations and informal chats throughout the working day; c) participants were usually busy, and it was doubtful that they or their managers would have agreed to further disruptions to their work time to collect more data; and d) it was also questionable if further data collection would have revealed significant new insights. Future research can capture the perspectives of the CAs and CRs and study their sensemaking processes and reactions to change during the IT implementation.

A further point is that although the transferability of the findings has been considered, this study is to some extent bounded by contextual factors and characteristics of both cases. The researcher provided detailed descriptions of the organisations and the context of IT implementation (see chapter 4, sections 4.2, 4.3, and chapter 5, sections 5.2 and 5.3) and, within the scope of this research, discussed some contextual and intervening conditions. Nonetheless, future studies might consider other settings, and investigate and focus on different contextual factors that may influence IT implementation in other organisations. For instance, cultural values and differences were not explicitly examined in this research project. Future research could seek a deeper insight into the impact of culture on stakeholders’ sensemaking processes and their responses to IT implementation. Similarly, although this research conducted two distinct case studies of different IT implementations with different types and magnitudes of changes, a potential limitation is a lack of including other types of IT implementations with quite significant changes in the organisation’s business processes (e.g. a full ERP implementation). The magnitude of change may vary in different IT implementations and is highlighted as a factor that can impact the stakeholders’ responses to change (Fedor, Caldwell & Herold 2006; Jiang, Muhanna & Klein 2000). Future research could, therefore, consider and investigate the implications of more profound or disruptive IT implementations with higher magnitudes of changes in organisations.

Future research may also provide additional insights into sensemaking processes of CAs and CRs by investigating and understanding other factors that may influence their social interaction, identity, and
meaning construction and negotiation. For example, power and political issues may affect CA and CR relationships (Ye et al. 2017; Maitlis & Sonenshein 2010). Therefore, further research direction could explore and understand the influence of power relations between CAs and CRs and the political processes associated with IT implementation on sensemaking and sensegiving processes. Further, social configurations of stakeholders may influence their interactions, mutual engagements and shared understandings. Thus, another useful research direction would be the adoption of the Community-of-Practice concept (Wenger 1998) as a lens for gaining deeper insights into the construction of stakeholders’ collective meaning and sensemaking processes (Weick, Sutcliffe & Obstfeld 2005). Individuals or groups may attempt to influence the sensemaking of others (sensegiving). For example, in both cases, there appeared to be some CAs or CRs that emphasised their conditions and justifications, and promoted their interests and expectations (e.g. see chapter 7, subsections 7.2.4 and 7.3.7). They tried to influence others, and gain and sustain the other group’s buy-in and support. As previously explained, this research did not explore and go in-depth into sensegiving processes within and between stakeholder groups. An opportunity for future research would be to examine and provide more insights into how individuals and groups influence sensemaking of others during an IT implementation.

7.4.4 Concluding remarks

This research project examined, both theoretically and empirically, sensemaking processes of CAs and CRs during change and sought more profound insights into effects of sensemaking on their feelings, attitudes and actions towards IT implementation. The study developed and discussed a model based on substantive findings. Further, it provided multiple theoretical contributions, and practical and managerial implications and suggestions. This research highlighted the need for and significance of understanding stakeholders’ sensemaking processes during IT implementation in improving understanding and management of stakeholders’ reactions, and hence, enhancing the performance and effectiveness of IT implementation and change management. The researcher also suggested some areas for future research to strengthen the validity of the findings and enhance the theoretical and practical applicability of the proposed model. Therefore, while this research project may be over, the research journey has only begun.
Bibliography


Bala, H & Bhagwatwar, A 2017, 'Employee dispositions to job and organization as antecedents and consequences of information systems use', Information Systems Journal, pp. 1-34.


Cascón-Pereira, R, Chillas, S & Hallier, J 2016, 'Role-meanings as a critical factor in understanding doctor managers' identity work and different role identities', Social Science & Medicine, vol. 170, pp. 18-25.


Charmaz, K 2006, Constructing grounded theory: A practical guide through qualitative analysis, Pine Forge Press.

Charmaz, K 2014, Constructing grounded theory, Sage.


Coetsee, L 1999, 'From resistance to commitment', Public Administration Quarterly, pp. 204-222.


Crotty, M 1998, The foundations of social research: Meaning and perspective in the research process, Sage.


Goles, T & Hirschheim, R 2000, 'The paradigm is dead, the paradigm is dead… long live the paradigm: the legacy of Burrell and Morgan', Omega, vol. 28, no. 3, pp. 249-268.


Guba, EG & Lincoln, YS 1989, Fourth generation evaluation, Sage Publications (Newbury Park, Calif.).


Laumer, S 2011, 'Why Do People Reject Technologies–A Literature-Based Discussion Of The Phenomena “Resistance To Change”', Information Systems And Managerial Psychology Research,


Liamputtong, P 2009, Qualitative Research Methods, Oxford University Press, South Melbourne, Vic.


Lincoln, YS & Guba, EG 1985, Naturalistic inquiry, Sage.


Lindberg, MJ, Markman, KD & Choi, H 2013, "'It was meant to be": Retrospective meaning construction through mental simulation',


Mahmud, I, Ramayah, T & Kurnia, S 2017, 'To use or not to use: Modelling end user grumbling as user resistance in pre-implementation stage of enterprise resource planning system', Information Systems, vol. 69, pp. 164-179.


Markus, ML & Tanis, C 2000, 'The enterprise systems experience-from adoption to success', Framing the domains of IT research: Glimpsing the future through the past, vol. 173, pp. 207-173.


Miles, MB & Huberman, AM 1994, Qualitative data analysis: An expanded sourcebook, Sage.


Myers, MD 2013, Qualitative research in business and management, Sage.


Rouleau, L & Balogun, J 2008, 'Exploring middle managers' strategic sensemaking role through practical knowledge,' JMS Conference,

Saldaña, J 2003, Longitudinal qualitative research: Analyzing change through time, Rowman Altamira.


Sarker, S, Chatterjee, S & Xiao, X 2013, 'How "Sociotechnical" is our IS Research? An Assessment and Possible Ways Forward,' 34th International Conference on Information Systems,


Shanks, G, Arnott, D & Rouse, A 1993, A review of approaches to research and scholarship in information systems, Department of Information Systems, Faculty of Computing and Information Technology, Monash University.


Stake, RE 2005, 'Qualitative Case Studies', in NK Denzin and YS Lincoln (eds), The Sage handbook of qualitative research, Sage.

Stake, RE 2013, Multiple case study analysis, Guilford Press.


Strauss, AL 1987, Qualitative analysis for social scientists, Cambridge University Press.


Taylor, MS & Hill, NS 2007, 'The role of affect and leadership during radical organizational change,' Academy of Management Proceedings, 1-6.


Walsham, G 1995a, 'The emergence of interpretivism in IS research', Information systems research, vol. 6, no. 4, pp. 376-394.


Weick, KE 1995, Sensemaking in organizations, Sage.


Yin, RK 2009, Case study research: Design and Methods, Sage.


Appendix A
Interviews Guide

Introduction

Thank you for taking time to answer my questions today.
I should reiterate that:

• There is no right or wrong response.
• This interview will take approximately one hour.

Interview Questions

The following list is the guide for interview questions at two stages of IT implementation: A) pre-implementation and B) post-implementation.

A. Prior to IT implementation
   o Background and position/role/work practices/experiences
     ▪ Your current role…
     ▪ Previous experience of IT implementations…
     ▪ How long in this organization?
     ▪ How willing are you to try out new technologies?
     ▪ What kinds of work do you do? Is it done in groups or mostly alone?
     ▪ How important is this technology to your role?
   o Communication, negotiation, information sharing
     ▪ How did you initially get informed about the IT implementation?
     ▪ What communication and information channels are used?
     ▪ Do you feel you have been adequately informed about the IT implementation?
       • If no, what additional information would be helpful to you?
   o Expectation
     ▪ Do you think the IT implementation will change your role/job?
     ▪ What are the objectives of the IT implementation?
     ▪ What do you expect to change after the IT implementation (strategically, operationally)?
     ▪ Do you think that this project (the IT implementation) will be a success? Why?
     ▪ How do you feel about this change?
   o Meaning construction
     ▪ Do you think that your role and activity is well understood by change agents?
     ▪ Have you had any training in anticipation of the new system?
     ▪ Do you think there will be any major problems in implementing this system? What will be the largest impediments to this change be?
   o Interactions
How involved do you feel in the IT implementation process? Can you influence the IT implementation in any way?

Are you confident that all your requirements will be met by the new system?
- Are there any important information/requirements that others/you did not consider?
- If you have concerns, what are you doing about that?

CRs: Have you met the change agents (e.g. project manager or a member of the change management team)? Do you feel that they will manage the project well?

Reactions to change
- In what ways can you contribute to the IT implementation process?
- What does the change mean to you? How do you think you will be affected by the IT implementation?

B. After IT implementation

Communication, negotiation, information sharing
- What communication and information channels were used?
- Do you feel you have been adequately informed about the change?
  - If no, what additional information could be helpful to you?

Expectations
- What were the objectives of the IT implementation?
- What did you expect to change after the IT implementation?

Meaning construction
- How did you learn your new working processes, and what learning methods were used? Could you give example of both formal and informal methods?
- What was going well about the change and why?
- What was not working well and why?
- Are there any discrepancy between what you expected from the IT implementation and your experience (perception) of it?
  - Can you tell me about it?
  - What turned out as intended, what did not?
- Do you think your colleagues have the same experiences of the change/events?

Perceptions, change experience
- How do you feel about the change?
- Describe how the IT implementation went about?
- Has your view (expectations) changed after the IT implementation finished?
- What has been changed during the IT implementation?
- What impacts do these changes have on your role, responsibilities, and activities?
- Do you think there was any major problem in implementing the system? What were the largest impediments to the change?
- What are the main areas for improvement?
- Do you think that this project was a success? Why?

Interactions
- How involved did you feel in the IT implementation process? Could you influence the IT implementation in any way?
- Were there any important information/requirements that others/you did not consider?
Did the management/implementation team or users consider those areas that you expected?
  • How did you communicate your requirements/expectations/thoughts and suggestions?
• What are your perceptions about how the IT implementation process in your organisation compares to other organisations you are familiar with, on the whole or in terms of communication, engagement and support?

- Reactions to change (IT implementation)
  • How did you deal with the issues/changes instigated by the IT implementation? Can you give me an example?
  • Contribution
    • Why did (did not) you contribute to the change?
    • What were your contributions to the change process?
  • Did you see any behaviours or interactions that you would describe as problematic?
  • Were there individuals/groups that had incommensurable beliefs and, if so, why and what can be their effects?
  • If there were one thing you would change about the IT implementation process if you could, what would it be?
Appendix B
Diaries Guide

Introduction
Thank you for your participation in this research project and taking time to answer some questions about the IT implementation in your organisation.

Diary Questions
Please answer the following questions regarding the IT implementation in your organisation. Please state any reasons or factors that influenced the implementation process.

1) What is going well and why?

2) What is going badly and why?

3) How do you feel about the change taking place?

4) What have been the significant events?

5) What problems do you foresee?

6) What could be done to improve the IT implementation process?
7) What have you heard or read about the IT implementation?

8) For each of the following questions, please choose only one option:

<table>
<thead>
<tr>
<th>Number</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I feel informed about the changes and the IT implementation process</td>
</tr>
<tr>
<td>2.</td>
<td>I feel that my concerns are heard/addressed</td>
</tr>
<tr>
<td>3.</td>
<td>I am satisfied with the IT implementation progress to date</td>
</tr>
<tr>
<td>4.</td>
<td>I believe the change will have a positive effect on our operations/services</td>
</tr>
<tr>
<td>5.</td>
<td>Overall, I am confident that the IT implementation will be successful</td>
</tr>
</tbody>
</table>

9) Would you like to add any other comments?
Appendix C
An example of using initial coding

<table>
<thead>
<tr>
<th>Examples of Initial Codes</th>
<th>Excerpt from a CR Interview Transcript</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being non-standard user</td>
<td>Q: How do you feel about the process? Do you think there was any major problem in rolling out the changes?</td>
</tr>
<tr>
<td>Experiencing disruption</td>
<td>A: Well, a lot of the users are not standard users. So, we ended up loading a lot of software and resetting everything up again, so it took us a long time to get the PC back operational. We don’t use Word and Excel as our main applications. We’ve got 3D models and GIS (Geographic Information System) stuff, all that sort of stuff which we load back on again. It all may take us a week to get the base system sorted out, up and running. Because they (the CAs) have got things on there that just don’t make sense. They haven’t given people permissions that they were supposed to have and all the rest of it. So, it wasn’t a straightforward process.</td>
</tr>
<tr>
<td>Getting back operational</td>
<td></td>
</tr>
<tr>
<td>Having special requirements; Using special apps; Explaining needs</td>
<td></td>
</tr>
<tr>
<td>Needing/expecting special consideration; Not being understood</td>
<td></td>
</tr>
<tr>
<td>Criticising plans</td>
<td></td>
</tr>
<tr>
<td>Getting expected permissions; Getting expected service/support</td>
<td>Q: What about the communication? Do you feel you have been adequately informed about the new changes?</td>
</tr>
<tr>
<td>Having negative feeling about the process</td>
<td>A: They should have had the information session; they should have had training sessions, not a three or four-day training session but at least a half day training session or information session telling staff what’s different, how it’s going to be run compared to what they were used to in XP and the likes. CA7 created a couple of tips and tricks sheets that was left on the desk as a welcome pack, and that is about the size of the change communication that went in with this particular project, which is most unusual but not uncommon for this organisation.</td>
</tr>
<tr>
<td>Expecting information sessions</td>
<td></td>
</tr>
<tr>
<td>Expecting training; Explaining required communication</td>
<td></td>
</tr>
<tr>
<td>Getting information about the new features/changes; Feeling uninformed</td>
<td></td>
</tr>
<tr>
<td>Explaining experienced communication</td>
<td></td>
</tr>
<tr>
<td>Criticising communication</td>
<td></td>
</tr>
<tr>
<td>Criticising change management</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix D

An example of developing focused codes

<table>
<thead>
<tr>
<th>Examples of Focused Codes</th>
<th>Excerpt from a CR Interview Transcript</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being understood</td>
<td>Q: How do you feel about the process? Do you think there was any major problem in rolling out the changes?</td>
</tr>
<tr>
<td>Experiencing issues</td>
<td>A: Well, a lot of the users are not standard users. So, we ended up loading a lot of software and resetting everything up again, so it took us a long time to get the PC back operational. We don’t use Word and Excel as our main applications. We’ve got 3D models and GIS (Geographic Information System) stuff, all that sort of stuff which we load back on again. It all may take us a week to get the base system sorted out, up and running. Because they (the CAs) have got things on there that just don’t make sense. They haven’t given people permissions that they were supposed to have and all the rest of it. So, it wasn’t a straightforward process.</td>
</tr>
<tr>
<td>Valuing users’ requirements and priorities</td>
<td></td>
</tr>
<tr>
<td>Criticising change process</td>
<td>Q: What about the communication? Do you feel you have been adequately informed about the new changes?</td>
</tr>
<tr>
<td>Having negative feelings about the process</td>
<td>A: They should have had the information session; they should have had training sessions, not a three or four-day training session but at least a half day training session or information session telling staff what’s different, how it’s going to be run compared to what they were used to in XP and the likes. CA7 created a couple of tips and tricks sheets that was left on the desk as a welcome pack, and that is about the size of the change communication that went in with this particular project, which is most unusual but not uncommon for this organisation.</td>
</tr>
</tbody>
</table>

| Undergoing ineffective communication    |                                                                                                         |
| Feeling uninformed                      |                                                                                                         |
| Criticising communication strategy      |                                                                                                         |
Appendix E

List of focused codes

<table>
<thead>
<tr>
<th>List of focused codes from the two cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accepting new changes; Adapting to change; Anticipating a smooth change; Appreciating user support; Assessing change and its impacts; Assessing user requirements and expectations; Being acknowledged; Being affected by group pressure; Being busy; Being doubtful about change benefits; Being forced to adopt change; Being happy with the change process; Being informed; Being involved; Being pessimistic about the change; Being prepared for changes; Being satisfied; Being satisfied with change process; Being unaware of change impacts; Being understood; Blaming change agents; Blaming change management; Communicating consistently; Comparing change experiences; Complaining about change process; Comprehending change; Confronting change; Cooperating with organisation; Criticising change planning; Criticising change process; Criticising communication strategy; Criticising multiple changes; Criticising poor project timing; Dealing with people who push back change; Dealing with personality conflicts; Dealing with unexpected changes; Defending communication process; Emphasising external issues; Encouraging stakeholders to participate; Expecting effective support; Experiencing unexpected issues; Facilitating open discussions about change; Facing unexpected issues; Fearing for losing autonomy and access; Fearing for not knowing new changes; Feeling afraid of disruptions; Feeling a predetermined plan; Feeling confused; Feeling disillusioned; Feeling forced to accept change; Feeling frustrated; Feeling ignored; Feeling involved in change planning; Feeling isolated; Feeling of having influence; Feeling pressure; Feeling resentful of constant criticism; Feeling uninformed; Feeling unsatisfied; Forcing users to accept change; Gaining and sustaining buy-in; Getting surprised with unexpected changes; Getting used to new system; Having a sense of loss; Having direct communication with users; Having negative feelings about change; Helping/supporting team members; Informing stakeholders early; Interacting with users; Interpreting user reactions; Involving stakeholders in change process; Justifying change initiative; Justifying concerns; Keeping stakeholders informed; Learning from others; Learning from previous issues; Linking change acceptance to time; Losing productivity; Meeting project deadline; Perceiving CAs’ experience and expertise; Perceiving change benefits; Presenting self; Projecting responsibility onto others; Providing consistent support; Providing constant and easy support; Reducing complexity; Refusing change; Resolving disputes; Seeing change benefits; Settling down before new changes; Showing appreciation; Speaking different languages; Supporting change; Understanding and acknowledging CAs; Understanding conditions and motivations for change; Undergoing ineffective communication; Understanding actions; Valuing users’ requirements and priorities</td>
</tr>
</tbody>
</table>
## Appendix F

### An example of a summary table of a category

<table>
<thead>
<tr>
<th>Category: Having negative feelings and attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focused Codes</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>• Negative feelings such as pressure, threat, frustration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Negative attitudes such as cynicism</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conditions in which the category arises, is maintained, or changes</th>
<th>• Having negative previous change experience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Assessing change and judging its impacts</td>
</tr>
<tr>
<td></td>
<td>• Experiencing unexpected or unfavourable outcomes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consequences</th>
<th>• Negative feelings and attitudes can cause stakeholders to resist the IT implementation.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Negative feelings and attitudes toward change can spread quickly if not considered and managed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emerging questions that are relevant to the category</th>
<th>• Do stakeholders’ feelings and attitudes toward IT implementation change over time? If yes, why and how?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• How does stakeholders’ understanding of the change influence their feelings and attitudes?</td>
</tr>
<tr>
<td></td>
<td>• Is there a relationship between stakeholders’ feelings and attitudes and their reactions to change?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related categories</th>
<th>• Assessing change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Resisting change</td>
</tr>
</tbody>
</table>
### Appendix G

**List of constructed categories and themes for CRs**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing mutual understanding</td>
<td>Being acknowledged</td>
</tr>
<tr>
<td></td>
<td>Understanding actions and conditions</td>
</tr>
<tr>
<td></td>
<td>Understanding CAs</td>
</tr>
<tr>
<td>Appraising change and constructing meanings</td>
<td>Anticipating a smooth change</td>
</tr>
<tr>
<td></td>
<td>Assessing change and its impacts</td>
</tr>
<tr>
<td></td>
<td>Getting used to changes</td>
</tr>
<tr>
<td></td>
<td>Getting surprised with unexpected changes</td>
</tr>
<tr>
<td></td>
<td>Interpreting events and actions</td>
</tr>
<tr>
<td>Interacting with others</td>
<td>Interacting with others</td>
</tr>
<tr>
<td></td>
<td>Communicating with others</td>
</tr>
<tr>
<td>Feeling involved</td>
<td>Being informed</td>
</tr>
<tr>
<td></td>
<td>Feeling involved</td>
</tr>
<tr>
<td>Seeking benefits</td>
<td>Benefiting from change</td>
</tr>
<tr>
<td></td>
<td>Being forced to adopt change</td>
</tr>
<tr>
<td>Attitudes and reactions</td>
<td>Having positive feelings and attitudes</td>
</tr>
<tr>
<td></td>
<td>Having negative feelings and attitudes</td>
</tr>
<tr>
<td></td>
<td>Resisting change</td>
</tr>
<tr>
<td></td>
<td>Supporting change</td>
</tr>
<tr>
<td>Justifying reactions</td>
<td>Criticising change process</td>
</tr>
<tr>
<td></td>
<td>Justifying reactions to change</td>
</tr>
<tr>
<td></td>
<td>Validating self</td>
</tr>
</tbody>
</table>
## Appendix H

### List of constructed categories and themes for CAs

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing mutual understanding</td>
<td>Being acknowledged</td>
</tr>
<tr>
<td></td>
<td>Understanding CRs and their needs</td>
</tr>
<tr>
<td>Appraising change and constructing meanings</td>
<td>Assessing change</td>
</tr>
<tr>
<td></td>
<td>Learning from change</td>
</tr>
<tr>
<td></td>
<td>Interpreting CRs’ reactions</td>
</tr>
<tr>
<td>Interacting with others</td>
<td>Interacting with others</td>
</tr>
<tr>
<td></td>
<td>Communicating with CRs</td>
</tr>
<tr>
<td></td>
<td>Providing support</td>
</tr>
<tr>
<td>Feeling involved</td>
<td>Keeping CRs informed</td>
</tr>
<tr>
<td></td>
<td>Involving CRs in change process</td>
</tr>
<tr>
<td></td>
<td>Feeling involved</td>
</tr>
<tr>
<td>Seeking benefits</td>
<td>Benefiting from change</td>
</tr>
<tr>
<td>Attitudes and reactions</td>
<td>Having negative attitudes</td>
</tr>
<tr>
<td></td>
<td>Having positive attitudes</td>
</tr>
<tr>
<td></td>
<td>Supporting CRs and change</td>
</tr>
<tr>
<td></td>
<td>Improving implementation process</td>
</tr>
<tr>
<td>Justifying reactions</td>
<td>Criticising CRs reactions</td>
</tr>
<tr>
<td></td>
<td>Justifying change and change actions</td>
</tr>
<tr>
<td></td>
<td>Validating self</td>
</tr>
</tbody>
</table>
Appendix I
More examples of participants’ perspectives (ExMoney)

Table I.1: More examples of CAs’ perspectives and comments (ExMoney)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CAs, ExMoney)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Developing mutual understanding | Being acknowledged | The major investment of our company is in IT, and it forms the basis of our company. Most of the services our company offers are based on IT, and the reason is not the low cost that IT has comparing to the high cost of employees here, but because of new and better services, the lower rate of human errors, easier management and fewer challenges. (CA3, Round 1) | - Understanding the significance of the IT implementation  
- Understanding CAs’ requirements  
- Expecting CRs’ acknowledgement and appreciation of the role of IT                                                                                                                                                                                                                           |
| Being acknowledged           |                   | This is a very competitive market. There are many big companies and small businesses in this industry, and all trying to do the currency exchange and money transfer. We need to provide high-quality services and be very efficient and quick. We need to reduce our costs so that we can offer better rates. It is all about costs and rates … IT has helped us to provide better services with lower costs, and also reach more customers in different countries and cities … From the accounting point of view, we need to be able to monitor, control and manage all transactions in an integrated system, and to see transactions of our branches and track them almost instantly. We need more reports … we need to improve our system; it is vital for us to update our accounting system and add many more features. (CA4, Round 1) | - Expecting CRs’ acknowledgement of the significance of IT services in their organisation  
- Expecting CRs’ understanding and support of the CAs’ decisions and plans  
- Developing services and maintaining market position through IT  
- Reducing costs and improving the quality of service                                                                                                                                                                                                                           |
| Being acknowledged           |                   | 15 years ago, I passed an intensive course of programming because of my interest in IT. I wrote a few software programs ... I have always been working in financial services, and during this period, my companies always provided online and web-based services. I have managed many IT projects and used IT to provide innovative financial services… We have a small but strong team of experts in finance and IT here to accomplish this project. (CA3, Round 1) | - Expecting CRs’ understanding and acknowledgment of the role of the CAs  
- Highlighting expertise and experiences                                                                                                                                                                                                                                                             |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CAs, ExMoney)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Being acknowledged    |                           | I’m a qualified accountant and for more than 25 years I was working in different industries. Recently, during the last two years, I started to work with ExMoney as the manager of financial services and particularly currency exchange services. Before, I worked around ten years in Australia, in one of the biggest oil companies, and I have been involved in many IT projects. (CA1, Round 1) | - Emphasising knowledge and experiences  
- Explaining relevant knowledge and expertise  
- Expecting CRs’ acknowledgement                                                                                                                                                                                                    |
| Being acknowledged    |                           | As an accountant, I’ve been involved in implementing financial and administration systems for different clients, because I was also a partner in a chartered accountant firm. So, we had clients that needed systems to be implemented. Also, I implemented a financial accounting system for superannuation, which was in the 1980s. I’m talking about a situation where there was absolutely no accounting system or superannuation that anyone could copy or implement or revise. So, I created from scratch an accounting system for superannuation funds that is probably being used today all over places. … So, I do have enough experience, I suppose, to talk about IT implementation and decide about the future changes. (CA1, Round 1) | - Explaining previous background  
- Highlighting having the required knowledge and expertise in planning and conducting IT projects  
- Expecting CRs’ acknowledgement and understanding                                                                                                                                                                                                 |
| Being acknowledged    |                           | I’ve been working in IT for more than 18 years, and have worked professionally in various roles such as system and database designer, business analyst, senior web and mobile application developer and project manager… [e.g.] as a team leader in ACo, which is one of the biggest software companies developing and providing accounting and financial software solutions. So, I’ve managed similar projects successfully, and we’ve planned to implement an integrated accounting solution in ExMoney, which I believe will yield significant results in performance and accuracy for both the company and users. (CA6, Round 1) | - Emphasising having relevant experiences  
- Presenting knowledge and expertise  
- Expecting CRs’ acknowledgement  
- Expecting CRs’ understanding and support of decisions and actions                                                                                                                                                                   |
| Understanding CRs and their needs |                           | We had to do some changes to the project scope, but the project mainly progressed as planned. We understand the users’ concerns. We know what their needs are. But, there are differences in priorities, and some changes depend on conditions. We needed to ensure that we would achieve the accounting transparency, reliability and accuracy, and we would have the integration between the accounting and the Administration system. Though, that [the change] wasn’t without its problems. There are some issues and inconsistencies, but we are working on them. (CA4, Round 2) | - Emphasising the organisations’ priorities and requirements  
- Understanding others and valuing their concerns  
- Expecting CRs’ patience, understanding and support  
- Expecting CRs to understand and acknowledge CAs’ role and efforts                                                                                                                                                                     |
<p>| Establishing change   |                           | We have had a 3-year experience in Australian Market here, during which we received many suggestions and feedback to develop our system. One part of the                                                                                                                                                                                                                               | - Emphasised the importance of the IT implementing                                                                                                                                                                                      |</p>
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CAs, ExMoney)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appraising change and constructing meanings</td>
<td></td>
<td>Feedback was about small changes, which we did on our [existing] system. And another part was about changing the system fundamentally and adding many new features. A goal was to increase the role of technology and decrease manual steps in our system. We plan to improve our accounting process and develop an integrated system. (CA3, Round 1)</td>
<td>- Explaining motivations for the new system implementation</td>
</tr>
<tr>
<td>Establishing change</td>
<td></td>
<td>In addition to interface and appearance of the system … the security section is another important section in which we have always been confronted with some serious problems, and we were lucky that our system has not been damaged. We have to make a great change to the security section of our system and websites. So, we have devised a plan in which all parts of the system from the user interface to the very internal parts, architecture and even hosting [service] are undergoing changes. This significant change will improve our security and paves the way for our new services. (CA3, Round 1)</td>
<td>- Highlighting the objectives of the IT implementation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The most important service in our company is transferring money. 70 to 80 per cent of the profit comes from money transfer services. But, we had some limitations and inconsistencies in our online money transfer and currency exchange processes because of the issues in our previous accounting and Admin systems. Now, many of our services are automated and can be managed centrally through IT. For example: customers’ notifications, customers’ profiles, customers’ documents management, money transfer or currency exchange requests, payments management, integrated accounting, and branch management. (CA3, Round 2)</td>
<td>- Highlighting the objectives of the IT implementation</td>
</tr>
<tr>
<td>Interacting with others</td>
<td>Communicating with others</td>
<td>… There are two different languages between accounting and IT guys. If we can talk in one language, everything will go smoothly. Otherwise, no one understands one another. … We have to talk in a common language, one language, this is very important first of all to find the way we are going to communicate together with the IT guys and users … so we know what users want and know what we have to provide that. At the end of the day, we have to understand each other. (CA4, Round 1)</td>
<td>- Communicating change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sometimes we [CAs] talk about the system development and implementation, but we haven’t had a meeting for this purpose in a while. Because, we are very busy and I have many other things to do. … Usually CA3 and I talk about the project progress or changes, but we don’t have regular meetings with users. I</td>
<td>- Having direct communication with CRs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Considering an effective communication approach</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Understanding others</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Undergoing ineffective communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Having regular and direct interactions with all the CR groups</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CA6, Round 2)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Feeling involved      | Involving CRs in change process | have had only a couple of short meetings with some key accounting users to discuss their requirements and changes, which I found them very helpful. I believe we should have more meetings with users. … In our meetings, I found out that they [CRs] are not aware of the implementation plan and some changes. Sometimes they were shocked to hear about the changes that we were working on them. | - Emphasising the need for discussion meetings and training sessions with CRs  
- Discussing/reviewing the changes with CRs  
- Explaining the lack of awareness and understanding among CRs about the IT implementation |
| Keeping CRs informed  |                                  | I always consult with them [CRs]. They always give me feedback. Our colleagues in other branches or the ones here call me and tell me their opinions. For example, I wanted to reduce the online charges; I consulted everyone. Although it was an operational change, not a change in the system, I asked for others’ opinions too. And now they are aware of the big picture of the changes in the system. … I usually ask for employees’ feedback because they have more communication with clients than I do, they work with the system and know all the details. And based on the feedback I receive from the employees or the clients, I try to improve our system or the processes. | - Involving CRs in decision-making  
- Asking CRs to give suggestions and feedback  
- Enhancing interactions with CRs  
- Communicate the project objectives and plans  
- Motivating CRs to participate in the IT implementation |
| Seeking benefits      | Benefiting from change          | We accomplished a very important IT project, and we achieved almost all of our goals. We have moved forward step by step based on our plan and we began to see the positive outcomes of the changes. 70% of the changes were made to ease our employees’ jobs and 30% of the changes were for customers and the facilities we considered for them… I can see the positive effect of the project on the performance of the teams, and errors have been significantly reduced. | - Highlighting the significance and benefits of the IT implementation  
- Explaining the achieve benefits of change  
- Emphasising the effectiveness of the IT implementation |
| Attitudes and reactions | Having negative                 | Well, I think people who are involved should make sure the IT implementation is successful. But to me, it's not being followed in the right way. Simple as that! But I think we will go down on this track, and we will have to do some U-turns, |
|                       |                                 |                                                                                       | - Feeling frustrated  
- Having negative attitudes toward the IT implementation process |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CA, ExMoney)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| feelings and attitudes | come back and fix a whole lot of things, and go forward. Because nobody is considering the financial information or the accuracy of financial information. I know that they are trying a trial and error approach, and all of a sudden, they say “debts are credits and credits are debts!” All that sort of thing. (CA1, Round 1) | - Criticising decisions and actions  
- Doubting change effectiveness |
| Dealing with Resistance | As I said this is a strategy, and we try to conform to this strategy; I mean the strategy shouldn’t undergo changes so that we feel comfortable, but we have to adapt to the way it works. … This is our strategy to use new IT solutions. It’s not a show-off, it is a need, and I believe in it. The ones working here are aware that the manager of this company likes everything to be automatically done and be based on IT. So, if anyone doesn’t like the system, we don’t make them stay here; we try to find people who think as we do. (CA3, Round 1) | - Explaining approach to respond to CRs’ reactions  
- Dealing with resisting CRs  
- Highlighting the significance of the IT implementation  
- Expecting the CRs to comply with and support the changes |
| Having positive feelings and attitudes | [IT implementation] has helped us follow the rules, improve our practices and reduce human errors. These are the points which are of high importance to me. The new system has made the users’ job much easier, and at the same time very accurate… IT implementation definitely has improved our work and services. There have been some small issues, which have been addressed or resolved. But, overall, I am satisfied with the project. (CA3, Round 2) | - Stating positive feelings and attitudes towards the IT implementation  
- Promoting change approach and the achieved outcomes  
- Feeling satisfied with the IT implementation  
- Supporting the change and attained results |
| Having positive feelings and attitudes | *The accounting system is the most important thing that is running in this company. We can’t have our systems fail. Among others, the managing director [CA3] and the accounting manager [CA4] have fully supported the new system implementation… I believe we have achieved all of the objectives that we set out for this project. (CA6, Round 2) | - Supporting the change and achieved outcomes, emphasising the change effectiveness  
- Highlighting the significance of the change  
- Explaining the top management support |
| Having negative feelings and attitudes | There has been a lot of changes [to our system] over the past years. And, I think this is not going to be the last change. We will have some other changes and updates again six months later… So, we have to spend quite a bit of time and effort to keep track with new changes. I think changes should be made once every two years. It is better, considering the costs and efforts. Even [the] smallest changes can affect the whole system… It gets tiring after a while. We are not an IT company; we are a currency exchange company. (CA4, Round 2) | - Expressing dissatisfied with the change process and the achieved outcomes  
- Being unhappy with the faced challenges  
- Feeling of being overwhelmed by continual change |
| Justifying reactions | There are changes that I have thought about them for a long time, and I believe they must definitely be done. That is, they have so many benefits that it worth doing them even if they double others’ jobs. For example, the transactional | - Justifying change decisions and actions  
- Highlighting the benefits of the IT implementation |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CAs, ExMoney)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Justifying change actions</td>
<td>approval procedure that we added to the system; it adds to employees’ jobs, but it is worth it. (CA3, Round 1)</td>
<td>- Expecting the CRs’ support and cooperation&lt;br&gt;- Expecting CRs’ understanding&lt;br&gt;- Explained limitations of the previous system&lt;br&gt;- Emphasising the need for change&lt;br&gt;- Highlighting change objective&lt;br&gt;- Justifying change decision and actions</td>
</tr>
<tr>
<td></td>
<td>Justifying change actions</td>
<td>I spend some six months of my time manually checking the system that had no beginning and end, and there was no information you could rely on, you didn't know what information had gone where, how this outcome was achieved. So being a little bank, because the money is dealt with like a bank, I thought we should have a smart system that accounts for every cent. (CA1, Round 1)</td>
<td>- Explained limitations of the previous system&lt;br&gt;- Expecting the CRs’ support and cooperation&lt;br&gt;- Highlighting the need for change&lt;br&gt;- Emphasising the need for change&lt;br&gt;- Justifying change objective&lt;br&gt;- Explaining the need for change&lt;br&gt;- Defending change&lt;br&gt;- Highlighting the need for and importance of the IT implementation&lt;br&gt;- Justifying the organisation’s priorities and requirements</td>
</tr>
<tr>
<td></td>
<td>Justifying change actions</td>
<td>The feedback that the manager [CA3] is getting is that you just fix the Administration system, and it will feed through another system and the financial transactions will come out of it, but it hasn't happened for about three years. And it (their old system) was absolute crap in terms of the records they got out of the system. They didn't know what profitability and cash flow they had. They didn't know margins. And that to me is the biggest problem. If you don't reconcile every person's account on your system, you don't know what to do. The financial system for a financial services company is number one or as equal number one as the Administration system. And the focus should not be purely the Administration system. (CA1, Round 1)</td>
<td>- Explained limitations of the previous system&lt;br&gt;- Expecting the CRs’ support and cooperation&lt;br&gt;- Highlighting the need for change&lt;br&gt;- Emphasising the need for change&lt;br&gt;- Justifying change objective&lt;br&gt;- Explaining the need for change&lt;br&gt;- Defending change&lt;br&gt;- Highlighting the need for and importance of the IT implementation&lt;br&gt;- Justifying the organisation’s priorities and requirements</td>
</tr>
<tr>
<td></td>
<td>Justifying change actions</td>
<td>In the current system, ExMoney has a separate accounting system in each of its main branches [in each country]. So, basically accountants have to register transactions, export them to Excel files and send them via email to the head office. This process takes lots of time; it is not secure and accurate. Sometimes they face huge discrepancies and cannot resolve them easily. It’s maybe easy for branches to work with small systems, export their local records and send them to the head office, but it’s not easy at all for accountants here to process them and manage them. To be honest, it’s just a mess! But, the new system will bring integrity, security, accuracy and real-time processing. All transactions will be automatically registered in an integrated accounting system. (CA6, Round 1)</td>
<td>- Explained limitations of the previous system&lt;br&gt;- Expecting the CRs’ support and cooperation&lt;br&gt;- Highlighting the need for change&lt;br&gt;- Emphasising the need for change&lt;br&gt;- Justifying change objective&lt;br&gt;- Explaining the need for change&lt;br&gt;- Defending change&lt;br&gt;- Highlighting the need for and importance of the IT implementation&lt;br&gt;- Justifying the organisation’s priorities and requirements</td>
</tr>
<tr>
<td></td>
<td>Justifying change actions</td>
<td>We make reports and after that, extract those reports and import them into other accounting systems, which is very complicated, very frustrating procedure, but at this stage, we have to do that, and we have no choice during this transition. (CA4, Round 1)</td>
<td>- Explained limitations of the previous system&lt;br&gt;- Expecting the CRs’ support and cooperation&lt;br&gt;- Highlighting the need for change&lt;br&gt;- Emphasising the need for change&lt;br&gt;- Justifying change objective&lt;br&gt;- Explaining the need for change&lt;br&gt;- Defending change&lt;br&gt;- Highlighting the need for and importance of the IT implementation&lt;br&gt;- Justifying change objective&lt;br&gt;- Explaining the need for change&lt;br&gt;- Defending change&lt;br&gt;- Highlighting the need for and importance of the IT implementation&lt;br&gt;- Justifying the organisation’s priorities and requirements</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, ExMoney)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>---------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Developing mutual understanding         | Being acknowledged | I expect that they [CAs] care as much as I do about the process, my needs and the issues I encounter, and understand that this accounting system is important for me. When I find an issue in the system or inform them about a deficiency, I expect they inform me of any changes they make and the process of resolving that issue or improving it; that they let me know whatever steps they take in order to develop the system or address our problems; or [inform me about] …their plan and the time that it will be implemented. ... So that I know they are doing something to improve it. Otherwise, I would think I needed a change or suggested a feature, but nothing happens…; or have found an issue, and I see that issue every day. When I don’t receive any response, I think I have done something useless. (CR6, Round 1) | - Expecting CAs’ acknowledging and understanding of CRs’ requirements  
- Expecting to be heard and responded to  
- Expecting CAs to value and respond to CRs’ concerns and priorities  
- Being considered                                                                 |
| Being acknowledged                      |                | If they [CAs] respect my ideas and care about what I say, I am willing to help and work with them to improve the system. They aren’t supposed to remove all the issues in a short period and all at the same time. I understand that it takes time if we want to develop the software. Even I have no problems if I know that the system issues will be resolved in the next few months. (CR6, Round 1)                                                                 | - Expecting CAs to acknowledge the CRs’ work  
- Expecting CAs to value CRs’ experience and knowledge  
- Being respected  
- Expecting CAs to consider CRs’ opinions and concerns                                                                 |
| Being acknowledged                      |                | Most of the times the manager of the company decides these changes and plans personally. So as a user, I usually become aware of it when it’s almost done and is about to be uploaded and used. Thus, I suppose, I am usually the last guy. The manager tells his requirements to the development team, or asks the team to implement them with high priority, and finally, we realise those changes. (CR1, Round 1)                                                                 | - Being informed about change details  
- Being considered in the IT implementation  
- Expecting CAs to consider CRs’ priorities and concerns                                                                 |
| Understanding others/changes/conditions |                | There are some accounting systems available, but they [CAs] have decided to replicate them again. In my opinion, they are almost similar [sic] and with the same features. (CR1, Round 1)                                                                                                                                                 | - Explaining understanding of the change  
- Doubting change effectiveness and achieving desired outcomes                                                                 |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CRs, ExMoney)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Appraising change and constructing meanings | Assessing change; Evaluating change process | I’ve heard that the new accounting system will help us to register and manage our financial records and transactions better. As I know, we’re going to have an ‘integrated accounting system’. I’m not quite sure what that’ll be like, what’s the plan or to what extent that’s going to impact us. We’ve had some discussions about our issues and needs with the team. To be honest, I am not quite sure about the plan, but hopefully, we will get there… from what I’ve seen so far, I suppose we still have a long way to go. Don’t get me wrong; I am not pessimistic. We have seen very helpful updates in our IT system, and we have a strong IT team. I mean, this is not an easy change; it is complex and critical. We can’t afford to have issues, inconsistencies or disruptions at this level and system [accounting]. (CR9, Round 1) | - Expecting being information about the IT implementation  
- Evaluating the change and its impacts  
- Appraising the IT implementation  
- Comparing with previous change experiences  
- Feeling uncertain and unconfident about the functionality and performance of the new system |
| Assessing change; Evaluating change process | I had a problem last month and sent a note about it, after a while, they fixed that issue. I told CA3 in a meeting that their [the implementation team] support of the system has been strong. About the new system, I am sure it’ll be helpful and complete. If I have a problem or need something, I’ll tell them, and again I’m sure they’re going to deal with that. CA3 just said that we are toward progress … [and] the development team is doing well. He also promised to inform the team of our concerns. He said he believes that the [implementation] team is doing its tasks well, and the problems will be solved soon. (CR7, Round 1) | - Feeling confident about the change process  
- Trusting CAs’ expertise and decisions  
- Expecting a successful IT implementation  
- Having positive previous change experiences  
- Acknowledging CAs’ skills and commitment in providing better solutions |
| Evaluating change process | We believe in ExMoney and its IT team, and usually, we all assume that if there is an issue, it will be fixed in the shortest possible time, even if we aren’t informed about it. I trust them so much that I expect when I report a problem, the next day I go to work, and it is resolved. (CR6, Round 1) | - Trusting CAs’ expertise and decisions  
- Acknowledging CAs’ consideration and support |
| Assessing change | I believe that the changes are to resolve the problems we reported and discussed in our meetings. I am sure that the new system will make the work easier for the staff. Definitely, the changes are to our advantage. (CR8, Round 1) | - Assessing the change  
- Supporting the IT implementation |
| Evaluating change process; Getting surprised with unexpected changes | When they [CAs] announced the system development, we did not know what to expect. After a while, we realised that it’s going to include a new accounting system and several changes in other systems. Some of my colleagues were anxious about the feasibility of some of the changes … [After go-live] our working process was changed completely. In the beginning, it was very confusing. There were many conflicts. We had many issues, and we had to check imported records and accounts. It’s a significant pressure and workload | - Encountering complexities and uncertainties  
- Comparing change experiences to understand the IT implementation impacts  
- Interpreting events and evaluate conditions  
- Assessing change process  
- Getting surprised |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CRs, ExMoney)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluating change process;</td>
<td>Getting surprised with unexpected changes</td>
<td>I didn’t know that I didn’t know that [a process change in the accounting system] at all. I didn’t know, and I don’t agree with it. They (the CAs) didn’t tell me about it, as I’m responsible for customers’ transactions in Australia, but it seems that there are many changes that are not communicated. It should be confirmed with users and tested. Otherwise, it will for sure cause trouble. When there is a change in the system, users must cope with it. They must inform users that “these are the new changes”, and provide them with some training. They should keep them informed. They shouldn’t put users in trouble. Managers have changed the system many times, and it seems things have not got any better, and I don’t think users accept doing things differently every day. (CR5, Round 2)</td>
<td>- Feeling uncertain about the changes&lt;br&gt;- Expecting getting informed about the system&lt;br&gt;- Getting surprised with unexpected changes and updates&lt;br&gt;- Feeling confused of unplanned changes&lt;br&gt;- Experiencing issues and disruptions&lt;br&gt;- Interpreting events and actions&lt;br&gt;- Comparing change experiences&lt;br&gt;- Appraised some changes as unnecessary</td>
</tr>
<tr>
<td>Evaluating change;</td>
<td>Getting surprised with unexpected changes; Interpreting events and actions</td>
<td>During CA3’s recent trip to XCity, he told us briefly that there would be some changes in the accounting system. Now, I think I don’t know at all what exactly those changes are about! We informed him of some deficiencies in the software, and he said that they would be resolved in our new system … Although he didn’t talk about what exactly would be added to the software, but I haven’t seen any changes regarding our needs … I got surprised the other day to see some changes that we didn’t know anything about them … I remember when we started using the new accounting system we had submitted some of the order records without their amounts. They [CAs] had added the option of “calculate”, but because of the lack of information and training, we had submitted the orders with the amount 0 [didn’t use the total amount calculate function]. (CR6, Round 2)</td>
<td>- Getting shocked with the change&lt;br&gt;- Experiencing discrepancies between expected and experienced changes&lt;br&gt;- Feeling confused and uncertain&lt;br&gt;- Doubting the consideration of the CCRs’ concerns and requirements&lt;br&gt;- Doubted the change effectiveness</td>
</tr>
<tr>
<td>Evaluating change</td>
<td></td>
<td>Sometimes change is good and sometimes not. I’ve had two different experiences in two different places. The change I experienced during my previous role in [another company], I found it a good one. Because we had to do many manual and paper-based work for integrating accounting records, and they implemented a new automated system, and it was a good change and very helpful. … I don’t think that here we have had such a significant and helpful change. I don’t believe that we needed some of the new changes and all these efforts. (CR1, Round 2)</td>
<td>- Comparing change experiences&lt;br&gt;- Criticising the process&lt;br&gt;- Doubting the change effectiveness or necessity</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, ExMoney)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Interpreting events and actions; Evaluating change</td>
<td></td>
<td>Whenever the system changes, not everybody is satisfied. Even some say “why did you change the system? We were used to working with the previous one, and it was OK”. But I think it is just an issue of time. Then later, when they find out in which sections it has made their jobs easier, they would be more satisfied with it. And as the system errors are reduced the users’ satisfaction increases. … I have worked with receipts and payments, and I know what problems exist, so I know how important it is to resolve them. But the users aren’t aware of the previous malfunctions and don’t know the benefits of making changes to the system. That’s why the changes aren’t pleasing to them. (CR8, Round 2)</td>
<td>- Appraising the IT implementation as worthwhile and effective - Being informed of the outcomes of the new system - Understood the importance of the change - Cope with change gradually - Expecting the CAs to inform the CRs and provide training - Explaining the need for change understanding</td>
</tr>
<tr>
<td>Interacting with others</td>
<td>Interacting with others</td>
<td>We have a small workplace here and we are all aware of each other’s work during the seven or eight hours that we are working together here. And especially when there is an issue, my colleagues expect me to explain it to them. Actually, they are dependent on me for their training. We talk together about new changes and updates. When I encounter any problems, I immediately share it with my colleagues, tell them for example, that I’ve reported it, so that they don’t report it again. We quickly make each other aware of the changes and errors. (CR6, Round 1)</td>
<td>- Share understandings of the changes with others - Discussed concerns and needs - Helping others and learning from others’ experiences</td>
</tr>
<tr>
<td>Interacting with others</td>
<td></td>
<td>When there are new changes in the system, we [she and her colleagues] talk about them. But, I think an important problem is the lack of communication with other branches and the implementation team. Very weak communication and information providing approach! So, we always get informed very late here. Our colleague in ZCity [an office in another city in the same country] has much worse situation than we do. Since we are three people here working in the same section and we help each other a lot … but our colleague doesn’t have these connections. (CR6, Round 2)</td>
<td>- Highlighting the importance of working in groups - Expecting being able to communicate and interact with others - Using others’ experiences and knowledge - Share understandings of the changes - Asking for others’ help and support</td>
</tr>
<tr>
<td>Communicating with others; Interacting with others</td>
<td></td>
<td>I’ve learnt about the new process mostly through informal talks with my colleagues. I think we just had only one short meeting about the new system with the IT team and managers. But the rest has been through colleagues. I mean we talk about the changes, we discuss the plans and what we’ve heard about decisions. We chat about our own experiences, and about the system … If I have a problem or don’t know how to use a function, I ask my colleagues. We chat about interesting things during the lunchtime. (CR3, Round 2)</td>
<td>- Discuss the changes with colleagues - Exchanging experiences of the new system - Sharing ideas or concerns with others in informal conversations and discussions - Having informal social interactions with others to improve understandings of the new system and learning</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, ExMoney)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Communicating with others</td>
<td>Through [our] talks and meetings, we can make [the new system] better and better… We should have more meetings, so we can discuss the required updates and changes. (CR5, Round 2)</td>
<td>- Having more meetings and discussions with CAs to improve understandings of the new system and express needs and concerns</td>
<td></td>
</tr>
<tr>
<td>Communicating with others</td>
<td>In my opinion, the manager has to explain [to both users and the implementation team] what he wants, and at least a user should be there, because the developer doesn’t know the details, nor the manager himself knows them. They don’t know the details of the Admin and accounting systems. Always a person who uses that part should be present at the meeting and be in contact with the developer … So, I think a third person must be there making comments and manager should listen well. A third person must give ideas, practical ideas! I believe the manager comes up with an idea, which can be right or wrong. The user approves whether it is practical or not. (CR1, Round 2)</td>
<td>- Expecting direct communication with CAs - Criticising the CAs’ communication approach - Expecting CAs to hear CRs’ concerns and needs - Expecting group discussions between CAs and CRs (for sharing experiences, negotiating needs and expectations, and evaluating and clarifying changes)</td>
<td></td>
</tr>
<tr>
<td>Communicating with others</td>
<td>We haven’t had a meeting to discuss the new changes. We just got informed after the completion of the system development. When the system was redesigned and was being prepared to go live. We were the last to be informed. We had a short session to see a demo, but we didn’t talk about the changes in detail. (CR9, Round 2)</td>
<td>- Undergoing ineffective communication - Expecting consistent communication - Expecting getting informed</td>
<td></td>
</tr>
<tr>
<td>Communicating with others</td>
<td>Sometimes there have been some strange problems, and because of the time difference between our country and Australia, I couldn’t make a call, because there wasn’t any colleague working at that time in Australia. Or sometimes I asked something, or had an idea, or thought that a section [of the system] could be improved, and they didn’t understand what I meant. (CR6, Round 2)</td>
<td>- Undergoing ineffective communication - Expecting direct and face-to-face communication - Experiencing misinterpretations and misunderstandings</td>
<td></td>
</tr>
<tr>
<td>Feeling involved</td>
<td>We just know that there is a new development team who intends to develop a new system for ExMoney. We don't know more than this… I don’t know if the system that I work on [the Admin system] is going to be changed, or if the new system affects my work or not. (CR4, Round 1)</td>
<td>- Expecting to be aware of possible impacts of the changes (to their roles, duties and practices) - Expecting being informed</td>
<td></td>
</tr>
<tr>
<td>Feeling informed; Feeling involved</td>
<td>I could just give a few general suggestions, like “what do you think if we make this part that way?” But, I couldn’t talk about the details because I didn’t have much information about the changes. I didn’t know the advantages or disadvantages. I just gave some general suggestions. When I see the new system, I tell myself “I knew this wouldn’t work this way”. I could be more specific and help to reduce issues. I mean I could be more influential. (CR8, Round 2)</td>
<td>- Feeling uninformed about the IT implementation - Being unaware of change impacts - Feeling separated and being able to comment - Expecting to be informed and involved</td>
<td></td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, ExMoney)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Feeling informed</td>
<td>During a conversation with CA3 [managing director], I found out that the Admin system also will be updated. But I didn’t know about the details, and no official emails or documents were sent to us about those changes. Unfortunately, we usually don’t have enough information about the software changes. For example, there was the option of ‘second approval’, which had been added to the system for a month, and we weren’t aware of it. (CR8, Round 2)</td>
<td>- Getting surprised with unexpected changes&lt;br&gt;- Expecting to be informed of the changes in advance&lt;br&gt;- Feeling unaware of the details of the changes&lt;br&gt;- Feeling disillusioned</td>
<td></td>
</tr>
<tr>
<td>Feeling involved; Feeling informed</td>
<td>I think I need to know more about the project. So, if, for example, they [CAs] ask me to find errors or flaws of a certain section of the software, I would be able to spend more time checking the system to find any deficiencies it may have. I am ready to do that. So, I can participate and be more effective. When we are aware of the [new system and implementation] details, we all get the impression that this is something that we can participate in. (CR6, Round 2)</td>
<td>- Have adequate knowledge about the changes&lt;br&gt;- Feeling separated and uninvolved&lt;br&gt;- Feeling unaware</td>
<td></td>
</tr>
<tr>
<td>Feeling involved</td>
<td>We didn’t have the perception of progress or a significant improvement in the system. That’s because no one asked for our ideas or feedback. For example, no one came to me to ask for the advantages or drawbacks of our current system, or how to make it better. No one asked for our concerns. We were using the previous system; then we were asked to work with the new one, and we did. (CR4, Round 2)</td>
<td>- Expecting CAs to collect and consider the CRs’ suggestions, concerns and feedback&lt;br&gt;- Feeling being ignored and isolated&lt;br&gt;- Expecting CAs to recognise CRs’ role and experiences&lt;br&gt;- Being able to contribute to the change</td>
<td></td>
</tr>
<tr>
<td>Feeling involved</td>
<td>Once they [CAs] encouraged us to do that [give feedback or suggestion]. And we did. They prepared an internal website which we could write our suggestions and what we wanted. Then, a responsible person could categorise them as ‘very important’, ‘important’ or ‘not important’… Some of them [needs or suggestions] were considered, many of them were ignored. I believe some of them were of high importance and priority for us, but they were not considered. (CR1, Round 2)</td>
<td>- Expressing concerns and needs&lt;br&gt;- Feeling ignored&lt;br&gt;- Feeling disillusioned</td>
<td></td>
</tr>
<tr>
<td>Feeling involved</td>
<td>Well, I reported some issues and also had some feedback. I expected that they [CAs] consider my requests and address them. But since there have always been superior priorities, mine hasn’t been considered important. (CR3, Round 2)</td>
<td>- Criticising CAs’ strategy of responding to the CRs’ requests and addressing their concerns&lt;br&gt;- Feeling ignored, discouraged and disillusioned</td>
<td></td>
</tr>
<tr>
<td>Feeling involved; Feeling informed</td>
<td>In our meeting with CAs they asked us to provide feedback. So, we talked about our problems and discussed some features. … I felt like I’m a member of this project. So, I look more accurately at the system to find and report issues or points that can be improved, because maybe there is a problem that I am aware of.</td>
<td>- Being a part of the team, feeling involved&lt;br&gt;- Feeling informed, connected and encouraged&lt;br&gt;- Feeling confident</td>
<td></td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, ExMoney)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Feeling informed</td>
<td>of, but others aren’t. So, I try to report them. I am more conscious now and try to send my ideas about the system deficiencies to the team. (CR6, Round 2)</td>
<td>- Being able to discuss needs and concerns - Feeling being valued and considered</td>
<td></td>
</tr>
<tr>
<td>Feeling involved</td>
<td>We had a series of meetings which, I think, were the best place to give suggestions, discuss issues and make requests. Also, we could hear the IT or management’s opinions. We could hear everyone’s idea there. That was the best solution to participate and improve the system actively. (CR9, Round 2)</td>
<td>- Being able to discuss requirements and give feedback - Feeling encouraged to participate and be more involved - Getting informed about the change progress</td>
<td></td>
</tr>
<tr>
<td>Feeling involved</td>
<td>It seems that our feedback hasn’t have any effect. (CR9, Diary, Round 2)</td>
<td>- Feeling ignored - Feeling disillusioned</td>
<td></td>
</tr>
<tr>
<td>Feeling involved</td>
<td>This new accounting system is better than the previous system, but it can be improved. More functions and forms can be added to the system so that those who do the accounting would make fewer mistakes and work with more ease… I’ve tried to talk about the deficiencies or issues to help the team to solve them. I believe we won’t have any serious problem, and the new changes have been helpful. The things I mention are suggestions for improving the system. (CR4, Round 2)</td>
<td>- Expressed satisfaction with the IT implementation - Being informed and getting involved in the change process - Being asked to give suggestions and report issues/problems - Feeling of having influence</td>
<td></td>
</tr>
<tr>
<td>Seeking benefits</td>
<td>Beneting from change</td>
<td>Unfortunately, I haven't seen anything [advantages] significant. … at the moment, everything is manual and I'm hoping, out of all, something will come out. We had a couple of discussions with the managing director and the implementation project manager, and I was very strong in terms of pushing our issues regarding how we should move and how we should operate. Because that would be a clear example of a system that is designed not the way we as users want it, but the way that probably they [the CAs] think is good to have. That is where you're going to get a lot of rejection unless you can prove that what you're providing is good. (CR9, Round 2)</td>
<td>- Doubting the anticipated benefits of the change - Distrusting the CAs or the IT implementation process - Doubting getting benefit from change - Feeling not being considered in the new system implementation</td>
</tr>
<tr>
<td>Attitudes and reactions</td>
<td>Having positive feelings and attitudes</td>
<td>I feel it [the new system] is quite helpful. Because sometimes I do the bank and the intercompany account reconciliation, so I had to extract reports from the Admin [the Administration system] and other accounting systems. I couldn’t have the balance; the transactions were based on different currencies, and they weren’t accurate. So, I had to use Excel and do it manually... The new system is very accurate, and I can easily print the lists and use them. So, it is really helpful for the reconciliation. The old system had some issues, so they [the team] just</td>
<td>- Feeling satisfied and confident about the changes - Supported the new system - Feeling being considered - Benefiting from the change (being able to do jobs easier), getting improvements - Feeling positive about the changes</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, ExMoney)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>-----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>resolved them... I’m so confident about the change; I believe it’s made our job easier. (CR2, Round 2)</td>
<td>- Supporting change management and CAs’ efforts, expressing appreciation</td>
</tr>
<tr>
<td>Having positive feelings and attitudes</td>
<td></td>
<td>The changes have caused progress, and there hasn’t been any significant disruption. Everybody seems to be satisfied, and I haven’t heard of any special problem so far. There were only some suggestions to make the system better. Nobody mentioned a defect in the system, like saying that because there is such a problem so we can't do such and such. We’ve also had fewer errors. … I believe the team has improved the security, functionality and performance of the system. (CR4)</td>
<td>- Feeling satisfied with the IT implementation process and the provided support - Feeling contented and confident (requirements were considered, getting supported)</td>
</tr>
<tr>
<td>Justifying reactions</td>
<td>Validating self; Criticising change process</td>
<td>First, I have to say that the branch records and financial transactions are processed and confirmed by me. Second, I check registered requests and currency rates and operations in the system. The duties in this company are clear. I need to be very careful about the processed money transfer requests, payments and market transactions. A small mistake can cause significant problems and inconsistencies in our records. You see, I need to be very cautious about both manual data entry and system functions. I can say that I am responsible for the system implementation and changes also. So, if there is going to be a change, I must be aware of that. They shouldn’t change any part [of the system] without having my opinion. I believe that it should be all right if I disagree a change. (CR5, Round 1)</td>
<td>- Explain experiences, professional roles and responsibilities in the system - Highlighting needs and concerns - Justifying expectations of the CAs to consider CRs’ concerns and priorities - Criticising CAs’ tendency to ignore opposite ideas and comments</td>
</tr>
<tr>
<td></td>
<td>Criticising change process; Justifying reactions to change</td>
<td>We weren’t aware of some changes, and that caused some issues… For example, when we submitted some wire order transactions, the orders were sent to the ‘exchange list’ instead of being listed under the “wire orders list”, and we didn’t know that. … So, our colleagues in Australia couldn’t find them [those transactions]. They didn’t know that there were such orders and they hadn’t processed them. Then, we found out we had many “waiting orders”. (CR6, Round 2)</td>
<td>- Being uninformed about using the changes - Criticising communication - Criticising change process - Justifying reactions (dissatisfaction and avoidance to use)</td>
</tr>
<tr>
<td></td>
<td>Criticising change process</td>
<td>Maybe he [director of ExMoney] thinks that we will get used to it [the new system] gradually. It might be true… one or two changes seem ok, but changing the system every year or changing things constantly is not good. It shows instability. The manager is looking for something new all the time, and because of these changes and new things, users are in trouble. (CR1, Round 2)</td>
<td>- Criticised the constant changes in their IT systems - Experiencing disruptions and lack of stability in the system - Criticising change process and management</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, ExMoney)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Criticising change process;</td>
<td>Justifying reactions to change</td>
<td>It [the system] has undergone many changes recently… and it seems that we don’t have some of the useful features in the new system. … [For example,] in the old system when we opened the order, we could see both sender’s and receiver’s information on the same page. Some changes have made the system more complex … [and] it has affected our performance. I expected [the implementation team] to ask us about the [system] design and the required functionality, to spend some time with us and see how we do our work. (CR6, Round 2)</td>
<td>- Criticising the change process</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Feeling uninvolved</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Not being consulted/involved in the change process</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Justifying lack of interest and reluctance to use the new changes</td>
<td></td>
</tr>
</tbody>
</table>
1) Design and layers of the prepared SOE

Layers of SOE:

- Tier 0: Base Windows 7 Enterprise image (Base image & OS hotfixes)
- Tier 1: applications (Core)
- Tier 2: applications (Productivity apps)
- Tier 3: applications (Optional applications)
- Tier 4: applications (Line of Business - Department wide)
- Tier 5: applications (Line of Business - automated)
- Tier 6: applications (Line of Business - manual install)

Details of the Application Tiers:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Type</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 0</td>
<td>OS / OS Updates / Components</td>
<td>Windows Updates, .NET Framework, IE</td>
</tr>
<tr>
<td>Tier 1</td>
<td>Core Apps</td>
<td>Acrobat Reader, Sun Java</td>
</tr>
<tr>
<td>Tier 2</td>
<td>Productivity Suite</td>
<td>MS Office Suite, Lotus Notes, MS Outlook</td>
</tr>
<tr>
<td>Tier 3</td>
<td>Optional Apps</td>
<td>MS Project, MS Visio</td>
</tr>
<tr>
<td>Tier 4</td>
<td>Line of Business Apps (Department wide)</td>
<td>TRIM, FileNet</td>
</tr>
<tr>
<td>Tier 5</td>
<td>Line of Business Apps (automated)</td>
<td>ArcGIS, DNR Garmin</td>
</tr>
<tr>
<td>Tier 6</td>
<td>Line of Business Apps (manual)</td>
<td></td>
</tr>
</tbody>
</table>
2) Sent email message to CRs for notifying the change deployment

From: Windows 7 Upgrade  
To: [User]  
Date: [Date]  
Subject: Windows 7 User, Workstation and Application Audit - Your prompt action is required

Dear User,

The Windows 7 rollout project will upgrade your desktop to a 64-bit Windows 7 operating system. As part of the Project activities, we need to confirm details about your workstation and your current software applications. This Audit should not take more than five minutes to complete.

It is essential that you follow the instructions in the attached document to successfully complete this audit. If you have any problems following these instructions, please email the Windows 7 project team at Windows 7 Upgrade and someone will contact you to assist.

Thanks,
Windows 7 project team  
[IT Services, GovOrg]

---

From: Windows 7 Upgrade  
To: [User]  
Date: [Date]  
Subject: You are being upgraded to Windows 7

Windows 7 Coming to DSDBI Soon

HELLO,

Your Upgrade Date is Confirmed for Week commencing _________

Your upgrade to the new Windows 7 (64bit) desktop environment has been confirmed. A deployment project team member will be visiting you at your desk to provide you with the pre-deployment checklist and help you complete it. The length of time this takes will vary from person to person, but in most cases will take no more than 20 minutes. Your actual day of conversion will be communicated to you by email.

Please make the necessary time available to support the deployment of your PC/Laptop to Windows 7. In order to upgrade to the new desktop environment, you must validate and sign off the pre-deployment checklist.

Please note you will not be able to use your PC from 3pm on the implementation day and cannot sign in to any other [GovOrg] PC or Citrix in during that time.

PREPARATIONS (PLEASE READ):

1. To assist with the pre-deployment process, it would be appreciated if you could complete the pre-deployment checklist as much as possible.
2. If you have saved any business documents to your local drive (i.e. Desktop, My Documents, D:\ or C:\ drives), please ensure that these are saved to corporate drives (G:\ drive), as they will be erased as part of the upgrade process. Please refer to the policy for saving corporate documents on the intranet.
3. If you have saved any personal documents (e.g. movies, music, photos, etc.) locally (i.e. Desktop, My Documents, D:\ or C:\ drives), please ensure these are moved to your personal storage device (USB, portable hard drive, etc.), as they will be erased as part of the upgrade process.
4. If you are not available on your upgrade date, please take the time to complete and sign the mandatory checklist form and leave it on your desk, ready for the next upgrade. If you fail to complete the mandatory checklist form; you will be removed from this batch and your upgrade will be deferred.
Important Note: If you fail to complete preparations (2) and (3) above, you will lose those documents.

If you have any further questions, please do not hesitate to contact the Project Team at Windows 7 Upgrade.

Thank you for your cooperation and support.

Windows 7 project team
[IT Services, GovOrg]
## Appendix K

**More examples of participants’ perspectives (GovOrg)**

Table K.1: More extensive quotes or further examples of the perspectives and comments of CAs (GovOrg)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CAs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Developing mutual understanding      | Being acknowledged              | I’m the manager for IT strategy and architecture, and I’m also the chief information security officer in the GovOrg. I’ve had 25 years of experience in IT, and I worked for different organisations. I’m also an ex-academic for ten years. (CA10, Round 1)                                                                 | - Explaining knowledge and skills to gain trust
- Expecting CRs to acknowledge CAs’ experiences and expertise and support CAs’ roles, decisions and actions                                                                                                                                                  |
| Understanding CRs and their needs    |                                 | I’ve come from strong project management and project delivering backgrounds. So, I do know what are the key things that are important in creating project success and what it means for users; and you really need to place the users in the forefront particularly in IT change projects. You need to understand their circumstances. And I think that tried and tested process is an example of this project we’ve been able to follow it. (CA9, Round 1) | - Understanding CRs and considering their needs and conditions
- Hearing CRs’ concerns and interests
- Identifying key CRs and valuing their requirements and priorities                                                                                                                                                                                                 |
| Being acknowledged                   |                                 | She [CA7] needed more support. She probably needed her own BA, because she’s got so far behind. I don’t think that GovOrg realised how much effort they [the implementation team] had to put in to complete the project. You know, communication was massive, getting testing done and all that sort of thing was massive and required significant efforts… They [top management] probably didn’t understand how much effort was involved. (CA8, Round 2) | - Being acknowledged and understood
- Expecting understanding of the CAs’ roles and responsibilities
- Expecting top management consideration and support                                                                                                                                                                                                                       |
| Understanding CRs and their needs    |                                 | We take the interest of the users at heart, because really at the end of the day, the business is the business, and the users are impacted by that [change]. So, we need to understand and be sympathetic as to what impacts would occur there, and treat them as valued customers. And I think that those qualities that are expressed in terms of, you know, how the project sponsor manages those things and resolving issues are critical. (CA7, Round 2) | - Highlighting the need for understanding the consequences of the change on CRs’ status and work
- Providing constant support to CRs
- Enhancing the CRs’ participation and support                                                                                                                                                                                                                           |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CAs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Understanding CRs and their needs |                                | Some of them [CRs] were not happy, because they’ve gone from XP to Win 7 and back to XP, and back to Win 7. So, they are sick of losing productivity. Some other users maybe just don’t understand the system or they're just too busy. They’re doing stuff for managers or doing stuff for the public, and if they lose that little bit of productivity they miss their own deadlines or timeframe. So, we need to understand where they are coming from with their conditions and workload and get a timeframe that suits them. Sometimes we can’t do that because we’re doing such large numbers, everyone kind of gets thrown into one batch. We do the best we can with the timeframe we’ve got. (CA8, Round 2) | - Understanding CRs and their needs and conditions  
- Providing support to CRs  
- Acknowledging CRs’ status, role and priorities  
- Gaining and sustaining CRs’ buy-in |
| Being acknowledged           |                                | I don’t think the departments realised how much of an expectation would be needed with testing and applying changes. We needed their super users and their administrators to do the testing and review the changes. … So, I don’t think they really had an understanding of how much effort was required, and that probably slowed us down, getting people motivated, and getting people in there to do it. (CA8, Round 2) | - Expecting understanding and support  
- Gaining and sustaining CRs’ buy-in  
- Expecting acknowledgement for the CAs’ roles and efforts  
- Criticising the lack of understanding, participation and collaboration from CRs |
| Appraising change and constructing meanings | Establishing change | We have been on the XP platform for as long as I’ve been in the department almost eight years. Microsoft will withdraw support for XP soon. [GovOrg] is going the extension with Microsoft for an additional period of support but thereafter that support lapses and we would need to pay a substantive amount of money for any Microsoft support of XP moving forward… We had looked at an upgrade much earlier than this, but we had circumstances, which prevented us from doing that sooner. (CA9, Round 1) | - Emphasised the urgency and importance of the IT implementing  
- Establishing change  
- Setting expectations |
| Establishing change, assessing change |                                 | We are going to roll out Windows 7 to the whole of the GovOrg. But we’re not just changing their [CRs] desktops. We’re moving them from one network to another network. So, that involves a lot more work than just rolling out Windows 7, because we have got to ensure that we move the [data] storage and their primary files to the new network. There are a lot of cross-certification and trust [certificates and settings] that have to be put up between the two networks so that they can still access the stuff on the old network. Because we’re doing it over a transition period, we’ve got to make sure that we don’t break it for the people who are still left behind on XP while we move the new ones to Windows 7. So, everything changes. It’s a big change, I suppose. (CA7, Round 1) | - Explaining and establishing change  
- Explaining the probability of encountering disruptions  
- Setting expectations  
- Emphasising the required extensive efforts and resources for progressing the project  
- Assessing change and its impacts  
- Highlighting some of the complexities of the IT implementation |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CAss, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Assessing change              |                                   | There would be some disruptions, and I would say, in some circumstances, we may experience long disruptions. We need to explain it to them [CRs]. We also need to explain that the system will be slow the first time and it’ll take a bit of time on the first day for things to come down. But, if they have an issue, we’ll be there to help them. So, we need to set the expectation that they [CRs] could lose some hours. (CA10, Round 1) | - Assessing and explaining change and its consequences  
- Explaining change processes and actions  
- Helping CRs in evaluating events and actions and anticipating outcomes  
- Setting expectations |
| Establishing change, assessing change |                                   | We typically make an assessment and a judgment call around the necessity for training. In this instance, we won’t provide for classroom training. In the past, we’ve typically done that but because the change is purely at the OS level, we deemed that isn’t required. What we will give them is an information pack around some of the training material and we thought that would be sufficient. (CA9, Round 1) | - Establishing change  
- Assessing the IT implementation and its impacts  
- Explaining change processes and actions  
- Setting expectations |
| Assessing change              |                                   | An email will go out to users a week before deployment to say next week this is what’s going to happen. Two days before that, we will give them a welcome pack which will include a pre-deployment checklist and all the documentation and all the stuff that they need to know of the things that are going to happen, and the changes to the applications… So, they will be able to operate with no or minimum level of disruption. We will also have floorwalkers going around and doing post-implementation support for the day. (CA8, Round 1) | - Appraising the IT implementation (as a standard process of upgrading their IT systems)  
- Explaining plans and procedures  
- Setting expectations |
| Assessing change              |                                   | We must create an area with the new SOE [Standard Operating Environment], maybe 5 or 10 machines and tell the users to use them; run their regular job under them for three months… So, they can get familiar with it. Once they are familiar with it, then they will be able to determine what are the changes that are lacking there. They [CRs] need to play with it for a while, to investigate the changes and identify particular requirements. That information should be taken before the rollout commencement. (CA10, Round 2) | - Assessing the IT implementation and its impacts  
- Involved CRs in the change assessment and audit  
- Consulting with CRs and considering their concerns and requirements |
| Interpreting CRs’ reactions   |                                   | [The CRs] are used to certain IT systems, and when this is changed, they are to move into newer ways of working. So, people are generally not happy with any upgrades in particular. It’s about getting used to new changes, and it takes time. In the first two or three months, I would say 20% would be happy to accept it the way it is and 80% would complain. So, it’s nobody’s fault; it’s just a matter of adjusting to the new change. We have had plenty of resistances, but then once they get used to it, they will like it. That’s the process. (CA10, Round 2) | - Interpreting CRs’ reactions  
- Helping CRs to get familiar with the new changes  
- Linking change acceptance to time |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CA7s, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Interpreting CRs’ reactions | | The change success is not actually what [the CRs] say, but what they don’t say. The less [CRs] that complain, the better a job you’re doing. We’ve had a few [CRs] that have said ‘hey, well done; it really went well’. People forget to say it’s a good job if it’s gone smoothly. They only remember to complain if it’s gone badly. So, you hear the complaints; you don’t really hear the good news. But [the CRs] still smile at me when I walk around the building. So, it can’t be bad, they all know who I am. It shows that the change has been successful. (CA7, Round 2) | - Interpreting CRs’ reactions  
- Assessing change success and effectiveness  
- Considering CRs’ responses to change and feedback |
| Interacting with others | Communicating with CRs | For any IT project that we do in GovOrg, we identify key stakeholders that we need to communicate to, and we advise them early about our upgrade intentions. So, we typically do that through the management layers, giving that information. And we do publicise that widely on our intranet. So, we have a number of publications that we do periodically and throughout the project. We’ve also constructed emails to individual users advising them when we intend to touch their desktops and what the process is involved in, what they need to do and their responsibilities to make it successful and what our responsibilities are. We have a stake in the communication process. So, several weeks out, a couple of weeks out, a week out, and that sort of things. (CA9, Round 1) | - Communicating with CRs  
- Communicating project objectives and plans  
- Clarifying roles and responsibilities  
- Having early and consistent interactions with CRs  
- Interacting with CRs to enhance awareness, clarify change processes and actions, and developing mutual understanding |
| Interacting with CRs | Communicating with CRs | I’ve got a responsible person from each of the divisions that is usually the communication person within that division, and I’ve been talking in meetings with them. They are my project team, and we deal with them and let them know how we’re going to approach it [IT implementation], what we’re going to do, when we’re going to do it, and how it’s going to affect them. (CA7, Round 1) | - Disseminating change information to CRs  
- Interacting with key users  
- Communicating the changes  
- Collecting CRs’ requirements, concerns and feedback |
| Communicating with CRs | Communicating with CRs | Our approach is to communicate early and often. We’ve prepared some communication packs. We are going to inform people [CRs] one month earlier and then two weeks out, then one week out, and then the day before [their system change]. So, they’re continuously getting updates. So, it [communication] starts one month out as this is what we are going to do. It’s quite brief, and then as we get closer we get more technical on what we expect from users and what we are going to be rolling out to them. (CA8, Round 1) | - Communicating consistently and keeping CRs informed about the changes  
- Explaining communication approach  
- Communicating with CRs to develop their understandings and set their expectations |
| Communicating with CRs | Communicating with CRs | I think communication is key to users, and we need to communicate early. We must keep them [CRs] informed about the new changes, and try to build up | - Highlighting the role of consistent and early communication with CRs  
- Engaging CRs in the IT implementation |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CAs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interacting with CRs</td>
<td>We tried to do [provide] one-on-one talk to the users. We’ve seen every single user have had somebody standing next to them twice; once before the implementation to talk them through it. So, they can’t say nobody talked to me; because we’ve been with them and signed it. And the next day after the rollout, we’ve walked around all day. We usually go back the first days to talk to users and see if any of the areas have got issues, then CA8 [vendor’s project manager] and I usually go there straight away to see what the problem is. (CA7, Round 2)</td>
<td>- Providing face-to-face support service&lt;br&gt;- Have direct communication with CRs&lt;br&gt;- Communicating change details and setting expectations&lt;br&gt;- Gaining understanding of the CRs’ concerns&lt;br&gt;- Encourage CRs to participate and cooperate</td>
<td></td>
</tr>
<tr>
<td>Interacting with CRs</td>
<td>I think it is almost impossible for [the project managers] to meet with all the users directly and regularly. So, they should break down 1500 members into the power users from different departments and divisions and bring them up to speak with them. The power users would get back to their individual staff meetings in their business unit and convey the message. So, we don’t need to literally ‘face’ each and every one of those 1500 people. We’d call power user meetings and give them handouts, instructions and all that sort of stuff. So, they would act as a bridge and disseminate that information to their groups perfectly. (CR10, Round 2)</td>
<td>- Interacting with ‘power users’&lt;br&gt;- Disseminating change details and collecting CRs’ needs through power users&lt;br&gt;- Having constant interactions with CRs&lt;br&gt;- Improve the CRs’ awareness and understandings of the IT implementation&lt;br&gt;- Enhance the CRs’ involvement and participation</td>
<td></td>
</tr>
<tr>
<td>Interacting with others</td>
<td>I work with [CA8]. We regularly communicate to keep each other in the loop. We complement each other. She’s a lot more technical than I am and she’s not a people person, she doesn’t like talking to people, and I’m more structured than she is. So, when it comes to doing the documentation, she leaves it to me because she knows I’m better at that than she is. But when I need something chased she’s pretty good at that. If the team is not able to resolve a technical problem, I can send her, and she’ll go. So, we complement each other quite nicely I think. (CA7, Round 2)</td>
<td>- Having positive relationship and supportive interactions with others&lt;br&gt;- Have ongoing communication&lt;br&gt;- Learning from others&lt;br&gt;- Share knowledge and experiences</td>
<td></td>
</tr>
<tr>
<td>Communicating with others</td>
<td>That meeting with the CEO, CIO and some other top managers was really great; just having key decision-makers and stakeholders in the room and delivering the right messages. I mean in that project control board that those issues and risks were raised and we could discuss our plans to deal with them. They understood what our challenges had been and then they could help us by providing extra resources… [CA7] was able to hire two extra people to help her. Getting that</td>
<td>- Undergoing ineffective communication with other CAs (particularly the top management)&lt;br&gt;- Emphasising the need for having regular communication with others&lt;br&gt;- Develop a common understanding of the implementation conditions and requirements&lt;br&gt;- Enhancing others’ engagement and support</td>
<td></td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CAs, GovOrg)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>----------------------</td>
<td>---------------------</td>
</tr>
</tbody>
</table>
| Feeling involved | Involving CRs in change process | Extra help for her has improved her part of the process, which means that we could then go faster and do our part better. (CA8, Round 2) | - Involving CRs in and gaining their buy-in to the IT implementation  
- Using the key users’ experiences and knowledge  
- Encouraging CRs to participate |
| | Involving CRs in change process | We need super users. We need our administrators to do the testing and say ‘yeah it [upgraded application] will work’ because we don’t really know their applications. I don’t think we have a complete understanding of how much effort is required. And that probably will slow us down a little bit. We need to get people motivated, get them in there to do it. (CA8, Round 1) | - Involving CRs and gaining their buy-in to change  
- Facilitating the CRs’ engagement and participation |
| | Involving CRs in change process | I think the key thing is really around buy-in of the users. And we really need to involve them [CRs] and encourage them to be part of the change process, and it’s a team effort. We need their help to make it successful. When they take hold of the operation, so getting buy-in from the business, and business having some stake in that is to me very important. (CA9, Round 1) | - Gaining the CRs’ assistance and support by involving them in the change process  
- Highlighting the role of involving CRs (e.g. in developing interactions, receiving feedbacks, and developing understandings of the needs and concerns) |
| | Involving CRs in change process | We need to get users involved. Once we get people on board, it just gets quite easy and simple. We’d get the help with the test designing, the test environment preparation and other things. We’d get the user buy-in, and I can say the doors open up. (CA7, Round 1) | - Involving CRs in the change early  
- Getting CRs’ help in collecting the requirements  
- Facilitating the communication of the change objectives and plans  
- Promoting the new changes and facilitating the CRs’ involvement and participation |
| | Involving CRs in change process | The key thing is early engagement with stakeholders and of course proper identification of who they are and finding the key roles within the organisation that can assist us with what we need. And hence we target business managers for that reason… They know about their business processes, and they can help us in identifying their needs and at the same time assist their business area with the change implementation. That is why it’s important to get their involvement. (CA9, Round 1) | - Emphasising the significance of involving CRs in the change process  
- Facilitating CRs’ involvement  
- Getting CRs’ opinions and feedbacks |
<p>| | Involving CRs in change process | We should do a lot of user requirements. We should engage them [CRs] in identifying needs and planning the required changes. For example, I suggested creating a web page to explain the objectives and gather more information. We should spend a lot of time gathering the right information and then analysing it. We need to understand what are their [CRs] concerns and how they do their jobs. (CA10, Round 1) | - |</p>
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CAs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Keeping CRs informed        |                                               | As well as moving to Windows 7, we’ve actually gone to a 64-bit environment. So, a lot of our applications might not work in the 64-bit environment … So, we informed the users about those changes, and asked the business owners and the users to test them. It’s been a lot of pre-work, and I worked with those business owners to do that. They were aware of what was happening, and it was their role to disseminate that information within their group. (CA8, Round 2) | - Keeping CRs informed  
- Informing CRs about the plans and events  
- Facilitating CRs’ involvement and participation  
- Involving CRs in testing and reviewing existing applications                                                                                                                                                                           |
| Keeping CRs informed        |                                               | We’ve had some issues. For example, we had a problem with share drives, and depending on what division they [CRs] are in, they couldn’t see certain folders… We informed users about those possible issues before rollout and gave them also some instructions about how to deal with those problems or how to report their issues. We tried to keep them informed. So, they could help us find and resolve those issues. (CA7, Round 2) | - Keeping CRs informed  
- Feeling considered and involved in the change process  
- Encouraging CRs to participate                                                                                                                                                                                                           |
| Involving CRs in change process |                                               | There’s been some upfront work that we asked the users to do them, such as filling out the survey forms, which doesn’t take a lot of time, about ten to fifteen minutes. They needed to send us a list of their applications and inform us about their special needs, like any required non-standard server settings or access levels. We also needed to make sure that they back up their data at some point in time prior to the upgrade. We wanted to engage them in the process, so we sent the users some instructions about how they should backup their documents and favourites. So, we made sure that those things are done as preliminary tasks they’re responsible for. (CA9, Round 2) | - Giving CRs roles or responsibilities to be involved and participate in the change  
- Collecting CRs’ feedback and concerns  
- Making CRs feel more involved and able to make a contribution to the change                                                                                                                                                       |
| Seeking benefits            | Benefiting from change                        | They [GovOrg] are currently in the [Windows] XP environment, which is no longer supported by Microsoft. If GovOrg does not upgrade its systems, it’ll get charged over a million dollars in support to continue. So, that’s quite a big emphasis to push it onto Windows 7. So, we’re going to deploy Windows 7 and upgrade some other applications. Also, we’ll update the Active Directory to use a shared service platform. (CA8, Round 1) | - Explaining change benefits  
- Reducing the cost of maintaining legacy IT systems                                                                                                                                                                                                                                               |
| Seeking benefits            |                                               | I would say that the expiration of the support by Microsoft certainly accelerated the upgrade process and I’m sure that accelerated the process for other government organisations and many private companies as well to change over. I mean, for us, it’s fundamental from the point of view that we do need to modernise our systems. We need to make sure that we get to derive benefit from keeping our IT systems up-to-date. (CA10, Round 1) | - Benefiting from change  
- Highlighting the positive impacts of change  
- Ensuring IT business benefits                                                                                                                                                                                                           |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CA9, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefiting from</td>
<td>Change</td>
<td>We had some limitations in adopting some new systems or technologies due to the outdated network infrastructure, platform and OS. (CA9, Round 2)</td>
<td>- Highlighting the need for and benefits of the IT implementation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Attitudes and</td>
<td>Having positive</td>
<td>I think both the PMs [project managers] that are involved in the project are trying hard deliver the project objectives. They have worked well, and so has the other people within the project team. (CA9, Round 2)</td>
<td>- Being satisfied with the change process</td>
</tr>
<tr>
<td>reactions</td>
<td>feelings and</td>
<td>I don’t know whether it [IT implementation] would be successful or not. It will be implemented, and people will suffer. After a while, they [CRs] will like it, and they will get used to it. It’s not going to be ‘all fantastic, this is what I wanted, I love it’. I don’t think we ever get that. I don’t believe we are going to hear ‘the communication was excellent; I was well informed, [CAs] responded back and helped us good’… They will get Windows 7, they'll suffer, and they will do it. (CA10, Round 1)</td>
<td>- Being cynical and pessimistic</td>
</tr>
<tr>
<td></td>
<td>attitudes</td>
<td></td>
<td>- Criticising the IT implementation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Feeling unsatisfied</td>
</tr>
<tr>
<td></td>
<td>Having negative</td>
<td>We are trying to do too much too quickly. They [top management] gave us three months to do 1600 people, and it’s not just in this building. We’re talking about five central locations and 29 regional sites … I told them that we have to reschedule some locations. You know, I had to say ‘no, we can’t do it’. It’s too much too quickly. (CA7, Round 1)</td>
<td>- Feeling pressure</td>
</tr>
<tr>
<td></td>
<td>feelings and</td>
<td>I have direct contact with the project team and managers. I’m a part of the project board, and from my understanding, generally, their view has been quite positive. The business managers have assisted us a lot, and I’m not aware of any issues that have come up or any criticisms about why we need to upgrade and how we do that. The team also hasn’t reported any problem. I’m pretty happy with how the project has progressed. (CA9, Round 1)</td>
<td>- Feeling pressure</td>
</tr>
<tr>
<td></td>
<td>attitudes</td>
<td>I think the project manager needed more technical expertise, not project management expertise. Also, the project manager must have domain knowledge. You can’t have any project manager come on to an IT project just because he is a project manager. He or she must have technical expertise and understand the requirements of managing software projects. Software [project] is different actually… The project management team needed to look at the user base. They should spend a lot of time gathering the right information and then analysing it. They need to understand user requirements. I’d group the users based on the</td>
<td>- Criticising the change management - Being unhappy with some decisions and actions - Disagreeing with some actions - Having negative feelings about change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CAs, GovOrg)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>complexity of the rollout and their needs, not based on their divisions or locations. (CA10, Round 1)</td>
<td>- Criticising the change management, communication and support approaches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project management and change management in IT are fundamental, and they work hand in hand. We can’t implement any IT project without the consideration of the change in the organisation or change management. Because not considering it we will not receive the same amount of success as we would if we plan it properly from the project management and delivery point of view, and also understanding users and helping them in dealing with the new changes. (CA9, Round 1)</td>
<td>- Feeling frustrated&lt;br&gt;- Feeling unsatisfied</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I think we did quite well in terms of change. We did have quite a lengthy pilot, so we were able to implement all the changes that we needed. … It was cool; the last three months were on my hand pretty much because we got it finished on time. It was a good project, and it was a good team of people, and we obviously did a great job to get it done on time and on budget. (CA8, Round 2)</td>
<td>- Having positive view about the project process and outcomes&lt;br&gt;- Feeling confident about and satisfied with the IT implementation&lt;br&gt;- Appreciating the CAs’ efforts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The one thing that’s done very good was whenever the [project managers] mentioned the rollout of a certain number of desktops, it was done under time. So, I could go and do the information security changes after those rollouts… All the rollouts were done exactly as planned. That’s a very good thing to achieve and they kept the timetable. So, we could also do our work as scheduled. That was a great collaboration. (CA10, Round 2)</td>
<td>- Appreciating and supporting the CAs’ actions and efforts&lt;br&gt;- Showing appreciation&lt;br&gt;- Being happy with the change process&lt;br&gt;- Feeling satisfied</td>
</tr>
<tr>
<td></td>
<td></td>
<td>There is always room for improvement, and everyone has their faults, but I think, overall, this project went on very well. We, CA7 and I, had obviously worked well as a team. We didn’t allow the problems to get in our way. It was a very successful project; we got it on time and budget and [the CRs] were happy with the outcome. That stands on the relationship and how everyone worked together, and once we got that user buy-in, the doors opened up. We got the help from them. (CA8, Round 2)</td>
<td>- Admitting experiencing some inconsistencies and issues&lt;br&gt;- Improving the change process and resolve the encountered problems&lt;br&gt;- Expressing positive attitudes about the change implementation process&lt;br&gt;- Supported the change outcomes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The communication hasn’t gone well. We had a communication plan, which we gave CA7. But she’s been busy organising everything, so the communication was probably the one that slipped. The welcome pack that she created went through a lot of changes. A lot of errors were in it, which weren’t noticed until</td>
<td>- Being unsatisfied about the communication process&lt;br&gt;- Criticising change process</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CAs, GovOrg)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the first few people got them, and then feedback came back. So, they had to make a lot of changes, and that caused confusions. (CA8, Round 2)</td>
<td>- Experiencing pressure and stress</td>
</tr>
<tr>
<td></td>
<td></td>
<td>She [CA7] needed to stay one step ahead of us. So, her communication packs had to go out, and she had to have the site ready before we access the site… CA7 needed more resources. We were getting to the point that we were so last minute that it was affecting my team and how they could roll out [the changes]. (CA8, Round 2)</td>
<td>- Expecting support and assistance from the top management - Feeling frustrated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I had to sort out a lot of things myself, such as ordering new PCs and servers, doing all the planning of the batches, doing the emails and so on. I was doing all of that, so I was putting in 12 to 14 hours a day, and only about a month ago I said ‘stop, I’m not doing this anymore’. And then they gave me a young girl to help me with the hardware needs and another woman, a BA, to help me with the admin. I should have put my foot down long ago and said ‘no, I’ve been trying to kill myself’. (CA7, Round 2)</td>
<td>- Criticising the change planning - Feeling pressure - Experiencing stress and anxiety - Being unhappy with the intense work pressure - Disagreeing with some plans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We’ve provided some users with extra support and one to one guidance as requested. We’ve tried to give the users enough time to get ready for the changes. … I know people are busy generally, but we do make sure we provide enough time. I think we’ve generally been fairly cooperative in terms of not forcing the issue and allowing users to defer their upgrade even though it’s not in the best interest of our project to do that. (CA9, Round 2)</td>
<td>- Criticising some change decisions and actions - Feeling unsatisfied</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We’ve had to escalate to the CIO, and he’s had to escalate to the top management a couple of times where users just said no, not doing it (the rollout). We’ve had to go back and say these users are refusing to go, and they’ve [the top management] had to have emails sent to them saying you don’t get a choice, and this is what’s going to happen. … You always get some people that are going to be angry no matter what you try and do. (CA7, Round 2)</td>
<td>- Dealing with the resistant CRs - Forcing the CRs to comply with the new changes - Interpreting the CRs’ reactions to change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I have been in IT project management for more than seven years. I have managed and accomplished many projects … I believe we have planned it [IT implementation] quite well and have a great team here. (CA8, Round 1)</td>
<td>- Justify position, validating decisions/actions - Emphasising expertise and previous experiences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I have been in the IT industry more than most people have been alive, about 39 years. I started off as a developer and I have spent the last 25 years in project management. I have been always in the IT industry doing a range of different</td>
<td>- Emphasising knowledge, experiences and expertise - Feeling confident about decisions and actions</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CAs, GovOrg)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Justifying change actions |                              | Well, you never ever get all the information up front in any project, because nobody can kind of think it. Even though you try and think up all the eventualities and all the limitations, you never do. It’s a big project in a large organisation. There are always tweaks that have to be made along the way, and that’s part of the project management as you have to identify those, work out what the impact is, and how best to implement them. (CA7, Round 1) | - Emphasising conditions and the size and complexity of the change  
- Justifying issues  
- Defending decisions and actions                                                                                     |
| Criticising CRs reactions |                              | … you’ll always have some users that are unhappy with whatever you do. … I think the true outcome of the project is measured by the angled view from your stakeholders and what the general perception is of the outcome and the success of that. In any organisation, you’ll always have some individuals that are unhappy with whatever you do and no matter how successful you are, it’s just the nature of those individuals. (CA9, Round 1) | - Blaming CRs  
- Interpreting the CRs’ reactions  
- Defending the change process and outcomes                                                                                                                                                                                                                                                               |
Table K.2: More extensive quotes or further examples of the perspectives and comments of CRs (GovOrg)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CRs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Developing mutual understanding            |          | - Understanding conditions and motivations for change  
- Feeling valued and considered  
- Feeling confident about the changes  
- Being understood and acknowledged by the CAs                                                                                           |
|                                            |          | I think when we go through pilots, we can test out the planned changes and check the new functionality. So, pilots are great for getting a better understanding of the change consequences… Well, the other side of it [participating in the pilot] is that I would be able to test my applications and tools and make sure that they would be ok after the rollout … Although things are expected not to go too flat, as what they are in the pilot project and in a controlled environment, but people are more confident about the changes. (CR13, Round 1) |
|                                            | Understanding actions and conditions, being acknowledged | Some people need additional software, and are required to list them when they do the audit. Just recently everybody was asked to send information about their needs. So, we are going to audit our own machine and then send that information back. So, anyone who wanted their existing software, they would be upgraded automatically, and then any new or special software requested by users would be installed. (CR12, Round 1) |
|                                            |          | - Identifying and clarifying requirements  
- Being acknowledged  
- Being asked about concerns and special needs                                                                                           |
|                                            |          | Some groups use special software. Unlike standard software tools, you can’t just push it [the change] out to the PC. You would actually need to have someone come and physically install them. But I think with any change, as long as people realise what it involves and how it impacts them then people will look more comfortable and will be more forgiving [for encountered issues and disruptions]. And I think there is that level of trust as well if you can say to them ‘look, I anticipate it’s going to take a full day’, then they kind of, in their mind, anticipate the delays and have the opportunity to plan around it. But if you, kind of, don’t tell them and just say ‘we’ll get to you, we will get it installed’, then people get annoyed, angry and frustrated. (CR13, Round 1) |
|                                            |          | - Developing trust and mutual understanding between CRs and CAs  
- Being understood  
- Expecting CAs to understand CRs’ roles, conditions and needs  
- Expecting being informed about the changes and possible disruptions                                                                 |                                                                                                                                               |
|                                            |          | We had another meeting about our needs this morning [with CAs], so it’s an ongoing saga. I hope they [CAs] will consider the requirements with what they call the non-standard settings. There are a number of issues; I’m not the only one                                                                                                                                                                                                 |
|                                            |          | - Communicating needs and concerns with CAs  
- Expecting CAs to understand CRs                                                                                                           |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CRs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>in that boat, on the non-standard PCs. But they’re working through the process, and as I said, I’ve had another meeting with them this morning and pointed at some other software packages [that needed non-standard settings and access] that I’ve just found about them over the weekend. (CR10, Round 1)</td>
<td>- Being heard and considered</td>
</tr>
<tr>
<td>Being</td>
<td>acknowledged</td>
<td>To put it bluntly, I think GovOrg could run IT if its life depended on it, and consider and value where they got innovation from. I think primarily because we (his group) are different and that they [CAs] base everything on the standard package, which we don’t fit into it, so, for us, it’s going to be a real issue. (CR19, Round 1)</td>
<td>- Expecting CAs to understand and acknowledge the CRs’ roles and requirements</td>
</tr>
<tr>
<td>Being</td>
<td>acknowledged</td>
<td>Here we had one meeting with a few players, and I specifically asked for us to have fortnightly meetings, and either that request was ignored, or my bet was that the timelines were so compressed that they [CAs] couldn’t run the meetings, arguing we didn’t have enough time to do them. (CR11, Round 1)</td>
<td>- Feeling not being considered and valued</td>
</tr>
<tr>
<td>Being</td>
<td>acknowledged</td>
<td>I originally started here in 2001 as a DBA [Database Administrator]. I’ve written a lot of the systems that we actually use here. I manage software on the Unix servers and the Linux servers and a couple of Windows servers. Pretty much, I troubleshoot any other software packages that we use, and I help out the other groups when they need it. (CR19, Round 1)</td>
<td>- Presenting self, highlighting experiences and knowledge</td>
</tr>
<tr>
<td>Being</td>
<td>acknowledged</td>
<td>My role is senior project officer in my department. So, I deal with a lot of project activities such as the implementation of IT systems, and I’ve been in the department for about seven years. (CR13, Round 1)</td>
<td>- Presenting self</td>
</tr>
<tr>
<td>Understanding</td>
<td></td>
<td>I think they [CAs] will go well. I know the project manager and she does a good job in terms of IT projects, and just making sure she gets on with people. Because I’ve worked on a different project with her before and I’m pretty confident she’ll get it done; it’ll be just whether the rest of the organisation support her. Some people will drag their heels in, but that’s inevitable. There are always people who dig their heels… and there are also some external impediments. (CR13, Round 1)</td>
<td>- Understanding CAs’ roles and efforts</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, GovOrg)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Understanding CAs, understanding actions and conditions | People should have a little bit more patience for issues to be addressed because it’s a huge organisation [in which] they are going to roll out [the new systems]. There are certain issues that they [CAs] need to address, and it takes more time. I suppose people can prepare themselves for the changes because we have to do the data backup ourselves. We have to keep all our favourites and personal documents in advance, although they [CAs] have also provided a data backup service in case someone is asking. With respect to this volume and their [CAs] small team, I think it takes time, and they are doing well. (CR17, Round 1) | - Understanding and acknowledging CAs  
- Having a sense of empathy  
- Supporting CAs’ efforts  
- Understanding conditions and motivations for change  
- Having close relationship with the CAs  
- Understanding CAs’ decisions and actions |
| Understanding CAs | I think it [change process] has been really well done. CA7 (the project manager) is very good at this stuff. She knows how to run a project, so that’s good. If you have good project managers, these things [changes] are easy. Well, they appeared easy to me, that’s what you want the end user to think: ‘it’s just a really simple process’. I knew there was so much work going in the background. The end users just need to see the product on their desktops the next day, and that’s what we wanted, and that’s what has happened. (CR12, Round 2) | - Understanding the CAs’ actions  
- Trusting the CAs’ expertise and experience  
- Feeling confident about the change process and its constructive outcomes |
| Understanding actions and conditions | One of the reasons that I am positive about the new changes is because, from my IT background, about many of the issues we’ve already faced I say “it’s OK, this is going to happen, don’t worry, it will be OK in a couple of days”. I understand because I come from IT background. It’s OK for me, it happens. I know the process… But if you ask a normal user, then probably a different answer comes out. “I have to restart my machine twice? It’s a problem; it’s not working”. Yeah, then the view of seeing the same thing is different. (CR18, Round 2) | - Understanding conditions and motivations for change  
- Understanding the CAs’ actions  
- Understanding change complexities and the faced challenges |
| Understanding actions and conditions | I’m having some connectivity issues because they [CAs] just changed from one domain to another domain. So now certain things work in the previous domain but don’t work in the new domain, because of certain technical settings. They are just addressing this issue. Still, it is hanging around, but they just identified some solutions, so they’re in the process of implementing it, and from my experience, I know this process takes time. (CR17, Round 2) | - Understanding conditions and the CAs efforts and actions in addressing issues  
- Understanding change complexities and the faced challenges |
| Being acknowledged | A lot of the users are not standard users. So, we ended up loading a lot of software and resetting everything up again, so it took us a long time to get the PC operational. We don’t use Word and Excel as our main applications. We’ve got 3D models and GIS [Geographic Information System] stuff … which we needed to load back on again. It took us a week to get the base system sorted | - Emphasising requirements and concerns  
- Feeling disregarded  
- Feeling not being understood, considered and supported  
- Expecting to be acknowledged |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CRs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Being acknowledged</strong></td>
<td></td>
<td>out, up and running. Because they [CAs] have got things on there that just don’t make sense, they haven’t given people permissions that they were supposed to have and all the rest of it. So, it wasn’t a straightforward process. (CR19, Round 2)</td>
<td>- Expecting to be understood and valued</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To me, Admin access [Administrator access in their own PCs] is not really part of the Windows 7 rollout. It’s just that you’ve either got it or you haven’t. It should be irrelevant of the operating system. I communicated to a lot of them [CAs] that we were having trouble with admin access and I got no response. That happened a few times, so I thought maybe I was blacklisted or something. (CR11, Round 2)</td>
<td>- Expecting CAs to acknowledge and consider CRs’ conditions and priorities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A number of people perceive it [change] as a work requirement. If it’s a work requirement, you’ll always get minimal buy-in in this organisation. It’s a bit funny they [CAs] think like ‘just throw it onto my PC, I’ll make it work scenario’. I don’t believe they would get any more buy-in or support if they decide to implement newer systems. [The CAs] are resolved to change. I think if the organisation were now deciding to make a big change software-wise, that would probably drive a few people into the ground. (CR10, Round 2)</td>
<td>- Expecting response from CAs</td>
</tr>
<tr>
<td><strong>Appraising change and constructing meanings</strong></td>
<td>Assessing change and its impacts</td>
<td>Organisations bring change to well. I guess, with Windows upgrade, it isn’t really to make staff’s working life easier or better. I think it is because the OS and some applications are outdated and no longer supported, so they aren’t going to be supported by their vendor. In my opinion that is really the main driver about upgrading to Windows 7 and Office 2010 because they are the supported applications. To me personally, it doesn’t actually make any difference. (CR13, Round 1)</td>
<td>- Highlighting the significance of CRs’ buy-in</td>
</tr>
<tr>
<td></td>
<td>Assessing change and its impacts</td>
<td>It [IT implementation] pretty much is what I think a catch up with the rest of the world, and it’s also an opportunity to upgrade any PCs that are out of warranty as well. They [CAs] can do it in one hit. … It’s Windows 7; most people got it at home, so it’s fine, we’re just catching up with the rest of the world because we’re a bit backward in IT here. As far as software and stuff, we’re a little slow. (CR12, Round 1)</td>
<td>- Assessing change and its impacts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Interpreting the CAs plans and actions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Interpreting the change as an obligation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Appraising change outcomes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Assessing change and its impacts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Not expecting a major change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Assessing conditions</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, GovOrg</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>Assessing change and its impacts</td>
<td>Everybody would be fine. It’s just an upgrade; it’s because we’re just going to Windows 7. It’s not like we’re going from PCs to Macs or things like that. That would be a completely cultural shift, because it’s a whole different way of working. I think people will like it whatever, and they all use it at home anyway. I have Windows 7 at home, so it doesn’t bother me at all. So, I’m used to using it, and I think everybody else just seems quite fine about it. I don’t think it’ll change the way they [CRs] do their job. I think it just sits there in the background and people just get on with it. (CR12, Round 1)</td>
<td>- Appraising change&lt;br&gt;- Comparing change experiences&lt;br&gt;- Not expecting a significant change&lt;br&gt;- Expecting a smooth change process</td>
<td></td>
</tr>
<tr>
<td>Assessing change and its impacts</td>
<td>We had some discussions with the project team and I know that the new changes would really save the network from any injection of virus and all these things. So, it’s really worth doing them, otherwise everyone has the admin access and can do or install anything. After deploying the changes, you won’t be able to install or inject anything inside the network. I mean, the network would be tightly controlled and much safer. (CR17, Round 1)</td>
<td>- Appraising change outcomes&lt;br&gt;- Feeling informed about changes&lt;br&gt;- Anticipating positive change outcomes</td>
<td></td>
</tr>
<tr>
<td>Evaluating change process</td>
<td>I expect to log in the day after deployment, and I should all be perfect. The other good thing is that they [vendor team] have upgraded some similar organisations before us and if there have been problems they would’ve ironed them out before they get to us. It should just really be smooth for us. That’s what we’re hoping anyway. (CR16, Round 1)</td>
<td>- Appraising change implementation approach and process&lt;br&gt;- Anticipating a smooth change process&lt;br&gt;- Expecting standard upgrades and small changes</td>
<td></td>
</tr>
<tr>
<td>Evaluating change process</td>
<td>In [my previous workplace], I felt like ‘corporate IT’, and the satellite groups were in pretty good partnership. Corporate looked at us and they respected us and we were part of their decision-making process, whereas here we’re not. (CR11, Round 1)</td>
<td>- Evaluate the change process&lt;br&gt;- Assessing CA plans and actions&lt;br&gt;- Comparing change experiences&lt;br&gt;- Expecting to be acknowledged / considered</td>
<td></td>
</tr>
<tr>
<td>Interpreting events and actions</td>
<td>I don’t really blame CA7 [the project manager] herself. I blame the way she was meant. She’ll do what she’s directed to [do]. And if she’s been ordered to do something, she’ll do it. And I think that’s the other issue with bringing contractors, because contractors if they are employed to a nasty job, they’ll do the nasty job. Whereas a normal member of the staff might balk and say ‘I think you should do it this way, because that would be better’. Probably some of the managers don’t want to hear that because they want to get it done on time and on budget, [and it] doesn’t matter how many people they muck around on the way. They just use those metrics the way that measures success. (CR11, Round 1)</td>
<td>- Feeling uncertain and frustrated&lt;br&gt;- Assessing the CAs’ actions and the change process&lt;br&gt;- Appraising the change approach&lt;br&gt;- Expecting consideration and support&lt;br&gt;- Interpreting CAs’ reactions</td>
<td></td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, GovOrg)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Getting surprised with unexpected changes | We [CRs] were a little bit surprised because there wasn’t only the Windows 7 rollout. There were a few other changes that got snuck into it, like the [documents] classification scheme, which they basically gave us a brochure and said here it is. So, some people were more annoyed at that [facing unexpected changes] than they were at the operating system rollout. Certainly, sticking on change on top of change, [is] not such a great idea. (CR15, Round 2) | - Experiencing unexpected and unplanned changes  
- Feeling surprised and annoyed with unexpected changes  
- Criticising the change planning and implementation process |
| Interpreting events and actions, evaluating change process | We experienced some issues; some critical issues such as loss of network drives and not being able to access data occasionally, or some issues because the staff weren’t really aware of the changes or didn’t know how to do what they needed to do. Some of them [issues] were not really project’s problems, but the users’ perspective of what they were expecting, and it did affect all staff for a while, … [such as] not being able to work to the full capacity that they used to working. (CR10, Round 2) | - Feeling unaware of the project requirements and results  
- Appraising events and actions  
- Encountering challenges and issues  
- Assessing change process |
| Getting surprised with unexpected changes | We all had some issues, and certain applications that we use and couldn’t be installed or used [after implementation]. But there were also some issues that we didn’t expect to have, like network and storage drive access issue, which was unacceptable. (CR19, Round 2) | - Getting surprised with unexpected changes, conditions or issues  
- Evaluating conditions, events and actions |
| Assessing change and its impacts | We did the pilot, and we could have a kind of awareness. So, we were more prepared. They [CAs] identified a few people, segregated a specific group for the pilot, and then moved their applications to the pilot environment for the test. There was a separate lab they had created, so you could just go there and go over the updated applications. So, we could check our applications and test them to see if there was any issue or anything that might impact our work or other projects. And, we identified several issues. (CR17, Round 2) | - Participating in the pilot implementation  
- Assessing changes  
- Getting informed about new changes |
| Assessing change and its impacts | I would have taken into account the non-standard requirements [of CRs] from the beginning. I would have paid more attention to the actual testing of the applications prior to the rollout, and the other [related] system changes as a part of the actual rollout. I would have paid a bit more attention to having the appropriate number of staff, I think, to support and manage the rollout. (CR10, Round 2) | - Evaluating the change process  
- Expecting CAs to consider CRs’ requirements  
- Criticising change planning and preparation  
- Interpreting events and actions |
| Getting used to changes | Initially, I did really not know how to install my required applications, use the network file storage and all those things. There is the hotline number, and I | - Getting familiar with the new changes  
- Assessing changes |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CRs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interacting with others</td>
<td>Communicating with CAs</td>
<td>called them [implementation team]. They just told me, for any installation [of non-standard applications] you want to do, you have to move your file into a specific folder and then do that. So, that’s because there are admin rights that must be set and are available in that folder only. It took a bit of time to get used to some of those changes. (CR17, Round 2)</td>
<td>- Perceiving change benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>We got an email telling us the project will start soon, and also, they have set up some test PCs that we can go and test our applications. ... There is a lot of unanswered questions about changes. For example, whether we are getting new PCs or having our old PCs updated, whether we can get extra memory, etc., etc., etc. So, we are given ample information in the fact that the project is happening. How it is going to happen is another thing. (CR19, Round 1)</td>
<td>- Emphasising the need for consistent communication - Being informed - Undergoing ineffective communication</td>
</tr>
<tr>
<td></td>
<td>Communicating with CAs</td>
<td>Changes must be explained and clarified in any project. I think they [CAs] probably need to focus on their communications better in terms of the way they communicate the change with the appropriate level of details. (CR10, Round 1)</td>
<td>- Expecting to be communicated and informed about the change process and consequences - Undergoing ineffective communication</td>
</tr>
<tr>
<td></td>
<td>Communicating with CAs</td>
<td>I have had a strong communication with the Windows 7 team. They also emailed us about the project, but as business managers, we’ve always given a heads-up about the change details well in advance before everyone else gets it, because we are the ones who have to do the running around to get our people organised so that the implementation runs smoothly. (CR13, Round 1)</td>
<td>- Having frequent and direct interactions with CAs - Being informed about the changes - Getting prepared for the IT implementation</td>
</tr>
<tr>
<td></td>
<td>Interacting with CAs</td>
<td>We had a little issue around; we had an accommodation move in between when we did the audits. So, I provided that information, but that wasn’t updated on the CAs plan. So, I spoke with CA7 [the project manager] about it and also my other concerns. I thought that could become a big problem, but it’s been sorted out. She also explained us the [new] plan and changes. So, we are now well-informed. (CR12, Round 1)</td>
<td>- Having close relationship with the CAs - Receiving guidance and support from CAs - Getting informed about the changes and plans - Communicating consistently - Having direct communication with CAs</td>
</tr>
<tr>
<td></td>
<td>Interacting with CAs</td>
<td>They should have had the information sessions; they should have had training sessions, not a three or four-day training session but at least a half day training session or information session telling staff what’s different, how it’s going to be run compared to what they were used to in XP and the likes. CA7 created a couple of tips and tricks sheets that was left on the desk as a welcome pack, and that is about the size of the change communication that went in with this</td>
<td>- Expected more regular and direct interactions with CAs - Being able to communicate needs and discuss concerns with CAs - Undergoing ineffective communication - Being informed about events and changes - Communicating consistently</td>
</tr>
</tbody>
</table>

314
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CRs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
</table>
| Communicating with CAs    | Being     | I wasn’t very happy with the communication. I would have run fortnightly meetings for us [power users]. Some groups may not have needed that, because they just have Windows and run [Microsoft] Word in it, and that’s not a problem. Others do more. The more you run [non-standard systems], the more you need to be communicated about the details. They also [CAs] didn’t tell us about the timeline very much. They tended to tell us loosely at the beginning and then three or two days before [the IT implementation]. (CR11, Round 2) | - Undergoing ineffective communication  
- Expecting to be communicated and informed about the change details  
- Expecting regular change communication  
- Being able to discuss their needs with the CAs |
| Feeling involved          | Being     | The implementation team should try to communicate with all the users along with the rollout phases, so give them, for example, guidelines and the related documents, and inform them of what will happen. I think they [CAs] should also try to have face-to-face sessions with all the users. They should assure the users that things are working in the background and progressing. When people are aware, they are more receptive, I would say. (CR18, Round 1) | - Expecting to get informed about the change process and outcomes  
- Expecting to have direct communication with CAs  
- Getting involved in interactions |
| Being informed            |           | We [CRs] are not informed about the new changes, and we are not asked to comment on the changes and plans. They [CAs] sent us a few emails saying Windows 7 would be rolled out and just gave us a form about our current software tools, which we needed to fill in electronically. That’s how I think we became aware that Windows 7 rollout would happen soon. But I think there was no mention of when exactly it is going to be, how they would do that, or would there be any other changes? (CR14, Round 1) | - Feeling not being able to have an influence  
- Not being informed about the change  
- Feeling uninformed  
- Feeling ignored |
| Feeling involved          |           | [I expect the CAs to] tell us what the project plan is, tell us what the elements of the new environment are going to be, explain to us what we’re going to lose, and run fortnightly meetings… So, the communication is really the key because we want actually to contribute to that project plan, and about what has to be done. So, we need to see it and be a big part of it and even get to be a stakeholder that approves changes. Here, none of that happens. (CR11, Round 1) | - Feeling uninformed  
- Feeling ignored or disregarded  
- Not being considered and involved  
- Expecting to have the opportunity to participate in the change process  
- Expecting consistent communication |
| Being informed            |           | I have no idea who the project managers are now. (CR11, Diary, Round 1)                                                                                                                                              | - Feeling uninformed |
| Being informed            |           | Basically, what happened with the staff was you come on Monday and you are on XP, and you come on Tuesday and you are on a Windows 7 machine. (CR10, Diary, Round 2)                                                      | - Criticising the lack of information and direct interactions between CRs and CAs  
- Feeling uninformed |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CRs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling involved</td>
<td></td>
<td>I was part of the pilot, and I was using the new changes before the other users. So, I was accustomed to them, and the problems that we supposed to face, we already faced them before they [new systems] come to live. So, when they went live, we didn’t face many problems. (CR18, Round 2)</td>
<td>- Being able to participate in the pilot and test&lt;br&gt;- Getting informed about changes&lt;br&gt;- Feeling confident and ready for the change</td>
</tr>
<tr>
<td>Seeking benefits</td>
<td>Seeking benefits, benefiting from change</td>
<td>If I look at what happens in Windows 7 as opposed to XP, I think I like XP better than Windows 7. If you do [file] search in XP, it is a lot quicker than Windows 7. There are also a few other things that are more complicated or hidden in Windows 7. So, maybe the only benefit is probably its 64bit base, so our computing apps would run faster. (CR11, Round 1)</td>
<td>- Being uncertain about the change outcomes&lt;br&gt;- Doubting gaining considerable benefits&lt;br&gt;- Seeking benefits&lt;br&gt;- Evaluating changes and comparing conditions</td>
</tr>
<tr>
<td>Attitudes and reactions</td>
<td>Having negative feelings and attitudes</td>
<td>They [CAs] don’t change their dates. They just put them in. Therefore, they don’t want to hear your problems because your problems will mean that they won’t hit their date. They don’t resolve a lot of the problems. I think a lot of problems will crop up later when the project is finished. (CR19, Round 1)</td>
<td>- Feeling pressure, and forced to accept change&lt;br&gt;- Being unhappy with the change process&lt;br&gt;- Being frustrated by the lack of communication and support</td>
</tr>
<tr>
<td></td>
<td>Having negative feelings and attitudes</td>
<td>[In this project] they’ve got contractors. When it’s a staff member and you’ve got a problem, then you probably going to know who to get back to, whereas here that contractor leaves. So, you don’t know who to speak to. That makes it a lot more difficult because there is no responsibility; the responsibility doesn’t carry on. If the same person was here, you could go back to him and say ‘can you help here?’. There will be none of these people [contractors] here. (CR11, Round 1)</td>
<td>- Criticising the change process&lt;br&gt;- Having negative feelings about change&lt;br&gt;- Feeling frustrated&lt;br&gt;- Feeling unsatisfied&lt;br&gt;- Being pessimistic about the change outcomes</td>
</tr>
<tr>
<td></td>
<td>Having negative feelings and attitudes</td>
<td>I don’t necessarily like the way they run things here. They get contractors on to do small amounts of work and the managers sit above that and then contractors basically bear the brunt of all the interface with all the users. If it goes wrong, it doesn’t matter because only the contractor finds out about it. What it means to me [is that] it’s pretty hard to build up on a corporate knowledge. The contractors have got to learn your environment. (CR11, Round 1)</td>
<td>- Criticising change management and process&lt;br&gt;- Feeling unsatisfied&lt;br&gt;- Being pessimistic about the change outcomes</td>
</tr>
<tr>
<td></td>
<td>Having negative feelings and attitudes</td>
<td>There will be some major changes in the access level and permissions on the new system… So, it’s about at least the rights and privileges where users can install and update software and then probably customise it or not, which is not exactly related to Windows 7 upgrade. I believe the planning and preparations haven’t been done appropriately, which will cause issues in our services and systems. So, I don’t agree with the plan of doing them. (CR18, Round 1)</td>
<td>- Being concerned with losing productivity, authority or autonomy&lt;br&gt;- Being pessimistic about the change outcomes&lt;br&gt;- Having a sense of loss</td>
</tr>
<tr>
<td>Theme</td>
<td>Category</td>
<td>Quotes (CRs, GovOrg)</td>
<td>Description/Summary</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Having negative feelings and  | Having negative feelings and attitudes        | They [CAs] haven’t prepared a practical test. Test machines are nothing like the production machines, which is why I push back on doing the testing because it’s a waste of time. They didn’t ask what we need... So, when we have had some issues in the tests; for example, involved people don’t have correct permissions or their permissions change every day, we will face several problems and disruptions later. Not the best environment to be in. (CR19, Round 1) | - Expecting CAs to consult with CRs and consider their needs and conditions  
- Feeling frustrated with the change plan and process  
- Being pessimistic about the change outcomes |
| Having positive feelings and  | Having positive feelings and attitudes         | My computer runs a bit faster. They [CAs] also upgraded my system’s hardware, and they put more memory on it to run the new operating system and applications. So, I think it’s been a positive kind of project. (CR12, Round 2)                                                                                                                                     | - Being satisfied with the change outcomes  
- Emphasising change benefits  
- Being happy with the change process |
| Supporting change, having     | Supporting change, having positive feelings    | It’s a big project, and they [CAs] upgraded a lot of workstations. I think they couldn’t have done it [the change process] any better. I mean there were probably some issues or something that fell out at the end, but at the everything seems to be working well. They staged it well. They didn’t try to do everybody at once, so they worked within their limitations. ... The [implementation] team had done all the hard yards beforehand. They managed to do all the work to get us to this point. It’s been a well-managed project. (CR12, Round 2) | - Feeling satisfied  
- Understanding encountered issues and disruptions  
- Supporting the change and CAs’ efforts and actions, showing appreciation  
- Understanding the size and complexity of the change |
| Having negative feelings and  | Having negative feelings and attitudes         | I’m blaming the Windows 7 project and mediocre planning. We still don’t know the full reason behind those issues where the network connections and integration kept dropping off. Obviously, we didn’t want to have the problem in the first place from a TSystem integration perspective. That was the problem I tied it to the Windows 7 project. I don’t know if it was part of the security, I mean the way that the security had been set up for individual PCs. We had quite a number of meetings about those issues with the [CAs and the vendors’] staff, and they were sort of running around in a circle to try and work out what had caused the problem. (CR10, Round 2) | - Doubting CAs’ expertise and criticising their decisions and actions  
- Feeling uncertain and confused  
- Being pessimistic about the change outcomes  
- Feeling unsatisfied |
| Resisting change, having      | Resisting change, having negative feelings     | I had some guys coming down from [a third-party service provider] that I was doing some work with, and that had been organised before they [CAs] told me my PC would be upgraded. So, I said ‘no, I’m using my system, so you can’t upgrade it on that day’. Also, there were a few guys in [another department] that had a massive project running and, because of their timelines, they just couldn’t afford to have a few days not doing anything. (CR19, Round 2) | - Feeling uncertain about the change impacts  
- Not trusting CA actions  
- Confronting change to avoid disruptions  
- Fearing of facing issues and unplanned changes  
- Having a sense of loss |
<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Quotes (CRs, GovOrg)</th>
<th>Description/Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justifying reactions</td>
<td>Criticising change process, criticising CAs</td>
<td>There really isn’t a particular project manager on our side to try to get the required resources, to get the required changes happen, and to support us. There really isn’t what I would call ‘change management’ involved in the project and the process whatsoever. (CR10, Round 1)</td>
<td>- Blaming CAs for not considering the CRs’ needs - Criticising the ineffective change management and the CAs’ lack of support</td>
</tr>
<tr>
<td>Justifying reactions to change</td>
<td>For the project team, it’s like they’ve set themselves up in an ivory tower. So, because they don’t liaise with us very much, they don’t care whether we think it’s necessary or not. So, if you don’t hear, you’re like a king in a tower; you don’t hear what the peasants are saying; you don’t want to listen to them either. Of course, they think they’re doing a good job until the revolution comes. So, that’s the reason. (CR11, Round 1)</td>
<td>- Being cynical about the change and the CAs’ actions - Not trusting CAs in considering requirements and priorities - Justifying the lack of engagement and participation</td>
<td></td>
</tr>
<tr>
<td>Justifying reactions to change</td>
<td>As I could see in the pilot, there would be a big difference between what I have now as far as my privileges are concerned, compared to the privileges on the network and PCs that I would have after the Windows 7 rollout. As I told them [CAs], it’s going to be an issue. Access restrictions will cause some problems for us to be able to use some of our tools and do our work … So, I don’t agree with the plan of doing them. (CR18, Round 1)</td>
<td>- Validate self - Justifying concerns and understandings - Rationalising the lack of support - Losing productivity, feeling afraid of disruptions</td>
<td></td>
</tr>
<tr>
<td>Justifying reactions to change, criticising change process</td>
<td>Installing new [non-standard] applications need special access. So, with the new procedure and access management policy, we have to apply for the admin access. Extra access request has to be really justified, and you can’t easily get an admin access. So, you need to do all those justifications then they will provide you with the access. With that access also, you won’t be able to install everything; there would be some limitations. (CR14, Round 1)</td>
<td>- Losing authority and control - Fearing of facing disruptions and losing productivity - Criticising CAs’ decisions and plans - Maintaining negative attitude towards change - Justifying concerns and needs</td>
<td></td>
</tr>
<tr>
<td>Criticising change process</td>
<td>In the last few weeks, CA7 was given an extra person just to assist with some of the paperwork. But in my opinion, that was ‘too little too late’ because the project was pretty much done. I think they could’ve resourced the project better. This project really touched everybody’s desk, and I don’t think management as such went with a high enough priority resourcing to be able to assist in a smoother type of rollout. (CR10, Round 2)</td>
<td>- Criticising change planning and process - Blaming change management - Blaming CAs</td>
<td></td>
</tr>
<tr>
<td>Justifying reactions to change</td>
<td>They [CAs] learnt a lot along the way, and they just kept improving the process. So, it was good to be at the end. They kind of ironed out the problems, the process went fine, and we had almost no significant issue. (CR12, Round 2)</td>
<td>- Supporting the CAs’ approach and actions - Justifying satisfaction with the change and its results</td>
<td></td>
</tr>
</tbody>
</table>
Appendix L

Human ethics clearance

To: Professor Judy McKay, FBE/Mr Amir Rahighi

Dear Professor McKay,

SHR Project 2014/192 Sensemaking processes and stakeholders’ reactions to IT implementation
Professor Judy McKay, FBE/Mr Amir Rahighi
Approved Duration: 25/09/2014 to 31/01/2017 [Adjusted]

I refer to the ethical review of the above project protocol by a Subcommittee (SHESC1) of Swinburne’s Human Research Ethics Committee (SUHREC) at a meeting held 15 August 2014. Your response to the review, as emailed on 26 and 27 August and 11 and 23 September 2014 were reviewed by a SHESC1 delegate.

I am pleased to advise that, as submitted to date, the project may proceed in line with standard on-going ethics clearance conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the current National Statement on Ethical Conduct in Human Research and with respect to secure data use, retention and disposal.

- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.

- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.

- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project. Information on project monitoring, self-audits and progress reports can be found at: http://www.research.swinburne.edu.au/ethics/human/monitoringReportingChanges/

- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact the Research Ethics Office if you have any queries about on-going ethics clearance. The SHR project number should be quoted in communication. Researchers should retain a copy of this email as part of project recordkeeping.

Best wishes for the project.

Yours sincerely,

Kaye Goldenberg
Acting Secretary, SHESC1

--------------------------------
Kaye Goldenberg
Research Ethics Executive Officer (Acting)
Swinburne Research (H68)
Swinburne University of Technology
Level 1, SPS, 24 Wakefield Street
Hawthorn, VIC 3122
Tel: +61 3 9214 5218
Fax: +61 3 9214 5267