

Organizational strategy, technology and public participation in municipal planning

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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Abstract

Research focused on public participation in municipal planning typically seeks to evaluate and improve methods for integrating community input into planning decision processes. Research in the use of information and communication technologies (ICTs) to enhance citizen engagement includes, for example, visual or geographical forms of engagement as well as approaches for adapting social technologies to public discursive methods. The continued development of social technologies coupled with increasingly large streams of citizen-generated data intensify both the potential and the perils of ICTs in public participation. Direct, real-time citizen communications lies in stark contrast to the increasing noise and information density in citizen communications and municipal data collection, for example. Such trends create dichotomies and emerging complexities that require new perspectives and models for examining the potential and barriers for citizen engagement in municipal planning decision processes.

This research advances academic discourse surrounding public participation in municipal government by examining the organizational role and perspectives of municipal leaders. Key-informant interviews were conducted with 23 municipal leaders in Ontario, Canada. The findings informed the development of an inter-disciplinary component model that positions public participation as a strategic imperative. The component model was applied as a framework to generate insights from a second phase of research, namely a survey of municipal leaders across Canada. The survey findings identify broad deficiencies in municipal participatory capacity, as indicated by significant gaps between, for example, municipal leadership vision for an active, informed public in contrast to municipal structures, processes, analyses, and technologies in support of the vision. Finally, visualization methods were used to identify gaps and opportunities in municipal participatory capacity, and to compare the results across different types and sizes of Canadian municipalities.

The organizational component model and visualization tools for public participation capacity developed in this thesis illustrate the interplay between structural organizational factors, managerial behaviors, and ICTs related to municipal public participation. These contributions suggest new approaches for municipal planners faced with the challenges of enhancing public participation capacity within their increasingly complex and information-rich contexts.

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Table of Contents

Examining Committee Membership	ii
Author’s Declaration	iii
Abstract.....	iv
Acknowledgements.....	v
Table of Contents.....	vi
List of Figures.....	viii
List of Tables	ix
List of Abbreviations	x
Chapter 1 Introduction.....	1
1.1 Research Background and Questions	6
1.2 Research Goals and Objectives.....	7
1.3 Research Outcomes and Contribution	8
1.4 Structure.....	9
Chapter 2 Public Participation, ICTs, Strategy, and CiRM	11
2.1 Public Participation.....	11
2.2 ICTs and Public Participation	32
2.3 Strategy	44
2.4 CiRM	53
2.5 Summary.....	70
Chapter 3 Researching Citizen Engagement.....	72
3.1 Research Outline.....	72
3.2 Phase 1: Interview Methods.....	82
3.3 Phase 2: Survey Methods.....	92
3.4 Data Analysis Approaches.....	96
3.5 Summary.....	98
Chapter 4 Phase 1 - Interview Research	99
4.1 Public Participation.....	99
4.2 Public Participation and Strategy.....	107
4.3 Public Participation and ICTs	112
4.4 Public Participation and CiRM.....	117
4.5 Summary of observations	124
Chapter 5 Phase 2 - Survey Research	127

5.1 Respondent demographics.....	127
5.2 Public Participation	129
5.3 Public Participation and Strategy	134
5.4 Public Participation and ICT capabilities	140
5.5 Public Participation and CiRM	147
5.6 Summary	159
Chapter 6 Research Summary and Applications.....	161
6.1 PCM Review	161
6.2 PCM Research Results	163
6.3 PCM Visualisations.....	173
6.4 Conclusion.....	185
Chapter 7 Conclusion.....	188
7.1 Summary of key findings	188
7.2 Theoretical implications	193
7.3 Contribution to methods and practice	196
7.4 Recommendations for future research.....	199
Bibliography.....	203
Appendices.....	217
8.1 Demographics figures	218
8.2 Appendix - ICT effectiveness analysis details (I04)	219
8.3 Appendix – Interview questions reference chart.....	221
8.4 Appendix – Interview Questionnaire	223
8.5 Appendix – Recruitment Letters and Process	224
8.6 Appendix – Online survey form.....	233
8.7 Appendix – Survey questions reference chart.....	234
8.8 Appendix – Non-parametric Statistical Tests Summary	235
8.9 Appendix – Analysis of Rating Scale (Likert-type) data	244

List of Figures

<u>Figure 2-1–Arnstein’s (1969b) Ladder of Citizen Participation</u>	15
<u>Figure 3-1: Participatory Component Model (PCM)</u>	76
<u>Figure 3-2: Mixed-methods Research Configuration</u>	80
<u>Figure 3-3: Research Design</u>	82
<u>Figure 5-1: Public participation ratings (P03)</u>	131
<u>Figure 5-2: Strategic implementation factors - organizational</u>	136
<u>Figure 5-3: Strategic implementation factors - citizen</u>	137
<u>Figure 5-4: Comparative strategic implementation factor averages (S02)</u>	138
<u>Figure 5-5: ICT System Ratings (I01)</u>	143
<u>Figure 5-6: ICT Effectiveness ratings by degree of citizen democracy</u>	145
<u>Figure 5-7: IT Effectiveness ratings by degree of relationality</u>	146
<u>Figure 5-8: CiRM Familiarity and Experience (A – C01; B – C02)</u>	148
<u>Figure 5-9: Comparison of CiRM familiarity (C01) and usefulness (C09) ratings</u>	151
<u>Figure 5-10: Duration of CIRM use (C11) with comparisons</u>	153
<u>Figure 5-11: Implementation status by role</u>	154
<u>Figure 5-12: Scope of CiRM use (C12) and populations</u>	155
<u>Figure 5-13: Citizen functions by technology (C14) with average populations</u>	157
<u>Figure 6-1: CiRM Efficacy Model – Basic</u>	176
<u>Figure 6-2: Regions</u>	177
<u>Figure 6-3: Counties and Townships</u>	177
<u>Figure 6-4: VAOI Matrix graph – unfiltered</u>	182
<u>Figure 6-5: CiRM Efficacy Model – Total sample (N=75; Pop.Av.=105K)</u>	182
<u>Figure 6-6: CiRM Efficacy Model-Townships</u>	183
<u>Figure 6-7: CiRM Efficacy Model-Regions</u>	183
<u>Figure 6-8: CiRM Efficacy Model-larger Regions</u>	183
<u>Figure 6-9: CiRM Efficacy Model-larger Cities</u>	183
<u>Figure 8-1: Respondents by position</u>	218
<u>Figure 8-2: Municipal populations</u>	218
<u>Figure 8-3: Types of Municipalities</u>	218
<u>Figure 8-4: Respondents by province</u>	218
<u>Figure 8-5: Respondents by # of employees</u>	218
<u>Figure 8-6: Respondents’ Education/Position</u>	218

List of Tables

Table 2-1: Comparison of the Concepts of Government and Governance	20
Table 2-2: Deficits in democracy (Clark, 2008)	22
Table 2-3: Central dimensions of citizen participation (Arterton, 1987)	25
Table 2-4: Ansoff's Domains of Validity for Strategic Behavior (Ansoff, 1987)	46
Table 2-5: CRM Misconceptions (Kincaid, 2002)	59
Table 3-1: Interview Participants	90
Table 4-1: Summary of P02 responses	101
Table 5-1: Population Distributions (by individuals and municipalities)	127
Table 5-2: ICT effectiveness attribute results (I04)	144
Table 5-3: "CiRM Value" response comparison between sample' and sample"	151
Table 5-4: Characteristics of C14 respondents	156
Table 6-1: VAOI Matrix of Citizen Efficacy	179
Table 8-1: ICT effectiveness attributes (I04) by citizen democracy category	219
Table 8-2: ICT effectiveness attributes (I04) by degree of relationality	220

List of Abbreviations

ASQ – American Society for Quality
BSC – Balanced scorecard
CAO – Chief Administrative Officer
CEM – CiRM efficacy model
CGC – Citizen-generated content
CIO – Chief Information Officer
CIP – Canadian Institute of Planners
CiRM – Citizen relationship management
CMS – Content management systems
CRM – Customer relationship management
CSO – Civil society organisation
DSS – Decision support systems
FCM – Federation of Canadian Municipalities
G2C – government to citizen
IAP2 – International Association for Public Participation
ICT – Information and communication technology
IoT – Internet of things
IP – Internet protocol
ISO – International Organization for Standardization
IT – Information technology
KPI – Key performance indicator
LRG – Local and regional government
NPM – New public management
OECD – Organisation for Economic Co-operation and Development
PCM – Participatory component model
PGIS – Participatory geographic information systems
PP – public participation
PSS – Planning support systems
ROI – Return on investment
SM – Social media
SNS – Social network services
xRM – Extended relationship management

Chapter 1

Introduction

Public participation in government is a cornerstone of democracy. Yet beyond citizen voting, meaningful citizen involvement in local government remains sporadic, tokenistic or exclusive. Urban participation theory, though rich and diverse, is still challenged to answer the longstanding questions about “*what* is effective citizen participation and what is its relationship to the social imperatives of our time” (Arnstein, 1969). The panacea promised by participatory and social technologies has pulsed with waves of optimism and disenchantment where failures far outnumber successes. Rapid changes in information and communication technologies (ICTs) are paralleled by escalating social and environmental imperatives faced by cities, raising new questions about how municipalities can adapt and manage for effective public participation. With each new participatory technology comes increasing competition for citizen attention. Government information, a requisite for informed citizen participation, is increasingly lost among noisy and specialized information streams. Social science, and particularly urban theory, inadequately addresses urban management and governance imperatives in the context of these dynamics and specifically in consideration of the democratic premise of public participation. This chapter contextualizes the research focus of this thesis within urban planning and governance theory, which provides the foundation for examining the interrelation of both participatory ICTs and present technological innovations and their impact upon urban management and governance. Enduring questions surrounding effective public participation are explored from recently emerging research perspectives at the intersection of participatory governance policy and ICTs.

Examination of contemporary issues in public participation literature reveals a diverse and complex landscape across numerous themes. Official definitions help to define citizens’ roles contributing to “good” governance, but are critiqued as idealistic, vague, and culturally constrained in application (Poluha & Rosendahl, 2002; United Nations, 2009). Numerous theoretic studies and practical frameworks attempt to clarify participatory practices in terms of methods, forms and activities. However, these are found to contribute tremendous diversity and complexity while insufficiently addressing the lack of consistency, effectiveness, and best practices across the urban

participatory governance and planning landscape (Bishop & Davis, 2002; IAP2, 2008; Lue & Fleming, 2015; Pierre & Peters, 2000; Rowe & Frewer, 2005).

Underlying the roles and practices of public participation is the question of its purpose. “Listening” to citizens and gaining an understanding of citizen preferences is instrumental to the design of attractive and thriving cities, and has been a longstanding tenet of urban planning (Booth & Halseth, 2011; Tiebout, 1956). Citizen preferences extend beyond the built environment to future visions and goals for the local community, including economic strategy, social services, structures, and roles as part of the city planning scope (Blumenfeld, 1967; Hodge, 2003). In addition, cities are increasingly faced with the “big issues” of economic and environmental resilience, natural resource consumption, public health, and population growth. Within these complex dynamics, urban planners and managers are challenged to consider both how to “listen” to citizens, and how to harness the immense potential of citizen-generated solutions through aggregate knowledge, behavioral change, and participation (European Commission, 2015; Katz & Bradley, 2013; McGirt, 2009; United Nations, 2014b).

ICTs, particularly Internet-based technologies, have long been thought to hold promise for improving the understanding of citizen preferences particularly as ICTs become more embedded in citizens’ daily lives and contribute to increased citizen networks (Anderson & Rainie, 2014; Fox & Rainie, 2014; Millard, 2008). Many individual forms of ICTs are now ubiquitous in society generally and in citizen-to-government interactions. Traditional participatory forms and institutions are declining, while ICT-based forms of civic engagement are growing by empowering large, diverse citizen groups through participatory structures and appropriate technologies (Smith, 2014). These include, for example, *direct* interactive forms such as e-mail, numerous chat and messaging platforms, and other social media. Other direct citizen participatory forms include interactive Web sites, numerous e-participation approaches, participatory public geographic information systems and decision-support systems, as well as specialized software developed by municipalities to engage with citizens. Participatory ICTs benefit cities by, for example, building networks of individuals that enable the creation of wealth and well-being, improve municipal service quality and responsiveness, or lead to a better understanding citizen sentiment toward local issues and initiatives (Mehaffy, 2014; Zhang & Feick, 2016).

ICTs also facilitate forms of indirect or passive government-citizen interaction and present emerging opportunities. Open government, for example, potentially aids citizen participation indirectly by providing citizens with large information resources and expanding opportunities for

harnessing citizen knowledge and increasing citizen dialogue in governance and planning at every level of government (Francoli, 2011; Government of Canada, 2016; Government of the United States, 2015; OGP, 2016). Other, rapidly emerging ICTs are radically altering traditional perspectives of direct, active participation and are challenging municipalities to exploit new participatory channels. These include, for example, big data and analytics, internet of things (IoT), and customer relationship management (CRM). Significant urban investments in these technologies are premised on making cities smarter, safer, resilient, more habitable, and ultimately more attractive and satisfying to citizens. IoT technologies are being deployed to monitor city infrastructure and are combined with big data and analytics technologies to detect maintenance requirements and performance patterns (Alder, 2015). These technologies, collectively described as the “digital skin of cities”, are purported to present governments with tremendous opportunities to understand and improve citizen services and are experiencing rapid adoption by municipalities (Goldsmith & Crawford, 2014; Hatry, 2014; Schaack, 2016).

All of these forms of ICT-based citizen “listening” and service-enhancing technologies are typically characterised by ample positive rhetoric, but remain inadequately supported by research about their impacts upon citizen participation in governance and urban planning (Rabari & Storper, 2015). These dynamics contribute to the diversity and complexity of the participatory landscape. The increased diversity of participatory channels amplifies the enduring problem of citizen engagement as a vast collection of methods and activities targeting discrete issues but lacking established best practices and strategic focus (Rowe & Frewer, 2005). Further, adoption of new participatory technologies in urban government is often challenged by outdated data governance policies and methodological standards to resolve issues surrounding privacy and security, polarization and isolationism of public opinion, anonymity, disinformation, noise, incivility, and unequal access (Alder, 2015; Baller, Dutta, & Lanvin, 2016; Blumer & Doering, 2012; Hedges, 2009; Roy, 2012). These perspectives on participatory ICTs reinvolve broad research questions about participatory governance policy, namely how municipalities and planners “listen” to citizens and what is public participation.

Thus, the increased complexity of the participatory ICT landscape and introduction of alternative forms of ICTs that purport to support citizen listening elevate the participatory research agenda beyond questions of effective forms and methods. Recent research trends evidence a range of emerging research themes, such as municipal organizational structure, policies, power and agency, and technology capacity. Specific research themes, such as the overlap between participatory policy

and understanding of technological capability, currently receive inadequate research attention and lag the current, rapid adoption of new technologies (Goldsmith, 2016). Other research areas, such as the effects of special interest groups on citizen discourse, highlight unaddressed concerns. For example, sizable analysis of policy literature found that non-citizen based special interest groups can overshadow the effect of citizen voices on governance decisions (Gilens & Page, 2014). Multivariate analysis covering 1,779 U.S. policy issues indicated that economic elites and business groups have substantial independent impacts on U.S. government policy, while average citizens and mass-based interest groups have little or no independent influence. Similarly, research surrounding the popular theme of the potential of participatory governance to achieve common citizen interests reveals numerous execution barriers that often lead to excluding the poor and most vulnerable from governance processes (CIVICUS, 2009; United Nations, 2008, 2014b). And while public participation is foundational to the modern notion of democracy, the effectiveness of traditional methods remains in question (Shipley & Utz, 2012). Thus, the current state of participatory governance research provides an inadequate foundation for appropriately harnessing existing and developing ICTs for effective citizen participation.

A significant research question surrounds the potential of passive and indirect forms of participatory ICTs to supplant the direct active voices of citizens amidst an already complex participatory landscape. One research perspective on this question juxtaposes organizational efficiency and citizen accountability that possibly reflects merely a newer, technology-driven recurrence of the 1990's New Public Management movement (NPM). NPM was a collection of market- and efficiency-oriented, "customer-facing" approaches, critiqued by opponents as advocating for specialised managerial governance processes that connoted elitism, thereby denigrating democratic citizenship and heightening distrust (Anttiroiko, 2004; Shipley, 2003; Tupper, 2001). NPM continues to contribute to the dichotomous tension between organizational efficiency and citizen accountability that may be amplified by data- and technology-driven urban governments.

Other research perspectives on the active citizen voice offer normative approaches focusing on roles and responsibilities of local government to enable participatory processes. One perspective seeks to replace outdated, traditional approaches to public participation with the concept of government participatory infrastructure (Goldsmith, 2016; Nabatchi & Leighninger, 2015; Taylor, 2014). This perspective highlights current assumptions about public participation and identifies the interdependencies between urban technologies to empower citizen engagement and public sector organisational strategies and policies. It thereby advocates for a deeper understanding by urban

decision makers of the interrelation between organisational policy and technology. A significant premise of this perspective is a fundamental deficiency in organizational strategies by Canadian municipal leadership that are needed to create innovative citizen engagement paradigms (Hume, 2016). These research streams suggest alternative perspectives on citizen participation, particularly highlighting the importance of the role of municipal organizational factors in defining and empowering participatory capacity.

This thesis develops the notion of organizational strategy as a supporting concept in addressing questions surrounding the potential of direct active voices of citizens to effectively participate in decision processes amidst an already complex participatory landscape and particularly in view of the emerging wave of passive and indirect participatory ICTs. An organizational strategy perspective vis-à-vis public participatory policy and ICT-based processes comprises several considerations. These include, for example, individual municipalities' visions for their participatory approaches and outcomes, and the organizational structure and processes required for appropriate strategic participatory planning and execution. Rather than leading to the identification of normative methods and forms, this research will explore the nature of a theoretical framework and methodological approaches at the intersection of participatory governance policy and ICTs that empower municipalities to articulate and tailor their individual participatory strategies and policies.

This exploration is strongly inspired and informed by the philosophy and approaches behind customer relationship management (CRM). CRM was conceived as a way for private sector companies to better “listen” to their customers and enhance customer experience by enabling more effective management of communications, information resources and metrics. While, CRM may mistakenly be viewed simply as technology, it is defined as organizational strategy that seeks to enhance overall customer lifetime satisfaction, and is comprised of philosophy, management approaches, organizational processes, and supporting technologies (Greenberg, 2009a). CRM also has long offered the promise to enhance citizen-to-government relationships by helping to facilitate citizen interactions and interface multiple data sources relevant to city services and citizens (LaMonica, 2014; Pan, Tan, & Lim, 2006; Schellong, 2008). Public sector CRM, or citizen relationship management, has been described as an organisational strategy that drives structural redesign and realignment of internal departments and processes arranged around new understandings of citizen needs (Batista & Kawalek, 2004). CRM information technologies continue to gain significance in both the public and private sectors and is now the largest and fastest growing enterprise software segment (Gartner Inc., 2016). However, citizen relationship management is

typically and increasingly focused on cost reductions, gaining efficiencies, and on routing citizen calls through 311 call centers rather than strategically enhancing citizen relationships and participation (Gartner Inc., 2016; Lue & Fleming, 2015).

This research will build on the notion of CRM as a collection of philosophical and strategic concepts and particularly focus on the relational function of “listening” to citizens. Specifically, it seeks to formulate a theoretical framework and methodological approaches at the intersection of participatory governance policy and ICTs. It further explores how such a framework and approaches may help municipalities to articulate and tailor their individual participatory strategies and policies. This exploration is supplemented also by examining how CRM transitions from customer to citizen applications in the public sector. The broader intent is to contribute to the body of research about local governance and urban planning ICTs framed as: Will current trends in ICT adoption in LRGs merely lead to a replication of elitism and mistrust as a newer, technology-driven version of the 1990’s New Public Management movement? Or can ICTs help to discern and amplify the voice of the citizen amongst the noise of alternative information streams, the influence of competitive groups, and the threat of passive and indirect ICTs to supplant the direct active voices of citizens amidst an already complex participatory landscape.

The following section expands upon the preceding description of the research context and problem by outlining the research background and questions, expected contributions and research structure.

1.1 Research Background and Questions

This thesis examines CRM in the form of citizen relationship management (CiRM) as a collection of philosophical and strategic approaches and their potential for enhancing citizen-government relationships in LRG. Municipal strategy and the perspectives of top decision-makers are explored as determining factors in the value of CiRM for citizen engagement. Several key questions provide the focus for the research. The first group of questions seek to develop an objective understanding of the form and value of CiRM to LRGs by examining the readiness factors, strategic importance, and evaluation measures of CiRM. First, is there readiness for CiRM adoption in LRGs, and what are the readiness factors? Second, do LRGs currently identify or engage CiRM as a strategic technology, and how do CiRM objectives fit into the strategic plan? Third, how can CiRM effectiveness be reported, for example, by determining what are suitable measures? To whom would they be communicated in LRG? How substantive and strategic are such measures, and to what extent

are they compared for evaluation? These questions will contribute to the generation of a framework that describes how CiRM derives value for LRGs.

The remaining questions then seek to determine the participatory design and implementation parameters for CiRM in LRGs. Specifically, how important is an integrated approach in CiRM planning and adoption for citizen engagement? How might CiRM help to facilitate participation in the short and long terms? And finally, what are the implications for planners in the LRG context?

1.2 Research Goals and Objectives

Building on the above research questions, the goals of this thesis are to develop a unique, strategic participatory framework based on CiRM concepts to enhance dramatically and transform citizen engagement in LRGs. This is developed by conducting primary research of organizational decision-makers' perspectives regarding citizen engagement, organizational strategy, and related technological approaches. In contrast to most participation research that focuses on citizens' perspectives, this research focuses on decision makers' perspectives, acknowledging their fiduciary role as the primary power holders in municipal decision processes. Specifically, the thesis seeks to identify their expectations for citizen engagement and their perceptions of the value, opportunities and barriers to utilizing CiRM concepts for citizen engagement. A further goal is to develop a strategic approach or toolkit for assessing and planning of broad ICT-based, citizen engagement strategies for individual municipalities.

The specific research objectives are to:

- 1) explore issues and approaches in current literature to provide a foundation for the subsequent research;
- 2) determine key decision-makers' perspectives on current issues and approaches in citizen engagement and CiRM through two research phases plus analysis. They are:
 - a. intensive interviews with key decision-makers in local LRGs;
 - b. national surveys of key decision-makers in Canadian LRGs;

Analysis of the results of the interviews and surveys serves to identify decision makers' perceived opportunities and barriers to citizen engagement and CiRM that informs the strategic, participatory approach to CiRM;

- 3) propose and evaluate a strategic, participatory CiRM-based framework for citizen engagement that fits LRG decision makers' perceptions;
- 4) evaluate and summarize the potential value for a strategic participatory CiRM approach in government.

1.3 Research Outcomes and Contribution

The outcomes of the research are intended to provide a better understanding of the expectations, opportunities, and barriers faced by decision makers with respect to citizen engagement in LRG. This is achieved through several distinct phases that result in usable approaches and tools for the future:

- 1) The literature review serves to highlight the dynamics and gaps in current research concepts at the intersection of participation theory in governance and planning, participatory ICTs, organizational strategy, and CiRM. The literature review in these four areas is intended to inform the development of a strategic participatory framework that will guide the research.
- 2) The strategic participatory framework will guide the research through two proposed phases. The first phase is a series of in-depth interviews with municipal leaders that explore their perspectives across the four areas of the literature review. This predominantly qualitative phase serves to distill and validate key themes within the four areas and to explore related themes *across* these four areas. The innovative use of the strategic participatory framework will help structure the complexity of this inter-disciplinary topic in this exploratory phase.
- 3) Building upon the first phase of research, the second phase expands the line of research through online surveys. Municipal leaders' perspectives are examined across the key themes highlighted in the first phase. This phase is intended to explore a broad-based, predominantly quantitative research application of the participatory strategy framework for comparative discovery.
- 4) The resulting qualitative and quantitative data sets from the second phase of research will provide the basis for further comparative exploration of municipal leaders' perspectives across the four areas of the participatory strategy framework. This exploration will explore trends and characteristics that might provide insight into the effectiveness of ICT-based participatory approaches.
- 5) The data set will also be applied against matrix analysis and visualisation approaches to contribute toward an evaluation and prescriptive framework. The matrix builds upon the most significant participation factors emerging from the research. The visualisation approaches help explore municipal "readiness" or capacity for CiRM-based participatory strategies.

Broadly, this research contributes a new perspective and approaches to academic theory and practice related to the problem of citizen engagement and participatory governance. The new perspective views citizen engagement primarily as a strategic decision within the scope of municipal leaders. The proposed strategic approach to citizen engagement helps decision makers identify the value of citizen engagement specific to their organization, and the participatory CiRM-based participatory framework guides the formulation of participatory strategic planning and execution by municipal leaders and urban planners.

More broadly, the thesis contributes to the theory of participatory governance by proposing a strategic, value-based approach to citizen engagement that is distinct from current mainstream views. Currently, citizen engagement is broadly viewed as a function of the “right” form of participation, achieved by the application of the “right” technologies. The thesis advances the theory of governance in a networked society by exploring a strategic participatory CiRM framework that seeks to promote participatory governance choice. By aligning citizen engagement with government strategy, whether explicit or implicit, decision makers have available a broader range of governance forms and, through participatory CiRM approaches, a framework for planning and execution of participatory governance.

1.4 Structure

Chapter 2 of the thesis examines existing research literature pertaining to four key areas underpinning the research, namely citizen engagement theory and practice, information technology in citizen engagement, strategic planning in LRG, and finally CiRM. The chapter describes these areas as the four pillars of the core research questions that undergird the design of both the research and development of the theoretical model. The discussion explores the important inter-relations among these four areas, and highlights their lack of systematic integration in current theoretical literature. The integrated perspective serves to highlight the interrelation of the research questions, as well as each of the four areas in development of a cohesive framework for ICT-enabled citizen engagement.

Chapter 3 builds on the theoretical gaps and research issues highlighted in Chapter 2, and further develops the interdisciplinary theoretical integration perspectives for the strategic participatory framework and the integration of CiRM theoretical concepts. Specific research questions are identified, and a two-part research strategy outlined. This chapter lays the theoretical framework and methodologies for the research presented in the following two chapters.

Chapter 4 presents the results of the interview research conducted with three mid-size municipalities. The exploratory research is comprised of semi-structured, key-informant interviews. In-depth interviews were conducted of 22 key decision-makers, which equally represented three municipalities, and included both LRG executives, including Mayors and councillors, and top-level administrators including Chief Administrative Officers (CAOs) and managers. The chapter outlines the observations, analysis, and the results that help inform the further development of the theoretical frameworks developed in Chapter 2.

Chapter 5 presents the results of the survey research of mid- to large-sized municipalities across Canada. The survey incorporated the salient questions emerging from the interview research to

produce a self-administered online survey targeting key decision-makers in Canadian LRGs. Seventy-five respondents provided survey data representing a variety of executive and administrative roles from various-sized municipalities. The chapter outlines the data, the methods of analysis, and results from this second phase of the research.

Chapter 6 summarizes the results from the two phases of research and outlines an evaluative and prescriptive model to help strategic approaches for citizen engagement. A comparison of results between the interviews and surveys helps to validate the conclusions drawn and further substantiates the theoretical approach to ICT-enabled citizen engagement. The framework integrates all four of the theoretical areas from Chapter 2, and outlines a CiRM-based citizen engagement evaluative matrix and graph.

Chapter 7 concludes the thesis by summarising the research and evaluates how the findings and the framework contribute to advancing effective citizen engagement in LRG. The chapter also presents opportunities for continued research.

Chapter 2

Public Participation, ICTs, Strategy, and CiRM

This chapter examines current literature related to citizen engagement in order to draw out key factors and perspectives. In particular, three inter-related areas are examined that contribute to a holistic understanding of citizen participation. They are 1) public participation theory and practice in relation to democratic governance in LRGs and urban planning, 2) ICTs related to public participation, including participatory support systems and e-governance, and 3) organizational strategy as it relates to governance and public participation. The examination of these three areas uncovers perspectives and key factors that inform the research described in Chapter 3. The fourth section then explores the topic of CRM/CiRM as it relates to public participation, integrating the factors and perspectives highlighted from the first three sections. The integration and summary of concepts will specifically be explored as a uniquely strategic perspective to public participation, and will be used as building blocks for the development of conceptual framework for participatory CiRM in Chapter 3.

2.1 Public Participation

Public participation, or citizen engagement, in government decision processes is a cornerstone of democracy (Patten, 2001; Roberts, 2004; Woodford & Preston, 2013). Democratic processes inform citizens of government actions and involve citizens in decisions, and impact on citizens most directly at the local level of government. Public participation is a primary area of study for sociologists and other social scientists, being linked to a variety of individual and community benefits (Matthews & Howell, 2006).

2.1.1 Public Participation in Local Governance

Public participation (PP) is a broad term referring to the involvement of the public, or citizens, in the affairs of government or governance (Rowe & Frewer, 2005). The practical definitions and usages of public participation vary across a broad continuum, ranging from referring to specific practices in

professional urban planning, to very broad inclusion of any informational dynamic that asynchronously impacts upon citizens and government.

The term public participation is used interchangeably in the literature with civic or citizen engagement, and public consultation, but in practice it often connotes consultative, issue-based events (Shiple & Utz, 2012). Elsewhere, public participation broadly denotes distinct traditional democratic processes including representation (voting), consultative processes, and active citizen engagement, including discursive forms such as citizen deliberation (Woodford & Preston, 2013). Public participation is also defined by a body of literature concerned with methods for understanding public preferences and values (Booth & Halseth, 2011), and further is inclusive of newer electronic or Internet-connected forms of asynchronous citizen involvement in the public policy process (Silva, 2013). Acknowledging the lack of general consensus in defined nomenclature across the breadth of the public participation literature, this thesis uses the terms citizen engagement and public or civic participation and their variants interchangeably, except as otherwise clearly stated, to denote the full range and potential of citizen involvement in public policy and decision processes. This approach intentionally leaves room for a renewed and more constructive perspective on public participation, particularly municipal decision makers' perspectives surrounding public participation concepts, forms and outcomes as related to democratic governance.

This section provides an overview of public participation theory and practice from two related disciplines, namely urban planning, and political science, more specifically democratic governance. Urban planning is also broadly referred to as town and country, city, community, or professional planning. The field of urban planning offers, in addition to selective theoretical underpinnings, a rich palette of current forms and trends in local public participation practice, including practices that are legally mandated, and in this thesis provides the practical context, namely LRG, for public participation praxis. The field of democratic governance provides a broad theoretical base and historical view of the development of PP. Together, the two fields provide differing but complementary perspectives on the growing expectations of the public, and begin to integrate the current challenges and opportunities facing government officials and practitioners contemplating the adaptation of traditional public participation into new social forms of ICT-based communications and networks.

2.1.2 Urban Planning

Effective planning is a key objective of local government and its outcomes are highly visible to citizens. Citizens are concerned that planning decisions support the well-being of their community, and that they have a voice in determining that well-being. Public participation in the planning processes represents a democratic ideal, is a regulatory requirement for cities, and has a long history in Canada (Shipley & Utz, 2012). Growth of cities and the increase of citizens' social networking creates increased demand for new planning paradigms, which can be regarded as either futuristic or impossible to achieve. According to a special United Nations Habitat report (Moreno, 2008), the challenge facing planners in the present global milieu is to harmonize the various interests, diversity and inherent contradictions within cities. The professional planning function aims to optimize citizen well-being within complex and diverse environments.

An understanding of the goals and challenges of public participation begins with an examination of evolution and perspectives of professional planning. The following overview considers scope of planning, the tradition of planning experts, the effectiveness of public participation, citizen-centric perspectives in planning, cities, and strategic factors in planning.

Public participation practices in urban planning are informed by the scope of planning, which extends beyond the physical built form of the city to include complex social issues. The role of planners is to “secure the physical, economic and social efficiency, health and well-being of urban and rural communities,” charged with resolving issues surrounding “not only land use, but also social services, cultural resources, creation of economic capacity, transportation and infrastructure, and working internationally” (CIP, 2000). Hence, the scope of planning extends well beyond the local setting, issues of property and the built environment. The diverse planning literature reflects a comprehensiveness and complexity of scope. Any tendency to limit the planner's role to the physical realm is “myopic” (Davidoff, 2003, p. 219). Thus, the bounds of public participation in planning also extend beyond the physical realm. That the complexity and breadth of city planning extends beyond the placement of physical social units is not a new concept. Babylonian society, for example, recognized the function of social services, structures, and roles as part of the city planning scope (Blumenfeld, 1967; Hodge, 2003).

Debates about the effectiveness or utility of the urban planning profession have revealed differing views and challenges regarding the profession, leading to significant changes in the last decades. The debates can be summarized by landmark volumes (Nolen, 1916; Walker, 1941; Kent, 1964, 1990) that predominantly outline physical roles for city planners, in contrast to the broader

scope of planning in the current professional environment. The education curricula of urban planners further indicate the breadth of planning's scope, which typically includes social and political dynamics, the impacts of urban plans within particular socio-political contexts, identification and quantification of causal values and benefits, and the impacts on public well-being as a function of ethics theory and communicative modes that all influence planning practice (Neuman, 2005). A renaming of "town and country planning" to "spatial ethics planning" in the United Kingdom further exemplifies the recognition of the broad scope of planning (RTPI, 2006).

Urban planning was initially dominated by experts who relegated citizens' opinions to the domain of non-expert and inconsequential. An expert planning approach may intuitively seem more suited to the complexity and diversity of the social issues faced by planners. However, the North American tradition of expert planning came under attack in the 1950s due to many failed urban projects. Jacobs (1961) exposed the expert planning profession as empowered by and often acting in the best interest of power holders rather than citizens, resulting in planned neighbourhoods that spawned artificial, lifeless urban spaces that were a complete failure. Out of the resulting debates came the movement for greater citizen involvement. This set the groundwork for extensive political debate and theorising on the forms and effectiveness of public participation in both the planning profession and, more broadly, in local governance.

The impact of these debates on the planning profession was varied. Some American cities reframed the debates as a question of the effectiveness not only of public participation but of the planning profession itself, calling for budget cuts and relocations of planning departments (Rice & Sard, 2007). Theorists continue to advocate for the planning profession as necessary to improve living environments for urban citizens, for legislated public participation requirements in urban plans, and recovery from the insecurities within the profession (Neuman, 2005). In Canada, the past few decades have produced an increased focus on PP, particularly its incorporation into codes of professional planning ethical practice (CIP, 2014b) and an expansion of existing forms of public consultation. However, unlike the United States and other representative democracies, Canada does not constitutionally grant citizens a right to participatory involvement (Woodford & Preston, 2013).

The increase in public participation activities as a result of these debates did not guarantee effectiveness, leading to questions about the methods of effective public participation. Arnstein (1969) first depicted citizen involvement as a ladder of citizen participation, with levels of effective participation ranging from manipulation to information, partnership, delegation, and control (Figure 2-1). Her ladder helped differentiate levels of public participation effectiveness as defined by degrees

of citizen power. While not intended to categorise planning practices, the ladder provides a citizen-centric framework to re-conceptualise public participation effectiveness.

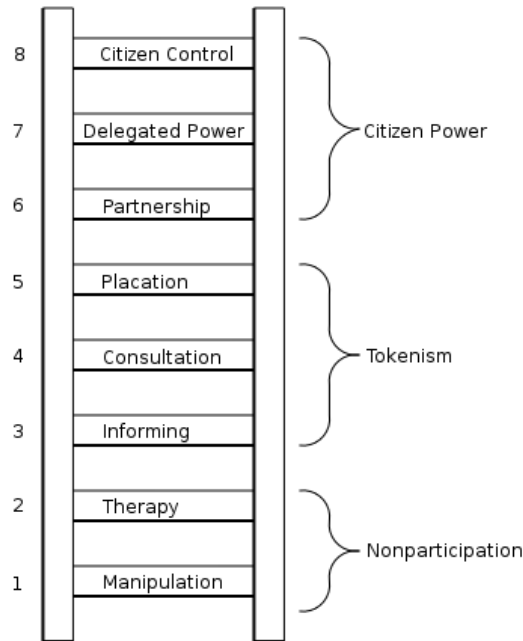


Figure 2-1–Arnstein’s (1969) Ladder of Citizen Participation

Proponents of public participation argued for public involvement in decision strategies at the start of planning exercises (Lash, 1976), and as an essential democratic principle (Burke, 1979). Urban planning was therefore seen to include the task of organizing citizens to incorporate the broad range of public interests in the various planning processes (Hodge, 2003). This movement resulted in statutes mandating that municipalities provide opportunity for citizen input.

While municipalities satisfy the statutory requirements for public involvement, many questions remain surrounding the level and effectiveness of public input. More recent theories of public participation in planning focus on the dynamics of public discourse, as well as technologies for stakeholder participation. Healey (1996) focuses specifically on communicative approaches to spatial strategy formation. However, sometimes participation is viewed by planners as inefficient or an obstacle in efficient decision processes (Hodge, 2003). General consensus holds that public participation is a fundamental and necessary democratic right. Yet consensus is lacking about the forms or degree required for effective and democratic public participation practice.

Shipley and Utz (2012) summarise common factors identified in the literature accounting for the ineffectiveness of public participation, including official resistance to public participation, a need to

improve on and differentiate among public participation practices, citizens' lack of belief in the impact of their contributions on decisions, and a fundamental lack of trust between citizens and officials. These factors bring into question the approaches used to manage public participation by decision makers, and therefore the identity and role of citizens in public participation.

A growing emphasis in modern planning theory is a citizen-centric perspective that places citizens at the core or starting point of any planning endeavour. The planner's role presents a constant challenge to ensure that the built environment is always planned in servitude to the needs of identified patrons of the environment. The planning of community environment and space "has no meaning or quality apart from the way the public is served" (Davidoff, 2003, p. 219), which demands that planners reach beyond the status quo to incorporate social and economic methods of analysis in order to evaluate the costs and benefits only in relation to various segments of the population. A citizen-centric planning approach therefore views the citizenry as both the object and participants in planning processes.

Adopting a citizen-centric perspective presents planners with the significant challenge of understanding the dynamic of citizen preferences and values. Post-modernism represents a shift in values in society generally, a return to individuation from authority, and to quality of life and well-being (Inglehart, 1997). The World Value Survey (Inglehart, 2000), for example, reveals a shift in global attitudes that dissociate modern rationality from universal normalization of structure and hierarchy, whereby citizens value democracy and questioning of established order. The implication is that citizens are best served through de-centralised planning processes that include public participation methods to capture adequately and act upon citizens' expressions of their interests and preferences.

Post-modern citizens' preferences for a sense of local community shifted from physical forms in local planning to the interplay of mixed-mode physical forms, accompanying communication and greater involvement in the planning processes. Post-modern trends influenced spatial planning's move toward mixed land use and a catering to human-scale amenities (Milroy, 1991). In short, a re-creation of local communities was proposed. In contrast to the modernist thinking of imposing plans based on functional zoning of different activities, post-modern planning represented an acknowledgement of a change in direction in planning priorities that were pluralistic and organic (Harvey, 1990).

Post-modernity challenges planners to think beyond the established physical status quo boundaries and to focus on citizens as engaged residents of planned spaces. However, this mode of

thinking remained more about a shift in attitudes than in actions (Hirt, 2005), making the process of understanding citizen attitudes an important but under-emphasised theme in planning. This emphasis suggests a benefit for planners' understanding of citizen preferences through the building of relationships similar to those of architects with their clients. The requirement to understand post-modern citizens' preferences and values presents new, unaddressed challenges in communication and establishing understanding among and between citizens and planners. This holistic understanding of citizens necessitates the consideration of strategic factors.

Another emphasis in modern planning theory is consideration of strategic factors that help urban planners to be proactive by understanding and anticipating external and contextual challenges. These challenges can impact upon future sustainability of citizen well-being, and are attributable to such strategic factors as global economic and social dynamics, as well as inter-city and regional competition that necessitates the consideration of strategic factors.

Among the strategic factors that impact on urban areas are global changes in social order that redefine economic and social interdependencies (Steele, 2004). A community's economic health and social capacity depend on developing sustainable competitive advantages to compete in regional, national, and global markets (Porter, 1990). The strategic advantage is gained by fostering regional clusters that align with a community's natural or built capacities (Porter, 2003). Citizens typically do not analyse the impact of globalisation in these terms but, as they experience its effects, they will increasingly be pressured to mobilize in order to develop and maintain conditions that are required for survival and prosperity (Glaeser, 2011).

Other competitive factors derive from an inter-city competition for identity and attractiveness. An increasingly popular strategy for local governments is to devise a strategic identity, for example as eco-tourism, artisanship, or technology centres, to promote smart and creative urban development (Anttiroiko, 2014). From a broader urban strategic perspective, economic sustainability becomes a function of a creative citizenry, which defines a city's capacity to attract and engage a citizenry that is creative and productive (Lorinc, 2006).

To summarize, the global and local strategic challenges facing LRGs are complex and varied, necessitating a proactive, strategic approach to urban planning. Engaging citizens effectively presents challenges exacerbated by the changing preferences and values of citizens, the changes in expert planning identity and roles, and the breadth and complexity of urban planning issues as outlined above. These challenges aptly affirm Jane Jacob's vision of cities as "organic organized complexity" (Mehaffy, 2014, p. 2), in which the practice of effective public participation presents a mystery. A

key to understanding this mystery lies in adopting a broader, theoretical perspective by examining the political and democratic governance theories that form the cornerstone of public participation.

2.1.3 Politics and Democratic Governance

The bodies of research surrounding politics and democratic governance comprise the foundational rationale for public participation and therefore demand careful examination. Public participation is a logical extension of the principles of participatory democracy and hence is worthy of the “relentless pursuit of perfection...” (Shipley & Utz, 2012, p. 22). Governance theory provides the socio-structural context for professional planning, namely the government structures through which democratic governance is operationalised. Stated conversely, planning functions are constrained by the democratic policies and practices of the LRG, and are therefore functionally subordinate to the LRG’s democratic vision and values. Thus, examining the applicability and effectiveness of public participation within the scope of democratic governance theory provides the theoretical basis to develop a public participation conceptual framework that is suited to the organized complexity facing planners. A broad perspective of governance theory also helps to illuminate the broader landscape of public participation practice that exists beyond the scope of professional planning to include independent citizen movements and citizen services organizations (CSOs). The following examination of democracy and participation as framed within the contexts of governance and government including structural and process perspectives illuminates the challenges of and opportunities for LRG PP.

The first point of examination is the distinction between government and governance, which is a recent development among Western democracies and fundamentally impacts upon PP. In the last several decades, new intensity is being given to discussions surrounding governance and the emerging distinction between government and governance in contrast to historical views. The historical view of governance equates to government structures, giving primacy to the social structural or institutional role of the state or ruling entity, enacted through laws and public policies that provide social direction and control in international, national, state, regional, and local levels of jurisdiction. *Gouvernance* has been acknowledged in France since the 14th century and overlaps with the concept of government, namely referring to the conduct of affairs of state institutions or professions with multiple stakeholders (Jessop, 1998). Democracy was exercised through representation by citizen-elected leaders, and assured through accountability and transparency. This institutional or structural model of governance was the dominating centre of power until the decade

following World War II (WW2), and to some extent even as late as the 1980s (Held, 1995), characterised by an emphasis on hierarchy, state-centricity, sovereignty, and empiricism (Pierre & Peters, 2000).

The institutional supremacy of state power began to erode in the decades following WW2, and particularly in the 1980s and 1990s due to the rise of non-governmental organizations and associated increases in public-private partnerships. In addition, the emergence of a new order in global governance changed the entire institutional governance landscape practically everywhere in the world (Anttiroiko, 2004). In the 1980s particularly, rigid and independent institution-centric hierarchies of government were being usurped by a multiplicity of public-sector organizations, corporations, civil society, and international organizations at different institutional levels, each with legitimate roles as central players in governance processes. Global economic networks strengthened the power and influence of corporations and international organizations, which also began to challenge actively national barriers to growing, global economic and political interests, thereby bringing new challenges to nation states (Pierre & Peters, 2000). Structure was eclipsed by cooperative relations, policy networks, and contractual partnerships to meet the need for more dynamic, network-based policy processes. Challenges to the authority of the nation states led to a strengthening of local awareness, and particularly the rise of the regions and local governments as the “new key players” in coping with external challenges and imposing political will within local communities (Anttiroiko, 2004, p. 23).

Therefore, while governments remained as the formal institutions of state mechanisms to enforce laws and policies, new forms of governance developed that were represented by broader policy networks. These networks included citizens, corporations, and other non-government interests intent on overcoming the weaknesses of traditional government structures by influencing policy at both the global and local levels (Jessop, 1998). This emerging split between government policy and government structure fostered a context for the rise of civil society organizations (CSOs) as policy influencers (Hawken, 2007; Jessop, 1998; Walker & Thompson, 2008). The emergent distinction between government structures and governance policy processes is an ongoing dynamic that creates a new competitive context for public participation, and is now discussed.

The emergent distinction between government structures and governance policy processes created a new environment that conceptually threw open the doors for greater opportunity for public participation in policy formation, while also creating the same opportunities for many competing interests. This new competitive participatory environment, particularly since the early 1990s, is characterized by transformation from hierarchies to networks, from command-and-control to initiate-

and-coordinate practices, from control-orientation to developmentalism, and from state-centricity to multilevel governance (Anttiroiko, 2004). While these new core concepts of governance may be clear, the new governance context has lost institutional definition, creating a complex environment described in the literature as a diverse and confusing variety of perspectives and descriptions.

One identifiable perspective distinguishes a continuum of localised governance forms, from the state-centric model to the society-centric model (Pierre & Peters, 2000). Anttiroiko (2004) offers more detail, distinguishing nine aspects of new governance that contrast to structural government, as shown in Table 2-1.

Aspects	Government	Governance
1. Conceptual core	Institutionalized authority and its functions	Activities and processes of governing
2. Power aspect	Legitimate coercive power, regulatory functions and maintenance of public order	Power to initiate and to develop, to set the agenda and to create partnerships
3. Role of administration	Implementation of binding collective decisions	Facilitator and co-ordinator in collective development efforts
4. Form of organization	Hierarchy	Network
5. Public agency's role as an actor	Self-sufficient actor	Coordinator
6. Processual focus	Internal administrative and service processes	External relations
7. View of resources	Financial resources allocated to the authority	Variety of resources possessed by a community and a wider context
8. The role of citizens	Subjects	Active participants
9. View of the business	Object of regulation	Partner

Table 2-1: Comparison of the Concepts of Government and Governance
(Anttiroiko, 2004, p. 27)

These nine aspects clearly describe the characteristics of government, particularly with respect to institutional identity, assigned forms of power and organisation, and roles of citizens among others. In contrast, the characteristics of governance appear less defined. From the citizen perspective, the new governance environment comprises four distinguishing characteristics that summarise the complexity in enabling public participation within the new governance environment:

- 1) the de-identification and anonymization of institutional policy influencers;
- 2) the negotiation of power and role;
- 3) the de-structuring and distribution of organizational form; and
- 4) the need for advocacy to legitimise the roles of citizens and other interests.

Another perspective distinguishing government from governance highlights the dichotomy between structure and function as government, and substance and process as governance. This perspective emphasises the competition created by conflicting interests within the realm of governance. The competitive dynamic adds a mediatorial or judicial role to the government institution in addition to its executive role. Combining both judicial and executive roles creates a dichotomy that Jessop (1998, p. 31) calls a “paradigmatic crisis.” The result of this dichotomy is that trust by citizens in corporations and governments had fallen markedly, while concern that their country is not going in the right direction was increasing (Becker & Slaton, 2000).

Almost a decade later, Clark (2008) reaffirmed the paradox that the substance of politics was becoming increasingly global, while the process of politics remained stagnant, accounting for a dramatic growth in CSOs. On the global scale, this extra-organizational form of governance transcended established governance networks that represented communities of place, emerging instead as a parallel participative mechanism that represented communities of interest (Clark, 2008). Hawken (2007, p. 5) documents the growth in the number of CSOs as not just a growing movement, but already “the largest social movement in history.” The London School of Economics now publishes an annual yearbook on this phenomenon (Birch, 2007).

Within this new governance context, citizens are burdened with strategizing a participatory role and approach within a context of competitive and differently-resourced interests. Proponents argue that CSOs help strengthen democracy, but the segmentation of interests may detract from the broader, common good, thereby eroding democracy. Such a context helps rationalise the question of public participation effectiveness and lack of consensus on evaluation approaches described earlier. Evaluating simply the forms and outcomes of public participation ignores the macro-perspective of citizen influence within a broad and complex socio-structural political environment. By contrast, a socio-structural perspective of public participation examines citizens’ degree of influence on policy decisions within a complex competitive environment of government structure and function as distinct from governance substance and process.

A socio-structural perspective of democratic governance attributes public participation effectiveness to the operationalization of a democratic vision in addition to appropriate participatory methods and tools. A weak democratic vision within society leads to a governance environment that undermines effective public participation, giving preference to competing interests. Democratic weakness is aptly described by Clark (2008) as five deficits in democracy that characterise the current global governance climate shown in Table 2-2.

Ideological	the need to shift from socialist/capitalist paradigms to the impact of production and the underlying decision processes regardless of ownership
Integrity	public disillusionment with government nepotism and the bargaining of public trust
Representation	the polarization of political candidates, and lack of choice for electorate from among the average populous
Reach	the lack of influence and jurisdiction by national governments in a global world
Sovereignty	the lack of autonomy of nation states to set policy within their boundaries and participate in decisions affecting everyday life

Table 2-2: Deficits in democracy (Clark, 2008)

Separation of governance processes and substance from government structures over the past decades has created a more dynamic context for visionaries of public participation. It has also diluted participatory citizen processes within a pool of competing interests, leading to growing democratic deficits and a gap between government structures and democratic governance processes. Several approaches attempted to redress these democratic deficits and gaps that are examined in the following paragraphs. The first approach is a managerial process focus that attempts to close the gap between structure and processes through increased government effectiveness and accountability. The second approach is a participatory governance theory perspective, which is rethinking of governance theory within a democratic framework.

The managerial process approach to improving governance focuses on narrowing the gap between structure and processes in order to improve the way public-sector organizations are managed. A public sector reform report (OECD, 1995) highlighted two priorities: first, improving efficiency, effectiveness, and the quality of organization processes, and secondly, the decentralization of highly centralized hierarchical environments. These priorities evolved into a broad public sector approach referred to as new public management (NPM) with an emphasis on cost savings, productivity, and performance measurement among other management initiatives (Anttiroiko, 2004).

NPM is arguably a theoretical and practical revolution in governance (Lane, 2000; Rouillard, 1999) that shifts accountability toward transactional mechanisms, and focuses on structural and process efficiencies to maximize overall results (Hood, 1995). Under NPM, traditional government structures were transformed into cross-sector organizational networks between multi-level, decentralized organizations, both public and private. The business language of NPM describes “stakeholders, customers and clients... performance indicators, business plans, and vision statements” (Tupper, 2001, p. 143). This new vocabulary signifies substantive administrative reforms that are the

domain of experts and rationalized by the need for professional management of transactional costs and efficiencies.

NPM spread rapidly from the United Kingdom to the United States, Australia, New Zealand, and western Europe due to its purported value as an accountability model for interactions among public service organizations (Lane, 2000). Opponents criticize NPM as an elitist, right-wing doctrine that is dismissive of the role of state and citizens (Pierre & Peters, 2000). Canada's public services sector has been broadly, deeply, and continuously reformed since the emergence of NPM despite inadequate debate about NPM's suitability for the twenty first century (Tupper, 2001).

NPM and its related market-oriented approaches recognize citizen responsiveness as a priority (Tupper, 2001), enacted by treating citizens as clients or customers and optimising "customer-facing" processes, a trait that is critiqued as "a denigration of democratic citizenship" (Shipley, 2003, p. 29). The promises of increased efficiencies and accountability under NPM are held by proponents as equating to improved representation, which opponents maintain connotes an elitism and distrust heightened by managerialist governance processes that are never inherently democratic (Anttiroiko, 2004).

The conflict between market-oriented approaches and the requirements of democracy may be the often-overlooked core of the governance debate. The tension is defined between "semiautonomous managerial sphere of inter-organizational relations" and process optimization on one hand, and citizens as voters and customers on the other hand (Anttiroiko, 2004, p. 32). The underlying assumption of democratic participation is grounded on the public's expectation of influence and participation in decisions (Pierre & Peters, 2000). However, while citizens require representation, customers demand quality service and attention. This multi-pronged conflict-based view of governance reveals the inherent and unresolved conflicts in market-oriented governance models. Government services are managed as transactions between structural and social stakeholders. This perspective marginalises the episodic, issue-based public participatory processes. These discrete and periodic episodes operate in an isolated, competitive sphere disconnected from the transactional business of governance.

NPM approaches to governance weaken the effectiveness of democratic governance because of a supreme dedication to optimising government efficiency and effectiveness. Within a socio-structural perspective of public participation, NPM is regarded as strengthening established transactional government structures that are not inherently democratic, and increasing reliance on experts rather than citizen inputs. However, NPM approaches subordinate democratic governance

processes to institutional priorities rather than to citizen participatory processes. Hence, NPM effectively suppresses or minimizes opportunities for citizen participatory processes within an already competitive environment of competing voices.

The influence of NPM continues to impact government institutions and public consciousness as evidenced by austerity measures, deficit reductions, and reduction of tax burden. Framing governance effectiveness as a function of efficient transaction management devalues and minimises the role of public participation. The sole focus becomes organizational performance rather than on citizen desires and preferences, widening the gap between government and democratic governance. These inherent conflicts cannot be resolved by improved efficiencies, but require an alternative approach grounded in a rethinking of democratic governance principles as presented in the following paragraphs.

Participatory governance seeks to promote public participation and direct citizen influence in government decision processes within the challenging and competitive context described above. This includes the varied and complex challenges of changing citizen preferences, the global pressures impacting cities, the competing governance interests and the NPM-based managerial pressures. An examination of the forms and effectiveness of participative governance includes its goals, roles, mechanisms, and categorisations.

The goals of good governance as defined by the United Nations (2009) includes eight characteristics, namely, accountable, consensus oriented, effective and efficient, equitable and inclusive, following the rules of law, participatory, responsive, and transparent. These characteristics acknowledge the need for managerial efficiencies in parallel with the rights and preferences of citizens. In particular, good governance aims at ensuring the views of minorities are heard. These characteristics impact upon the actor groups and roles in participative governance including citizens, administrative staff, and executive officials or political representatives. Executive officials' roles are to represent citizens' collective interests in decision-making capacities. The roles of citizens are to communicate and negotiate their needs and preferences. The roles of administrative staff are to carry out the executive decisions in accordance with their respective legal and organisational contexts. Administration implements governance decisions, while political representatives enact the latter to the common interest. While scholars challenge these specific goals as being idealistic, vague, and culturally constrained, they agree that good governance must involve citizen participation (Poluha & Rosendahl, 2002).

Participatory governance policy is linked to values through the influence of each decision maker on the public policy process that is within the scope of their mandate. As values are the foundation of

public policy, then participatory governance philosophy and goals reflect decision makers' values toward participation (Smith, 2003). Further, where participation is viewed as comprehensive and strategic, it evolves into defined goals that are aligned with the strategic priorities of the organization. These are policy-level goals, as distinct from pre-policy goals that are limited in space and time to specific functions, such as decision-making and information. Moreover, policy-level goals are categorized by six steps along the policy development phases, namely, 1) problem definition; 2) value and goal clarification; 3) option generation; 4) selection; 5) implementation; and 6) evaluation (Smith, 2003).

In another approach to the goals of good governance, Arterton (1987) outlines the central dimensions of citizen participation shown in Table 2-3. These dimensions help to describe the *post-hoc* effects of public participation activities and can help to evaluate outcomes according to identified goals or targets. However, they do not prescribe the suitability or effectiveness of particular mechanisms.

An increasing number of modes and mechanisms exist by which citizens participate. Dominant approaches in the 1980s, particularly in Canada, centred on citizen consultations (Woodford & Preston, 2013). Barber (1984) outlines three broad modes of citizen participation including talk, decision-making, and action. Two decades later, Rowe and Frewer (2005) listed over 100 participatory mechanisms. The current plethora of mechanisms have been typed and categorised by democratic theorists. Three broad categories are conventional, overt/direct, and catchall which respectively include basic democratic participation such as voting, consultative and other discursive modes, and thirdly involvement in service processes and other indirect modes (CIVICUS, 2009).

Dimension	Description
Access	range of citizens able to participate
Reach	percentage of able citizens who participate
Effectiveness	potential to directly influence public policy
Agenda-setting	citizen control over issues, alternatives, timing, and order of decisions
Involvement Type	individual vs. membership, group-based participation
Initiative	citizen creation and communication of involvement opportunities
Costs	financial and other burdens on participating citizens
Political competence	skills and confidence in political activity

Table 2-3: Central dimensions of citizen participation (Arterton, 1987)

A survey of 154 scholarly papers by Shipley and Utz (2012) identified eight public participation categories including public meetings, citizen juries, focus groups, scenario workshops, visioning,

collaboration, consensus building, and Web-based techniques including social media. The authors cited the requirement that effective participation be “deep and offer continuous involvement” (Shiple & Utz, 2012) with a focus on process and outcome. A parallel list of 17 participative methods across seven categories was summarised as forms of “*ad hoc* democracy” in contrast to “functioning democracy” (Anttiroiko, 2004, p. 41). Functioning democracy was characterised by governance processes and practices that were organized on a systematic and continuous basis. While public participation was recognized as a foundation of the modern idea of democracy, critics of traditional methods opine that they “simply do not work” (Shiple & Utz, 2012, p. 22). Hence, the requirement for deep, systematic and continuous participation was acknowledged but was rarely reflected in the methods and categories of public participation, evidencing a significant effectiveness gap.

To close this effectiveness gap, democratic theorists have proposed methods of direct involvement in decision processes. Barber (1984) led the notion of strong democracy, denoting effective participation through some forms of citizen self-governance. Direct democracy requires that citizens vote on all important issues, while tele-democracy or ICT-based democracy is based explicitly on information technologies (Bellamy & Taylor, 1998; Globescan, 2005). These categories of participatory mechanisms are intended to drive traditional governance paradigms towards direct, mass forms of participative governance, embracing a view of citizens as capable of direct governance (Pierre & Peters, 2000).

In the continuing drive toward effective participatory governance, citizen influence became the ultimate criterion for effectiveness, based on the rationale that no participatory mechanism can guarantee effective democratic participation in governance (Anttiroiko, 2004). A new governance praxis tied increased effectiveness to public participation structures and processes. Other approaches built upon Arnstein’s (1969) ladder of citizen participation to describe the effectiveness of participative mechanisms as a measure of citizen influence. Bishop & Davis (2002) matched participative mechanisms to particular levels of participation. Similarly, the International Association for Public Participation (IAP2, 2008) identified five categories of participative mechanisms, namely, to inform, to consult, to involve, to collaborate, and to empower.

These varied approaches to participatory governance have not resolved the effectiveness gaps nor the paradigmatic crisis between functional structure and substantive processes. Despite the great potential of participative governance and some “spectacularly successful examples,” their numbers are far outweighed by instances of “failed and spurious participation” (United Nations, 2008, p. 28).

The strong, direct, or ICT-based democratic governance approaches often lack proven practices or viable enabling systems that bridge the governance-government divide.

CSOs help mobilise citizen interests into focused organisational units, but their narrow focus on global issues often contrasts local citizen representation. Market-based managerial priorities tend to prioritise transactional relations, pushing citizen interests to the periphery of democratic governance. Finally, virtually none of these perspectives address the need for deep, systematic and continuous engagement paradigms within existing government structures to close the socio-structural governance effectiveness gaps.

Models for categorising public participation may help practitioners match mechanisms to intended outcomes, but are often merely descriptive of types of public participation. Rather than being prescriptive models for effective participatory governance, their effectiveness is too often undermined by numerous social and structural variables and gaps. The resulting barriers and issues are examined in the following section.

2.1.4 Barriers and Issues in Democratic Governance

In addition to the complexities and gaps identified above, numerous barriers continue to hamper effective democratic governance and public participation. The idea of participative governance has gained enormous popularity as a potential means to achieve common interests (United Nations, 2008). However, its realization is limited by numerous barriers that often lead to excluding the poor and most vulnerable from governance processes (CIVICUS, 2009).

One barrier is the lack of standard practices and terminology hindering the dissemination and common application of research on methods, outcomes, and success factors. For example, Hirst (2000) outlined five versions of governance usage, namely good governance defined by the OECD (1995), international governance, corporate governance, new public governance, and new governance. The equivocal public participation governance terminology continues to generate confusion in governance concepts and implementation practices (Rowe & Frewer, 2005).

Institutional or structural gaps are barriers that detract from the real issue of participative influence on governance decisions. Numerous studies indicate that measures of institutional effectiveness correspond poorly to the real measures of citizen influence, leading to identification of several structural gaps (United Nations, 2008). The capacity gap referred to the lack of required communication and collaboration skills, along with a range of management skills, including strategic and financial planning. The incentive gap recognized that citizen participation is costly in time and

resources, as well as the forfeiture of other opportunities. Thus, individuals risk losing respect, social standing, or even safety status. Finally, the power gap existed in highly unequal societies due to, for example, large income differentials, entrenched social hierarchies, or internalized oppression. Closing the power gap by allowing subordinated groups to participate in governance processes on an equal footing is essential to participative governance. Deliberative democracy is a participative mechanism that has demonstrated some successes in closing the power gap by supplanting established power with the power of reason (Fung & Wright, 2003).

A related institutional barrier is limited models, or closed system perspectives, of governance that consider only explicit, overt and formal actors and organizations. They can overlook external or supra-organizational influences such as the International Monetary Fund, global corporations, or subversive political or ideological forces, even mafias and trade unions, that can significantly hamper participatory governance (United Nations, 2008). Citizens' actions and reactions to these external or informal influences can undermine the effectiveness of governance models and practices and thereby perpetuate structural gaps.

Persistent structural perspectives are additional governance barriers that can limit citizens' perceptions of their power of influence. Common structural misperceptions can hide the important distinction between well-defined government structures and complex, even anonymised, governance policy processes and influencers. Thus, citizens perceive they have little role influencing the form of government structures and they do not perceive their potential influence upon policy processes. A common example is the three governance paradigm. In this, governance literature blurs the lines between the public, private, and not-for-profit sectors while implicitly reinforcing the three sectors paradigm (Catlaw, 2007). A more recent literature review has noted that the existing three-sector paradigm is still accepted, while current trends continue to propagate traditional management approaches within the three sectors (Bryer, 2010). These outmoded structural perspectives inhibit the possibility of working toward the common good. Hence, we are again we are reminded that there is nothing inherently democratic about governance.

Other participatory barriers that limit or demotivate individuals' governance participation are personal costs and a lack of skills. Social theorists describe individual participatory barriers as the collective costs faced by an individual or group and that must be outweighed by the intrinsic and instrumental value of participation (Fung & Wright, 2003). Developing citizens' basic communications and participation skills may take years to develop. CSOs involved in long-term social mobilization can help citizens develop the required skills through practice over time. This

especially impacts on the weaker segments of society and relates to the increased success of citizen influence (Baiocchi, 2003; Besley, Pande, & Rao, 2005). These positive examples, however, are far outnumbered by public participation failures (United Nations, 2008).

The gaps and deficiencies in government structures for participatory governance processes are further exacerbated by a dichotomy between overt state directives and actual realities in civic governance. For example, the State of Civil Society report (CIVICUS, 2013) concludes that in the context of interconnected economic, environmental, political and social crises, on one hand the institutions of global governance – governments, international CSOs and businesses – increasingly recognise the civic freedom needed to unlock citizen potential and sustain the world’s economies. On the other hand, the operating environment of civil society is “shaky at best and deteriorating” (p. 7) due to state pushback, threats against activists and online bloggers, funding cuts and legal threats to CSOs, and even outright violence to public advocates. The report calls for the formation of new, more broad-based, inclusive coalitions and communities representing the diversity and strengths of civil society. This includes CSOs, community groups, online activists, the new protest movements, faith-based groups and trade unions. Further, it advocates for the innovative use of technologies to connect and mobilise large groups, and for continuing the push against the largely disabling legal and policy environments for civil society organisations that exist in many countries including Canada (Loat & MacMillan, 2014).

The CIVICUS (2013) report also parallels a recurring theme detectable across this review of governance gaps and barriers, namely, the lack of alignment between at least three core elements of effective governance models in today’s complex, competitive participatory environments. These three elements include citizen participation methodologies including activities and mechanisms, institutional policies and structural perspectives supportive of participatory governance, and the use of appropriate technologies. The alignment of these three elements contribute to participatory governance capacities.

The building, or at least revitalisation, of participatory capacities currently lacks the parallel development of innovations and alignment across all three core elements. For example, Erkul (2013) affirmed the need to co-evolve social structures to match technological change. Similarly, Kelly (2010) posited a broad, historical view of technological innovation that results in long term societal impacts. In this view, innovations depend on development of new societal and institutional paradigms, appropriate planning, management and deployment methods, and observations and measures that demonstrate positive societal impact. Taylor (2014) specifically pointed to the need for

institution building in the participatory governance space in addition to establishing common technology-enabled methods and practices. She also noted that cities, in particular, should consider their competitive and strategic position as primary governance influencers. These three elements of participatory capacities will be explored in Chapter 3 as foundational themes in the development of conceptual framework. Alignment of the three elements becomes a key consideration in the research as evidenced by the gaps identified above.

Participatory governance through appropriate co-evolution of methods, structures, and technology may still lack effectiveness where the political will and civic motivation is lacking. Summarising participatory governance as merely “informed and organized, requiring freedom of association and expression on the one hand and an organized civil society on the other hand” (United Nations, 2009, p. 2) may be an outdated, ineffectual sentiment. Bryer & Nelson (2013) questioned whether the costs of democratization include citizens potentially losing trust in governments that fail to respond to citizens. One viewpoint highlighted public trust as the missing link in effective participatory processes (Shipley & Utz, 2012), while an opposing viewpoint suggested that political will may be the primary success factor that accounts for public trust (Malena, 2009). These opposing viewpoints reinforce the importance of citizen perceptions, named herein as the citizen efficacy principle. This principle combines the three core elements of effective participatory governance identified above, namely, the public participation methodologies, the structural perspectives, and appropriate technological elements. Further, the principle recognises that the three elements operate and evolve within a complex, competitive environment and must be perceived by citizens to provide deep and continuous influence in decision processes. Restated, the efficacy principle is a three-pronged dynamic of participatory governance processes and capacities from a socio-structural perspective, interrelated with the level of actions of citizen and their associated perceptions of governance influence, and correlating with the evolution and enablement of effective, ICT-based participatory capacities.

Research on current participation rates and the participatory climate seems to support the efficacy principle dynamic. Rates of public participation in traditional forms and institutions are declining, while new forms of civic engagement are growing where large, diverse citizen groups experience empowerment through formal and informal participatory structures supported by appropriate technologies (Smith, 2014). Conversely, a sizable analysis of the literature covering 1,779 policy issues found that economic elites and organized groups representing business interests have substantial independent impacts on United States government policy (Gilens & Page, 2014). In

contrast, average citizens and mass-based interest groups were found to have little or no independent influence. These findings demonstrated how ineffectual socio-structural mechanisms and capacities within a highly complex and competitive participatory environment lead to poor citizen efficacy in terms of participatory governance.

A perceptual barrier to effective participatory governance is the notion of a universal vision implicit in participatory governance practice as evidenced in the preceding discussion, herein referred to as the problem of democratic universalism. A society may be designated as democratic or otherwise, implying a binary designator that either achieves or fails to meet a democratic standard, such as representation through elections. In reality, participatory governance is shown to be practiced in many forms and ‘degrees’ as representative on a graduated scale of effectiveness that parallels, for example, Arnstein’s (1969) ladder of citizen participation. Further, democratic governance outcomes are constrained by many contextual, structural and participatory barriers that minimize citizen perceptions of influence, or efficacy, and further erode the notion of democratic universalism. The faulty assumption inherent in democratic universalism limits democratic visioning and definition, thereby inhibiting the effectiveness of participatory governance.

2.1.5 Public Participation Summary

This examination of the many gaps and barriers that face democratic governance reinforces the complexity facing public participation practitioners, and particularly professional planners working for citizen engagement in LRGs. The separation of government structures from the governance influencers, including corporate interests, CSOs, and other interest groups, creates many challenges for planners that impact on their roles and responsibilities but are typically beyond their scope or capability to manage. Existing government structures provide little allowance for public participation processes beyond basic representation, particularly when considering legacy expert tendencies and the many competing voices and interests. In contrast, even where public participation abounds, consensus is lacking on how to manage or measure public participation, and whether public participation is effective. The democratic imperative of centralising citizen interests and influence on decision processes remains clouded, and lacking defined efficacy. As such, a viable conceptual model for participatory governance must consider the alignment of the elements of participatory governance capacities, including appropriate supporting information systems, in addition to the appropriate organizational and structural contexts for governance policy development in support of public efficacy.

The following section examines the development of information and communication technologies (ICTs) for public participation, followed by an examination of organizational strategy as a suitable framework for evaluating the organizational and structural contexts appropriate to participatory governance policy.

2.2 ICTs and Public Participation

Since their emergence, information and communication technologies (ICTs) have been viewed as a key enabler for improved public participation in democracy generally and LRG specifically (Millard, 2008). A core component of ICT-enabled citizen engagement, also referred to as e-participation, is the Internet which is used not only by youth but also by 87% of adults (Fox & Rainie, 2014). The Internet is expected to become less visible and more integral to citizens' daily lives, analogous to electricity, and to continue to increase citizen networks (Anderson & Rainie, 2014). Cities as networks of individuals and groups benefit exponentially from interconnections between individuals, which enables the creation of wealth and well-being (Mehaffy, 2014). ICTs thereby are considered to be a significant influencing factor in LRG, particularly in planning processes and citizen engagement.

This section categorises the literature on the use of ICTs for public participation into two broad approaches, namely, direct participatory systems, and indirect or transactional approaches, with each having different aims and methods. Direct participatory systems approaches are oriented toward citizen input, knowledge identification and collection to analyse issues and inform municipal decisions, of which Planning Support Systems (PSS) are the best representation. Indirect transactional approaches, broadly referred to as e-government, are oriented to internal government processes and transacting existing business across the entire organization, primarily targeting efficiencies, cost reductions, and improved service quality.

PSS approaches tend to offer great potential for deep public participation but are typically limited to specific issues in time and place. E-government is a continuous, integral part of LRG processes, but has historically limited public engagement to citizen input of information and requests and obtaining information and demonstrated limited effectiveness at realising participatory goals. These two approaches are now discussed.

2.2.1 Planning Support Systems

PSS are technologies that help facilitate urban planning decisions and have been historically focused on analysing and modeling planning scenarios to facilitate more effective decision making. The increased need for public participation to be included in planning processes led to the adaptation of PSS for more user-friendly public participation applications (Geertman & Stillwell, 2003; Vonk & Geertman, 2008). PSS can include related technologies and approaches, such as participatory geographic information systems (PGIS) and decision support systems (DSS) to provide an extended framework that integrates three traditional decision support components, namely, information, models, and visualization (Geertman & Stillwell, 2003).

Typical characteristics of PSS include limited scope, elevated public participation, and application early in planning processes. Various PSS methodologies have been proposed, including the Analytic-Deliberative Process, which identifies specific concerns and policy options (Renn, Webler, & Wiedemann, 1995). Similarly, the Enhanced Adaptive Structuration Theory (EAST) (Jankowski & Nyerges, 2001) and EAST 2 (Jankowski & Nyerges, 2003) help to identify roles of participants, including stakeholders, decision makers, and technical specialists aiding in the resolution of urban planning issues. These methodologies limit the application of PSS to a particular scope of planning issues within a specific location and timeframe.

The limited scope and defined processes of PSS can serve to elevate public participation as proscribed by Arnstein's (1969) ladder by facilitating intensive involvement of selected citizenry. PSS are typically applied early in the planning cycle according to four iterative phases, simplified as assessment and decisions, execution, outcomes, and evaluation. PSS are thereby applied to the early planning stages by facilitating citizen participation in issue assessment and also in identifying decision options and processes.

PSS also limit the potential for broad application of public participation to ongoing community decision processes. PSS tend to include only a relatively few stakeholders directly interested in the issue, thereby excluding the majority of citizens and potentially exposing the PSS process to manipulation by political or special interests (Hays, 2007). However, the public participation characteristics of PSS lie in contrast with the indirect transactional characteristics of e-government which are examined next.

2.2.2 E-Government and Citizen Engagement

E-government is the application of information technology to support internal government operations, engage citizens, and provide government services (Silcock, 2001). Historically, e-government has been broadly accepted for successes in improving internal operations. E-government has demonstrated quantifiable improvements in efficiencies, cost reductions, and service quality (Schellong, 2007). However, e-government technologies, when applied to democratic engagement of citizens, yield less quantifiable benefits, particularly financial, and therefore have found limited success in sustaining and improving citizen engagement. Despite the broadly stated aims of e-government to promote citizen participation, outcomes of individual projects tend to be limited to streamlining existing government operations rather than optimising public participation. This gap reveals the continuing need for broad-based citizen engagement (United Nations, 2010, 2014b).

Further examination of e-government and citizen engagement in the following paragraphs outlines five perspectives on e-government technologies, as distinguished by the differing types of citizen engagement roles. The first perspective of e-government examined regards citizens as customers who consume and demand quality services. E-government is intended to be “citizen-centered, results-oriented...and market-based” (Chu, Yeh, & Chuang, 2008, p. 290). To meet these objectives, e-government emphasizes achieving quality and value through a three step process, namely, mapping or identifying the various services that are being provided, then improving or redesigning each service delivery mechanism, and finally measuring the effectiveness of the quality and value achievements. E-government provides demonstrable improvements in citizen services delivery (United Nations, 2014b).

However despite the benefits, the e-government language of citizens as customers is critiqued as a distortion of the government-citizen relationship (Shipley, 2003). Further, viewing citizens merely as passive consumers of government services can disempower citizens as influencers of public policy and decision processes (Denhardt & Denhardt, 2011). Lacking a profit motive, and as a single source provider, municipalities do not compete in an open market in the same manner as private enterprise. E-government must therefore not only recognize but also actively empower citizen participation as a critical aspect of LRG policy processes.

Another e-government perspective engages citizens as evaluators of government services as a key feature of accountability in governance. Citizen evaluation of government services serves as a check on the power of experts or special interests. One form of evaluation is structured statistical

citizen surveys as given by the American Customer Satisfaction Index on government (Freed, 2010; Lewan & Anderson, 2014).

Other forms of citizen evaluation include community indicators. For example, the City of New York's Center on Municipal Government Performance includes standard community measures, focus groups, and service quality follow-up calls to gather citizens' performance evaluations in 21 different service areas (Cohn-Berman, 2006). Citizen-initiated or -informed measurements also figure in NPM's emphasis on measurable results in government (Cohn-Berman, 2008), which can integrate with local community indicators for an holistic approach (Greenwood, 2008). While citizen evaluations of the impacts of e-government are essential for improvements, the measurement focus is still on inputs and outputs which can overlook the systemic and long-term societal changes (Erkul, 2013). Other issues related to citizen satisfaction impact are examined further in Section 2.2.3 below. The following paragraphs examine citizens' roles in services delivery.

ICTs are facilitating more active roles for citizens than being merely customers or evaluators by mobilising individual and mass citizen input. For example, City of New York residents utilise handheld computers and mobile ICT devices report to easily and accurately street conditions and other community issues to the city's ComNET service (FNCY, 2010). Some Canadian cities are implementing citizen reporting Websites for emergencies and e-policing (RCMP, 2006), such as Toronto's Citizen Online Report Entry (CORE) system (www.torontopolice.on.ca/core). Other online citizen services systems, such as citizen portals, kiosks, lifestyle approaches (Ontario, 2007), Web mapping, and 311 services, are intended to help governments manage citizen data efficiently and to correct problems quickly. Ideally, they also track changing conditions over time to improve services in a way that matters to the community (Epstein, Coates, Wray, & Swain, 2006).

E-government reporting and analysis systems are also intended to extend individual reporting capacities by mobilising mass citizen inputs for response services, challenging traditional views of public participation. The mass number of calls and reports that would traditionally be treated as disruptive to the emergency response process become a valuable information source. These systems potentially provide valuable analyses that can help expedite emergency response services (Schellong & Langenberg, 2007). Similarly, portal and social media data are intended to provide insights for LRG emergency management and other city services (Li & Goodchild, 2010; Mergel, 2014). By contrast, Canada's Emergency Management Framework includes no mention of the use of social media or portals (Government of Canada, 2011).

The potential for 311 services, citizen portals, and analysis tools to significantly enhance citizen services, policing and emergency management parallels similar shifts in urban design. Urban design processes can engage citizens using ICT approaches based on Surowiecki's (2004) notion of harnessing the collective wisdom of crowds, or crowdsourcing. E-government tools, portals, Websites, geo-mapping, and social media can mobilise collaborative groups of citizens, or local social networks, can be harnessed to generate higher-level thoughts and actions than those achieved by individual members (Stephenson, 2007). Deliberative-oriented sites are designed to engage citizens in conversations to provide feedback and, in some cases, spark public disagreement with LRG decision directions (Drapeau, 2008). Other tools and Websites are dedicated to collecting ideas, creating applications, and collecting design submissions for urban projects, as demonstrated by the 14 citizen-directed urban projects at Crowdsourced City www.weburbanist.com, or CityLab's crowdsourcing site (www.citylab.com/topics/crowdsourcing/). Other sites target citizen-driven innovation at resolving urban challenges, such as NextCity (www.nextcity.org), and Fastcompany's *Slicker City* project. National conferences such as www.Civicdatachallenge.org and even the awarding of TED's annual prize in 2012 to an idea called *City 2.0* (www.tedcity2.org) are indicators of the significant impact of citizen-centred urban design projects that aim to have a direct impact on public decision-making.

Research on social computing structures the science of crowdsourcing to understand better effective social innovation and develop new paradigms in urban planning (Erickson, 2014; Ferro, 2014). However, a tremendous challenge is to move beyond merely the provisioning of urban design Websites for citizens to ensuring that projects have demonstrable impacts on communities (Berg, 2012). An increasingly important consideration is the role of large data analysis and sharing of data, which are examined next.

Citizen-generated content (CGC), through 311 services, citizen reporting portals, social media, citizen engagement Websites, and government data warehouses are ever-growing repositories that can lead to citizen insights through analytics. These include the use of data analysis tools and data sharing. The District of Columbia (2006), as an early example of a citizen data warehouse, was designed with the goals of enhancing citizen understanding of government activities, engaging citizens to improve quality of life, and monitoring government performance for greater accountability.

The exponential growth in data access is largely attributable to the Internet becoming more embedded in daily life and less visible, leading to increased citizen usage and CGC (Anderson &

Rainie, 2014). Another emerging factor leading to data growth is Internet-connected data collection and control devices attached to city lights, municipal water pipes, vehicles, air quality sensors, and smart phones. These devices create continuous data streams from the monitoring of city infrastructure nodes via environmental sensors. Referred to as the “Internet of Things,” this growing network of smart devices can help city managers to monitor performance, spot problems, and provide detailed control to help improve efficiency and quality of life for citizens (LaMonica, 2014).

Open government is a growing movement for the sharing of these large data sets to increase citizen access to and inter-organisational sharing of government information (Larsfalten, 2011). Providing citizens with access to data and analytics tools may have tremendous potential to improve management efficiencies, government accountability, informed citizen participation in policy processes and visioning, and government/citizen relations (Martin, 2012; Vizard, 2012). However, the impact of digital media, CGC, and large data analytics on government and communities currently lacks sufficient research to adequately evaluate the societal benefits (Anderson & Rainie, 2014). Hence, these trends raise concerns about eroding citizen privacy, as well as potentially increasing passivity that can result from over-reliance on transactional data rather than active citizen inputs (LaMonica, 2014). These concerns are examined further in the next section.

2.2.3 ICT research issues

The impact of ICTs on democratic governance has developed a multiplicity of perspectives and approaches, while facing accelerating change and emerging issues. The Internet has led to democratic citizen empowerment in the 21st century (Millard, 2008). It has also increased optimism for citizen participation through increased voter turnout, high levels of online activism, and an emerging culture of public deliberation (Tapscott, 2008). Despite the many developments and optimism, the high rates of change and volume of experiments have revealed many challenges and hurdles. These expose the vacuum of research needed to understand how to adapt effectively ICTs for better governance and to establish best practices. This section briefly presents some of the key ICT research issues and directions pertaining to citizen engagement.

Early adoption of ICT-enabled planning support tools and, more generally, public participation tools, by local governments suffered from high diversification of solutions, lack of best practices, shifting priorities, and budget cuts (Geertman & Stillwell, 2003). As identified above, adoption of ICTs has typically focused on e-government solutions, often driven by software vendors needing to

demonstrate financial returns rather than driven by municipalities pursuing citizen engagement. Several barriers continue to limit adoption of ICT-enabled public participation.

One barrier is a fear of misuse of technologies and information by governments, particularly with proliferating analytical and visualisation technologies such as Geographic Information Systems (GIS) that can infer information and conclusions ahead of citizen consultation (Fotheringham & Brunson, 2004). A related barrier is the fear of exclusion, wherein not all citizens may have equal access to influence decisions. Research indicates that higher education and income traditionally correspond with higher levels of citizen engagement, and this trend is mirrored in social networking usage (Smith, 2013). Common fears that youth are excluded from political engagement and adults are not interested runs against research indicating that 1/3 of adults' political activity occurs online, and 2/3 of American 18-24 year olds now engage politically (Smith, 2013; Tapscott, 2008). However, fears of misuse or exclusion continue to inhibit the adoption of public participation technologies or lead at best to partial solutions.

Minimal public participation goals and solutions are among other barriers to adoption of ICTs. Online citizen information services that fall under the guise of full public participation solutions only engage citizens as information receptors (Conroy & Evans-Cowley, 2006). More recent research indicated that many municipal Websites primarily offered information and, even where citizen input was requested or permitted, governments were generally found to be poor at in responding online to citizens (Andersen, Medaglia, Vatrapu, Henriksen, & Gauld, 2011). Conversely, where citizen input was responded to or was perceived to influence policy, citizen satisfaction levels increased significantly (Duffy, Skinner, & Cornick, 2010).

Poor or partial public participation online practices can be observed in Canada, for example, on the *Consulting with Canadians* Website (www.consultingcanadians.gc.ca). This provides a list of federal public consultations and numbers only 30 items, mostly with limited local or topical scope. Moreover, it allows only email input, lacks discursive or collaborative functions, and provides no real-time review of citizen comments. Similarly, Canadians cannot file freedom of information requests online, and are not allowed anonymity or protection from retaliation, factors that may contribute toward Canadian citizen engagement rates that are 11% lower than the average of the member countries of the Organisation for Economic Co-operation and Development (OECD, 2014). Low public participation technology adoption due to fears and minimally or poorly implemented public participation goals point to research issues in e-government design.

Early e-government designs relied on objective frameworks to guide development that focused on very broad design factors including, as Rouillard (1999) outlined, interactive and communication processes, learning, social capital and democratic control. Other technology-centred frameworks emerged, such as the simplistic Web presence and e-participation framework (United Nations, 2003), and Gartner's (Stauffacher, 2002) more complex four phases of e-government. The latter includes presence, interaction, transaction, and transformation, each of which include four components, namely strategy/policy, people, process, and technology. Shortcomings in these objective and technology-centred frameworks indicate a need to consider the broader government institutional structures.

Evolving e-government designs, intended to enhance democratic e-governance, attempted to foster the coevolution of technology and government structures. Anttiroiko (2004) identified 17 e-governance methods in 7 categories relevant to policy processes that can help guide the integration of participative e-governance into institutional networks. The seven categories, representing increasing levels of participatory democracy, are 1) facilitating information processes, 2) supporting communication and negotiation, 3) citizen consultation, 4) direct citizen involvement in planning, 5) community-based deliberation, 6) political transactions such as making decisions and initiatives, and 7) citizens' involvement in service delivery and evaluation processes.

Similarly, the OECD e-government imperatives (2003) identified ten success principles in four categories, intended to balance institutional- and citizen-centric design:

- a) *Vision/political will*: 1) Leadership and Commitment; 2) Integration
- b) *Common frameworks/co-operation*: 3) Inter-agency collaboration; 4) Financing
- c) *Customer focus*: 5) Access; 6) Choice; 7) Citizen engagement; 8) Privacy
- d) *Responsibility*: 9) Accountability; 10) Monitoring and evaluations.

These imperatives, while still relevant, present an ongoing challenge when applied across a broad range of institutional types that each lack standards and best practices. A focus shift to the local government context allowed for greater attention on participatory aspects of design, where the greatest number of citizen contacts occur, and where the concept of governance explicitly includes public participation in the decision-making process. This presents a "second chance" for administrative reform through e-government (Drüke, 2005, p. 4).

E-government designs for local government often centre around growing urban pain points, reactively reinforcing the emphasis on easily demonstrable results such as financial gains and improved services at the loss of public participation functions (Bélissent, 2011). More proactive,

value-based approaches recommend continuous evolution of e-government by adapting to rapidly changing conditions and expectations. For example, the FAST paradigm integrates flatter, agile, streamlined and tech-enabled approaches to achieve the co-production of public value through interdependent institutional networks (Larsfalten, 2011). However, a recent study concluded that many e-government systems still fail to achieve their democratic objectives (Tambouris, Kaliva, Liaros, & Tarabanis, 2014). The authors proposed an information architecture centred on a unified reference model of 186 requirements across 19 stakeholders, intended to lead to design approaches that reduce e-government project costs and improve effectiveness and quality.

This overview of e-government design research reveals changing and diverse approaches along with increasingly detailed specifications that attempted to address the failures to achieve democratic innovation through ICTs. Implicit in this is the faulty assumption that e-government concurrently and intrinsically leads to citizen engagement.

This failure of e-government to lead concurrently and intrinsically to effective public participation is an issue herein referred to as the problem of concurrency. The concurrent growth of both government functional efficiencies and increased citizen engagement was envisioned as an inevitable process driven by emerging technologies and citizen demand for convenience and cost saving (Netchaeva, 2002; Silcock, 2001; West, 2005). While widespread adoption of e-government solutions has resulted in increased transactional efficiencies and quality, these benefits have demonstrated an accrual to the institution rather than the citizens, and have failed to transform universal citizen engagement. The implicit expectation of concurrent public participation remains as an e-government research issue.

Another research area conversely evaluates e-government outcomes and impacts from the perspective of citizen satisfaction. Research on e-government citizen satisfaction provides a range of observations on effectiveness outcomes and impact on citizen well-being. Early global surveys concluded that e-government sites, while resulting in cost and time savings, did not meet citizen needs and were not recommended by users. These conclusions were linked to a lack of participatory design methods (Anthopoulos, Siozos, & Tsoukalas, 2007). Ongoing studies reveal increasing reuse, recommendations, and trust in e-government. For example, Freed (2010) found e-government users, compared to traditional government service users, were 49% more likely to reuse the government service, 57% more likely to recommend the government service, and 46% more likely to trust in government overall. Four years later, ratings increased to 90%, 96%, and 67% respectively (Lewan & Anderson, 2014). However, other studies providing greater context, show user satisfaction of

government Websites ranks lowest among ten industry sectors and continues to decline. The decline is attributed to increasing user expectations (ACSI, 2014). One of the cited causes of increasing expectations is growing citizen use of mobile devices, which alters citizen service demands from 24x7, that is anytime availability, to real time, namely any place and time. Mobile-enablement of e-government services is also cited as the greatest opportunity for improving citizen services (Lewan & Anderson, 2014). Mobile usage is also changing the communication patterns across social media. This is a social dynamic that carries implications for ICT-enabled public participation research.

Proponents of ICT-enabled democratic change view online social network services (SNS) as a key source of research and practice that lead to new forms of participative governance (Tapscott, 2008). The online Obama political campaign (my.barackobama.com) is credited as the first application of SNS for scaling and supporting community action that led to Barack Obama's election victory (McGirt, 2009). Such research, however, raises troubling trends and questions about this potential.

Research on online SNS trends actually reveals a mix of positive and negative social outcomes, which can moderate expectations for unconstrained participative e-government. Roy (2012) elucidates numerous paradoxes among social media use in Canada, including polarization, group think, unrestricted behaviors, lack of idea exchange, lack of verifiability of data, masking, and anonymity. He characterises a trend toward the "political operatives of tomorrow" (p. 5) as cyber bullies, anonymous bloggers and Internet trolls. Similarly, Blumer and Doering (2012) note the creation of numerous and significantly different online personalities of individuals. Hedges (2009) observed the pre-eminence in social media of entertainment value and spectacle, as a re-living of Roman times, in place of social critical reasoning. Other research, however, identifies the value of SNS in aiding the cultivation of increased civic engagement and values, particularly among young adults and those with mid- to lower reach, which is a measure size of an individual's network by number of contacts (Jang, Lee, & Park, 2014).

Contextual research by Rainie (2014) highlights the continually changing social dynamic of SNS as described across four revolutions, namely, Internet, mobile connectivity, social media, Internet of things. Each is characterised by five attention zones with distinctive motives, content, devices, engagement, influentials, mindshare, and media strategy. The five zones are:

- 1) Streams (catching up, checking in, curiosity);
- 2) Stacks (learning, productivity);
- 3) Snacks (killing time, boredom);

- 4) Socials (friend grooming); and
- 5) Signals (real-time awareness).

Identifying the dynamics and motives of SNS activity in this way provides an approach to understand better the continually changing context of participatory e-government. The contextual dynamics of SNS users are further impacted on by the changing economic, technological and competitive contexts that impact LRG. These complex dynamics provide the rationale for the continuing increase in ICT spending and adaptation in LRGs (Bélissent & Giron, 2013). Further, SNS integration into a participatory governance perspective aligns with the value of network building that is necessary to help city leaders manage the increasing pressures and problems of local governments (Katz & Bradley, 2013). Restated, a broader rationale for the continuing LRG adoption and adaptation of ICTs, particularly SNS, is the need for social institutions to co-evolve with technological and societal change (Erkul, 2013). Framing the role and potential of SNS within a LRG ICT strategy can lead to the identification of research issues surrounding citizen privacy and accessibility. These are discussed in the following paragraphs.

Internet-connected services, while providing access to government, place at risk citizens' personal identity, privacy, and security, the regulatory protection of which are foundational to democracy. One of the most difficult challenges for e-government is to provide open accessibility without increasing citizens' risk or decreasing privacy. Accessibility is argued to be an obligatory, unavoidable part of democracy's evolution, which continually evolves to match the emerging technological networking potential of ICTs, as highlighted in the previous section, with the goals of participatory governance (Roy, 2006, p. 241). Research, however, has revealed that publicity has emerged as the default modality, with privacy declining, and that citizens easily trade privacy in favour of convenience (Rainie & Anderson, 2014).

Privacy and accessibility issues are exacerbated by questions of identity, data aggregation, legislation, and political will. Knight and Saxby (2014) have identified challenges due to multiple online identities for individuals, the delineation of cyber- and real-world identities, identity durability, theft and exploitation, and consent. Additional complexities arise from the use of metadata (data about data, such as dates and times of phone calls), data aggregation and anonymising, and the implications of "Do not track" and "right to be forgotten" laws (Collins, 2014). Research is insufficient to understand fully the complex and multi-faceted phenomena and underlying dynamics of these issues. Further, the failure of government to address adequately these complexities is

simplistically attributed to causes of either administrative shortfalls or lack of political will (Malena, 2009).

The privacy and accessibility challenges in Canada are prominent and instructive. Canada's lack of citizen consultation on e-government is attributed to the Federal government's lack of political will, which ultimately inhibits democratic processes (McNutt & Carey, 2008). Canada's e-government strategy, despite its goal to be known globally as the government most connected to its citizens by 2004 (Cochrane, 2009), emphasised the provision of efficient services at the expense of participative governance, as demonstrated by preceding examples.

Proposed solutions to the issues of privacy and accessibility include regulatory frameworks, such as the United Nations (2014a) Resolution on the Right to Privacy in the digital age. Other solutions call for new design perspectives that supplement traditional identity protection with multipronged 'technical-legal' initiatives that manage multiple risks on a global scale (Knight & Saxby, 2014). Revised political mandates are proposed that overcome the lack of political will by requiring all politicians to engage citizens online through SNS (Swinhoe, 2014).

2.2.4 ICT Summary

ICTs in planning and public participation have materialised as planning support systems, which have traditionally had limited implementation scope, and e-government solutions, which have generally proven to make government information and services more accessible at less cost and higher quality.

However, different citizen perspectives on e-government – as customers, evaluators, services participants, planners, and data sources – reveal ongoing opportunities and challenges, and a significant gap remains between the promise of ICT-enabled participatory governance and current realities.

Research that seeks to close this gap highlights numerous causes for low adoption rates of ICTs, a mix of design approaches, lagging citizen impact and satisfaction, and the many complexities of SNS dynamics and citizen privacy and accessibility. The need for integration or co-evolution of technological advancements with institutional arrangements calls for a renewed focus on holistic research frameworks that include the organisational mechanisms that operationalise urban planning priorities and constrain or advance the pursuit of participatory governance (Coleman, 2014). The following section explores the organisational strategy component that is integral to achieve a holistic perspective, specifically the role and current state of strategic planning approaches in governance.

2.3 Strategy

Porter (1996) asks “What is Strategy?” in his classic article of the same title. He regards strategy as the planning of organizational goals based on a rationale of what is important, what is achievable, and how to achieve the goals within the context that the organization exists. The planning of organizational goals, or strategic planning process, gives expression to an organization’s strategy. Thus, strategy and strategic plans are typically used synonymously.

This section reviews the academic literature pertaining to organizational strategy, beginning with the development of strategy in the corporate sector and its subsequent application to LRG. The review highlights current issues that relate strategy to both urban planning and CRM/CiRM, and introduces the selected strategy models that inform the research presented in this thesis.

2.3.1 What is Strategy?

Definitions of organizational strategy are varied and include the formulation of a plan to cope with competition (Porter, 1979), the delineation of how an organization will create sustained value for shareholders (Kaplan & Norton, 2004), and the act of planning for change as part of the overall management process in an organization (Katsioloudes, 2006). These definitions are complementary in that together they provide a window on foundational questions that relate strategy to how success is defined and planned, and then implemented and evaluated within an organization’s operating environment. The following discussion outlines the historical perspectives on strategic planning, particularly distinguishing between strategy approaches that emphasise strategic planning as contextual analysis, approaches that integrate strategic planning with strategic execution, and approaches that focus on strategy execution, management methods, and measures.

Strategy in business historically denoted the formal attention to long-term issues (Koteen, 1989). The 1970s saw a significant shift to centralized planning by experts and highly rationale methods. Central planning specialists emphasized quantitative analysis that existed outside the corporation and could impact corporate operations or profits (Ansoff, 1979; Ohmae, 1982; Steiner, 1979).

Strategic planning in the 1980s and 1990s matured across several paths. First, Porter’s (1979) article started a revolution in the strategy field by transforming the subjective and philosophical notions of strategy to a rationalistic competitive model supported by economic rigor (Porter, 2008). Porter based his analytical strategy model on five external or environmental forces, namely, industry competition, power of suppliers, power of customers, threat of new entrants, and threat of substitutes. He elaborated on the firm’s strategic choice by suggesting three generic strategy options that lead to

competitive advantage: low cost, product differentiation, and customer focus (Porter, 1985). According to Porter, selecting a strategic position is necessary to defining a coherent strategy that avoids conflicting strategic objectives (Christensen, Rayner, & Verlinden, 2001; Kim & Mauborgne, 2004; Rigby, 2001). The application of competitive strategy to governments is further examined below. Porter's rationalistic approach to strategic planning prevailed until skepticism emerged about the effectiveness of strategic planning.

Another avenue of strategy development was the emergence of critical schools of thought on corporate strategy that identify adaptive and integrative approaches. Ackoff (1969) identified three organizational postures for strategic planning, namely, satisficing, which was to do well enough, but not as well as possible; optimizing, by formulating corporate goals in quantitative terms combined into a single measure of overall corporate performance; and adaptivizing, which required changing the system in such a way that more efficient behaviors followed naturally. Characteristics of the adaptive organization included minimalist structure and staffing, customer orientation and generating value (Peters & Waterman, 1982).

Adaptive approaches to strategy were opposed to rationalistic planning approaches (Andrews, 1971; Ansoff, 1987). For example, emergent strategy was a popular adaptive approach that identified successful strategic choices merely through trial and error (Mintzberg, 1990; Mintzberg & Waters, 1985). Adaptive strategy approaches allowed for deliberate strategic planning, but identified the essence of strategy as emergent learning through experience.

Ansoff (1987) integrative approach attempted to merge divergent strategy approaches into domains of validity based on levels of environmental competitive pressure. He identified organic and reactive models as adaptive approaches, while systematic model corresponded to a rationalistic approach. Notably, Ansoff's identification of the form of decision power was identified in Section 2.2 above as a key rationale for public participation in decision processes. Table 2-4 below highlights the interdisciplinary nature of strategic approaches as proposed by Ansoff's scientific optic, thereby suggesting strategic approaches that are best suited to the complexity of professional planning in the LRG context.

Other critics of mainstream rationalistic strategic planning called for an integrative management approach to strategy. They invoked Gresham's Law of Planning, that is if left uncontrolled, operational activity suppresses strategic activity (March & Simon, 1958), which is still valid. The critique identified the fixation on partitioning and serializing strategy processes as the cause of perpetual poor strategy execution, in contrast to the Japanese parallel strategy approach (Declerck,

Hayes, & Ansoff, 1976). The result was that strategic implementation was subjugated to ‘status quo’ operations rather than strategy being used to guide operations.

Model	Scientific Optic	Decision Process	Power	Culture	Environmental Pressure
Organic	Political-Social	Conflict Resolution	Distributed	Multiple	Weak
Reactive	Psycho-Social	Pluralistic Consensus	Distributed	Homogeneous	Moderate
Ad Hoc M’G’T	Psycho-Social	Guided Consensus	Decentralized	Homogeneous	Strong
Systematic - 1985*	Cognitive-logic	Forced Consensus	Centralized		
- 1984	Multi-Disciplinary	Guided Consensus	Strong Center	Cultural Transform	Very Strong

Table 2-4: Ansoff’s Domains of Validity for Strategic Behavior (Ansoff, 1987)

Another avenue of strategy development focused on strategic processes through two approaches, namely, structural re-orientation of strategy actors, and strategic process perspectives. The structural re-orientation approach was an attempt to operationalise strategy through structured, sequential implementation processes and thereby address the growing skepticism surrounding strategic planning (Kaplan & Norton, 2001b; Mintzberg, 1994). Strategic planning evolved away from centralized experts and outward to operational managers (Welch, 1984). Strategic management linked the strategic planning function with the strategic execution or implementation function, which thereby placed management of day-to-day operations into the longer-term strategic context (Koteen, 1989). This reassignment of strategic responsibility gave impetus to the growing movement toward methods- or process-based strategic management which, notably, paralleled the similar movement away from expert urban planning as described in Section 2.2. Developing and enhancing methods of strategic management continues as one of the most significant challenges facing organizations today (Kaplan, 2008; Neilson, Martin, & Powers, 2008; Rohn, 2008; Rukstad & Collis, 2008; Tsenkova, 2007).

The strategic process perspectives emerged from an analytical survey based on almost 1000 academic articles that revealed numerous approaches to strategy processes (Hutzschenreuter & Kleindienst, 2006). The authors distilled the multiplicity of process approaches to six main perspectives as follows:

- 1) rational mechanistic – aimed to align internal strengths and weaknesses with external opportunities and threats.

- 2) cognitive – explains organizational behavior as a function of cognitive models held by key decision maker(s).
- 3) upper echelon – top executives influence strategic choice and organizational performance.
- 4) middle management – the pivotal influence of the latter in strategy actions by their ability to control translation of strategy into frontline actions.
- 5) organic – the multiple organizational actors that constrain strategy choices and focus instead on strategy change, and
- 6) micro – strategy as social action, comprised of the micro activities of organizational actors that effectively translate strategy into day-to-day practice.

These six categories help to conceptualize the diverse approaches to strategy, and also indicate the complexity of issues in determining success. Four implications for research of strategic initiatives are offered by these perspectives. First, they reveal limited options for prescriptive approaches to strategy, offered only by the rational mechanistic perspective, as distinct from the other descriptive approaches. Second, these perspectives highlight potential limitations that may have direct implications for or inhibit research on strategic public participation and constrain the range of possibilities for new strategic initiatives such as CiRM. For example, an organization's success may be limited by a key decision maker's ability to vision and execute (cognitive), or a visionary top executive may not be able to surmount the constraints of an organization's established past practices (organic). Third, the middle-management perspective also raises citizen efficacy issues, namely, whether middle management is beyond the reach of the public's strategic influence, and if so, whether the public's role in strategy formulation has any impact. Finally, the distinctions between the six perspectives – the methods, cognitive factors, organisational structure, emergence, and actions – that impact strategic implementation identify factors to explore in examining the public participation potential of CiRM.

The cognitive perspective on enabling the implementation of strategic CiRM invites exploration, particularly as related to the relationship aspect of CiRM. Strategic cognition is a growing theme in strategy research that views strategy formulation as a complex process of scanning, sense making, and decision making by top decision makers. Strategy implementation, as distinct from cognition, is a process that includes sense-giving, sense making, and issue selling (Narayanan, Zane, & Kemmerer, 2011). Within this cognitive perspective, decision makers' cognitive need for strategic sense making accommodates the framing of public participation within the strategic metaphor of citizen relationships. The advantage of metaphor is as a conduit for communication by linking concepts through ontological mappings across conceptual domains (Lakoff, 1993), even across dissimilar or

within emerging domains (Boyd, 1993; Hunt & Menon, 1995; Knudsen, 2003). It is also a useful analytical device in complex environments (Chettiparamb, 2006). Further, the relationship metaphor may increase resonance and priority of citizen issues with LRG decision makers, which are the primary contributors to issue salience as the determinant of strategic cognition and responsiveness of decision makers to stakeholder concerns (Bundy, Shropshire, & Buchholtz, 2013). Hence, the relationship metaphor as a factor of strategic cognition in making citizen concerns more resonant and salient with decision makers has yet to be examined in CiRM or public participation research.

The final strategy development avenue to be examined represents value-based approaches, which are implicitly tied to the organization's reason for existence. In the 1950s and 1960s value was implicit in the return on investment (ROI) for corporations, and grew in sophistication by the quantitative analytical methods prevalent throughout the 1970s. Explicit focus on value management emerged in the 1980s, giving primacy to shareholder value (Morris, 2006).

Value creation was given strategic definition by specific models, first by Porter's (1985) value chain analysis which explicitly defined the primary, value generating activities in a firm's operations as distinct from its support activities. This concept was then extended through strategic measurement systems, most notably the Balanced Scorecard (BSC), which focuses the attention of all workers in the firm on activities that create future, sustainable value (Kaplan & Norton, 1996). This principle was later extended into a strategy map (Kaplan & Norton, 2001a) on the explicit notion that organizational strategy describes how a corporation creates value for its shareholders and customers. In the public sector, organisational strategy describes first how value is defined and then also created for citizens and other stakeholders (Kaplan & Norton, 2004).

A refinement of the value concept is the customer value proposition, which represents a more customer-centric view of a firm's value generating activities, and is the central element of strategy (Kaplan & Norton, 2004). The strategic centrality of value defines the critical link between an organization's *raison d'être* and its day-to-day activities. Current trends in value definition and value generating activities emphasize greater customer-centricity (Saint-Onge & Armstrong, 2004). The identification of value in organizational strategy corresponds with the emphasis in professional planning identified above on aligning with citizen values and preferences through public participation.

The strategy approaches discussed above emphasise, to varying degrees, processes and methodologies, and distinguish between strategic planning, implementation, and evaluation. The approaches commonly recognize the imperative of assigning responsibility for strategy in the

organisation, either centrally or distributed throughout. Perhaps most significant is the need for a multi-disciplinary strategic paradigm that accounts for visionary, structural, operational, cultural, and environmental factors that impact on the effectiveness of strategic implementation and that centres on customer value.

The next section examines the development and application of strategy in public organizations, particularly the operational and competitive considerations in government, followed by a more detailed examination of strategic planning and implementation issues as they relate to CiRM.

2.3.2 Strategy in Government

The extensive literature about strategy in public organizations reveals many similarities with business strategy, with distinctions in several key areas. Similarities include providing a plan for the operation and direction of the organization, the types of approaches, and the need for both planning and implementation processes. Distinctions are in the areas of fundamental purpose, the value proposition definition, competitive focus, and strategy practices. These are now discussed.

The fundamental purposes for public sector strategic planning focus on organizational and operational factors. These include:

- 1) optimizing public sector management (Lynn, 1984);
- 2) defining organizational focus under the New Public Management movement and the restructuring of government agencies (Hood, 1995; Schellong, 2008);
- 3) providing a foundational component in municipal policy making (Lightbody, 1993);
- 4) integrating departments into organizational goal-setting processes (Reese & Fasenfest, 2003); and,
- 5) reorganizing the international development operations that were highly criticized for micro-managing the internal affairs of developing country governments (Girishankar & De Silva, 1998).

Earlier public sector roles for strategy did not address issues of competitive position with respect to the environmental forces identified by Porter (1979). Further, some criticism was given to the notion that mechanistic business approaches were applicable to matters of public trust without degrading the importance of the citizen (e.g. Shipley, 2003). These issues are reviewed below.

The value proposition definition gained specificity over time. Early public sector strategy approaches focused primarily on identifying the needs of targeted client groups and the appropriate service delivery to satisfy them (Koteen, 1989). More recent public strategy applications account for a complex environment, where the business value chain approach is displaced by supply choices for the

organization's process outputs. The Specificity-Contestability (SC) Matrix, for example, challenges public organizations to identify the specificity (what is the output) and the contestability (who can deliver) of strategic outputs (Girishankar & De Silva, 1998). For example, road maintenance is identified as Type I high specificity, high contestability wherein outputs are easily identified and quantified and responsibility for delivery falls within a narrow scope. In contrast, economic management and budgeting exhibit Type IV low specificity, low contestability as outputs are viewed subjectively and responsibility for delivery involves numerous stakeholders, including citizens, throughout the process. The SC Matrix allows for the identification of types of strategic outputs, and selection of matching strategic implementation approaches and measures, which is another key factor in the research for this thesis.

Value creation activities (for example, operating heavy equipment or processing information) are similar between business and government, while the definition of the value proposition differs. Business value is defined as customer-desired products and services and shareholders returns. The value proposition for the public sector is defined, in contrast, not by increasing its financial value, but rather by achieving the organization's mission as a benefit to citizens (Kaplan & Norton, 2004). Public sector measures of success are more complex than simply generating profit or shareholder returns. Organizational visions and missions must result in measurable outcomes, and also impact upon citizens' perceived benefits and community well-being. This differentiation of outcomes from impacts is a key differentiator between private and public sector strategy.

Another key differentiator between private and public sector strategy is the inclusion of the value beneficiaries in the strategic planning process. A government organization that identifies its mission as being accountable to a community must involve citizens in every aspect of the strategic plan's development (Plant, 2010). Involving the citizens as the value beneficiaries is a significant distinguishing feature of public sector strategic planning (Greenwood, 2008).

The emphasis on competitive environmental factors at the core of business strategy theory was largely absent in early public sector strategies. The emergent role of adaptive competitive positioning in government strategy was underscored in Subsection 2.1.2 above. Governments can identify competitive factors that ultimately impact on the quality of citizens' lives and community attractiveness. Porter (1990) applied his five forces model to government strategy based on the concept of regional competitive strategy. The concept of competitive advantages of regions was described as innovation clusters comprised of intra- or trans-geographically-related industries and businesses that mutually share and promote innovation (Porter, 2003). Communities are seen to gain

competitive advantage by strategically identifying and participating in competitive regions that aligned with a community's natural or built capacities.

This approach to government strategy is exhibited in Porter's (1991) review of the Canadian competitive landscape. This concept of competitive strategic positioning further underlies the urban planning themes of new regionalism, smart growth, and sustainability (Perroni & Whalley, 2005). The imperative of strategically managing intangible assets, while true for corporations, is even truer for countries and, by extension, provinces and regions (Kaplan & Norton, 1996). A growing competitive trend among LRGs is the pursuit of an strategic identity or brand such as eco-tourism, artisanship, technology hubs (Anttiroiko, 2014; Florida, 2009). Hence, local governments are seen as competing strategically within clusters as described above to align their resources in order to enhance community capacity and growth through planning and implementing an explicit competitive strategy.

Strategy has a clear role in urban planning (Seasons, 1989; Shipley, 1997), and underlies planning development themes such as new regionalism and smart growth, as noted above. The role of urban planning as defined by the Canadian Institute of Planners (CIP, 2014a) indicates an overlap between strategic and urban planning. Strategic planning defines top-level organizational goals (Plant, 2009), and is an important component in policy-making process for Canadian municipalities (Lightbody, 1993). Thus, it is an important tool for community planners. LRG Planning departments operate in alignment with strategic goals of their respective organisations, which is a key factor in optimizing strategic implementation across the organisation and providing citizen value through city planning.

Strategic planning has found renewed emphasis in government and municipalities (Feldman, 2008; Obi, 2010; Wescott, 2004). The last decade has seen the development of effective strategic methodologies (Greenwood, 2008; Kaplan, 2008; Sagini, 2007; Scholey, 2008; Sridharan, Go, Zinzow, Gray, & Barrett, 2007). Further, the complexities of planning and executing effective LRG strategies is aided by simplified methods and strategy roadmaps for municipalities (Plant, 2009, 2010).

A simplification of Porter's (1996) strategy definition was offered by Rukstad and Collis (2008), who identify three working components of strategic planning, namely:

- 1) Objective: both the ends that the strategy is designed to achieve, and a quantitative target and time frame (similar to a vision statement);
- 2) Advantage: the means by which the enterprise will achieve its objective; what the enterprise will do differently, better or uniquely compared to competitors; the value proposition the company will offer to attract customers; and the value curve; and

- 3) Scope: the domain (niche) in which the enterprise intends to operate, the customer segment, the product line breadth, the technologies employed, the geographic locations served, and degree of vertical integration or value chain activities performed.

The framing of organizational strategy by objective, advantage, and scope exemplifies a simplified strategy implementation practice that is useful for enhancing citizen value within local government.

Another simplified approach to strategy (McNamara, 2010) suggested three different strategic planning perspectives, namely, getting back to historical “roots,” focusing on current “issues”, and setting future “goals.” A roots-based approach is suited to an organisation that can use its history for a market advantage. An issues-based approach is more appropriate for new organizations, or in contexts with many pressing issues in the present. Goals-based planning is best suited to established organizations with a view primarily to setting future direction. These three perspectives identify time-based strategic values from the past, present, or future, providing citizens a simple framework to understand the strategic approach and provide meaningful feedback.

The practice of strategic planning and implementation in LRG requires strategic thinking that extends beyond smart growth and new regionalism and that understands citizens’ preferences (Lorinc, 2006). This confirms a priority that aligns with the cognitive process perspective identified above. Strategic thinking requires the identification and effective strategic management of intangible community assets, which is a principle particularly applicable in government (Kaplan & Norton, 2004). Aligning local assets to citizen preferences helps optimize community outcomes and create contexts for growth. Recent research cites strategic thinking as an essential quality for effective municipal leadership and decision making. Further, most municipal leaders are “particularly weak” in strategic skills, resulting in plans that provide leadership and vision for neither city management nor the community (Hume, 2016).

The challenge in effective strategy practices is to advance modes of strategic planning toward simplified methods that can be executed by municipal managers while addressing the analytical aspects of achieving a competitive value proposition for citizens. Taylor (2014) described the many complexities of implementing a participatory strategy into advocacy practice. One complexity factor was the dual relationship revealed by integrating community public participation with the practice of strategic planning in the public sector. Public participation facilitates citizen involvement in the strategic planning processes, while at the same time, public participation goals – extending beyond strategic planning to include all key organisational decision processes – can be identified within the

strategic plan. This duality adds complexity to public participation initiatives, while recognising that the importance of public participation goals is bolstered by contextualising public participation within the strategic planning initiatives. By extension, therefore, the implementation of strategic public participation initiatives is integrated into the strategic implementation processes of the LRG, and thereby supports the public participation directives of the LRG planning departments.

2.3.3 Strategy Summary

The review of organisational strategy has examined the definitions and scope of strategy in terms of strategic planning and implementation first in the corporate sector and then also as applicable to government, particularly LRG. Strategy research has evolved along several streams, namely rationalistic, adaptive, processual, and the value perspective, which continue to influence strategy practices. Government strategy models and methods parallel those in the private sector, but are given significant differentiation by a strategic focus on citizens as both value definers and beneficiaries.

While strategic imperatives help define the future of urban planning, a growing emphasis on competitive strategy is gaining relevance particularly as the pace of global urbanisation continues to create new challenges for LRGs. The complexities of strategic planning and implementation require the successful integration of public participation in the strategy processes, as well as defined, rationalistic strategic initiatives or pillars that advance citizen engagement.

The importance of strategic definition is highlighted in the following review of CiRM, where organisational strategy is a required component, along with the integration of appropriate ICTs and public participation vision.

2.4 CiRM

As noted in Chapter 1, Citizenship Relationship Management (CiRM) is the application of corporate CRM concepts to government settings, while participatory CiRM is the use of CiRM to enhance citizen participation in democratic governance. CiRM is emerging as one of the leading technologies in all levels of government. It may offer the next great evolution in government services technologies, if corporate CRM is any indication. The focus of this thesis is to identify and build upon CiRM's component areas, namely, organisational strategy, relational value, and extensible technologies, in order to develop a model for participatory CiRM. This necessitates an in-depth examination of CRM as the conceptual context for CiRM.

This chapter therefore begins by describing CRM concepts and their relation to organisational strategy, customer value, technology and scope of application. The second part examines CiRM, particularly the application of CRM concepts toward CiRM solutions, theoretical frameworks, impacts on governance, and participatory CiRM issues. The following provides an overview of the development of CRM in business, its link to corporate strategy, misconceptions about CRM, and how the technology might provide value for LRG, and particularly public participation.

Perspectives on CRM and its potential to transform government vary greatly. An article in *Electronic Government* magazine describes CRM as “one of the greatest technological contributions to enterprises in the 21st century” (Chu, et al., 2008, p. 290). Others’ views of CRM are simply as a powerful contact manager, or sales automation software. This thesis explores the path of CRM development in the private sector, and in particular, the strategic, management and relational aspects related to customer value, and identify how these might inform LRG public participation.

CRM was originated for the optimization of the sales process with the ability to analyze customer behaviours and assemble organisational information and preferences, referred to as a “360-degree view” of the customer. Over time, CRM practice has broadened to include strategic approaches and management practices in order to enhance a firm’s relationships with customers, increase customer value, and thereby corporate profits. Some key characteristics of CRM are, therefore, the link to business strategy and the inversion of the traditional sales approach. These characteristics are examined in the following discussion.

2.4.1 CRM and Strategy

The intimate tie of CRM to strategy is now well established. The importance of effective strategy and strategy adaptation for CRM success has led to describing CRM as a business strategy, wherein effective CRM cannot be separated from a firm’s strategic planning and management. CRMguru.com (2005) emphasises that “CRM is a business strategy” that helps select and manage customers to optimize long-term value. CRM requires a customer-centric business philosophy and culture to support effective marketing, sales, and service processes. CRM effectiveness depends on the appropriate leadership strategy and culture within an enterprise.

Best practices for CRM implementation have emerged through detailed results evaluation. These led to the recognition that CRM must be based on a clear strategy, and also that CRM has a profound role in subsequently continuing to shape effective business strategy and guide the maximization of customer value. Silverman (2001) summarizes CRM as a way of doing business, not just a

technology, and that CRM systems can be highly effective if implemented in a strategic, focused, and holistic manner. Such implementations rely on the alignment of strategy, organizational structure, business practices, and customer value. Such alignment is referred to as a customer-centric orientation, or customer-centricity.

Hence, CRM cannot be separated from strategy. However, its complexity and range of capabilities can quickly overshadow the strategic objectives. The resulting implications of CRM's link to strategy are still being discovered and are beyond the scope of this thesis for the corporate setting. However, CRM's role in and dependence on the identification and optimisation of customer value as an essential factor in customer relations is examined next.

2.4.2 CRM Value Inversion

The focus of CRM on customer-expected value inverts the value perspective between customers and businesses. A traditional view of business relations is corporation-to-customer, namely, the corporation selling to the customer. CRM principles, however, invert this traditional focus by capturing customer data as well as transactional and relational behaviours from the customer, which in turn lead to a deep understanding of the customer. These data, insofar as they feed into and impact upon the business strategy, serve also to increase perceived customer value, which results in a customer-to-corporation relationship in which the customer informs the corporation.

Thus, CRM, rather than referring to a specific software application, properly defines a strategic approach to customer value, aided by ICTs by way of a CRM system. Without supporting ICTs, a corporate CRM approach would fail to capture adequately the vast multitude of customer interactions, and therefore be incapable of collating and analysing the significance of those interactions for strategic purposes. At the core of the technology, CRM systems may include or integrate with marketing, sales force automation and customer services support applications in order both to capture data and to facilitate interaction at the point of customer contact. Further, CRM systems may also include any other technologies that strategically serve customers at any point, thus better meeting customers' needs. Additional capabilities, according to one list, can include:

- Contact management;
- Account management;
- Time management;
- Contact centre enhancements e.g. customer self-service, automated email response, customer profile screen-pop;
- Customer service e.g. incident management, order management, service level agreement management, warranty management;
- Field service e.g. call handling/dispatching/ scheduling/workforce management;

- Telemarketing/telesales;
- Partner relationship management;
- Knowledge management;
- Business analytics;
- Project management; and
- Employee relationship management (BPIR, 2006).

Hence, CRM is strategic approach supported by CRM systems that collect data and facilitate customer interactions. CRM, as a strategy, helps to invert the traditional relationship of pushing sales information to customers, and instead solicits and allows analysis of customer information and interactions to inform business policy. It thereby allows customers to speak to the corporation. However, the strategic focus of CRM depends on a broad range of technological functions and features that are examined next.

2.4.3 CRM Technologies

In order to operationalise customer-centric strategy, CRM technology operates in support of and in alignment with strategy and management methods, and is therefore best thought of as a platform, rather than a software application. The technology component enables levels of efficiency and scalability to mass markets that by manual methods would be infeasible. CRM technology is comprised of a collection of components and characteristics, including a core set of digital information databases, a security architecture, common or out-of-the-box functions, and typically includes cloud services, technical extensibility, numerous integration or add-in options, and social and mobility enablement. Such a collection of CRM technologies may be custom programmed, assembled by integrating existing technology solutions, or built upon a CRM solution platform.

The database and security architecture components of CRM are engineered to be very robust and scalable for very small organisations with a few users to large, global organisations with tens of thousands of users. The out-of-the-box functions provision many of the functions listed in the previous section.

Cloud services are an Internet-based software delivery model that facilitates Software-as-a-Service (SaaS) provision of applications such as CRM. They reduce initial infrastructure purchase and set up costs, and increase the ability to scale rapidly the software application to any number of users. SaaS CRM systems, for example, operate on an external vendor's computing facilities, and offer a robust yet flexible data security model. This security model enables accessibility from any

Internet-accessible location by authorized users, including employees, managers, and external organizations such as suppliers, customers, and citizens.

The technological extensibility characteristic allows the CRM technology components to be highly customized, and also to be integrated with other modules and third party products. They can also be connected to other organizational databases for the purpose of tightly integrating CRM's technological functions to the organization's strategy and management processes. CRM extensibility can be deployed rapidly or incrementally over a lengthy time.

Technological extensibility has broadened the scope of CRM beyond customer facing functions to include suppliers, agents, producers, media groups, and others, now referred to as xRM. This label collectively denotes CRM technologies, management approaches, and strategic focuses that extend beyond the sales and marketing departments of an organization to all departments and functions with a singular competitive value objective at the core. Further, xRM is intended to expand customer relationships strategically wherein organizations relinquish control of customer communications in favour of direct customer-to-customer relations related to product information and evaluations. These communication functions of xRM are intended to enable a richer view of customer preferences and values (Band & Petouhoff, 2010).

The integration of CRM with other software applications and add-ins is a form of CRM technological extensibility that leads to the concept of a CRM ecosystem. Add-ins allow for packaged solutions or specific functions to be integrated into CRM without user programming knowledge, creating an extended application platform, or ecosystem. Forrester Research's generic CRM Application Ecosystem model (Band & Petouhoff, 2010) describes CRM technology clusters including customer collaboration, targeting, acquisition, and retention. These clusters are each oriented toward the single strategic objective of achieving customer understanding. As such, CRM is not defined by a fixed set of technologies or organizational processes, but rather by selected technologies and management approaches tailored to an organization strategy and customer relations.

Social CRM and mobility are forms of CRM extensibility that include social networking capabilities to engage customers where and when they wish to communicate. Mobile CRM interactions build on cloud services to allow users to access the CRM application from a range of smart devices, such as phones and tablets. In fact, usage is wide-spread and growing, becoming a continuous, non-discrete activity, allowing for continuous user-generated content such as product reviews, experiences, product support information and even political activity to be shared on public social media (Smith, 2014). These mobile forms of social media typically lie outside a firm's control.

Social CRM therefore includes tools and methods to monitor buzz and user-generated content about a company and its products, and track the growth and decline of interactions.

Buchanan's (2010) operating model for social CRM outlines the comprehensiveness of a social CRM ecosystem and its capabilities. The model connects the organisation's strategic functions, including the various operational components focusing on value creation, to the analytical functions that provide real-time insights, to the total customer value experience. The CRM ecosystem illustrates the fundamental shift in an organization's marketing approach, from pushing information from inside outward, to attracting customers from outside inward, recognizing customer control of the conversation as a key dynamic in social CRM (Greenberg, 2009b). Hence, social CRM seeks to enhance further the capabilities of CRM in real time and contribute to business-to-customer interactions and relationship quality.

The breadth and complexity of CRM technologies lead to considerations of CRM's appropriate scope of application and the challenge of establishing a customer-centric business strategy. These are examined in the next section.

2.4.4 CRM Scope

CRM comprises a broad solution with a multitude of subcategories that address a range of business issues and which raise the challenge of adequately defining a firm's business problems or requirements prior to selecting a CRM ICT solution (BPIR, 2006). The following steps exemplify an approach to CRM to maintain a strategic focus:

- Assess customer strategy within the context of overall business strategy;
- Assess organizational readiness, including capabilities, policies, incentives and practices;
- Assess current customer experiences along all customer touch/interaction points;
- Assess customer information architecture;
- Enable initial customer analysis and feedback as a key driver of other initiatives;
- Identify and prioritize CRM objectives and initiatives;
- Select and implement CRM solutions in a deliberate, phased manner, with the objective of delivering early and continually increasing value;
- Identify existing and target metrics to guide and evaluate initiatives;
- View CRM as an ongoing, iterative business strategy rather than a single program or group of technology projects (BPIR, 2006).

The first and last points again emphasize that CRM principles begin and end with strategy. Minimizing the strategic component can lead to a limited CRM scope. Kincaid (2002) identified some misconceptions of CRM's scope and the corresponding realities as shown in Table 2-5.

Misconception	Reality
CRM is the Internet	Relationships are built on understanding and trust. People who understand the customer's perspective must design the Web experience.
CRM is just the latest name for Direct Marketing	CRM is a shift in focus from marketing (communicating "to") to relationship management (communicating "with").
CRM means recognizing a customer wherever he interacts with our company, a 360' view of the customer.	Information about customers is critical to increased understanding and improved service. You also need tools and training to know what to do with it.
CRM means scoring and measuring Customer Value	Use the knowledge to increase the number of loyal customers and the value of each.
CRM is sales rep productivity tools.	The sales function is only one of those that directly touch customers and make up CRM.

Table 2-5: CRM Misconceptions (Kincaid, 2002)

These misconceptions of CRM tend to overlook the dependence on strategic planning. A limited, technological perspective of CRM relies solely on traditional ICT deployment methods while, in contrast, a strategic perspective relies on strategy process approaches. This thesis adopts the strategic view of CRM as a collection of management approaches and extensible technologies that depend on organisational strategy to increase customer value delivery. This organisational, strategic view of CRM provides the basis for the exploration of CiRM in relation to public participation concepts in this thesis.

The recent reinvention of CiRM, particularly in LRG, raises new challenges of understanding strategy factors related to citizen services and governance. The differences between business strategy and government strategy, while sharing similar approaches and process needs, are paralleled in the differences between CRM and CiRM. While sharing CRM's underlying capabilities and methodologies, CiRM operationalises LRG strategy by focusing on effective service delivery, deep public participation, and citizen value definitions, all of which are central to the focus of this thesis. Accordingly, building on the CRM concepts presented above, the following sections examine CiRM in terms of its development, government solutions, theoretical frameworks, impact on LRG, and particularly its participatory role and capacities.

2.4.5 CiRM

CiRM is receiving renewed attention given CRM's contributions in the corporate world. CiRM research adapts private sector CRM research and applies it to e-government applications, particularly transaction-oriented citizen services (Schellong, 2005). Gartner's 2014 forecast for global enterprise software spending (Cheung, Dharmasthira, & Eschinger, 2014) shows CRM among the top drivers of

7% annual growth, supported, for example, by Salesforce's launch of cloud-based government CiRM service (Corbin, 2012).

Participatory CiRM, as introduced in Chapter 1 and at the start of Section 2.4, builds upon CiRM's component areas as a model to enhance participatory governance. To clarify, participatory CiRM research in this thesis is concerned particularly with a strategic framework for ICT design and CiRM implementation that executes on the promise of public participation and the democratisation of urban planning. CiRM provides almost unparalleled advantages as a research platform in this regard. Specifically, it offers a more structured approach than other customised e-government applications. It also focuses on the customer perspective as a springboard to public participation, and it is flexible in design and functionality. Further, consistent with the earlier discussion on strategic planning, CiRM is dependent on an explicit organisational strategy. As noted in the previous section, CRM has established high levels of success in the corporate sector, which may serve as a launch point for CiRM to offer best practices and keys to public participation success in LRG.

CiRM parallels CRM's description, strategy, need for a value objective, and the ICT properties described in the previous section, and by extension shares the issues of scope and misconceptions. The ability to modify and extend CiRM is an important consideration, and understanding the range of functional extensibility is a key factor in exploring the potential role of CiRM and e-participation in LRG. Similar to CRM, CiRM includes a strategic focus, which may be accommodated by the strategy practices of most LRGs as previously described. However, unlike CRM, the strategic objectives of CiRM do not centre on the profit motive of the private sector, but require a citizen-centric value objective that is uniquely defined for the specific LRG application.

The following section surveys the CiRM research literature to review the diverse CiRM approaches, and to identify strategic approaches, practices and value objectives that are most appropriate to participatory CiRM. CiRM research, although not extensive, diverges broadly across different approaches, which are categorised as either solutions-oriented approaches or theoretical frameworks.

2.4.6 CiRM Solutions-Oriented Research

Solutions-oriented research highlights the flexibility and adaptability of CiRM's extensibility across different solution approaches, matching the complexity of LRGs. Three solution areas are reviewed in the following subsections, including e-government solutions, strategic applications such as smart cities, and market-oriented solutions.

E-government CiRM is the most widely accepted model of CiRM, with the objectives of simultaneously improving citizen services quality and reducing costs (Hildreth, 2007). E-government CiRM applications typically include a set of functionalities and tools that enable governments to become citizen-centric by optimising citizen service transactions as the value objective. Kannabiran, Xavier, and Anantharaaj (2004) outline an e-government CiRM approach that includes an integrated citizen information system to provide personalized services and citizen interface centres as citizen service access points. In this context, 311 call centre solutions are often equated with e-government CiRM. However, Fleming (2008) clearly distinguishes between 311 systems that include CiRM as part of the call centre function, and CiRM systems that aid citizen services beyond 311 functions.

By focusing on optimising citizen service transactions as the value objective, e-government CiRM is subject to the critiques of e-government design and concurrency as noted in Subsection 2.2.3. E-government CiRM can prioritize easily demonstrable results, such as financial gains and improved services, sometimes at the loss of participatory functionality (Bélissent, 2011).

Other e-government solution approaches extend CiRM further toward comprehensive strategic paradigms such as smart cities. For example, the Connected Government Framework for Local and Regional Government (Muehlfeit, 2006) amalgamates several technologies to integrate government functions to enhance service delivery and efficiency, enable data integration, and promote e-democracy and inclusion. This framework, while integrating a broad range of applications, is characterised by an overarching transactional and ICT focus on commercial context and lacks a citizen engagement, or participatory CiRM, focus.

The Citizen Service Platform for local government services is a commercial development of smart city LRG applications. This is built on a highly extensible CiRM technology platform and includes strong workflow integration with a focus on citizen life cycle management (McKenzie, Bunio, Colclough, & Lanvin, 2008). The Citizen Service Platform is designed around a comprehensive four-layer conceptual framework that includes key challenges, people and processes, applications, and technology. This platform is aimed at the full range of transactional challenges faced by LRGs in both developed and developing countries. The Citizen Service Platform framework illustrates the growth in breadth and complexity of LRG applications that are enabled by CiRM, but only provides the technology layer, while lacking participatory CiRM functionality. However, it serves to highlight the importance of addressing business and operational issues before designing technology solutions. Further, such smart city CiRM solutions align with broader, established LRG strategic objectives while still allowing for the definition of an LRG's unique value objective.

Market-oriented CiRM solutions attempt to replicate the business model of private sector CRM by identifying the competitive dynamics within the LRG context and defining citizen services in terms of customer products. Russell and Hammons (2012) advocate for a competitive approach to CiRM design that emphasises a citizen “product” development orientation. This CiRM design is supported by customer functions such as citizen management, marketing, customer services and support, analytics, social media, and an online citizen product marketplace. Such a market-oriented approach assumes the efficiencies of free-market approach to defining citizen value objectives, which are then operationalised by the CiRM solution.

These solutions-based approaches to CiRM research, including e-government, smart city, and market-oriented approaches, almost all include mention of citizen-centricity and even citizen engagement, but lack the conceptualisations or operationalisation of direct participatory functionality. While CiRM extensibility offers the capability to promote citizen engagement, these solutions are solidly transaction-oriented and prioritise improved efficiencies and service quality. Citizen participation in decision processes is typically not a value objective that is included among the cluster of solutions-oriented functions, unlike several of the theoretical frameworks that are reviewed in the next section.

2.4.7 CiRM Theoretical Frameworks

CiRM approaches and technological extensibility have continued to mature so that the technology component of CiRM is “the easy part” of CiRM (Schellong, 2007, p. 1). The greater challenges of CiRM are given by the strategic complexities as described above, identify public participation functional priorities, and moderate the prioritisation of transactional efficiencies at the cost of participatory CiRM. A variety of theoretical frameworks attempt to address these complexities for CiRM design with varying degrees of citizen participation focus. These frameworks are described below as generic, sophistication, relational, insight, social, civic implication, and collaborative models.

Early theoretical frameworks investigated private sector CRM to develop generic models for CiRM applications. Schellong (2005) reviewed private sector CRM research in parallel with 311 case studies to develop a project-oriented approach to e-government implementation. Chang and Chen (2007) outlined a framework for evaluation of Web services to accommodate the needs of the three stakeholder groups that they identify as critical for effective CiRM, namely, government, citizens, and employees. These generic models were first attempts to standardise CiRM design and implementation

practices. However, they lacked both the flexibility to accommodate the complexities of LRG and the strategic integration of public participation functionality for CiRM.

The sophistication model by Kannabiran, et al. (2004) suggested a new e-government paradigm that increases citizen influence in government decision processes through the evolution of government services sophistication. They proposed a transformation of government processes and citizen relationships through three progressive levels of sophistication, namely, governance automation, citizen-centricity, and participative democracy. In this, the evolving sophistication of CiRM was supported through analytics functions, integration and extensibility features, and redesigned business processes. This model defines effective participatory CiRM as a function of identifying and implementing increasingly sophisticated participatory needs of citizens, but lacks technical and functional definition.

A relational perspective to CiRM in e-government proposed to make the relationships between government and citizens more quantifiable (Pan, et al., 2006). Three relational aspects were considered, namely, incentives, or each party's needs and benefits; value, or the relative importance of the needs and benefits that the relationship satisfies; and tools, or the mechanisms that identify the incentives, that help realize the value, and that capture a valuation of the relative magnitudes of such transactions. The relational perspective remains as one of very few examples of a rationalistic approach to relationality in CiRM despite its name. However, it was subject to numerous challenges. These include a justifying a business case for investment, gaining leadership support, and overcoming the traditional mindset of government employees.

CiRM can introduce citizen insights into LRG decision processes to enable democratic participation. King's (2007) CiRM strategy closely approximated a participatory CiRM framework that emphasised citizen insight as the gateway to understanding citizen value preferences. He identified three progressive relational levels of CiRM practice, commencing with the informational/transactional relationship. Second was the insightful council-driven stage which, while controlled by LRG leadership, incorporated CiRM analytics to understand citizen values and preferences. Third was the insightful citizen-driven stage which was controlled by citizens to influence the informational elements and functions of the CiRM design. While this level also lacked technical and functional definition, an important contribution of the insight model was King's identification of a key barrier to progressive participatory CiRM advancement. This barrier occurs in the context of "big data" and data science as a result of an overdependence on analytical CiRM that reduces citizen efficacy and disengages citizens.

A social CiRM framework identifies five social objectives including listening, talking, energizing, supporting, and embracing. These are mapped directly to operational functions and to CiRM capabilities (Li & Bernoff, 2011). This type of framework, while not widely practiced, is one example of an integrated theoretical linkage between social network activities, organisational objectives, specific social participatory CiRM objectives and participatory CiRM ICT functions.

The Matrix of Civic Implication framework (Prieto-Martin, 2011) identifies four dimensions that describe LRG public participation initiatives, namely, intensity of collaboration, which is a direct adaptation of Arnstein's (1969) participation ladder; actors or stakeholders who influence the participatory exercises; level of institutionalization, which represent the degree and periodicity of public participation embedded into organizational processes; and intensity of deliberation to describe the various forms of public participation practice. The matrix helps to frame the complexity of relational attributes and relational dynamics between stakeholder groups needing to be considered in participatory CiRM. It further integrates the deep and continuous participatory characteristics of participatory governance as noted in Section 2.1.3.

Finally, the collaborative CiRM model provides a technology framework that integrates transactional and analytical functions with other Web services. It outlines a participation architecture with the purpose of redesigning existing services to be more citizen-centric and to promote citizen collaboration (Gonzalez & Gonzalez, 2012). Although lacking strategic specificity, the model's unique contribution is the explicit identification of a participation technology architecture built around collaborative participation that is reported to increase the magnitude and quality of citizen participation.

The theoretical frameworks reviewed above, including generic, sophistication, relational, insight, social, civic implication, and collaborative models, attempt to apply different perspectives and influencing factors to the design of participatory CiRM. They allow for, and in some cases prioritise, a focus on citizen participation. The models contextualise, implicitly or explicitly, a citizen-centric value definition with varying degrees of specificity on delivery or CiRM technical impact, and help to identify some potential challenges for participatory CiRM design and implementation. The following section examines the impacts of CiRM.

2.4.8 CiRM Impact

Research on the impacts of CiRM relies on broad surveys as well as case studies, reporting transformational improvements in citizen services delivery, along with some real-world impacts on public participation.

King (2007) identified a recurring theme in the research, namely, CiRM's positive impact on the transformation of citizen services, particularly in e-government applications, and public service experience. Citizen services were reported to be more responsive, accessible, convenient and cost effective, providing a more insightful or holistic view of citizens. Similarly, by 2009, 113 (56%) of the largest 200 municipalities in the United States had adopted CiRM (Reddick, 2010). Although most of these CiRM implementations were still in initial stages, they were already found to have had a positive impact on government-to-citizen communications and on citizen service quality, particularly through the citizen service requests tracking function used by 97% of the municipalities surveyed.

CiRM benefits have been identified in relation to the replacement of antiquated e-government applications or legacy systems. CiRM, as a replacement technology, is shown to increase citizen services efficiencies, more accurately illuminate citizen requirements, and strengthen communications and cooperation among government, citizens and stakeholders (Kannabiran, et al., 2004). Gartner reports a growing perspective of CiRM as driving better citizen satisfaction by providing a more affordable, step-wise path to modernising legacy systems, particularly due to its extensibility and integration capabilities (Hildreth, 2007). CiRM can also incrementally replace existing systems for specific services, rather than entire legacy systems, resulting in improvements in internal management, citizen usage, efficiency, and quality of service (Chu, et al., 2008).

However, CiRM implementations can carry risks that diminish rather than enhance democratic governance. Efficiencies and cost savings in e-government are often achieved at the cost of public engagement. An overemphasis of financial returns and cost savings can overshadow the creation of citizen value and democratic participation (West, 2005). One explanation is that the benefits of e-government CiRM are found to accrue internally to the municipality rather than externally to the citizens (Coglianese, 2007). Another risk is a possible dependency on technology, particularly the analytics barrier as noted above that can overshadow direct citizen voices (King, 2007).

CiRM provides benefits in areas of urban planning, citizen participation and advocacy, and analytics in addition to e-government. CiRM was instrumental in helping to improve community development planning by providing insight into the specific needs of residents, despite numerous

political, technical, and regulatory challenges (Hildreth, 2007). Eggers and Dovey (2008) described the power of public participation tools used successfully by the 2008 Obama election campaign that were projected to create a growing demand for a bottom-up, participatory models for democratic governance. Schellong (2008) affirmed that CiRM provides the means to achieve a different, deeper kind of public participation. He cited the need for expanding broadly on the theoretical conceptualization of CiRM to push beyond the limitations of transactional e-government. Similarly, relationship and participatory factors need to be strategically planned and designed into the CiRM solution (Fountain, 2008). Despite these positive factors, none of these suggest that CiRM spontaneously stimulates public participation without appropriate strategic direction and ICTs.

Advocacy is another area of CiRM impact through the growth of individual online activism and petitions, which show a significant influence in directing public decision processes globally with increasing capabilities and sophistication. While this form of participation lies beyond the traditional organizational scope of the organization, it is within the extended social CiRM framework described above (Li & Bernoff, 2011). Further, online advocacy is noteworthy for both its rapid growth and its emergence outside the domain of e-participation research (Smith, 2014). The result is that researchers do not have access to the valuable e-participation data that these systems are generating about patterns and reasons of use, users' demographics, typologies of action, success rates, and other factors (Prieto-Martin, 2012).

The last area of CiRM impact noted here is the field of data analytics, which aims to transform large data sets into meaningful information for organizational decision makers. The explosion of transactional and online data effectively launched a new era in data processing (Economist, 2011). Analytics provide the technological infrastructure and tools for accessing vast amounts of data in non-traditional ways in order to gain insights into and make discoveries about the world, people, and organizations. Most CiRM applications include some analysis functions, while extensibility features allow the addition of highly sophisticated analytical functions to CiRM. Analytics integrated into CiRM, or analytical CiRM, can lead to critical citizen insights and intimacy. This allows, for example, the tailoring of service delivery to meet specifically segmented customer demands, thereby increasing citizen satisfaction (Vizard, 2012).

CiRM research, in both solutions-oriented and theoretical frameworks, has revealed numerous impacts of CiRM. However, numerous challenges and issues for CiRM research remain to achieve effective participatory CiRM, as is examined in the next section.

2.4.9 Issues in Participatory CiRM

The issues in participatory CiRM design and implementation leading to increased, effective citizen participation are often stymied by numerous barriers and challenges, which are summarised in the following discussion.

A widely acknowledged barrier is the complexity of municipal governance due to the increasing management burdens within a context of multiple stakeholders and increasingly vocal citizen demands. These complexity factors significantly heighten the difficulty of organizational transformation for the enhancement of citizen value (Reddick, 2011). Further, the growing complexity of municipal services described by Schellong (2007) is attributed to emerging needs such as local impacts of global issues such as climate change, as one example (Bloomberg, Paulson, & Steyer, 2014). Increasingly, these complexities are impacting local governments, which are seen as the most pertinent and adaptable institutions to form networks that are able to address the current and future societal challenges (Katz & Bradley, 2013). While CiRM technology is shown to be adaptable to complexity, the lack of CiRM holistic theoretical frameworks and lack of best practices, particularly for participatory CiRM, places the burden of design and implementation on each individual municipality. Many municipalities may not have the expertise or resources to navigate the many complexities to achieve a unique value definition and strategic focus for successful CiRM.

Other contextual or environmental challenges for participatory CiRM have been highlighted in the literature, including regulatory barriers, political challenges, citizen perceptions, limited strategic planning, and terminology. Regulatory barriers based on legacy processes can inhibit the optimisation of CiRM processes. Political challenges emerge from disagreement on priorities, and a lack of unified strategic vision for CiRM. Many municipalities limit their strategic planning to the regulatory Official Plan or a strategic planning document that bears little or no resemblance to executable or measurable outcomes. This limits a strategic CiRM focus. In other contexts, strategic plans are absent or incomplete, or there exists a gap between strategic rhetoric and the practice of citizen engagement. Strategic focus is further limited by ambiguous terminology or debates. Debating the perspective of citizens as customers can obfuscate the strategic importance of understanding citizen services in terms of enhancing citizen benefits (Shipley, 2003).

Citizen perceptions introduce additional complexity and, while potentially aided by CiRM analytics, they are not homogeneous and are subject to constant change, particularly across a diverse range of issues that can evoke strong emotional response. Further, citizens, unlike customers, face demands from municipalities that may change their perceptions. Citizens are required to transact with

municipalities by paying taxes, for example, and are subject to regulatory requirements such as local ordinances and law enforcement. Citizens therefore have a multi-faceted relationship, which can be accommodated by CiRM, but thus can also influence citizen perceptions, values, and citizen efficacy.

A difficult strategic choice for a participatory CiRM approach is the degree of integration into organisational structure and processes. Taylor (2014) emphasised the importance of an institutional approach to facilitate citizen engagement. Institutions provide an organisational context necessary for resourcing participatory CiRM design and development and ensuring that relationship and participatory factors are centrally planned and designed into the solution (Fountain, 2008). However, King (2007) pointed to citizen-led participatory CiRM as the objective that helps cross organization-controlled participatory barriers.

An organisation's strategic direction will determine the types of benefits to be gained from participatory CiRM. As noted earlier, CiRM is gaining acceptance due to strategic benefits derived from transactional e-government services and process optimisation rather than due to strategic benefits derived from deep public engagement in the participatory vision of CiRM. Scholey's (2008) strategy mapping adapted for the public sector helps identify strategic priorities for LRGs. However, it requires that each LRG grapple with the difficulty of determining the citizen value objective central to their strategy, and therefore to participatory CiRM. Consideration of a public sector competitive environment further complicates the strategic value definition and is seldom addressed in LRG strategy. The typical emphasis on ROI provides an easy selling point for e-government CiRM but this may conflict with public participation goals and democratic governance of participatory CiRM. Finally, strategic issues of customer value and stakeholder definition can take many perspectives in the context of local politics and can often lack clarity.

While CiRM analytics, as the cutting edge of civic innovation, may present the key to citizen relationship building (Martin, 2012), few municipalities currently have the expertise to harness this capability. Analytical tools and practices are becoming more broadly accepted, but create the potential for misuse, and raise questions about citizen security and privacy. As noted above, this can serve to disenfranchise rather than engage citizens (King, 2007).

Participatory CiRM research suffers from unrealistic expectations and a lack of critical perspective, particularly among solutions-oriented approach, and from a general lack of inter-disciplinarity and data access. A technology orientation to e-participation is too often based on a naïve understanding of civic participation leading to questionable research and policy. These conditions are attributed to the continually changing contexts of e-participation research and that open

government data are currently insufficient to support research adequately in civic engagement and citizen-centric policy design (Prieto-Martín, 2012). Additional considerations deterring from effective research is the fundamental deficiency in organizational strategies by Canadian municipal leadership that are needed to create innovative citizen engagement paradigms (Hume, 2016). Another key gap is lack of research at the intersection of policy and technology (Goldsmith, 2016).

Finally, participatory CiRM lacks a holistic model that integrates strategy, process, and technical design. While the solutions-oriented research models allow for public participation, they avoid attempting to normalise any particular forms or levels of public participation and democratic governance. Where the theoretical models advocate for more effective and deeper public participation, they lack the technical and often procedural descriptions necessary for operationalising participatory goals through CiRM. Bridging the gap between solutions-oriented research and theoretical models requires a framework that aligns LRG participatory vision and strategy with organisational processes, and which then guides the operationalization of participatory governance in participatory CiRM. The framework developed in this thesis helps to fill this knowledge void.

2.4.10 CiRM Summary

This section of Chapter 2 has outlined the corporate origins of CiRM, particularly as a collection of strategic approaches, technologies, and organisational processes, along with its scope and misconceptions. Strategic value comprises the core of CiRM, which is the key to understanding relationship management. CiRM technologies may include out-of-the-box software, while the extensibility of CiRM allows for highly customised and integrated configurations according to the strategic scope and relational functions required. However, both the extensibility of CiRM and broad range of strategic configurations render the design of participatory CiRM particularly challenging.

The two main approaches in CiRM research are solutions-orientation and theoretical frameworks. The solutions-oriented research includes e-government, strategic, and market solutions, but typically lack significant participatory functions of CiRM. The numerous CiRM theoretical frameworks attempt, to varying degrees, to prioritise public participation functionality, but typically lack technical definition. The gaps between these two research approaches are evidenced by a failure to integrate citizen-centric strategic value and public participation functionality with functional/technical specifications.

Numerous research issues were identified, including matters of complexity, context, citizen perceptions, strategic perspectives, and analytics. The overriding participatory CiRM research

challenge is to integrate public participation into the strategic core of CiRM and extend its role beyond transactional e-government functions, in order to fulfil the promise of ICT-enabled public participation and engage citizens fully in municipal decision processes and visioning.

2.5 Summary

The outstanding challenge of citizen engagement is to implement ICTs in a way that fulfils the long-standing promises of ICTs to transform participatory governance. Contributing to these challenges are the complex societal and economic environments faced by planners and decision makers, the lack of consensus around definition and evaluation of effective public participation practices and outcomes, and the research gaps discussed in Section 2.1, particularly relating governance arrangements to the competitive environment faced by engaged citizens. Distinguishing government from governance warrants a new perspective on citizen engagement that illuminates the competitive governance environment between diverse agencies, including corporations, CSOs and special interest groups, among which citizens compete for policy influence.

Further, citizens' roles are defined in e-government as customers or evaluators, thereby inhibiting their participation in governance processes. A narrow range of solutions typically offered by non-governmental institutions attempt to address this gap by enabling citizen participation in urban planning and other LRG decisions. These are problematically limited to discrete issues in time and place rather than part of continuous participatory LRG processes. A growing trend is the passive role of citizens as data providers rather than active participants. However, none of these roles fulfils the promise of ICT-enabled citizen engagement. Rather, they reinforce the problems of universalism and concurrency. Among the many outstanding challenges are issues in the low rates of adoption of public participation technologies, societal trends, behaviours, and expectations influenced by social networking, citizen privacy and identity barriers, and issues in e-government design. The increasing rate of ICT development and adoption in society serves to increase the participatory governance gap, emphasising the need not for improved technology, but for alternate design and implementation strategies.

The strategy review in Section 2.3 highlighted the widespread use of strategic planning in urban government. Diverse streams and approaches in strategy allow for strategic sophistication amid the complexity of urban government, but more often the LRG context requires simplified aids for strategic planning and implementation. The examination of strategy in government reveals gaps in competitive visioning, in planning and implementation methods, and evaluating outcomes. A noted

factor in the problem of citizen engagement is the lack of articulated visions for participatory governance in LRG strategy.

The review of CiRM in Section 2.4 highlighted its strategy imperative, particularly in terms of a citizen-centric value definition, and the extensibility, adaptability and relational characteristics of CiRM. Research demonstrates the potential impact by CiRM technologies on LRG through e-government applications, and replacements of legacy systems. CiRM technology impacts are further realized through targeted citizen communications, integrated social networking, and facilitating communications networks among citizens, and analytics that provide the listening capacity in the relational paradigm. However, a significant gap was shown to remain in the provision of holistic, strategic participatory CiRM solutions.

The past decades of research in participatory governance have associated ICT-based solutions with the key to broad-based citizen engagement, but the continued development of ICT capabilities have made technology the “easy part” (Schellong, 2007, p. 1). With an abundant array of technological options and capabilities, LRG adoption of participatory technologies is often stymied by political, managerial, economic and strategic barriers and risks. The research complexities and challenges are exacerbated by a growing gap between the accelerating development and societal adoption of ICT-enabled social networking and the lagging institutional adaptation for LRG participatory governance. This thesis, rather than testing a technological solution, develops a broad-based research approach suited to these contextual complexities.

The research described in the following chapter examines these challenges and gaps through an interdisciplinary perspective across the four areas identified in this chapter. The integration and summary of concepts will specifically be explored as a uniquely strategic perspective to public participation, and will be used as building blocks for the development of conceptual framework for participatory CiRM in Chapter 3. The integration of perspectives and accommodation of complexities begins by articulating a graduated vision of democratic practice through the development of a conceptual model that abandons the common assumptions of democratic universalism and concurrency. Organisational strategic planning and implementation processes then operationalise the framework and integrate ICT-enabled organisational processes, leading to a strategic, ICT-enabled participatory framework. The framework extends across all four of the areas explored in Chapter 2. The research design, comprised of a local interview phase and national survey phase, is described next.

Chapter 3

Researching Citizen Engagement

This chapter describes the research design and methods for the exploration of the interdisciplinary relational framework by examining top LRG decision makers' perspectives across the four areas explored in Chapter 2. These are examined in terms of the public participation problem factors and perceived needs, alignment of strategic and ICT capacities, and the receptivity to a strategic CiRM participatory governance approach. The first section of this chapter reiterates the research purpose and scope and describes the interdisciplinary perspective informing the research and outlines the conceptual model. It also outlines the research approach, methodologies, and design parameters. The second and third sections of this chapter describe the design and methods for the two phases of research, namely, the interviews and national surveys. The fourth section describes the data analysis approaches.

3.1 Research Outline

3.1.1 Purpose

As stated in Chapter 1, the purpose of this dissertation is to explore the potential viability of an interdisciplinary relational framework that accommodates the complexities and competitive aspects of public participation across the four content areas discussed in Chapter 2. The broad goals of this thesis as identified in Section 1.2 are to examine top LRG decision makers' perspectives on issues and approaches related to participatory CiRM in order to develop a renewed perspective and interdisciplinary framework for citizen engagement.

The purpose statement was refined by specific research questions that lead to defining the methodology and analytical approaches.

- 1) Is there readiness for CiRM, specifically in LRGs?
- 2) Do municipalities identify or engage CiRM as a strategic technology?
- 3) How can CiRM in LRGs effectiveness be reported?
- 4) How important is an integrated approach in CiRM planning and adoption for public participation?

- 5) How might CiRM help to facilitate participation in governance processes in the short and long terms?

These questions aim broadly at exploring CiRM as an ICT-enabled public participation approach from the perspectives of municipal decision makers. The next section outlines the general research approach, including scope, epistemology and methods, followed by the research design and methods.

3.1.2 Overview and Scope

This exploratory research focuses on Canadian municipalities, and was conducted in two phases: 1) local interviews and 2) a national survey. The local interviews were conducted within two mid-sized cities and one mid-sized regional government within Waterloo Region in southern Ontario. The second phase consisted of a national online survey of Canadian municipal decision makers. The data analyses will help to assess the validity of the interdisciplinary relational conceptual model as an evaluative and prescriptive implementation approach for a broadening of public participation technology policies in LRG.

The scope for the thesis is prescribed by two overlapping domains, namely, citizen-government relationships in LRG, and also public participation in urban planning. The duality of scope is based upon several rationales that arise from the dynamic interplay between the two domains. First, public participation in urban planning has a history of established practices and regulatory requirements, as examined in Section 2.1.2 above. However, as also noted in Chapter 2, these practices are constrained by the policy priorities and resource allocations that are determined within the broader context of LRG governance policy. Second, the LRG's planning vision and citizen perspectives inform the urban planning function. Therefore, extending the research scope across both domains broadens the understanding of citizen perspectives. Third, the LRG's strategic focus of LRG impacts upon the direction of planning practitioners and therefore also its public participation forms and issues. Similarly, all four areas of the interdisciplinary conceptual model as identified in Chapter 2 extend across the LRG beyond the urban planning function, and are therefore best examined across both domains. These contextual and strategic considerations provide the rationale for extending the scope of this research to include both the urban planning and the broader LRG domains.

The next section builds on the concepts discussed in Chapter 2 to outline the interdisciplinary participatory concept model and, particularly, to describe the linkages between the each of the four areas and their contribution to the research design.

3.1.3 Conceptual Model

This section outlines the approach to the development of the conceptual model, specifically as it differs from mainstream approaches, and outlines both the underlying propositions of the conceptual model as well as the components of the conceptual model. These components are related directly to the four areas of research reviewed in Chapter 2, are interrelated by the propositions.

The perspective of the conceptual model introduced here differs from current mainstream ICT- and general technology-based participatory approaches which centre on the technology. They follow a generic perspective that begins with a focus on technological capabilities. This typically leads to development of an ICT-based public participation solution, which then is offered or imposed on government organizations or citizens. The success of the technology-based participatory efforts rests on achieving the ideal or correct public participation technology solution that the public will use and will lead to desired outcomes. In contrast, the development of this interdisciplinary conceptual model begins with three perspectives identified in Chapter 2 and identifies requirements or key factors from each area that lead to a synthesis of all key factors into an integrated framework. This framework then provides the foundation for a flexible design tool by which governments or citizen organizations may identify the citizen participation priorities and functions best suited to their strategic goals. This can then be used to design a tailored public participation ICT-based solution and matching organizational processes.

The rationale for this approach to the development of the conceptual model rests on three propositions that integrate shared characteristics of citizen engagement and customer relationship management, namely, that citizen participation is:

- 1) best defined as a bi-directional relationship between government and citizens (“relational paradigm”);
- 2) strategic in that such relationships are intended to provide perceived value to citizens within the scope of government entity’s goals as supported by the ICT ecosystem and operationalization of the CiRM principles (“value-based ICT platform”); and,
- 3) process-oriented, whereby the relationship is realized through a range of activities that are integral to the government operational processes with measured results (“organisational processes and outcomes”).

The specific components of the conceptual model derive from these propositions, and also by definition are logical parts of strategic, ICT-based public participation as explored in Chapter 2. The literature reviews of each of the three component areas revealed the key factors and perspectives that are relevant to the propositions. First, the public participation research outlined in Section 2.1

examined decades of theoretical and methodological perspectives based on democratic imperatives in governance and local government, which must continue to undergird and be adapted to public participation design. Second, Section 2.2 showed how ICTs are the variable force impacting social interactions, and which induce the current wave of change for public sector engagement strategies. Third, organizational strategy research of Section 2.3 focused on theory and methods for organizational planning and processes that lead to value for identified stakeholders, and was identified as a necessary component for rationalizing the goals and value of technology initiatives. All three areas contribute to an integrated perspective for ICT-based public participation. Finally, the review of CRM and CiRM literature in Section 2.4 integrated the three research areas, and provides the required organizational and technological capabilities that completes the components of the conceptual model. The designations “relational paradigm,” “value-based ICT platform,” and “organisational outcomes” encapsulate the underlying propositions identified above of the conceptual model for reference throughout the following discussion. The interdisciplinary approach thereby integrates the four research areas outlined in Chapter 2, supported by the underlying propositions, in a singular conceptual model. This model, hereafter referred to as the participatory component model (PCM), is described more fully in the following section, and particularly how the PCM integrates the interdisciplinary concepts of the component areas identified in Chapter 2.

3.1.4 PCM Research Integration

The four components of the PCM, namely public participation, strategy, ICT, and CiRM, help to inform the research design and the subsequent interpretation of results. The uniqueness of the PCM lies in the integration of the components through the identification of explicit linkages. Hence, the research focuses on examining decision makers’ perspectives within each of the four component topics, and also across the component linkages. Figure 3-1 illustrates the conceptual interrelationships between the PCM components, and is followed by an explanation of the PCM integration linkages based on the research issues identified in Chapter 2.

The integration within the PCM is best described by the bi-directional operational linkages between the three core components, and the internal conceptual linkages with CiRM as illustrated in Figure 3-1. The three core components, namely, public participation, strategy, and ICTs, appear at the vertices of the PCM illustration. Each of the components in the figure represents a semi-autonomous, inter-related area of concepts and issues described in Chapter 2.

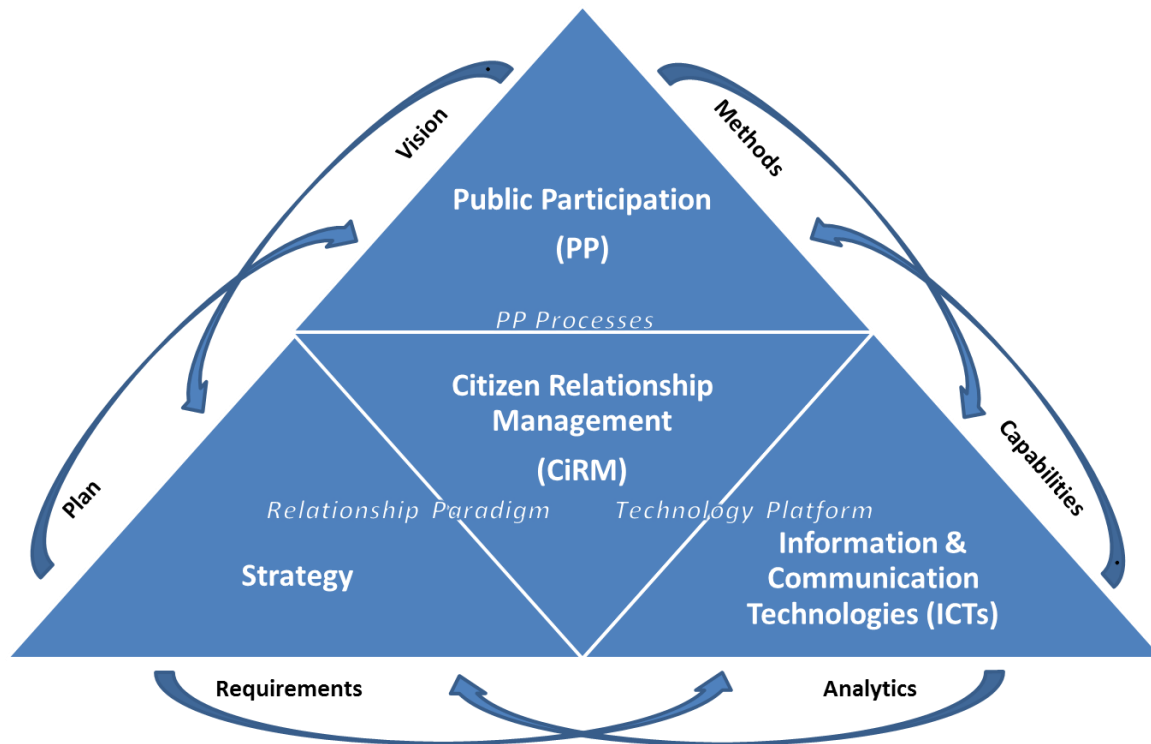


Figure 3-1: Participatory Component Model (PCM)

The operational linkages build on the research issues described in Chapter 2 and are illustrated around the external sides of Figure 3-1. For example, the public participation vision informs the LRG strategy, while the strategic plan clarifies the environmental and temporal constraints, as described in Subsection 2.3.1, for the public participation vision. Similarly, the domain of public participation methods and practices help to inform the functional capabilities of the ICTs, while the ICT capabilities inform and constrain the participatory governance capacities. Finally, the strategic requirements provide implementation scope and functional requirements to the ICT domain, while the ICT reporting and analytics capabilities provide feedback to the strategic domain.

The three internal integrations illustrated in Figure 3-1 represent the conceptual attributes described in Chapter 2 that interface between each of the three core components and CiRM. First, the public participation processes interface the public participation and CiRM domains to represent the participatory governance capacities described in Subsection 2.1.4. The relationship paradigm aligns the CiRM functional design with LRG strategy imperatives as described in Section 2.4.1 and Section 2.4.7. Finally, the technology platform simply refers to the integration of ICT ecosystem and

operationalization of the CiRM principles as they support the strategic approach to citizen value as described in Section 2.4.2.

The PCM research design is defined by several distinguishing characteristics. First, the integration between the components, as illustrated in Figure 3-1, represents dynamic relationships between all components. Due to the linkages between components, changes in priorities, methods and systems in one component impact the other components. Second, the participatory nature of the CiRM approach, namely participatory CiRM, results as a function of the breadth and depth of the public participation vision and its implementation throughout the strategy and ICT components. Thus, the selection of methods and degree of formality among the issues listed among the components are designed to shape a participatory CiRM approach distinctly suited to each LRG. This dynamic leads to the third characteristic which describes the operationalisation of the participatory CiRM, which is envisioned as a cycle of steps. The cycle starts with the setting of a vision for participatory governance, followed by the planning of a relational strategy and also the execution of technological and management processes. A continual feedback process between the components is envisioned to help tune the system to refine the vision, processes and outcomes.

The final characteristic of the PCM is as an evaluative or prescriptive tool developed from either a normative or descriptive perspective. A normative approach establishes ideals or norms for each component area, against which outcomes are measured and evaluated. Alternatively, a descriptive or comparative use of the model represents a situational or relativistic perspective, whereby issues in each component are defined by distinctive categorisations that are descriptive or evaluative via measurement scales. The research approach follows the latter application, seeking to describe and compare key categories of goals and issues identified by municipal decision makers in each component area to examine each area's key contribution to realizing participatory CiRM.

The descriptive use of the PCM represents a new, holistic approach to ICT-enabled public participation issues that informs the research process. While the component areas are not new to municipalities, the PCM's unique focus is on decoupling participatory governance issues into four integral perspectives, and also on identifying the linkages between each area to understand better the organizational and operational dynamics in participatory processes. This unique focus integrates the governance success factors and thereby potentially addresses some of the democratic deficiencies and power imbalances inherent in today's complex participatory environments. The model provides a socio-structural perspective of democratic governance that operationalizes the defined democratic vision, binding them to the application of appropriate participatory methods and tools, which are

attributes of public participation effectiveness as described in Section 2.1. The model inherently weaves participatory vision and policy into organisational processes and systems. By identifying interdependencies, the framework potentially guides municipal understanding, visioning and implementation leading to creative and innovative citizen engagement paradigms. These are based on organisational processes that enhance institutional definition in the participatory environment. As posited by governance theory, the municipality assumes leadership to enable methods and processes that simultaneously listen and respond to citizens, building on citizen feedback and opinions to improve quality services, enhance the built environment, and strengthen democracy.

As described in Chapter 2, LRGs operate in all four areas of the PCM components. For example, they outline public participation priorities, typically engage in strategic planning, invest in ICTs, and utilise CiRM technology. The PCM informs the research approach and helps to unbundle the complexity of the component areas for the research design. For example, the decoupling of interview and survey questions about technological solutions from the issues of public participation vision and approach is intended to focus respondents on each separate area in order to explore gaps and dissonances in their perspectives. Such a decoupling also segregates the research about public participation perspectives away from discussions solely about the latest technological trends and toward values-based, citizen-centric considerations. Decoupling strategy research issues from the other components, similarly, is intended to focus on vision formation and on established organisational mechanisms that operationalise decision makers' values into systems and processes.

Hence, the decoupling of the four interdisciplinary perspectives is intended to guide participants through the discovery of insights in each respective area independently of research issues in the other areas and lead ultimately to an examination of the linkages between areas.

3.1.5 Research Approach

Clarification of the research paradigm and epistemology helps to guide the research methodology and lends validity to the research (Miller & Fredericks, 1994). The exploratory research design aligns with a critical realist ontology that endorses empirical or structured exploration of perceptual constructs in order to advance an understanding of reality and underlying mechanisms (Bhaskar, 2010). While not incompatible with objectivity, this paradigm acknowledges the role of subjective human perceptions as a gateway to understanding reality in its complexity and depth within the research context.

Within this ontology, a post-positivist epistemology allows for confirmation or disproving of propositions through a range of both inductive and deductive methodologies, while acknowledging the fallibility of any results (Ritchie, Lewis, McNaughton Nicholls, & Ormston, 2014). A post-positivist approach to research focuses on identifying patterns and mechanisms in the social world and testing causal relationships through established strategies.

This research relies on a blend of established strategies, namely a mix of qualitative and quantitative research methods. The first phase of the research, namely the interviews, applies a grounded theoretical approach to the analysis to uncover major themes and categories representing decision makers' perspectives on the issues raised in Chapter 2. The online surveys represent a more traditional quantitative compilation for an aggregate view of the perspectives representative of many municipalities.

The grounded theoretical approach to analysis of data leads to the development or advancement of a posited theory throughout a family of methods. It is broadly distinguished by an iterative process through three steps, namely, theoretical sampling, comparison of data to theoretical categories, and finally "the development of theory via theoretical saturation of categories rather than substantive verifiable findings" (Bryant & Charmaz, 2007, p. 13). The iterations and details of methods used are described more fully below, following the next section that discusses the mix of qualitative and quantitative research methodologies applied to this research.

3.1.6 Research Methodologies

A common differentiator in research is between qualitative and quantitative approaches. The latter is commonly assumed to be more objective and generalizable, while qualitative research is validated by underlying paradigms and epistemology that align interpretive methods with the purpose of research (van der Riet, 2008). The selection of research methods is an integral part of the research design, and draws on several considerations.

A requirement in designing a combination of research methods is to ensure suitability for the research goals within the post-positivist epistemology. Mixed-methods approaches refer to a combination of both qualitative and quantitative data collection and analysis, which are recognized for several advantages deemed relevant to this research (Greene, Caracelli, & Graham, 1989; Jick, 1979; Mertens, 2003; Tashakkori & Teddlie, 1998). These include:

- 1) Expansion: widening the research scope to better understand the research problem;
- 2) Creativity: new perspectives for subsequent methods, or for future research;

- 3) Nesting: tiered sequencing for additional insight from different levels or units of analysis;
- 4) Transformation: sequence of methods leading to advocacy for marginalized groups; and
- 5) Triangulation: data validation and convergence across various methods.

Mixed-methods assist in delving through complexity and research participants' socially-constructed meanings to facilitate a careful listening process.

Another consideration in selecting research methods is formulating the specific configuration of mixed-methods. Drawing on Creswell (2003), six main mixed method strategies are distinguished by the concurrent and sequential blending of qualitative and quantitative methods. The two phases of this research, namely interviews followed by surveys, match a sequential exploratory strategy and add a nested strategy. The intent is to prioritize the qualitative interviews, and use the quantitative survey results to validate further or explain the results of the interviews. The results from the qualitative phase helped to design the survey by highlighting the most relevant questions for inclusion. Figure 3-2 employs Creswell's nomenclature to illustrate the composite mixed method strategies (prioritized data in CAPS).

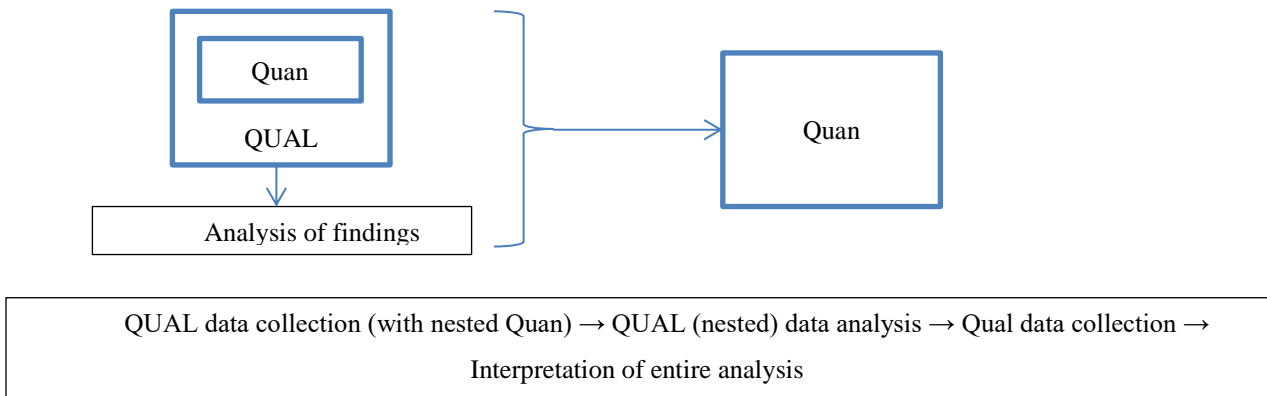


Figure 3-2: Mixed-methods Research Configuration

Another consideration in the methods selected for this research is the capacity for the iterative advancement of theory in the analysis of research participants' responses. Warren (2002) affirmed that participants are viewed as meaning-makers rather than passive conduits of information. The inductive approach, discussed by Creswell (2003) supports these requirements by constant comparison of data with emerging categories, and by sampling different groups to maximize the similarities and differences of information. Five specific steps are employed, namely, gather research data, record field notes, analyse data into themes or categories, look for broad patterns or theoretical generalisations, and draw comparisons to past experiences or literature.

A final consideration in the selection of research methods is to ensure validity of the research findings. The mixed-methods research configuration (see Figure 3-2) helps ensure accuracy of findings by employing quantitative-assisted interpretation (methodological triangulation), and the comparison of results between cases or municipalities (cross case triangulation), and between research phases (cross phase triangulation) (Creswell, 2003).

In summary, rationalising the selection of research methods by identifying the research paradigm and epistemology leads to a mixed-methods approach that matches the research purpose in several ways. First, the grounded theoretical approach to data analysis and multiple data gathering methods are compatible with the post-positivist epistemology employing qualitative interview methods. Second, the inductive logic process methodizes the exploration approach, while also positioning the mixed-methods strategies as integral to the construction and advancement of theory as the end point. The specific research design flows from the research approach, and is discussed in the next section.

3.1.7 Research Design

As noted above, the research design builds on the research approaches and mixed-methods configuration identified above. It includes five specific research components to achieve the purpose of examining decision makers' perspectives across the four PCM areas, namely:

- 1) Semi-structured, key informant interviews with twenty-two politicians and top administrators among the three local municipalities;
- 2) Grouping and observational analysis of interview results, with quantitative analysis;
- 3) Online surveys of over 100 Canadian municipal top administrators and politicians;
- 4) Statistical and qualitative analysis of survey results; and
- 5) Compilation of the results of the two phases.

Figure 3-3 encapsulates the entire research design as described in the sections above. In summary, this confirms the four theoretical perspective domains of the PCM as integrated in Subsection 3.1.4, which lead to a re-envisioning of the gaps in citizen engagement identified in Chapter 2, and an outline of the qualitative research epistemology and approaches. The post-positivist epistemology leads to the sequential, nested, exploratory mixed-methods strategy comprised of two phases of investigation, supported by a grounded theoretical approach to data analysis as described in Subsection 3.1.5. This blend of multiple research methods across the two phases help ensure validity and reliability in support of the research goals.

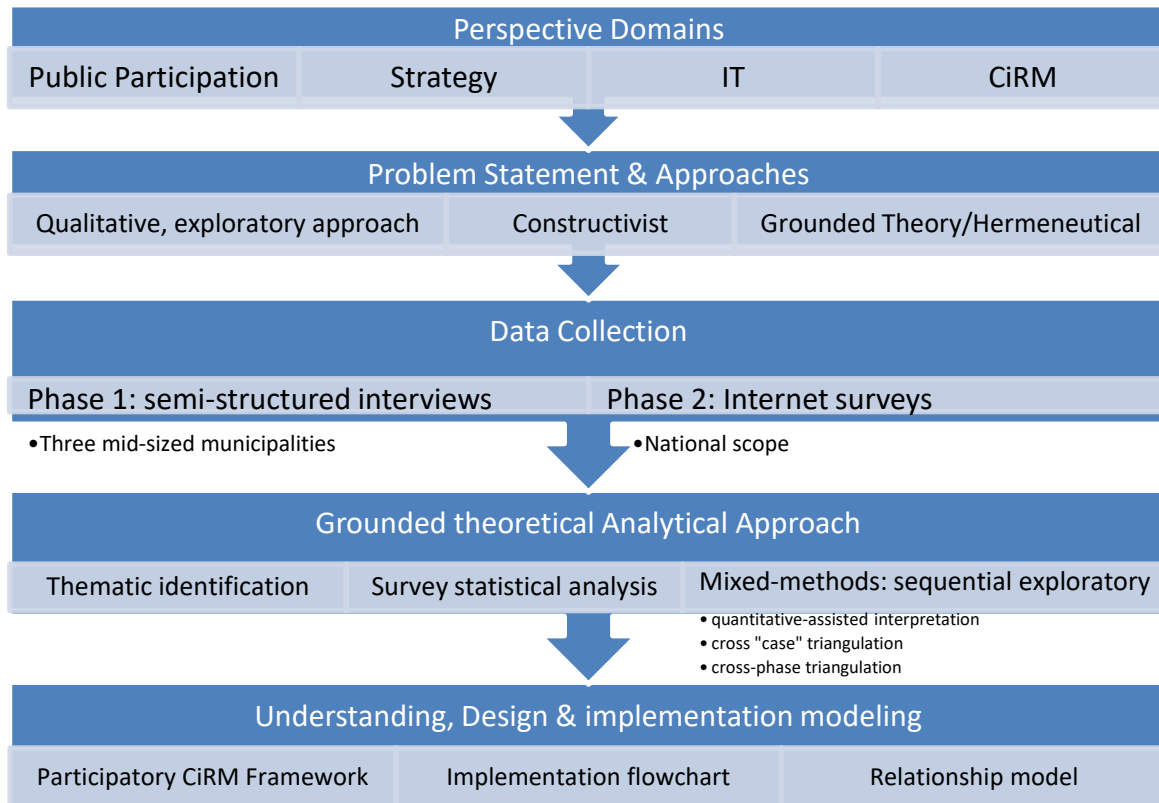


Figure 3-3: Research Design

The next section reviews the research methods used for the first phase of the research.

3.2 Phase 1: Interview Methods

This section describes the design and methods of the Phase 1 Interviews stage of this research and builds on the general research approaches and design outlined above. This first phase of the research comprises a series of interviews of senior municipal staff, mayors and councillors operating at the nodes of decision processes as key informants. The research purpose, as identified above, is to explore top decision makers' visions and their perspectives on organizational factors that impact the engagement of citizens in decision processes, and particularly the use of technology and CiRM in those decision processes. Guided by a questionnaire, the interviews sought to determine decision makers' perspectives from the four disciplinary dimensions or domains of the PCM in order to determine how CiRM might serve as a tool to aid citizen engagement and provide insight to solving the problem of citizen engagement. The following subsections describe the design approach and details of the questionnaire, interview administration, data collection, and analysis.

3.2.1 Interview Design

Interview research is included among the original qualitative research methods, along with participant observations and document research (Bogdan & Taylor, 1975). More creative qualitative research methods include rap (group discussions), posing (embedding in workplace), between the lines (review of texts, or policy docs), and montage (pictures & commentary).

Gubrium and Holstein (2002) distinguished between several forms of interviewing including survey, qualitative, in-depth, and focus groups. Qualitative interviewing is suited for establishing common patterns or themes among a group of respondents (Warren, 2002). It is particularly applicable to this research, which seeks a deep understanding of participants' knowledge about organizational processes by carefully hear the meaning of what participants are saying, as described by Rubin (2012). Interview research is particularly useful for revealing multiple, alternative, or uncommon perspectives, as well as revealing commonly held assumptions or biases (Johnson, 2002).

The nesting of qualitative and quantitative data was achieved by utilizing a semi-structured format that combined numerical and multiple choice questions with open-response comments. This approach builds on Schellong's (2008) CiRM research, which highlighted the need for both further exploratory research, and also a more structured approach in key areas to determine significant relationships among CiRM strategic design factors. Creswell (2003) recommended prioritising either qualitative or quantitative methods, and in this case priority is given to qualitative methods.

The nesting in this research of quantitative data enables testing for correlation or prediction among the themes that emerge from the qualitative data. The quantitative, structured data collected from each individual served as phenomenological reflections of their personal knowledge and perspective on the organizational activities and importance of existing technologies, as well as comparative data regarding respondents' visions and attitudes toward future strategy and technologies related to public participation. While the quantitative data provided very little basis for understanding the reason for a response, the goal was to match quantitative ratings to qualitative questions in order to gain a deeper understanding of reasons for the rating. Further, quantitative reasoning helps stimulate conversations about the basis for and meaning of a question in the interview. The matching of qualitative to quantitative questions provides the mechanism to capture the open discussion responses.

The qualitative, open-response questions were space-constrained to suggest a limit to the response provided by the interviewee in order to obtain a concise and intuitively immediate response, and to help limit the interview time. However, as suggested by in-depth interviews, respondents were

given freedom to digress into a productive discussion and expand on any question or topic, and further explore key information. The interviewer was also able to ask follow up questions on any response, while being assertive in keeping the interview on course (Johnson, 2002).

This combination of qualitative and quantitative data provided direction for the second phase of research, namely the online national surveys.

3.2.2 Questionnaire

The questionnaire formed the basis for the structured interviews of key informants following the guidelines for in-depth interviews (Johnson, 2002; Warren, 2002). The questionnaire provided relative uniformity between interviews while allowing for conversational interaction (Warren 2002). The questionnaire helped lead a relatively uniform flow of discussion among participants while providing ample opportunity for participant feedback both about the question topic as well as the validity of any question. The questionnaire included five sections, beginning with participants' personal and demographic information. The remaining four sections represented the four areas of the PCM, namely public participation, strategy, ICT, and CRM/CiRM. Single letter section codes, namely P, S, I, and C respectively, along with the question number were used to simplify question identification within each section. For example, P01 denotes the first question in the participation section whereas C03 denotes the third CiRM question. Multi-part questions add a letter identifier, for example S05a. Each questionnaire section was marked with the respective heading, and included an introductory section explaining the purpose and scope of the questions, some instructions, and terminology pertinent to the section.

The questions in each topic were designed to focus on decision-makers' perspectives that form the basis and context for their decisions. For example, the interview sought decision makers' perceptions of and attitudes toward CiRM functionality juxtaposed against their stated views on citizen engagement. The structured interview questions were designed to focus on individual perceptions regarding existing plans and technologies used, while the more exploratory questions sought information about attitudes, vision and future direction regarding municipal strategic planning, public participation and related technologies.

The thematic focus of the questions aimed at identifying key factors and barriers in each of the four sections that potentially influence decisions about CiRM use. The thematic approach to the questions draws on the understandings provided in Chapter 2, namely the concepts, models and practices, as well as the gaps. A general flow of questions within each section was as follows:

- 1) General familiarity with current methods or practices of the topic area;
- 2) Relevance and application of the methods to the specific LRG context;
- 3) Vision and rationale for growth or change;
- 4) Problems or barriers in current practice and in achieving the vision; and
- 5) Outcome levels, measures, and reporting.

The questions also attempted to focus participants' responses on specific examples or instances of reports, methods, or other municipal artifacts relevant to decision processes. Participants were asked to identify, reflect on and compare priorities and identify gaps between goals and outcomes. The comparative process was partly explicit through direct questions, and partly a discovery by the participant based on the flow and sequencing of questions. These discoveries were captured in the comments sections of the questionnaire. The design parameters identified above and these thematic approaches were applied to the formulation of questions in each of the four sections, as described in the following subsections.

The purpose of the personal information questions at the start of the interview was to gather basic contact information, position in the organization, demographic data and information about technology knowledge and use, industry experience, education, citizen interactions, and organizational reporting. These data were used to explore relationships to other key themes or factors in the other sections of the questionnaire.

The purpose of the public participation section in the questionnaire was to examine the participants' perspectives on the forms and effectiveness of their municipality's participatory activities, including related goals, measures and technologies, and desired changes. Familiarity with participatory goals and activities was assumed given their democratic importance and related regulatory requirements as noted in Section 2.1.2.

Twenty-seven questions were posed about levels and forms of engaging citizens in a range of municipal processes, as outlined in Chapter 2, including strategic planning, urban and development planning, and 311 and emergency services. Appendices 8.3 lists a summary of the questions, and Appendix 8.4 provides the full interview questionnaire. Questions also focused on municipal participatory processes in order to identify implementation strategies, such as a public participation policy manual, plans, reports, and officer position, reflecting the municipality's level of structural and processual commitment to participation. Participants were then asked to reflect on their organization's participatory goals and implementation, including the links and importance of participation as reflected in the strategic plan, actual participation activities, and the respondent's participatory

philosophy and goals. A question about how the municipality listens to citizens was intended to reflect participants' views regarding relational strategies. Public participation reporting and barriers were questioned to evaluate citizen feedback processes. Participants were asked to evaluate their municipality's support of participation and identify any supporting IT systems across several participation types across the depth of influence continuum (see Chapter 2).

- a) Organizational definition: formality of structure and processes, integration (linking & flow of objectives & processes between departments) particularly with respect to implementation and measurement of goals (for example: "central objectives -> departmental objectives -> implementation processes -> outcomes -> measures")
- b) Evaluating outcomes: Effectiveness, measurement, reporting; internally vs. externally directed; report "consumers"
- c) Citizens as customers: customer-centricity; service optimization; service quality; "service" or value comprehensiveness; customer satisfaction
- d) Value: definition, link to community assets, value accrual (internal, external), value measurement/assessment
- e) Power: locus of control – central control, "expert" based vs. distributed (throughout the organization) or citizen-based; distributed
- f) Depth of influence of public participation – e-Gov (transactions), information (reports, requests), limited participation in local (discrete) planning initiatives (providing inputs), participation in local and area planning & development initiatives (decision-making), municipal-wide planning, visioning, and leadership.
- g) Breadth or extent of citizens included in public participation activity – inclusiveness
- h) "Form" of public participation: planning (inputs), management (execution), measurement & reporting (outputs)
- i) public participation Organizational target (operational/process focus) – which decision processes do citizens' engagements influence – continuum from vision, idea, planning, implementation/execution, reporting, assessment/evaluation.(!comment)

The strategy section of the questionnaire sought participants' perspectives on strategic planning activities, management, and reporting in their municipality. The thirty-three questions examined related importance and effectiveness of the overall strategic planning process, strategic goals, measures, technologies, and citizen participation in strategic processes. Participants were questioned about different strategic planning approaches, familiarity with their LRG's vision statement, and methodologies. Questions about their urban planning processes were included in this section, given the intrinsic link between strategic and urban planning as noted in Chapter 2. Participants were asked to identify and list details, frequency, and priorities of their LRG's strategic planning activities as assessments of both knowledge of and perceived value of these activities. Effectiveness of strategic planning activities in terms of internal (organization) or external (citizens) value were asked, as well as its level of formality, comparative effectiveness to other municipalities, and organic-mechanistic approach.

The strategy section also included detailed questions about municipal reporting, including participants' knowledge of reports, reporting objectives, and citizen participation. Strategic reporting objectives included, for example, progress toward achieving strategic goals, strategic implementation process measures, and measurable strategic outcomes. Citizen participation reporting factors considered citizens as both report consumers as well as data sources for citizen satisfaction, effectiveness of reports in determining operational efficiency and effectiveness, and customer service measures.

The twenty-six ICT questions sought participants' perspectives on their municipality's information technology activities and priorities, including goals, measures, and technologies used. Participants were questioned about their general perceptions of ICT, including familiarity, strategic importance, comparison to other municipalities, ICT planning approach according to an "internal to customer" continuum, and ICT spending against priorities. Participants were then asked about their perceptions of each of the specific software systems used, specifically their strategic importance, quality, benefits, and accessibility. Questions were asked about their municipality's ICT capacity to adapt to technological advances, to implement new technologies, and to evaluate their success, particularly in terms of customer satisfaction of ICT systems. Finally, participants were asked about ICT goals for the future, barriers to achieving the goals, vision for ICT-driven public participation and technologies required, and also about general public, mobile access to municipal information.

The purpose of the CiRM questions was to reveal participants' perspectives on CiRM participatory value, and their knowledge of activities, goals, and measures related to CiRM in their municipalities. The twenty-seven questions examined decision makers' experiences with and value perceptions of CRM/CiRM in both the private and public sector. The priority of CiRM was examined, followed by questions about actual CiRM initiatives in the organization, and their goals, impact and barriers. The progress of CiRM initiatives was examined in terms of organizational and personal support actions, and perceptions of effectiveness of such actions. The usefulness of CiRM was questioned in terms specific municipal services areas and various forms of citizen engagement, and also in terms of CiRM analytical capabilities to reveal citizen needs and preferences. Finally, questions were asked about citizen relationship measures and about emerging social networking technologies.

Providing participants with definitions of key terminology such as CRM, CiRM, and e-government helped to maintain uniformity in the interviews. The definitions also helped to contextualize the discussion within the framework of citizen experience and value. However,

definitions of citizen experience or value were intentionally omitted, which allowed participants to reflect on their own conceptions and assumptions of citizen experience and value in their answers.

The questionnaires concluded with open questions about any other public participation technologies used, in which municipal service areas more public participation was desired, how this could be achieved, and any other comments. The following section outlines the interview methodology used to administer the questionnaires.

3.2.3 Interview Methodology

The questionnaires were conducted through onsite interviews of senior staff and councillors of three municipalities in the Region of Waterloo, Ontario, and follows the research design outlined in Section 3.1. This section details the protocols implemented in the participant selection and recruitment process, the parameters surrounding the number of participants, and the final feedback and communications processes concluding each interview. The interviews were conducted throughout February and March, 2009.

Participants in this phase of research were selected from among councillors and senior staff of the Region of Waterloo, the City of Waterloo, and the City of Kitchener, which are overlapping and adjacent municipalities, respectively, located in southern Ontario, Canada. With a growing population of about ½ million, the region is home to three universities and colleges, and represents a unique blend of agricultural, commercial, and high technology industries. Located within a convenient geographical reach, these three municipalities were deemed to of appropriate size for the research, small enough to be easily accessible, while of sufficiently scaled organizational structures with mature planning and decision-making processes.

The research targeted persons responsible for decision making and related to citizen engagement processes in the organization. Councillors and staff each represent different key perspectives in Kaplan's (2008) Government Strategy Model. The executive positions, including Mayors and councillors, represent the mission/customer perspective dealing with the municipality's social impact on citizens/constituents. The administrative positions, namely chief administrative officers (CAOs), clerks and senior staff, represent the support/operational perspective dealing with attraction, allocation and efficient and effective use of resources.

Finally, the examination of decision makers' attitudes toward CiRM sought differences and similarities for further exploration of readiness factors and barriers to strategic alignment and adoption of CiRM for public participation. Thus, the participant selection criteria were based on

degree of responsibility and/or organizational interest related to decision processes and citizen engagement. Any councillor was held to satisfy the criteria. No gender or age-specific parameters were used in participant selection.

The recruitment process consisted of first obtaining from the key contacts the willing participation of the three target municipalities. Participant invitations were initially sent to each of the two city Mayors and the regional Chair, who were the key contacts for the recruitment process, followed by invitations to councillors, chief administrative officers (CAOs), commissioners, directors, and senior managers.

Recruitment occurred primarily via email communication implementing the recruitment letters and process submitted to and approved by the University of Waterloo's Office of Research Ethics (see Appendix 8.5). Additional follow up, where required, occurred via email and telephone based on the preferences of the individual participants.

The recruitment process included the use of Microsoft CRM Dynamics software to track all emails, telephone calls, and responses. Recruitment letters were entered as email templates and merged with contact names to personalize communications. Short summaries of any telephone conversations were recorded to ensure the flow of relationship development with individual participants was constant. In addition, a staged CRM workflow process was utilized that provided a quick overview of the participant numbers for each municipality, their progress in the recruitment cycle and in the overall study process. These methods ensured a uniformity in the recruitment process, enabled timely communications, tracked participant appointments, and provided a complete tracking history for any necessary follow up. The use of the CRM software in the recruitment process added efficiencies and accuracy, which this researcher believed helped to instill confidence and a sense of reliability among subjects, and helped achieve positive responses to the research and high participation rates.

Positive responses to the recruitment letters were followed by scheduling of individual interviews, initiated by email directly with the participant or indirectly with their administrative assistant. The indirect scheduling required significantly more communications time and effort compared to direct contact. It was also suspected that the lack of initial direct contact could reduce the interpersonal connection and sense of familiarity in the interview, but no noticeable negative effect was observed.

The recruitment process was also designed to maintain a high level of respect and gratitude, infused with a sense of the importance of the study. Communications were friendly but concise, with

optional additional information to answer anticipated questions, while respectful of participants' time. The recruitment process culminated in 22 participants.

From among the 26 invitations, a total of 22 interviews were conducted, including all three key contacts, namely the two city Mayors and the regional Chair. Additionally all three CAOs, nine councillors, and seven senior staff were successful recruited. This satisfies the recommended target of a minimum of 15 to 20 participants for mixed-methods interview research (Warren, 2002). These participants represented a near-optimal balance between the executive and administrative perspectives, and were roughly evenly distributed from among the three municipalities as shown in Table 3-1.

Municipality	# Exec	# Admin	Totals
Region of Waterloo	4	4	8
City of Kitchener	4	3	7
City of Waterloo	4	3	7
Totals	12	10	22

Table 3-1: Interview Participants

The completion of all the interviews culminated in an email notification to each municipality's key contact expressing thanks for their municipality's participation. Subsequently, upon completion of the mentioned report, a final letter accompanied the report to the key individual. All participants were offered a summary of the interview report with answers aggregated and screened to ensure anonymity.

3.2.4 Interviewing and Data Collection

The administration of the questionnaire during the interviews, including the data recording, followed the protocols recommended qualitative methods that give adequate consideration not only to the research objectives, but also to the participant expectations and social context (Denzin & Lincoln, 2005). The target duration for the interviews was approximately two hours, which compares favourably with other strategy- or information technology-related interviews (Schellong, 2008).

The interview protocol centred on the questionnaire, but was conducted through a guided conversation approach which emphasized a personal and professional tone within a social relational context, thereby allowing for varied perspectives and moderating the traditional expert interviewing the subject (Warren, 2002). Further, the interview was designed to establish rapport and commonality in lived experience, and reduce tension and formality consistent with in-depth interviewing (Johnson,

2002) and post-modern interview trends (Fontana, 2002). The interviews were conducted one-on-one in a comfortable office setting, typically the participant's municipal office. All interviews were personally conducted by this researcher, who established rapport by sharing a brief personal background, including his experience as a former CAO and business consultant. The tone established early in the interview was purposeful but friendly and relaxed.

The interviews all commenced uniformly, with an introduction of the research, explanation of context, purpose and objective, interview process and instructions, and the interviewee thanked in advance for their willingness to participate. Participants were asked to reflect their current experience, perceptions and opinions in the answers to the questionnaire, to not be concerned about right or wrong answers, and to separate their own hypotheses or acquired facts dissociated from their experience. The interviews proceeded sequentially through the series of questions.

The data recording protocol follows the recommendation for interviews, for both conducting the interview and for data recording (Creswell, 2003). Each questionnaire was uniquely coded and omitted personal identifying information to promote evoke anonymity. Interview times were carefully recorded, for time management of the interviews, as possible relevant data in the analysis stage, and to communicate to participants respect for the value of their time.

Subjects were provided with a copy of the questionnaire for reference, but were not required to record their own answers. Responses to the interview questions were recorded by the interviewer directly onto the questionnaire sheets in point-form notation. Special coding or shorthand was not used, since the types or categories of answers were not anticipated. Outstanding points or very strong sentiments expressed by the participants were marked with an asterisk. Most answers were followed by perception checking and verification of meaning to eliminate possible ambiguity. Lengthy, abstract or somewhat ambiguous answers were summarized and restated back to the participant, sometimes accompanied by a request for specific examples, to verify correct interpretation and ensure answers reflected the participant's lived experience. In some instances, for example the relating of a story or mutual discussion between participant and interviewer, note-taking was suspended in order to build the depth of conversation. Salient points were then recorded following these discussion moments.

This interview recording protocol was designed to achieve a purposeful yet informal social context that stimulated the confident and heartfelt sharing of participants' perspectives and ideas.

Two additional data recording steps followed the interview. First, a careful review of the interview results was conducted for accuracy and completeness immediately following each

interview. Each answer was reviewed to ensure it was complete, legible, intelligible, and unambiguous. This review was completed with the interview results still fresh in the interviewer's memory. Each completed questionnaire was also reviewed for completed time entries, and that every page had the interviewee's identification code in case any pages were misplaced.

Second, a record of initial impressions and a general summary of the interview were recorded by the interviewer a short while after the interview. This reflection served to reinforce the data and, throughout the schedule of interviews, build a growing awareness of the accumulation of interview knowledge and concepts. This progression permitted later interviews to add specific probes and verification of learnings from earlier interviews (Johnson, 2002). The notes were documented in the researcher's CRM system, and the CRM interview tracking advanced to the next stage.

The collation of interview data followed the general methodology outlined in the research proposal which followed recommended practices to ensure security of the data, protection of identities, orderly and efficient tracking of processes, and ease of access of results (Creswell, 2003).

To ensure anonymity the personal data sections were coded and separated and securely filed apart from the main questionnaire, ensuring only the anonymized demographic data were available for subsequent analyses. Each participant's main questionnaire responses were entered into one row in the questionnaire data collation spreadsheet, with each detailed answer option as a column. Each column was titled with the question code (e.g. "C01"), with a letter appended (e.g. "S05a") for multi-part answers such as matrix questions. Notable comments were highlighted in green or red font as explained further in the analysis section below. Any participants' comments about numerical answers were entered as a comment against the numerical cell.

In summary, the interview phase of the research was the first in a sequential, nested, exploratory mixed-methods strategy. The questionnaire follows the grounded theory and hermeneutical research strategies by facilitating an in-depth listening process to build a growing understanding of participants' perceptions across each of the PCM areas. The selection and recruitment of participants, as well as the interview and data recording protocols, followed a detailed, managed process across 22 interviews. The second phase, namely the national online survey research, is described next.

3.3 Phase 2: Survey Methods

The second phase of this research, namely the national online survey, follows the purpose and general design identified in Section 3.1. Survey methods are typically associated with quantitative (statistical) sampling research. Since the seminal social survey research work of Lenski (1961),

survey research grew rapidly due to social research trends, academia, and particularly government census surveys and wartime opinion polling, and continues as among the most important basic research methods in the social sciences (Marsden & Wright, 2010). While Chapter 5 discusses the survey analysis and results of the second phase of this research, the following sections describe the survey research design and methodologies.

3.3.1 Survey Design

The design method for the national online survey followed a more quantitative and statistical analytical approach than the qualitative research given in Section 3.2. The survey was based on the interview questionnaire design across the same five sections, but abbreviated, filtered and adapted for Internet-based research.

Adaptations of the questionnaire for Internet-based research followed Piazza's (2010) sampling fundamentals, ensuring that questions were clear and unambiguous and suited to the online survey functions that were provided. This necessitated, for example, the deletion of the complex matrix questions from the questionnaire.

Additionally, specific structural adaptations for the Internet-based survey platform were made. The survey platform Website SurveyMonkey.com was both affordable and provided the basic required survey functions, with minimal adaptation of the questions for the Website's question types. The Website also offered survey automation functions, such as branching, that allowed for conditional follow-up question engagement and controlled dropout points as an alternative to uncontrolled dropouts (Birnbaum, 2004).

The survey question design included modifications of the questionnaire by allowing for less textual input compared to the interview format, including no long answer questions, and fewer short answer questions. The wording of some questions was adapted to the online format, guided by respondent feedback garnered from the interviews. Some of the Likert-type scale questions were simplified for Web-based survey administration, while the short answer questions that expanded on the Likert-type questions were retained or modified to provide greater focus on a specific factors (Friedman & Amoo, 1999; Miller & Salkind, 2002).

The survey design also gave attention to the quality of research design and possible biases (internal validity) and the generalizability to other municipalities (external validity). Miller and Salkind (2002) noted that achieving very high internal validity limits generalizability. Attempts to mitigate factors that would jeopardise validity included addressing the key extraneous variables, such

as experimental mortality, including dropouts (attrition). Dropouts were managed by the use of the branching survey feature as described above. Construct validity of the survey was aided by parallelism between the two phases of research, as well as inclusion and comparison of similar questions to be highlighted in the subsequent analysis. The survey maintained a structured approach to data gathering and analysis, which aimed at minimising methodological bias, improving reliability, and thereby enhancing any possible generalizability (Miller & Salkind, 2002).

The survey design included consideration of control of conditions and stimuli, biases, and measurement for Internet-based research (Birnbaum, 2004). First, experimenter bias was reduced by elimination of research assistants whose actions potentially bias the results. Instead, the Internet survey platform provided a uniform administration experience for all survey participants. Second, the risk of methodological bias, which is a tendency of Internet-based research to be biased in favour of participants most comfortable with online technologies, was minimized by the sampling methods described in the next subsection. The risk of methodological bias was further reduced by seeking subjects who demonstrated a familiarity with online technologies in alignment with the ICT focus of this research.

The risk of multiple submissions from individuals is increased by Internet-based survey platforms, but was mitigated by a search for duplicate Internet Protocol (IP) addresses. Further, while participants submitting surveys from the same organisation may exhibit duplicate IP addresses, further comparison of demographic and personal data was useful to identify duplicate submissions. Finally, because the Internet did not allow for restricting survey participation based on location or individual identification, targeted sampling and recruitment methods of participants was adapted accordingly as described in the next section.

3.3.2 Sampling and Recruitment

This survey utilised a purposive sampling method (Miller & Salkind, 2002), combined with a quota sampling approach to accommodate cost constraints (Sudman, 1967). The purposive sample population targeted top municipal decision makers working at all Canadian municipalities and regional governments. These targets included, similar to the interview research, Mayors, chief administrative officers (CAOs), councillors, and senior staff. No gender- or age-specific biases were factored into the target. The surveys were conducted through August 2009.

The population size of targeted municipalities was not considered to be a constraining factor with respect to sample selection in this exploratory research since CiRM may be deployed by very

small groups of users. However, a systems constraint required that municipalities participating in this research be of sufficient size so as to engage in strategic planning, utilize ICT networks, and implement formal internal processes that are used by multiple staff. Hence, these requirements excluded municipalities with populations of only several hundred persons. Additionally, the financial cost and selection criteria of the primary recruitment channel, the Federation of Canadian Municipalities (FCM), constrained the selection of municipalities to those with populations over 50,000. These two constraints were judged to be supportive of the goals of the research and were, in particular, complementary to the purposive sampling method.

Recruitment for online survey participants emulated that used in the interview phase by first emailing an introductory letter via FCM to the selected 117 CAOs. The letter introduced the nature and purpose of the research, requested redistribution of the invitational email to suitable subjects both within and outside of the recipient's organization, and listed the survey site's Internet address. A shorter, similar notice was posted on several municipal groups in LinkedIn, as well as within the researcher's LinkedIn network. The recruitment process also included follow up emails to municipal leaders known to the researcher, as well as scanning relevant Websites for names and email addresses of suitable candidates.

The need to control costs led to the use of quota sampling whereby several suitable recruitment channels were employed until the target sample quota was reached (Sudman, 1967). To achieve the target quota, several non-probabilistic sampling strategies were deployed through specific recruitment channels.

As noted, the primary recruitment channel was the FCM, which was supplemented by LinkedIn.com. FCM's municipal membership of 2,000 members represents greater than 95% of Canada's population (FCM, 2013), and their distribution targeted all CAOs of both member and non-member municipalities. Due to limited research funding, the affordable selection range was one municipal recruitment email to 117 municipalities with populations over 50,000. The recruitment email included a request that the CAO forward the email to the Mayor and other top decision makers in the municipality. For purposes of statistical analysis, anticipating roughly normal distributions for the continuous measurement scales, a sample size of at least 30 was targeted. With a FCM distribution of 117 emails, the minimal response rate would have been 26%. An estimation of three additional internal distributions by 50% of the CAOs resulted in a possible distribution of 292, rendering a 10% minimal response rate.

LinkedIn.com was used to supplement recruitment efforts by posting requests for Canadian survey participants to the researcher's LinkedIn network along with selected municipal groups. Again, cost constraints prohibited paid advertisements. No estimates for number of respondents was made.

While the use of an Internet survey platform allowed for broad distribution of the survey, it did not allow for definitive validation of participant identity. However, the list-based recruitment targeted participants based on email addresses, and therefore provided a fair degree of reliability to ensure that participants' identities were not misrepresented.

3.4 Data Analysis Approaches

3.4.1 Mixed-methods Analysis

The data analysis approaches give priority to the qualitative data, which is consistent with the concurrent nested mixed-methods strategy used in this research, as described in Section 3.1.7 (Creswell, 2003). In both research phases, the quantitative questions were nested among the qualitative questions for several purposes. First, pairing quantitative questions with qualitative questions provided indicators of the significance of the issues emerging from the qualitative data analysis, as well as degree of variation in respondents' opinions. Second, the qualitative questions in the first research phase helped highlight the most applicable issues to be included in the subsequent survey phase of research. Third, the quantitative data analysis enabled the identification of correlation or prediction among themes that emerged consistently across the four PCM areas.

The question types and corresponding analytical approaches used are discussed in the next sections.

3.4.2 Quantitative Questions and Data Analysis

The quantitative analysis approaches were used in this research typically in support of qualitative data analysis, and varied depending on the question type. The quantitative question types included quantity fields, rating scales, binary "yes, no" questions, multiple choice questions, and checklists. The exploratory nature of the research led to the use of analysis techniques that generally sought to establish representative scores, such as averages, counts of occurrences, or percentages of answers per category for nominal data, and the degree of variation among respondents. These scores provided estimates of the relative importance of the data results and indicated the type of meaning to be drawn from the quantitative results.

Ordinal, or rank order rating questions were used frequently in both phases of research, typically with a scale of one (low) to five (high), and often in parallel or to supplement a qualitative question type. For clarity, ordinal scales, when grouped into a series of statements about a single topic, are referred to as Likert scales, with the analysis consisting of combining the scores into an interval index subject to tests of inter-correlation and validity (Likert, 1932). However, the research incorporated only individual ordinal scales used in this research, often referred to as Likert-type scales, that were individual items that were not combined into Likert scale indices. Analyses of the rating scale data consisted of non-parametric procedures, such as rank, median, mode, range, and frequency distributions. The use of parametric descriptive statistics, such as mean and standard deviation, to analyse rating scale data remains controversial, with divergent opinions as to whether they follow a normal distribution (Allen & Seaman, 2007; Jamieson, 2004). These measures were therefore applied in this research only as an initial gauge of the data results and not to draw inferences.

Qualitative Data Analysis Approach

The qualitative data analysis represents a grounded theoretical approach, and is completed using content analysis of the textual-response questions while recognizing the interpretive steps in the recording process. Content analysis is well recognised in the field of qualitative social science research as a generally accepted technique to identify themes and conceptual relationships from textual data by highlighting key words or references, or frequency counts of terms and ideas (Schooley, 2008). Themes are “fuzzy” constructs that are identified before, during, and after data collection, and are induced from the text itself (Ryan & Bernard, 2000). Context analysis further seeks to reinforce the themes or relationships with quotes or examples from the textual data.

The content analysis heuristic used in this research follows the process described by Creswell (2003), namely:

- 1) organizing the data for analysis;
- 2) scan the data to identify possible themes, categories, or recurring meanings;
- 3) organize or “code” the data into logical groupings with labels, using terms from the actual participants’ language if appropriate;
- 4) use the code to generate about five to seven conceptual themes as the key “findings” of the research;
- 5) represent the themes into a narrative about the findings, drawing connections possibly with other themes, or with conceptual models, or adding quotations, sub-themes or multiple perspectives; and finally
- 6) offer interpretation or extract meanings from the text, including lessons learned, the researcher’s personal reflection, comparison with theories or concepts from literature, or additional questions.

These six steps were applied in two general stages. First, all of the qualitative data were collated for thematic identification, separated into identified thematic categories, and summarized by response counts and percentages for each theme. Second, the qualitative data were blended with the quantitative data for comparison and detection of dominant themes that coincided with significant quantitative responses as described above.

Qualitative data recording and transcription processes inherently involve an interpretive element and therefore require an awareness of the researcher's role in "constructing what we define as data" (Charmaz, 2005, p. 509). To this end, participant interview responses that were interpreted as noteworthy, such as significant gaps or dichotomies, concise expressions of a consensus idea, key barriers, or very strong opinions, were highlighted during the recording and transcription process.

The remaining analytical steps, the interpretive narratives and extraction of meaning (Creswell, 2003) for each phase of the research, provide the results and conclusions presented in the following chapters.

3.5 Summary

This chapter has outlined the purpose and design methods use in this research, and the design of both the interview and online survey phases of the research. The research was designed to explore the potential viability of an interdisciplinary public participation relational framework and application of participatory CiRM by examining top LRG decision makers' perspectives across the four PCM components within the contexts of LRG generally, and urban planning specifically. The research design was guided by a post-positivist epistemology that employed a grounded theoretical approach to the analysis, allowing for the development of theory from iterative or multiple observations and analysis. These approaches were combined with in-depth observations and reflections on key informants' experiences for a deep, contextual understanding. The two phases of research, namely the interviews and national online surveys, comprise a sequential, nested, exploratory mixed-methods approach that ensure validity and reliability in support of the research purposes. Finally, the quantitative analytical approaches and the grounded theoretical approach to the qualitative data analysis were described.

The following two chapters present the results and analysis of the interview and survey research phases respectively, followed by compiled observations and conclusions in Chapter 6.

Chapter 4

Phase 1 - Interview Research

This chapter summarizes the findings of the interview phase of the research. The interviews and therefore the presentation of results are structured according to the four component areas of the PCM detailed in Subsection 3.1.4, namely, public participation, organizational strategy, ICTs, and CiRM. The decoupling of these four interdisciplinary perspectives in the interviews served to guide the exploration of decision makers' perspectives in each respective area independent of research issues in the other areas. Further, the goals and issues identified by municipal decision makers in each component area facilitated the examination of each area's key contributions to realizing participatory CiRM, as well as allowing exploration of the linkages between each area illustrated in Figure 3-1.

The descriptions of results in this chapter typically include the ratings results for specific questions. Each question is referenced by the annotation as outlined in Section 3.2.2. For example, P01 refers to the first question in the participation section. Multi-part questions are identified by an additional letter, for example S05a. Further details are given in Appendix 8.4.

The results are cited according to the answer options as they appear on the questionnaire. For example, rating scales generally are rated "low" to "high," typically on a scale of 1 to 5 unless otherwise stated. Some questions offer specific options, for example, "Less-than-optimal" in question P01. The questionnaire is provided in Appendix 8.4 for reference.

The numerical results are provided in one of two forms, namely, either as a average rating on a scale of one to five, or as the percentage of responses representing a particular rating score or result. The percentage of responses at a particular rating is employed where the results are skewed or for questions other than rating scales.

4.1 Public Participation

LRG decision makers' perceptions of public participation were explored across four areas, namely, visions and motivations, goals and philosophies, participation implementation, and evaluation. Respondents' comments are included along with the summarised data to help elucidate their stated priorities, needs, and passions surrounding public participation in planning within their jurisdiction.

4.1.1 Visions and motivations

Most respondents (95%) indicated an overall dissatisfaction with current levels of citizen engagement (P01), either by selecting a “less-than-optimal” rating or by their comments (P01a). The focus on optimality in this question allows for respondents to indicate whether levels of engagement are currently too high or too low. The concept of an “optimal” level of citizen engagement seemed to resonate with respondents, as responses were given without hesitation and no one questioned the use of the term. Similarly, almost all respondents indicated a desire for more and better participation across organizational services (P26). No respondents were satisfied with their existing levels and quality of soliciting citizen feedback (P07a). These affirmations of the importance of public participation reflect western democratic values generally and regulatory requirements for engagement more specifically. Further, respondents explicitly and passionately expressed their visions, philosophies, responsibilities, and desires for more and better participation.

Respondents expressed their visions for improved citizen engagement behaviours (P02) that represented a balance of organisational and citizen responsibilities. Respondents’ comments were analysed according to the open coding content analysis protocol described in Subsection 3.4.3, revealing six dominant categories or themes in addition to a generic category, listed here with the percentage of responses and examples of participants’ comments.

% of responses	Category	Examples of comments	Responsibility
25%	Different approaches and tools	specifically including finding new feedback methods, increasing opportunities, modes, thinking more from public perspective, "asking" more, making it easier, being proactive, getting positive input, being smarter about to "marketing" and planning for public participation, and having it "register" in the minds of the public	Organisation
22%	Better accessibility/representation	24/7 accessibility; easier participation in person; get different people, not always the same; manage lobby efforts; meet "silent majority"; include youth, new Canadians, (young) families	Organisation
11%	Increased Voting	increase to at least 50%; explore electronic voting. “This is the ultimate indicator of involvement.”	Organisation
11%	Issues	good turnout for engineering type issues - others, not as good; people only come out if it's negative, if it affects them directly; more issues than just "their backyard"; get people involved in general city matters - don't wait until something upsets them	Citizen

9%	More	More informed Involvement; “More!”; more attendance at council & committees (“with \$1B budget, only 4 citizens turn out”); "Get engaged!"	Citizen
7%	Strategy	increase participation in broad-scale, strategic planning; give confidence in direction, priorities, will guide specific interests; more in building healthy communities, not just specific issues - this is a balancing act.	Organisation
15%	General/other	Earlier/timing issues, get citizens Informed, be positive, structure (problematic two-tier system), enough engagement (with program volunteers)	

Table 4-1: Summary of P02 responses

The P02 responses revealed two perceived sources of responsibility for participation, namely, LRG as organisations, and citizens. Organisational responsibilities included “Different approaches and tools” comments, as well as the “Accessibility”, “Voting”, and “Strategy” themes, whereas the “Issues” and “More” categories of comments were directed toward citizen responsibilities.

Further discussion about the P02 responses revealed motivations or reasons underlying desired changes in participation behaviours that included avoiding negativity, timing issues, healthy communities, and citizen guidance for improved community planning. Decision makers expressed genuine concern for well-being of citizen and for representing citizen desires and interests, particularly on a collective municipal scale beyond citizens’ individual issues. Most comments were premised on a lack of citizen involvement, while others noted that excessive involvement by a few citizens created inequality in the public participation arena. One response expressed frustration that “with \$1B budget, only 4 citizens turn out.” Avoiding negativity, particularly from poorly or lately informed citizens, was a common attitude. These distinctive comments confirm a rational basis for the ratings given in P01, reducing the likelihood of simply positive response bias. One comment summarised a common sentiment expressed as “This is a balancing act”, namely, that there was a need to focus more on building healthy communities, not just specific issues. Finally, another subtext reflected throughout the comments was that obtaining citizens’ views is difficult and often frustrating, compared by one participant to "pulling teeth."

These results paralleled the responses to participatory barriers (P19), where 78 distinct responses emphasised organisational administration and structural issues (50% of responses) such as a lack of time, resources, appropriate technologies, goals, planning, management, as well as organizational structure, staffing issues and process issues. Political responses (10%) included low interest and representation in participatory processes by LRGs. Citizens barriers to enhanced participation (40%) included interest, turnout, efficacy, and public perception. These data affirm a common perception

among the decision makers surveyed that their municipal organizations carried the bulk of responsibilities for improving or addressing existing barriers to participation (60%), and citizens to a lesser extent.

Notably the comments relating to organizational responsibility in both P02 and P19 were generally expressed rationally and analytically, whereas citizen-directed comments were expressed emotionally, for example, “You don't hear from them when you do something right, but you sure do when you do something wrong!” and “Get engaged!!!” This observation raises the question whether participation would be significantly improved if decision makers became as passionate about the organisational responsibilities as they were citizen responsibility for participation.

Despite the dissatisfaction with their own municipality's levels of participation, respondents typically viewed other municipalities as doing worse. In comparison to other municipalities' levels of optimal public participation (P08), 95% of interview participants rated their municipality above average.

4.1.2 Goals and philosophies

Respondents' visions for public participation in their LRG (P16) led to lengthy discussions, and revealed distinctive and varied philosophies, values, goals and approaches. A recurring emphasis on the vital role of public participation in democracy and municipal decisions was observed, along with the need for more effective participation. This subsection of the interview examined the influence of decision makers' participatory goals on public policy within the frame of the policy and pre-policy levels described in Subsection 2.1.3 (Smith, 2003). Each respondent articulated a single or dominant philosophy which are categorised accordingly, rather than a collection of disparate ideas as in earlier responses.

First, 76% of responses fell into the pre-policy stage, describing goals for participation that were primarily functional and minimally influential on public policy. These included decision-making (46%), communication and information sharing (22%), customer service goals (4%), and voting (4%). A brief examination of the specific responses revealed a diverse range of goals with low participatory impact.

The decision-making category (46% of responses) sought to include public participation in LRG decision processes, particularly specific policy issues, development initiatives and planning, and “opinions on direction for the city in general.” These responses were very passionate, emphasising the importance of public input “early and often” in decision processes, for quality decisions and serving

the public interest. The comment that summarises the decision-making perspective is "...citizens as customers. They help to make decisions. It'd be nice for every decision to just punch it in to the Internet and get public response. More participation results in better service - that's just common sense." However, overwhelmingly these responses targeted low impact participatory goals (10% inform; 70% consult/involve), according to the IAP2's Spectrum of public impact (IAP2, 2008). Only 20% touched the higher impact "collaborate" stage, and 0% fell into the higher "empower" stage of citizen impact.

The communication and information sharing responses (22%) focused on disseminating information, obtaining feedback, and "dialoguing" across all three communication types (Rowe & Frewer, 2005). Respondents described a variety of extensive efforts, for example, "moving away from confrontational public meetings," allowing everyone's input without feeling attacked, reducing conflict through mediation, promoting community respect through a citizen task force replacing consultants and engineers. A common sentiment was expressed as "city hall is the heart of the community" and must "listen to community", which "goes right to the heart of this research." These responses indicated the high importance and priority of effective communications, and value of efforts and strategies to promote effective participation.

The lowest number of pre-policy responses were customer service goals (4%) and voting (4%). These focused on "fostering a customer-focused culture" in municipal services by viewing citizens as customers, and emphasised the importance of voting in democracy and citizens' responsibility to engage. The few responses indicate a poor alignment with the citizen-centric view of participatory governance. Thus, despite passionate expressions, the majority of the decision makers' goals were functionally oriented (pre-policy), resulting in low public policy impact. They also exhibited low participatory public impact in decision areas, and prioritised outward, one-way communication above citizen-centricity.

Distinct from the four categories of pre-policy goals discussed above, 23% of the respondents articulated policy-level goals that were more comprehensive and strategic than functional. These responses emphasised the need for certification in participation (such as IAP2 values training); attaining increased depth of participation through "deeper engagement" and tapping into "collective wisdom" for which "we need strategies, [and] this involves technology"; increasing the breadth of public input by "reaching a broader group" and the "silent majority" who aren't engaged; and generally to "increase and improve public policy surrounding public engagement."

The response characteristics were spread across five of the six stages of the policy level perspective (identified in Section 2.1.3), indicating that even within the policy perspective, respondents had very differing views of their needs and goals within the policy development cycle. Generally, the goals and underlying philosophy or approaches were consistent with respondents' expressions for both the desire for more participation (P01, 02), and the levels of passion or emphasis underlying their responses. However, none of the respondents' goals, while impassioned, was explicitly rationalised by a democratic governance philosophy or theory. Further, the perspectives were very diverse within both the pre-policy and policy perspectives, and spread across a broad range of impact stages. The majority of pre-policy, functional goals inherently emphasised discrete, issue-based participation (as described throughout Section 2.1), contrary to the desires expressed in P02. These results highlighted a significant dissonance among respondents' perspectives between their perceived desires and stated their goals and philosophies.

4.1.3 Participation implementation

Implementation of public participation was examined as a function of four organisational factors, namely, structure and processes, strategic planning, participatory activities or methods, and municipal services and functions.

Participatory implementation through organizational structure and processes was evaluated by yes/no questions about public participation policy manual (P09), plans (P10), reports (P11), and Public Participation Officer or similar (P12). These processual elements were acknowledged by a quarter to a third of the respondents, with many qualified responses. "Yes" responses comprised 30%, 24%, 31%, and 41% of responses for P09 to P12 respectively. However, they were mostly qualified by comments indicating that the policies (P09) and plans (P10) either were in development or, along with reports (P11), existed as part of other documents. No municipality identified any one of these as a single complete document. One respondent commented, "It'd be great if we did!" report to council. No municipality claimed a stand-alone participation officer (P12). Affirmative responses included the role as part of the communications director, communications staff, or "everyone's job" and needing a corporate culture to "make this happen." The variety of responses indicated confusion about participatory responsibilities, leading to comments such as, "it sounds like a good idea" and "why has it never been discussed before?"

The strategic importance of participation goals was affirmed by 80% of the respondents who indicated that their strategic plan linked to public participation objectives (P13a). These responses

were supported by specific examples (P13b). While some of these examples were implicit (19% of responses), such as “everything goes to the public,” the majority were explicit examples of strategic goals or citations from the plan. Some examples (10%) pointed to a major focus area of the LRG strategic plan. The strategic importance of public participation (P14a) was rated on average as very high (4.2 / 5), with 65% of the respondents giving specific examples (P14b) from the strategic plan. However, 20% indicated that the strategic plan included buzzwords or references but did not clearly indicate to the “average citizen” that citizen engagement was a priority. The remaining 15% of the responses indicated that the importance of participation was lacking or missing in the plan, and “that’s the problem.” One comment indicated that the participatory strategy was “to develop a plan.”

Participatory activities in the LRGs (P15) were easily identified by all respondents, most listing the maximum requested of eight. Listed activities included, for example, mailings, emails, public or town hall meetings, surveys, open houses, publications, delegations, committees, news releases, advertisements, and some social media. These represented a good cross-section of traditional forms and encompassed all three types of information flow (Rowe & Frewer, 2005). While one comment was that municipalities “...can never have too much public input,” the listed activities fell widely across the first four levels of IAP2’s Spectrum (IAP2, 2008), particularly at the lower impact levels, with none at the higher impact empower level. The low impact results paralleled the goals and philosophies results discussed earlier.

Participatory implementation was examined across five organisational functions, ordered by increasing depth of participation. They ranged from highly transactional e-government (P20) through more traditional participation such as information dissemination (P21) and local development feedback (P22) to deeper engagement in decisions (P23) and social capital building (P24). The ratings (scored out of 5) averaged 2.4, 3.3, 3.3, 2.9, and 2.6 respectively with low levels of variance among respondents. The lack-lustre scores ranged slightly higher for traditional forms of engagement (P21 – 23) and lower for more progressive forms of engagement. These data were consistent with the traditional nature of participation activities cited in P15, and reflected desires to “do more” in both e-government and deep participation.

Desires for more public participation in municipal services were highly affirmed (P26). Almost all respondents (95%) desired more participation in one or more of the municipal services areas listed. Participants selected water (86% of the respondents), transportation (76%), housing (71%), protective services (67%), environment (67%), and general services (52%) as well as a first additional area (100%), and second additional area (29%). Many respondents (38%) selected all of the municipal

service areas. The additional areas primarily included communication (31% of additional areas), and strategic or budgetary planning (27%).

Use of a single-point-of-call or similar 311-type system (P05) was not implemented by 87% of the respondents' municipalities, although such systems were being considered. Two-tier municipal systems were cited by respondents as being a potential barrier for this type of system.

In summary, the strategic importance of public participation was affirmed, with two-thirds of the respondents meaningfully linking participatory goals to the strategic plan. However, the results indicate low levels of implementation in planning, documentation, and staffing. Participation activities represented traditional modes at the lower levels of citizen impact, paralleling the lacklustre ratings in organisational functions and service areas. More and deeper implementation was strongly desired across all service areas.

4.1.4 Participation evaluation

LRG evaluations of their participation efforts and impact was examined in terms of participation ratings and descriptions, methods of listening to citizens, and objective measures of citizen engagement.

Participation ratings and descriptions were examined across four categories, namely strategic planning (P03), community development planning (P04), emergency response (P06), and citizen satisfaction feedback (P07). These received average ratings of 2.7, 3.3, 2.3, and 2.6 respectively. The relatively low ratings indicated levels of dissatisfaction that were supported by the accompanying comments, and with overall participatory ratings (P01). Public involvement in emergency response (P06) received the lowest ratings (2.3 average) among these four categories, and the comments signaled a lack of awareness of the value of citizen involvement described in Subsection 2.2.2. Only one respondent expressed an understanding of the value of citizen emergency response involvement, particularly as applied to a pandemic, for example, the "H1N1" outbreak, and the need to call for volunteers. All respondents indicated dissatisfaction with their existing processes used to gather and analyse citizen satisfaction feedback (P07). The citizen satisfaction comments (P07b) described the use of surveys, advisory committees, informal calls, emails to staff and councillors, and ad hoc departmental efforts. Comments repeatedly cited problems with surveys as too infrequent, too expensive, and that they provided citizens with "the only way to express citizen dissatisfaction."

Municipalities listened to their citizens (P17) typically by traditional activities such as email, meetings, surveys, and forums. Only two respondents (5%) provided answers that were process- or

policy-based, or representing a defined methodology or philosophy. Participants described listening as formal or informal, for example, “we weigh and adjust what we hear,” being responsive, having strict policies, a variety of ways, asking, having respect, giving people access, being available, and having regulatory requirements. Almost half of the respondents included unsolicited evaluative comments, of which 90% were negative reflections such as “we’re not going to citizens,” use of a lot of “old school [outdated methods]”, and LRGs having a problem listening to citizens. Some questioned how to use technology more, and how to change messaging. The other 10% were positive reflections, such as “we’re doing well.” However, these respondents also indicated a desire for more participation in most service areas (P26). Some respondents equated listening with the previous two questions, describing the same activities. Others, however, considered listening to citizen inputs as a distinct aspect of participation, describing how information is processed and acted upon (“take input seriously”, “informs recommendations to council, often and strongly, and council is highly responsive”), the “active” part of ensuring different groups are heard, and letting citizens know they’ve been heard by following up.

Measurement of citizen participation (P18) included reports about events and other informal, “ad-hoc” indicators. No one, however, identified a formal, periodic summative report tied to strategic objectives. One monthly report was cited, tied to council meetings where “all public input is reviewed.” Most respondents (73%) indicated a measurement deficiency, roughly half (56%) lacked any formal measures, and (44%) commented on the need for improvement. A minority of the respondents (27%) not citing measurement deficiencies cited either individual activities (18%) rather than formal reports, or only provided vague indicators without explicit examples (9%).

These results and comments highlighted the lack of well-planned and managed organisational measures of participation. Some comments indicated a gap between “really good” participation activities and the negligible effect on council decisions, for example, “council members do what they think rather than listening to citizens.” Other comments reflected that the municipality “listens well, but citizens aren’t talking enough.” Others focused on municipal actions and responsibilities such as “being available,” and “promoting opportunities for citizens to speak”. These results were consistent in terms of the lack of implementation elements observed in the previous subsection.

4.2 Public Participation and Strategy

Strategic planning and implementation are two functions of strategic effectiveness as described in Section 2.3. This section examines decision makers’ perspectives on strategic effectiveness in three

areas, namely strategic planning approaches, implementation of strategic goals, and reporting mechanisms.

4.2.1 Strategic planning

This subsection examines decision makers' perspectives in terms of their familiarity and satisfaction with their LRG's strategic plan, the formality of the strategic planning processes, and the philosophies and approaches reflected in their strategic planning processes.

Over 90% of the respondents rated themselves (S02) very highly familiar with their LRG's strategic vision, yielding an average score of 4.7 out of 5. However, they expressed less confidence in the organisational effectiveness (3.5 average score) of the plan (S03). While some voiced strong dissatisfaction, most respondents indicated that effectiveness was improving, or that the plan was helpful for directing staff. One respondent described a cynical bias regarding strategy after seven years of working on the plan. However, most comments recognized the strategic plan as central to, and intended to guide, all management decision-making, matters of council, and staff activities. Despite the moderate effectiveness ratings, respondents generally compared their own organisation's strategic planning to other municipalities as more effective (S14).

The degree of formality or structure in strategic planning processes (S04) received moderate to high ratings (3.5 average score), with explanations ranging from highly structured to "flying by the seat of our pants." While most respondents viewed formality as leading to more valid planning, some expressed doubt about process effectiveness, and that lengthy planning cycles resulted in confusion and erosion of confidence among LRG leaders and citizens. Despite the moderate S04 ratings, respondents rated their organisation's strategic planning as slightly more formal than other municipalities (S13), also commenting on the extra challenges and time needed in the non-profit sector.

Respondents described their overall approaches to strategic planning as following several of the models described in Chapter 2. According to McNamara (2010) model, summarized in Subsection 2.3.2, most respondents indicated an issues-based approach (66% of the respondents) focusing on current or existing priorities, while 33% indicated goals, focusing on future direction. No-one indicated a roots-based approach (S01). A predominantly issues approach was misaligned with the desires expressed in P02 for broader engagement beyond issues.

According to Ackoff's (1969) descriptors (see Subsection 2.3.1), most respondents identified their philosophy of strategy (S18) as adaptivising (57%) by continually responding to changing

conditions, while 29% and 14% identified with optimising or satisficing respectively. Respondents commented positively about the insight given by these descriptors, while one comment attributed their satisficing approach to “a legacy engineering mentality.”

An emergent or organic approach to strategic planning was slightly preferred over a highly mechanistic, process-based approach (S17). This contrasted with the perception of highly-structured planning processes (S04). Many respondents preferred the organic adaptability, while some preferred the highly mechanistic approach to ensure “a method for accountability.”

These data revealed that while high priority was given to the strategic plan in guiding all municipal priorities, initiatives and activities, not all respondents perceived the strategic plan to be highly effective. Some gaps were revealed between the desires for broad engagement expressed previously, and the approaches and philosophies to strategic planning actually being used. The next subsection examines strategic planning implementation and effectiveness.

4.2.2 Strategic implementation

This subsection examines strategic planning implementation in terms of strategic planning proficiency, effectiveness of the strategic planning mechanisms, and inclusion of external competitive analysis.

Respondents rated their proficiency with strategic planning (S15) as moderate to high (3.7 average score), while many paused reflectively before answering. The single repeated comment was that this “is an interesting question.”

Participants rated the effectiveness of their five most strategically important planning mechanisms in terms of helping to improve four organisational factors. Respondents first identified all of their existing strategic planning mechanisms and then selected the top five most important strategic options (S05-08). Respondents each identified over 21 planning mechanisms on average. The listing and ranking of the top five mechanisms helped ensure that respondents’ ratings reflected actual planning mechanisms rather than general notions. The four organisational rating factors were employee performance, services, community development, and citizen satisfaction (S09-12) with average ratings of 4, 3.8, 3.8, and 3.6 respectively. While all but one response included citizen participation plan, most of these were described as a volunteer code of conduct, guidelines, or by comments such as, “we aren’t really doing this” and “happens on a limited basis – not near enough.” The effectiveness ratings of top planning mechanisms were skewed slightly toward internal

organisational factors, possibly indicating a priority on internal, organizational processes rather than an outward focus on citizen benefits.

The citizen satisfaction (S12) ratings of strategic planning mechanisms were positively skewed, according to respondents' comments. Planning activities were perceived as indirectly improving citizen satisfaction and leading to long term effects even if citizens "don't know how it impacts them." Some ratings were described as reflecting intent rather than actuality. This particular question resulted in a range of respondent interpretations of effectiveness. However, the comments and qualifications clearly confirmed respondents' perspectives that strategic planning mechanisms provide direct and indirect value to citizens.

External or environmental analysis, used to understand the competitive organizational environment as described Subsection 2.3.2, was rated as highly important (3.8) in strategic planning (S16). Their descriptions of external analysis (S16b) pointed to numerous activities, such as public meetings, surveys, council workshops, focus groups, visioning sessions with keynote speakers, open houses, polling, and Website responses. Some specialised approaches included formal reporting dashboards, citizens' group reports, the use of consultants and Environics Research Group citizen satisfaction and social values surveys.

One comment described the numerous approaches as "layered like an onion with staff working with different advisory committees." Another commented, "I don't think we've ever gone to citizens and asked, 'How are we doing?'" Only one respondent mentioned external economic and demographic scans as best practices. However, no one indicated the use of external analysis for competitive positioning as described in Subsection 2.3.2 to establish, for example, unique identity or cultural definition.

4.2.3 Strategic reporting

Respondents identified the strategic value of reporting mechanisms used in their LRG and evaluated their effectiveness. They each identified eight report mechanisms on average (S19). The strategic value of the reports was rated across five factors, namely, measuring strategic planning goals (S21), providing feedback to strategic planning processes (S22), reporting on citizen input (S23), citizen access (S24), and measuring citizen satisfaction (S26), with average scores of 72%, 66%, 46%, 58%, and 50% respectively. The first two reporting factors related to internally-oriented organisational strategic reporting, while the latter three were citizen-oriented. The identification of

existing reporting mechanisms (S19) helped ensure that ratings reflected actual reporting mechanisms rather than vague notions.

The evaluation of strategic value revealed a high strategic priority and relevance, but with lesser connection to citizen participation. The ratings for the strategic value of internal organisational factors (S21 and S22 – 3.6 and 3.3 averages) were significantly higher than the citizen-oriented factors (S23, S24, and S26 – 2.3, 2.9, and 2.5). Further, citizen input on all but four of the reports was rated low (10-20%). The four higher rated reports were service delivery (3), strategic outcomes (3.2), external score-carding (3), and citizen satisfaction measures (4.5). This supports the common understanding that citizen input plays little role in standard municipal operating reports, and highlights a gap in the presence of citizen feedback used in these reports. The OMBI report was rated as having very low (1) citizen satisfaction relevance, with a comment that “it should be rated 0.” One participant commented that they “wanted to do this grid. It looked like fun, and actually went quite well.” Many respondents made comments or references to specific reports that revealed a personal emotional attachment.

Participants also evaluated the effectiveness of organisational reporting (S27-32). They rated and commented on the reports they each identified in S19 across six evaluative factors. They were comparative sophistication (S27 @ 3.3 average score), comparative effectiveness (S28 @ 3.3), strategic reporting proficiency (S29 @ 3.8), measuring organizational efficiency (S30 @ 2.8), measuring organisational effectiveness (S31 @ 3), and measuring customer service (S32 @ 2.5).

Respondents identified organisational efficiency reports (S30b) as efficiency audits, continuous improvement programs, testing public response, benchmarking to OBMI, cost comparisons, and others. Organizational effectiveness reports (S31b) were identified as metrics, surveys, continuous improvement program management, employee feedback, or “the same” as given above (S30b). Some respondents described alternative evaluation approaches as informal, “ear to the ground”, “lack of complaints”, “organic”, or, as summarised by one participant, “In public life, a critical measure is always the number of complaints.” Deficiencies perceived in the quality and validity of these reports were revealed by comments such as, “I don't think we're in tune with this. We're getting better though,” and “There is no trust in the system, no cohesiveness between continuous improvement and key performance indicators (KPIs).” Some respondents preferred to rely “less on physical numbers, and more on quality of the product – morale, citizen satisfaction, doing more.” Another commented, “How satisfied are customers with what's being done? I don't know of any tools used per se.” While one respondent proudly described the results of their efficiency/effectiveness audits as already saving the costs of six staff positions, another expressed concerns with the costs of formalised audits.

Summary comments about strategic reporting (S33) highlighted the need for comprehensive measures, explained as “not a priority, but they should be. Metrics/KPIs should be tied to service level outcomes vs. activities.” Others described the need to “develop a set of performance indicators that relate to customer service which isn't being done. E.g. roads - measures yes, targets no. It's not actively managed.” The most impassioned expressions were “Don't know how. That's why it's poor!” and “We don't look at ways to improve where there's a problem. We're crisis-driven!”

The results in this section revealed that while respondents affirmed the value of strategic planning, implementation, and reporting for decision-making, strategic implementation and reporting were perceived as ineffective, deficient, and costly. Despite the many opportunities for comments in each question of the strategy questionnaire, over half of the participants added summary comments (S33) that emphasised the importance and difficulties in measuring efficiency, effectiveness and citizen satisfaction. Opportunities were cited such as prioritising a citizen service strategy, analysing incoming calls such as “to the Mayor,” focusing on goals, simplifying complexity, and dealing with numerous complaints. These perceptions by LRG decision-makers revealed important gaps and opportunities in strategy, reporting and public participation.

4.3 Public Participation and ICTs

The exploration of ICT functions and effectiveness was informed by the research issues outlined in Section 2.2. This section of the interviews investigated the perceptions of municipal decision makers from the perspectives of users and citizens rather than from a technical perspective. The ICT research results are presented in four subsections, broadly described as vision, performance, goals and resources, and development.

4.3.1 ICT vision

Decision makers' ICT visions and goals, as the basis for participatory ICT strategies, were examined in five areas, namely, systems familiarity, strategic importance, planning approach, vision, and appropriate technologies.

Respondents' familiarity with their municipal systems (I01) received affirmative ratings (66% on average). While many expressed hesitation about their IT knowledge, participants expressed strong functional knowledge of and many strong opinions about their IT systems.

Despite respondents' modesty about their IT knowledge, they rated the strategic importance of IT (I02) as high (4.4 on average), with 90% of responses high or very high. The strong strategic

importance of IT was further reinforced by the lowest scoring respondents commenting that it “should be higher.” Respondents generally rated their IT systems as ‘on par’ with other municipalities (I03).

The IT planning approach (I04) from the perspective of decision makers was examined as a reflection of the strategic direction of technology applications. Respondents unanimously indicated an internal focus to IT systems application, emphasising either internal customer (66%) or user support approaches (34%). Many respondents (60%) voluntarily expressed strong desires for change to an external approach to IT systems planning. Many expressed passion along with frustration, for example, “it should be external”, “it’s the tail that wags the dog”, “we need to increase external and strategic focus”, and “currently on a reactive treadmill, overwhelmed with day-to-day.”

These responses highlighted a significant gap between the current internally-focused IT planning approach, which is suited to a highly operations-oriented organization seeking high efficiencies, and the desire for change to an external focus, which is more appropriate for a customer service-focused organization. Considering respondents’ high regard for the strategic importance of IT (I02), this gap may have resulted from an intuitive understanding that if the municipality is to be outwardly, citizen-focused strategically, then the strategic systems that rank high in importance should align with that outward focus.

Respondents’ visions for ICT-enabled participation (I23) clearly and passionately articulated the needs and expectations by citizens for appropriate strategies and technologies. While some expressed desires to increase development of applications and infrastructure, most comments focused on facilitation of citizen dialogue and decision participation by, for example, “expanding exponentially the use of IT, particularly in social marketing where we’ve had success such as the use of Facebook in trying to get public opinion and ideas.” Respondents implicitly acknowledged the link between the strategic importance of IT and the imperative for a participatory IT strategy.

Respondents were less confident about the appropriate participatory technologies needed (I24). Most identified social networking and ubiquitous computing approaches as possible contributing technologies, but expressed uncertainty about form, application, and effectiveness. One response effectively summarised this sentiment as, “I support the CiRM idea as an e-democracy infrastructure. Would a Website work? Cameras, streaming? I don’t know details, but we need technological capacity.”

While municipalities were exploring emerging technologies on the one hand, decision-makers on the other hand had quite differing opinions about the actual direction and timing of an IT strategy for public participation. Leaders acknowledged rapidly advancing social IT and its growing

importance, but were less certain of the direction and need for careful planning and incremental but constant advancement. As one respondent commented, “We have it, but don’t use it. If you’re going to take this seriously, you need to start automating it.”

4.3.2 ICT performance

Assessment of ICT performance reflected respondents’ perceptions of the effective capacity of their IT systems to meet the LRG’s information processing needs. Respondents listed up to eight of their IT systems (I06), and ranked each in terms of strategic importance (I07). Despite expressed apprehensions about lack of technological familiarity, respondents revealed a high degree of IT knowledge by readily listing up to eight of their municipal IT software systems. Commonly highlighted applications included financial systems, Internet and Intranet, email, human resources, services and fleet management, planning, and document management. Comments about the strategic importance (I07) revealed that all participants had a strong vision for IT, they recognized various obstacles, and generally expressed these perceptions quite passionately.

Respondents also rated of their listed IT systems across six performance characteristics (I08-13), as listed here with average rating scores:

- cost efficiency (I08) – 3.8
- system/data quality (I09) – 3.9
- internal orientation (I10) – 3.8
- direct public accessibility (I11) – 1.9
- reporting/analytic capability (I12) – 3.2
- transaction orientation (I13) – 3.5

Respondents’ high ratings (3.5 – 3.8) of traditional IT performance characteristics (I08, 09, 10, 13) aligned with participants’ comments expressing confidence in the return on IT investment, data quality, and an overall internal operations orientation of their systems. Deficiencies particularly in public accessibility (I11) and in reporting capability (I12) were explained by outdated systems and duplication. “Employees use the Internet to look up data that should be on the Intranet, which is too outdated.” One more respondent, claiming a high level of IT familiarity, called their two systems “a complete mess” with “many duplicates with no management of the database.” Most respondents indicated that their IT systems were completely inaccessible to the public, while only a few Web or Intranet sites were rated as highly accessible. One comment on a high accessibility score was the desire to score it low because it’s “not a good Website and reports are not good.”

Overall, ICT performance was rated moderate, and was characterised as traditional, internally-supporting transaction-oriented systems with negligible customer/citizen-facing functions. Many unsolicited comments revealed negative sentiments and tone. Several participants commented that the format of the chart provided an interesting perspective on their municipality's IT function, and was "thought provoking" and insightful into actual IT priorities that effectively determined the core functioning of the organization.

4.3.3 ICT goals and resources

Decision makers' ICT goals were examined, as well as their perspectives on available resources. IT goals, both short-term (I20) and long-term (I21), were extensively and passionately described. These responses followed the examination of participants' perceptions of ICT vision and performance, an immersive interview technique designed to elicit more fully formed reflections. Comments centred predominantly on developing IT capacities, strategies, and policies for citizen support, including Web-based tools for information searching, engaging in political processes and decision, surveys and feedback. Others included citizen transaction handling (e.g. fees, applications), improved citizen access, communications capacity, and customer service. The detailed paths toward these goals were generally uncertain, but included expanded IT facilities, Websites, IT strategic plan and governance models, alignment of goals and priorities, culture change, and even "fully functional CRM."

The participants' descriptions of goals were quite emphatic, given without hesitation, and impassioned, for example, when discussing the urgent need for Website updates. One emphasised IT as "a strategic partner with a focus on shared outcomes and citizen service." The desire was to "increase communication capacity with citizens" but didn't "know what that looks like." A general assessment was for the need to "shift from supporting business units to getting involved in driving the IT strategic plan. They aren't involved, whereas they should be driving efficiencies and improvements." A reflective comment was that, "IT has more impact on customer service than anything else."

Resource allocation and spending (I05) was a significant concern, but tended to be rated behind other aspects of IT development and planning. There was a tendency to view IT as underfunded (70% of the respondents), reinforced by comments about the importance of IT not being reflected in staffing, funding priorities, or corporate structure. Stated desires were for more leadership (CIO hiring), and that "it's hard to decide whether to buy software or repair a road". One respondent who

indicated that too much was being spent on IT expressed a desire for more application development rather than hardware spending. In many cases, assessments, discussions and plans were underway to address these issues.

4.3.4 ICT development

ICT development in LRGs is examined here in terms of three factors, namely, adaptability, IT customer satisfaction, and barriers to effectiveness.

ICT adaptability was examined by evaluating the capacity to exploit new technologies to improve performance and citizen service. Respondents rated ICT adaptability across five factors, listed with average scores:

- responsiveness (I14) – 2.9
- technical implementation (I15) – 3.8
- user adoption (I16) – 3.3
- external analysis (I17) – 2.9
- Incremental vs. re-engineering approach (I18) – 2.1

The moderate responsiveness score (I14) indicated a desire for greater adaptability. Many unsolicited comments were offered, highlighting a lack of understanding of new technologies, desires for improvement, and large numbers (>60) of applications, systems and Websites to manage with a single LRG. No one cited a lack of resources as a barrier impeding responsiveness, while one high scoring respondent commented that “movement is slow” despite available resources. In contrast, confidence in technical implementation (I15) was rated high or very high by almost 90% of the respondents, while 10% rated very low. Respondents rated LRG user adoption of IT (I16) somewhat lower than technical success, and with relative uniformity. External analysis ratings (I17) were spread widely across the continuum. Explanations referred to IT master plans, scans of other municipalities and their IT software, best practices approaches, and informal surveys of other IT professionals. While one respondent referred to an externally commissioned applications assessment, no one referred to an overall strategic IT assessment. Finally, most respondents’ perceptions of IT system planning (I18) tended toward the use of an incremental approach (75%), that is, step-wise improvements to existing systems rather than a re-engineering approach. These data revealed a moderate confidence of decision makers in IT capacity for change and adaptation, and many general dissatisfactions with the adaptability of the IT function within surveyed LRGs.

IT customer satisfaction measurement (I19a) evaluated the capacity to meet IT needs, and received low ratings on average (2.1). Respondents’ comments (I19b) revealed frustration with

limited or reactive measures that produced minimal results. For example, with an “in-house focus - want to shift [to external focus]”, “We don't do it at all - don't meet satisfaction - most important, the Website is the worst!”, “We do help desk surveys, but the challenge is engaging users [within the organisation] in the development of systems. This explains the difference between I15 [good] & I16 [poor].” Notably, no one connected the poor internal customer services measures as relating with poor citizen service IT support, on the premise that external customer service excellence rarely exists where it is not matched or preceded internally.

Barriers to IT effectiveness were identified by respondents (I22) and analysed to reveal four categories. The largest category (51%) predominantly encompassed organisational strategy, structure, and culture. Comments described the need for an effective IT strategy across all departments, as well as a culture shift toward flexibility and customer orientation in IT plans and policies. The second category of barriers (37%) focused on resource constraints, primarily in staffing and knowledge resources, but also budget. Notably, participants’ comments about the identified resource constraints immediately qualified them to be a result of structural or strategic barriers. Other barriers included governance issues (6%), such as an uncertain vision by council and administrative priorities, as well as complexity and multiplicity of software applications (2%). These comments helped to explain the barriers, such as “giving IT high enough profile, for example compared to legal or HR. Currently [IT] is buried in the finance department, and we have no CIO at this point.” Another commented that IT “is currently internally focused rather than servicing the needs of citizens. We need a huge shift, we need a CIO.”

4.4 Public Participation and CiRM

This interview section explored participants’ perceptions of CiRM across four areas, namely, CiRM value and vision, purpose and goals, implementation, and participatory functions. The exploration of vision commenced with an assessment of participants’ familiarity and experience with CiRM, which helped to frame an understanding of their perceptions of CiRM, and thereby also helped to validate this section’s survey response data.

4.4.1 CiRM value and vision

An assessment of participants’ familiarity and experiences with CiRM was rated and described in terms of their experiences in both the private and public sectors. Respondents also indicated and described the value of CiRM and elaborated on their visions for CiRM. A very brief definition of

CiRM was provided to interview respondents, which included both the technological and process factors described in Chapter 2.

Respondents' ratings of familiarity with CRM (C01) and CiRM applications (C04) varied widely with modest average ratings of 2.7 and 2.9 respectively. Respondents validated their experience ratings by describing specific experiences with CRM (C03) and CiRM (C06). These included general customer service experiences, as well as specific references to, for example, in-depth CRM management and development experience, observing poor CRM system management, and "advocating for CRM implementation." Many described their use of personal contact software as CiRM used to foster and maintain citizen relationships. No one described a corporate-wide, centralized participatory CiRM system, nor any intra-organizational sharing of data and processes.

Based on their experiences, 91% of the respondents affirmed the value of CiRM (C07a) for their municipality, while 9% indicated possible value. Participants validated their affirmations with comments (C07b) such as "very", "Oh Yes!", and "Absolutely Yes! Yes!" They also elaborated extensively on their overall visions for CiRM in their municipality, referring to projects underway such as CiRM pilots and Websites and content management systems (CMS) providing CiRM-type functions. Some participants elaborated on CiRM operational and tactical visions, including managing all inbound and outbound communications, coordinating volunteers, cost cutting, responding to citizens, tracking input, and making communications more convenient. Others also described strategic visions such as developing a culture of customer service, providing a one-stop shop, and improving quality of life. One commented, "it's absolutely important, to make every citizen feel important, that they're going to be handled and dealt with in the best manner possible." Some responses touched on design aspects of CiRM, such as "It's [CiRM] essential, but also a tough question, because there's two approaches: tech-based, or human" and "We need a more consistent approach across the organization in two areas: 1) technology; and 2) a framework of service delivery."

The comments about CiRM value (C07b) revealed two opposing perspectives. One was based on successful experiences, summarised as, "Our emphasis over the years has been on customer service [with] good success. We want to go back and take a run at doing it again." The opposing perspective was based on shortcomings or failures, as revealed by "Communications are lacking with the public – too much marketing rather than communicating," and "Too many things constituents don't know about." Generally, respondents expressed insightful visions for learning more, identifying gaps and improvements, and developing a "consistent application of best practices and consistency in

collecting information to meet citizen expectations.” One respondents stated that, “Currently, the public is engaged when the municipality wants to. CiRM allows the public to provide input when they want to.”

Survey respondents indicated varying levels of familiarity with CiRM with, in some cases, extensive experience. More significantly, this familiarity reflected an eagerness to dialogue about participatory CiRM functionality. This conceptualisation and understanding of CiRM frames the interpretive context for the remainder of the interview.

4.4.2 CiRM purpose and goals

Participants outlined their understanding of CiRM in terms of purpose, goals, and strategic alignment. They described the purpose of CRM (C02) and CiRM (C05) with extensive and insightful answers, and included depth and breadth of functionality. Many responses highlighted transactional aspects of CiRM, such as tracking customer interactions. Many also pointed to objectives such as improving customer experience, retaining customers, maintaining active relationships with customers, tracking complaints, successes, and failures, and analysing trends. Some respondents framed their purpose statements according to the current uses of CiRM technologies in their municipality, including tailored electronic spreadsheets, contact managers, and custom databases for the purposes of tracking and managing citizen enquiries, responses, satisfaction, project engagement and communications. One summarised the use of CiRM as, “We’re here to serve the public. CRM allows us to do better, service the public better.” Some participants described a strategic purpose for CiRM, stated as “a public sector value chain to rate customer satisfaction, analyse data and identify gaps” and “an organization’s ability to make decisions, achieve organizational efficiency and [promote] democratic values” through a “one stop shop” approach. One respondent passionately expressed the need to “refocus and foster an organisational service culture. Service levels are outmoded, our perception is misaligned. We tend to think of ourselves as better than we are. We’re not ‘there’ [where we think we are, at a point of excellence].” Perspectives on the purpose of CiRM related closely to the descriptions of the value of CiRM (C07b above) but with much more detail.

Goals for CiRM, in both the short (C13) and long (C15) terms, were described by 100% of the respondents, and represented a broad range of perspectives. Most responses were tied to existing personal visions for enhancing citizen services and two-way communication. Numerous responses included specific types of approaches or solutions, including “1-stop-shop”, prioritisation tools, and volunteer coordinating being “one of the biggest priorities.” Some expressed urgency, such as

needing CiRM to review committees, while others desired first to review carefully citizen engagement approaches. Others indicated hesitancy with “yet another project.” Analysis of the respondents’ goals revealed two distinct perspectives. The first was a blend of political visions, such as voter contacts, “political engagement”, developing a “clear view of the citizen”, and “improved relationships.” The second perspective was communication or administrative functions, such as Web casting of council meetings “like in Europe” or be able to “do everything on TV like in Korea” to overcome a “passive media”, remote data entry, access by councillors, full call [centre] history to replace existing personal system, stronger technical department support to “be stronger on people interaction rather than merely focusing on tools...” and enhancing the call centre database to filter and analyse its contents.

Alignment of strategic goals with CiRM activities (C19) was rated as high or very high by 75% of the respondents, for an 4.2 average rating. Some respondents (18%) indicated misalignment or having no knowledge of the strategic plan. Extensive unsolicited discussions validated the responses, some describing clear strategic alignment, others describing progress, and some citing timing issues. Decision makers generally described their personal CiRM activities aligning highly with their municipalities’ strategic goals.

Overall, respondents described CiRM purposes as a highly participatory and broadly encompassing form of citizen engagement and had satisfaction levels in line with their perceived value of CiRM. In contrast, respondents’ goals focused narrowly on specific, existing or desired capabilities from either political or functional perspectives. Stated goals reflected participants’ anticipated objectives within perceived barriers, gave minimal emphasis to specific citizen engagement or satisfaction functions, and were minimally related to their descriptions of strategic value. These results revealed a gap between purpose and current goals. Generally, participants’ deep understanding of the purpose of CiRM reflected their own desires for change. Moreover, these were framed by a perspective of citizen benefits derived from engagement, efficient transaction handling, effective services, information sharing, and relationship development, which reveal a citizen-centric perspective that complements the CiRM purposes outlined in Chapter 2. Numerous respondents desired to learn more about CiRM approaches, and were “referring to strategic objectives, to improve customer service by working on citizen-centred service approach. It’s there [the strategic plan]. We want to improve relationships [with citizens], to help them feel better about the governing body and about services.”

4.4.3 CiRM implementation

Respondents rated the level of implementation and described their municipalities' CiRM across five characteristics. These five characteristics were the priority of CiRM initiatives, barriers to implementation, corporate support, personal support, and measures of impact and effectiveness.

The priority of CiRM initiatives was examined across five interview questions, namely, stage of development (C08), duration of development (C09), priority ranking (C10 and C11), and rate of development (C12). Overall stages of development (C08) were indicated by 73% of the respondents, thereby affirming the existence of CiRM initiatives. About one half of these individuals identified specific projects in the consideration or pilot stages, and another third in production or post-production stages. Unsolicited, respondents described various types of CiRM initiatives, including clusters of front-line departmental applications. None of the production stage initiatives were described as cross-organisational, but rather as limited to individual departments and not being used effectively, or in limited production "for some time and now being taken to the next level." The duration of the initiatives (C09) in development averaged 3.7 years with several as long as nine and ten years, with comments indicating that the applications were "not hugely successful" or not performing as expected. Priority of their municipality's CiRM initiatives (C10, C11) was ranked moderate to high, with 61% of affirmers rating high or very high. Almost all respondents rated CiRM development too slow or much too slow (C12). One respondent reflected that they "have a long way to go. We spend millions on internal IT systems that don't help the public."

Key barriers to CiRM implementation (C14, C16) focused on a lack of corporate awareness of the strategic and functional capabilities of CiRM, an overestimation of the resources required (time, money), and IT governance that constrained the consideration of CiRM adoption. Some respondents described strong CiRM application experience that aided only their personal CiRM implementations, and not their LRGs' organisational participatory applications. A key barrier was described as "organizational capacity for new things and resistance to change" particularly in the face of "false starts in CRM in the area of knowledge management."

Corporate support for the implementation of CiRM goals (C17) was rated low to moderate (48% average). Several unsolicited comments acknowledged strong personal support for CiRM in contrast to others' lack of CiRM understanding, while others recognised high CiRM support by councillors and senior staff but low priority across the organization and "lack of vision by IT."

Personal support for their CiRM goals (C18) was described by respondents' lists of specific activities. Almost all respondents (96%) cited several tangible examples, including personal use of

spreadsheets or databases for citizen relationship management, and also specific initiatives and committees exploring technology options, broader facilitation, or “internal awareness of change particularly in IT.” While one respondent doubted that “anything could happen since it’s not a priority for the municipality,” the large majority expressed optimism and enthusiasm about their activities in support of their CiRM goals.

Measures of CiRM impact and effectiveness (C20) listed by respondents included specific reports, measures and activities. Almost all respondents (96%) listed multiple hard and soft measures. Hard measures included call volumes, other process measures, customer surveys, response times, and financial metrics. Soft measures included observations of outcomes, informal citizen feedback and discussions, general satisfaction, and internal progress on improvements. Some responses concerned the maturity of measurement, differentiating between the availability of measurement data and understanding the impact and outcomes, and also distinguishing between, for example, their call centre’s capacity to route calls and its capacity to help resolve citizens’ issues. Many comments suggested a difference between and difficulty with measuring activities, such as citizen interactions, and measuring effectiveness, for example, “We don't know how to measure [effectiveness]; we can be communicating, but we really don't know.” Another participant, after listing several measures, reports and processes, pondered the matter further, and said, “Good question!” in an apparent dissatisfaction with the existing measures.

Most respondents described CiRM development initiatives underway, which, despite a high priority ranking, were plagued with slow and lengthy implementation and low perceptions of effectiveness. The perceived barriers, including lack of corporate awareness and IT resistance to change, appeared to be misaligned with respondents’ lofty ratings of IT capacity for change described above. Further, the perceived overestimation of resource requirements was in contrast to the lack of resources cited as an ICT barrier. Another key gap was lack of organisational support perceived in contrast to individuals’ CiRM-oriented activities and personal optimism. Discussion around the proliferation of measures led to numerous expressions of gaps and deficiencies.

4.4.4 Participatory CiRM

Respondents’ perspectives on the participatory value of CiRM was explored across four areas including value by participatory function, level of understanding of analytics, value by measurement function, and interest in social networking. These expanded on the value ratings given in C07, thereby enhancing both the construct validity of the questionnaire and insight gained into respondents’

perspectives. For simplicity in this Subsection, the term “customer” was applied to citizens in the context of municipal-citizen interactions, paralleling the language of e- e-government described in Subsection 2.2.2.

CiRM value by participatory function (C21) was rated across five types of citizen engagements that represented increasing depth of engagement progressing down the provided list. CiRM participatory value was rated high overall (4.4 average), with average ratings for each engagement type declining as listed:

- E-Government – 4.7 (transactions, call handling, services delivery)
- General participation – 4.7 (information sharing, enquiry response, satisfaction monitoring)
- Citizen engagement – 4.4 (citizen involvement in community development and groups)
- Social or community engagement – 4 (planning, decisions, action committees, networking)
- Social capital – 4 (citizen-based community evaluations, visioning and leadership)

The decline in average scores suggest an inverse relationship between the perceived participatory value of CiRM and the participatory depth of the engagement function. A moderate number of comments were offered, focusing mostly on the latter three types, reflecting two dominant perspectives. The first perspective focused on barriers, either with IT or with envisioning the functionality, while the second emphasised the need for social media management tools and “digital democracy.”

Respondents rated their understanding of CiRM analytics as low (2.4), ranging broadly across the scale. One individual commented on “seeing how it would be useful” while another elaborated on an Environics Research Group study that categorized citizens into profile groups.

CiRM value by measurement function (C23) was rated across five areas of citizen measurement. The overall rating for CiRM usefulness was high to very high (4.2 average) with average ratings for each area as listed:

- Understanding citizen needs – 4.6 average
- Helping to respond to emergencies – 4.2
- Rating overall citizen satisfaction – 4.2
- Evaluating municipal services delivery – 4.3
- Evaluating community development outcomes – 4.2

A moderate number of comments were made that crossed a range of issues. Several indicated a lack of understanding, or simply a list of desired participatory functions and urgencies rather than measures. Others highlighted the difficulties of establishing valid measures, particularly of satisfaction rather than just operational outcomes, and of potential for manipulation. A third area of

concern was management issues, including citizen adoption and excessive data accumulation. A few commenters with high ratings pointed to existing studies and approaches, and a high priority to “do anything for emergencies.” The responses generally reflected a low capacity for implementing participatory measures.

Interest in use of social networking technologies for their municipality (C24) was rated high (4.4). Respondents commented knowledgeably about social media (SM) applications suitable to engaging citizens (C25), and about the potential of social networking to reach younger people. Respondents highlighted a broad range of barriers and concerns related to SM (C26), including the many different departments and programs needing coverage, the unknown resources, management tools and policies needed, the difficulty in working to a “bottom line” unlike corporations, a latent preference for “face-to-face” meetings, and the unknown effects in time and impact of speed of communication. One respondent commented that despite the barrier of their municipality being “very static, CiRM could bring life to local government.”

In summary, the visions for CiRM as a citizen relationship and customer service support technology resonated very strongly with most respondents. However, CiRM was not identified as a primary participatory technological approach, nor as integral to the strategic planning pillars, and most respondents expressed no familiarity with CiRM primarily as a management approach to enabling deep public participation. Throughout the interview, respondents appeared to gain insight, awareness of, and enthusiasm for the concept of CiRM as public participation technology. The strong need for increased public participation as evidenced and high regard for the benefits of technology applications found expression in the concept of CiRM, despite the general lack of formal CiRM concepts and terminology. An intuitive understanding of participatory concepts was accompanied by a high understanding of the potential utility of CiRM, particularly with respect to engagement (C21), and less on reporting (C23). Some respondents wondered why CiRM was not already being used for public participation, others expressed strong interest to learn more, and others just thought the idea of CiRM “or something like it is obvious.”

4.5 Summary of observations

In general, to summarise the above responses, public participation was perceived by the LRG decision makers interviewed as an important and strategic imperative, central to formation of future direction, and integral to municipal decision processes and customer service improvement.

Participants consistently expressed desires for broader and deeper citizen engagement throughout the

interviews, particularly through the adoption of current social technologies. However, a significant degree of uncertainty was expressed about the directions and the paths that might be taken to achieve public participation goals.

While respondents unanimously acknowledged the strategic importance of information technologies in municipal governance and their potential for enabling participation, they described a broad range of technology solutions and approaches, but broadly included social networking, various media, and 311 or call centre technologies.

Notably, CiRM was generally not perceived as being among the primary public participation technologies. CiRM technologies were typically being implemented in the early stages of adoption or in limited production. CiRM was typically aimed at transactional or call centre applications and not as a means of managing citizen engagement.

Numerous summary comments were offered by respondents (C27), most notably two that represented the ends of the spectrum of perceptions. One respondent noted that a major barrier is “so many demands that without the ‘bottom line’ [corporate profit motive] pushing everything, there are many other demands. There’s no limit to the demands. We need staff and a political champion for this.” At the same time, “technology is giving us a huge opportunity that we haven't had before to find out what general citizens are thinking.”

One additional respondent’s insights summarized the challenges of participatory value of CiRM, “I’m trying to get [staff] to log all my calls, to know the number of calls per issue, to determine citizen ‘happiness.’ If people don't call, we assume they're happy but they may not be. It’s very hard to communicate with people. We've tried every way and it's absolutely impossible. People still don't know and don't understand. You have to do it one on one, and that's impossible for so many people for a city to run that way. If we change policy, it’s difficult to know the concerns of 1000's of people – if you don't know, you can't change it.”

While interview responses revealed minimal knowledge about CiRM functions, respondents revealed an intuitive understanding of the purpose of public participation technologies in various forms, and strongly supported ICT-empowered facilitation of public participation activities and citizen relationships. Similarly, the technological functions required to meet the public participation goals expressed by respondents closely matched those functions provided by CiRM. Hence, the concept of applying CiRM principles and systems resonated strongly with interview respondents.

The next chapter extends the results discussed in this chapter and outlines and summarises the research findings from the national online survey which follows the four topics outlined in the questionnaire.

Chapter 5

Phase 2 - Survey Research

This chapter summarizes the findings of the national phase of the research. The presentation of survey results differs from those discussed in Chapter 4 due to the design differences identified in Subsection 3.3.1. More specifically, some complex or lengthy interview questions, such as the open-ended questions, ratings comment fields attached to Likert-type rating scales, and multipart matrices, were simplified, truncated, or combined in the survey. Direct comparisons of the survey results with Chapter 4 interview results are therefore presented in this chapter only where relevant, while overall comparisons of results are presented in Chapter 6. This chapter begins with an overview of respondent demographics, and then summarises the online survey results according to the four PCM areas, namely, public participation, strategy, ICTs, and CiRM.

5.1 Respondent demographics

The online survey resulted in a total of 75 qualified respondents from 51 different municipalities across Canada. The respondents and municipal demographics are summarised in Table 5-1, listing the distribution of respondents across size of municipality by number of individuals and by number of unique municipalities. Additional demographics are illustrated in Appendix 8.1, Figure 8-1 to Figure 8-6, including respondent role, municipal population size, type of municipality, province, number of employees, and respondent education.

Population	I. Qty	%	M. Qty	%
> 1,000,000	1	1.3%	1	2%
> 500,000	6	8%	3	6%
> 100,000	17	23%	13	25%
> 50,000	36	48%	25	49%
< 50,000	15	20%	9	18%
Total	75	100%	51	100%

Table 5-1: Population Distributions (by individuals and municipalities)

Respondents represented an approximate 1:2 ratio of executive to administrative positions (see Figure 8-1). The 23 executive positions included seven Mayors, 14 councillors, and two others. The 52 administrative positions included 26 CAOs and 26 other senior administrative staff such as Deputy CAO, Clerk, Treasurer, Chief of Staff, and Communications Director. The resultant ratio of executive to administrative positions is a likely a result of the Federation of Canadian Municipalities (FCM) email list to CAOs (see Subsection 3.3.2), resulting in greater administrative responses, but is judged to provide an adequate representation of both strata.

The municipalities surveyed comprised populations ranging from 400 to over 1,000,000 residents with an average size of 105,000. Over 70% of these municipalities had populations between 50,000 and 500,000. The exact distributions of both individual respondents and of municipalities across population intervals are listed in Table 5-1 and also illustrated in Figure 8-2. These two distributions followed very similar patterns, which eliminated the need for discriminant analysis between these two samples. More specifically, the number of respondents in each population category represented a similar percentage of the total sample whether considered by ratio of unique municipalities or by individual respondents. An additional characteristic of the respondents' municipalities is that they generally represented the targeted size, being large enough to have the potential for both strategic planning and sophisticated ICT systems.

The 75 respondents represented 51 cities and towns (69%), three counties (4%), and the remainder Townships, Regions and amalgamations as illustrated in Figure 8-3. The majority of respondents (67) represented Ontario municipalities (89%), while the remainder responded from British Columbia (four), Alberta (two), New Brunswick (one), and Nova Scotia (one). The non-Ontario respondents disproportionately represent larger population centres, averaging 250,000, compared to Ontario respondents averaging 87,800, as illustrated in Figure 8-4.

Numbers of employees were indicated by 50 administrative respondents, with the majority distributed across the three categories up to 25 (22 respondents), 100 (17), and 1000 (nine), with two respondents over 2500 employees. Only 11 executives responded, reporting up to 1000 (six respondents) and over 2,500 (three), as illustrated in Figure 8-5.

Finally, 46 respondents had Bachelor degrees or above, including 12 Masters and one PhD. Only eight respondents indicated a high school education, and 21 college level. The ratios of executive to administrative positions for the Bachelor (9:17) and Masters (7:12) levels closely approximate the role ratio of the total sample.

The next section presents the findings of the public participation survey responses. As with Chapter 4, specific questions are noted in brackets where appropriate similar to the notation described in outlined in Section 3.2.2. For example, P01 refers to the first question in the participation section. Multi-part questions are identified by an additional letter, for example S05a. Further details are given in Appendix 8.5. Finally, significant gaps identified between pairs or groups of rating scale responses are supplemented by statistical tests as appropriate, as fully described in Appendix 8.8.

5.2 Public Participation

The public participation survey section examined municipal decision makers' perspectives across four topics, namely, vision and barriers, implementation, measuring and reporting, and improving participation.

5.2.1 Vision and Barriers

The results and observations related to the LRG decision makers' visions and perceived barriers to participation closely approximated the interview results presented in Chapter 4. Survey respondents' participatory visions were captured by overall ratings and descriptions of desired behaviours. Public participation was rated as "optimal" (P01) by only 34% of respondents. The concept of optimality in citizen engagement levels was found to resonate with interview respondents as described in Subsection 4.1.1, and is used in similarly in the survey. Notably, two thirds of these (22%) represented smaller municipalities (>100,000) who also exhibited low ratings for participation measurement (see P03d below). Indicating "optimal" levels of participation based on poor participation measurement raises a question about the actual basis for these optimal ratings. This same condition was also observed in Chapter 4 among a minority of interview respondents.

Respondents' descriptions of desired participatory behaviours (P02) were categorised evenly between organizational and citizen responsibilities for improving participation. The most frequently cited organizational responsibilities were poor communication, inappropriate "tools" and timing issues, as well as visions to improve dialogue, "creation of opportunities" and "encouragement of civic engagement" which is "something we need to work on." Citizen responsibilities predominantly included "increased knowledge," providing more "corrective feedback," overcoming "apathy" and having awareness, interest, and involvement in municipal matters. Notably, respondents' comments sided either with organizational or citizen responsibility, while no one offered a balanced perspective of mutual responsibility.

Barriers to improving public participation (P09) were mostly attributed to organisational factors (66% of responses). These included gaps in promotion and access, organisational processes, resources, and organisational commitment. Citizen factors accounted for 33% of the barriers, and underscored a lack of citizen interest and time.

5.2.2 Implementation

Respondents were asked to evaluate the implementation of public participation across five participatory factors, and also in terms of both organisational management functions and of measurement and reporting functions.

Five participatory factors (P03a-e) that integrated several key questions from Chapter 4 were rated. Four of the factors represented key participatory policy processes, including evaluating citizen satisfaction, prioritization, strategic planning, and measuring citizen engagement, while the fifth item was comparative to other municipalities. The majority of respondents (80%) rated public participation in the strategic plan as being of mid to high importance (P03b), which aligned with respondents' personal priority ratings in P01. However, only 24% of the respondents were confident (rating high or very high) that their municipality's participatory goals were linked to their strategic plan (P03c). Further, respondents' ratings of the strategic importance of public participation (P03b) are significantly different on average (see appendix 8.8.1 for significance test) from respondents' ratings of citizen satisfaction (P03a). While 58% of respondents rated strategic importance as high or very high, only 14% rated the importance of citizen satisfaction feedback as high or very high.

Similarly, measurement of participation was rated low to very low, both in terms of direct participation measures (P03d) and citizen satisfaction (P03a). Very few respondents rated these factors high or very high (8% and 14% respectively), with none rating direct measurement (P03d) as very high. Figure 5-1 illustrates the significant gap between the high strategic importance of public participation (P03b) and the low ratings of three implementation factors, namely links to strategic plan goals (P03c), public participation measurement (P03d), and citizen satisfaction feedback (P03a).

Respondents' comparative ratings of other municipalities (P03e) revealed the perception that these gaps extend beyond their own municipalities to all other similar municipalities. These results indicate a significant gap between the acknowledgement of the strategic importance of implementing public participation on the one hand, and knowing how to implement and evaluate public participation on the other hand. Current participatory methods were not perceived as bridging the gap in organisational participatory priorities.

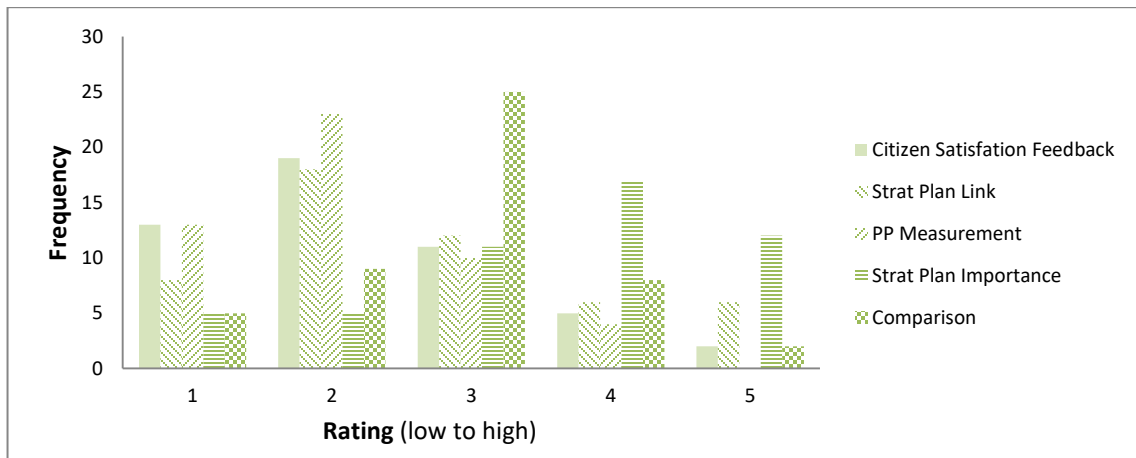


Figure 5-1: Public participation ratings (P03)

Participatory implementation was also examined in terms of management functions dedicated to implementing a participatory vision, namely, organisational policy manuals and processes (P04a), planning (P04b), and staffing (P04c). On average, only 16% of respondents, representing both small and large municipalities, indicated having these organizational resources either in place or in development for their public participation goals. Few respondents (14%) affirmed the existence or development of a manual, while 24% had a formal plan. Only 10% of the respondents had a public participation officer or similar, representing mostly smaller municipalities (<100K), and the position was specified as a “communications manager.” These findings closely approximated the interview results, and indicated a lack of substantive management support for participatory functions.

Implementation of measures and reports of participatory activities was explored in greater detail than during the interviews, specifically examining the existence of a dedicated participation report (P05), reporting frequencies (P06), reporting objects (P07), and report contents (P08). Only 4% of respondents affirmed the existence of dedicated public participation reports (P05), and the remainder (96%) indicated no dedicated report. The frequency of any participation reporting (P06), including non-dedicated reports, was mostly by event (36%), with little periodic reporting (8%), and comments by 18% of respondents indicated “never” formally reporting on participation.

Respondents were asked to describe participation reporting in terms of both the scope or objects of the reports (P07), as well as the detailed contents and measures in the reports (P08). The reporting objects (P07) primarily highlighted participatory events such as town hall meetings (28% of responses) and departmental communication activities (14%). Reporting on progress toward

participatory goals was negligible (1% of responses). Report contents (P08) included details of events (32% of participants), numbers of event participants (16%), and progress toward strategic goals (14%), with some respondents commenting that no reporting measures were used (8%). These data indicate that implementation of participatory measurement and reporting is very low, lack dedicated reports, and primarily focus on events rather than progress toward participation goals.

Overall, these implementation results indicate a general lack of formal organizational implementation applied to public participation as a strategic priority, showing that implementation gaps are widely shared across municipalities. As reflections of decision makers' perceptions, these results also indicate that these were known gaps, even if not adequately considered. Overall, the highly rated importance of citizen engagement was not reflected in planning goals, management functions, nor reports. These results closely approximate the interview results presented in Chapter 4. The strategic implementation gaps are explored further in the strategy section, which is discussed in Section 5.3.

5.2.3 Improving Public Participation

Survey participants' desires for more public participation was examined in terms of the municipal services area (P10), by type of technology (P11), and by an open response format question (P12). Most respondents desired more engagement (P10) in all three planning-related services, particularly strategic planning (selected by 75% of respondents), as well as urban planning (60%) and community planning (55%). Approximately 45% of respondents desired more engagement in environment, general services, volunteering, and municipal elections, while almost one third of respondents also supported increased participation in traditional municipal services such as water protection, transportation, and protective services. Citizen involvement in decision processes garnered the least support (25%), which exposed a misalignment of decision makers' understandings of citizen engagement in decision processes as the cornerstone of democracy, as highlighted in Section 2.1.

The emphasis on citizen involvement in all three planning processes was consistent with traditional and regulatory practices. Further, the high responses related to strategic planning reveal strong preferences for citizen-led visioning processes as distinct from a traditional consultant-produced strategic planning documents. This aligns with desires for the "early and informed" participation observed in the Chapter 4 interview results. The low desire for more involvement in traditional services shows a tendency toward conserving the status quo. The lowest support for more involvement was in municipal decision processes, which belied the highest efficacy value of citizen

engagement, that is, to impact positively on municipal decision processes. This dissonance parallels that of the interview respondents in Chapter 4 (see Subsection 4.1.2), where the general lack of clear participatory philosophy contributed to significant gaps between stated desires and identified participatory goals. A lack of participatory philosophy and appropriate strategy is consistent with organisational goals that diverge from citizen-centred core values.

Respondents expressed a desire for increased use of ICTs for participation (P11) in all municipal service areas. Decision makers preferred Internet “Web” technologies across all service areas identified in P10 (55% of responses), followed by other ICTs (32%), which include internal database programs. No additional ICTs were indicated in 9% of the responses, while only 5% of the respondents desired more CiRM-enabled participation. These results reflect the trend toward increased use of social media and are associated with a lack of awareness of participatory CiRM approaches.

More participatory ICTs were desired mostly in municipal elections and general services, and least in volunteering and water protection. The participatory service areas that were rated high in P10, particularly the planning functions, were ranked in P11 as mid to lower, indicating that ICT-enablement was perceived to be a less vital component, or had reached optimal or desired levels, for participation in these areas.

Respondents also provided open responses on how their municipality could facilitate more public participation (P12). Comments were divided between policy and infrastructure (66%), as well as facilitation, including meetings and improving access (33%). The policy responses emphasised processes and practice (42% of responses), interactive IT and online discussions (33%), and more strategic approaches and resources (25%). Comments highlighted the need to act on citizen responses, explain issues via position papers, explain reports that were posted, the need for creativity, and “getting away from what appears to be public engagement...[toward] more involved engagement.”

5.2.4 Public Participation Summary

The perceptions of citizen engagement as strategically very important and desires for more engagement across most municipal service areas were contrasted by significant implementation and measurement gaps, as well as an apparent protectionism of decision processes. Municipal decision makers perceived a dissonance between high strategic priority and suboptimal implementation of public participation. They also revealed an awareness of the deficiencies in formal organizational implementation in terms of staffing, procedures, planning, and measurement and reporting practices.

Improvement ideas emphasised organizational processes, information systems, and providing access to citizens for “deeper” citizen engagement, rather than citizen responsibility. These ideas spanned almost all municipal services areas except for decision processes, while ICT enablement favoured Web technologies over CiRM technologies, possibly reflecting a low awareness of CiRM for citizen engagement. A significant gap was revealed between the strategic importance of engaging citizens and knowing how to cultivate and evaluate public participation effectively. This dissonance reveals a gap not currently bridged by organisational participatory methods.

Respondents’ comments revealed a candid self-criticism about participatory deficiencies, equally expressed across all sizes of municipalities and positions of respondents. Responses were fairly consistent results across all question types in this section, whether rating scales, comments, and detailed selections, affirming internal validity of the survey questions. The comments expressed frustration and disappointment, while they lacked substantive consideration of participation in terms of organizational structure and strategic implementation.

5.3 Public Participation and Strategy

The previous section underscored the strategic importance of citizen participation, according to respondents, and the perceived gaps in participatory visioning and implementation processes. This section of the survey instrument reflected the strategy concepts presented in Chapter 2 by exploring the links between organisational strategy and public participation in terms of strategic planning, implementation, and reporting.

5.3.1 Strategic planning

LRG leaders’ familiarity with their strategic plans and perceptions of effectiveness, along with reflections on their participatory strategic plan pillars were examined in the strategic planning section of the survey. Most respondents (83%) indicated a high familiarity with their strategic plan (S01), while no respondents indicated a very low familiarity. Somewhat fewer respondents (63%) perceived a high effectiveness of the municipal strategic vision (S02a), while still fewer (44%) perceived their organisation to be highly proficient at strategic planning (S05a). (See appendix 8.8.2 for significance testing.) These data indicate a gap between effectiveness of strategic vision and strategic planning proficiency, wherein the effectiveness of the strategic vision is significantly higher than the capacity to execute upon that vision.

These results provide a validity baseline for further exploration of LRG leaders' perceptions of their organisational strategies.

Strategic "pillars" designate the key areas of importance in a strategic plan that support the strategic vision for an organization. Respondents identified an average of five pillars, or key initiatives, in their strategic plans (S03), with the majority (70%) identifying four to seven. The number of strategic pillars that explicitly prioritised public participation (S04) was significantly lower. The majority of responses indicated "none" (50% of respondents) or one pillar (37%), while 13% of responses included two to four pillars.

Most of the participatory pillars (84%) listed municipal issues such as economic and social development, environment, and healthy communities and lifestyles, which are indirect participatory goals and presumptive of citizen values. In contrast, only 16% of the responses were based on direct participatory pillars such as improved communication, engaged communities, or citizen responsiveness. The significant emphasis on indirect or presumptive rather than direct participatory initiatives illuminates a gap in citizen-centric strategic planning approaches. This was captured by the comment, "Citizen engagement is a pillar to my mind...ignored though." These data indicate a critical link between the lack of participatory goals included in the organisational strategic plan and the divergence from citizen-centred participatory priorities as revealed in Subsection 5.2.3.

Overall, the strategic planning survey responses reveal general familiarity with the concept of strategic pillars and proficiency in identifying participatory pillars. However, 50% of the respondents indicated no explicit participation pillars. This highlights a significant gap between the strategic priority ratings and the existence of participatory strategic initiatives.

5.3.2 Strategic Implementation

The links between organisational strategy and public participation were explored in terms of strategic implementation (S02), specifically across five organisational and four citizen factors. The ratings are on a five point scale from "strongly disagree" to "strongly agree," scored from 1 to 5, described as "low" to "high" respectively. The positive value of each of the factors was aligned with "strongly agree."

The five organizational factors of strategic implementation contribute to strategic planning effectiveness, which included formality of the strategic plan, comprehensiveness, measurable goals, plan usefulness for staff, and reporting. These factors approximate progressive stages in the strategic process continuum, from formulation to outcomes. Formality (S02b) was rated very high (4.4 average

score), reflecting that most strategic plans are in the form of written documents. Comprehensiveness (S02c) was also rated high (4.2) with measurable goals (S02e) being rated moderately (3.3). Usefulness of the plan to guide senior staff (S02f) and regular reporting to council (S02g) also received moderate ratings on average (3.6 and 3.4 respectively) as illustrated in Figure 5-2.

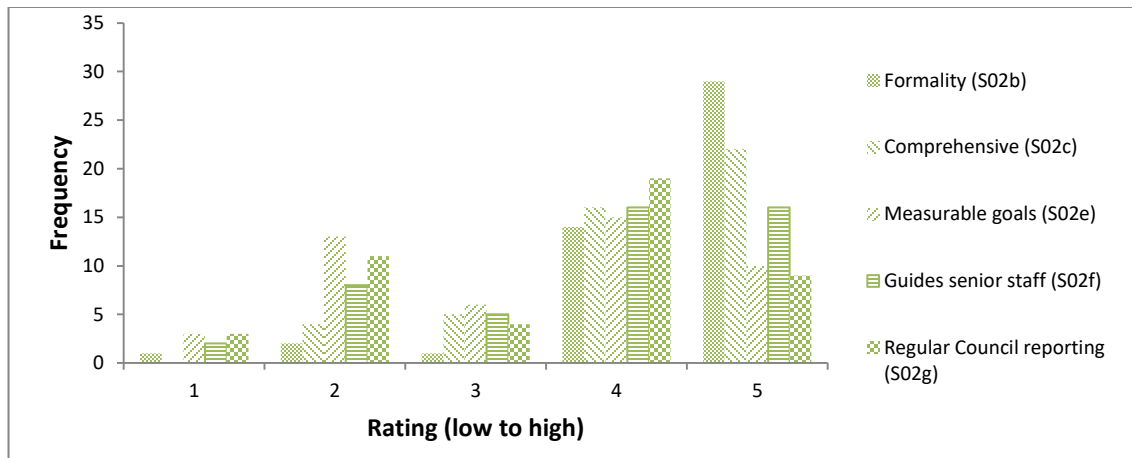


Figure 5-2: Strategic implementation factors - organizational

This bimodal distribution, as illustrated by the two peaks at low (score of 2) and high (4-5) with few moderate ratings, was evident across almost all organizational factors, and particularly so for measurable goals (S02e) and council reports (S02g). Respondents at the upper end of the scale represented larger-sized municipalities than those at the low end of the scale across all five organizational factors. These results suggest that some smaller municipalities are less confident in the organizational factors that account for their strategic effectiveness.

Four citizen-oriented factors of strategic implementation (S02) examined citizen consultation, measurement of citizen value, reporting to citizens, and convenient online availability to citizens. Similar to the organizational factors, these factors approximate progressive stages in the strategic planning process, from documentation to outcomes. Rating scores were moderate across the four factors, showing online availability rated highest (3.6 average) and measurement of citizen value lowest (2.6). Overall, citizen factors were rated lower than organizational factors. Similar to organizational factors, a bimodal response distribution was evident across citizen factors, as shown in Figure 5-3, which did not correspond with any of the demographic characteristics described in Section 5.1. These results indicate divergent perspectives within the sample on strategic effectiveness of citizen-oriented factors. Further research is needed to account for this divergence.

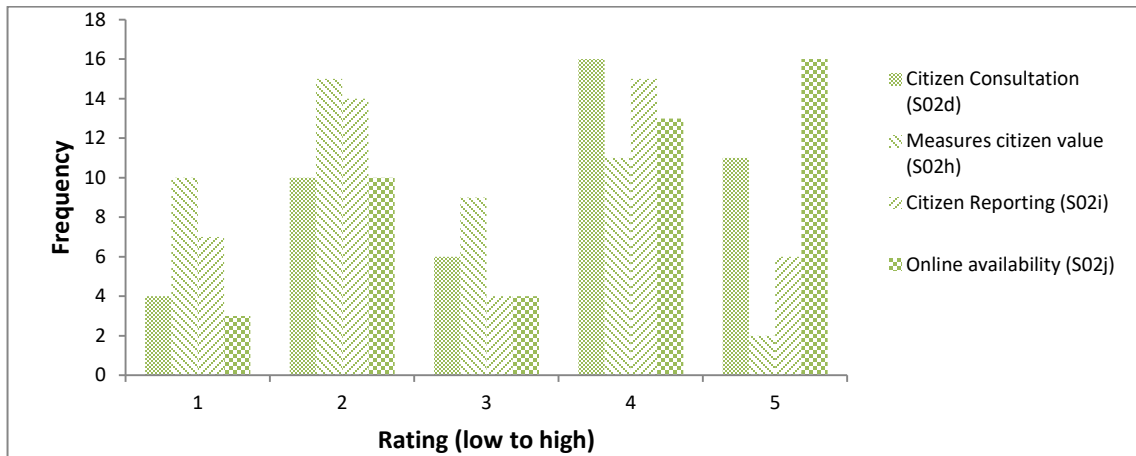


Figure 5-3: Strategic implementation factors - citizen

Further comparative analysis of these strategic implementation factors was conducted by selective statistical comparisons shown in appendices 8.8.3 through 8.8.5, and in the graphical comparisons shown and described below. First, strategic planning formality (S02b) and comprehensiveness (S02c) were the organisational factors that were each compared to citizen consultation (S02d). These comparisons indicate that respondents perceived the formality and comprehensiveness of their strategic visioning processes as insufficiently supported by citizen consultation. Second, comparison of the organisational factor “measuring strategic goals” (S02e) and “citizen value” outcomes (S02h) indicates that respondents perceived greater emphasis given to measuring organisational strategic goals rather than citizen value. Third, comparison of the organisational factor “strategic council reporting (S02g) and the citizen factor “citizen reporting” (S02i) indicates that respondents perceived significantly greater strategic emphasis given to reporting to council than to citizens. Altogether, these comparisons indicate that respondents rated organisational strategic implementation factors significantly higher than citizen factors.

The graphical comparisons help illustrate the gaps between the five organisational factors with the four citizen-oriented factors across three categories. The first category, namely plan formality, matched the organisational factor “formal document” (S02b) with the citizen-oriented factor “citizen availability” (S02j). The second category, engagement, matched the organisational factors “comprehensiveness” (S02c) and “staff guidance” (S02f) with the citizen-oriented factor “citizen consultation” (S02d). The third category, measurement and reporting, matched the organisational factors “goals measurement” (S02e) and “council reporting” (S02g) with the citizen-oriented factors “citizen value measurement” (S02h) and “citizens reporting” (S02i). The analysis was conducted by

calculating the “high proficiency ratings” as the percentage of “high” scores (>3) for each factor. The scores for pairs of factors within a category, for example, S02c and S02f, were combined by averaging the percentage of high scores. (Note that the results of this analysis were nearly identical to those that used average scores for each category as compared to high ratings.) The three categories roughly represent progressive steps, or a continuum, in strategic implementation processes, namely, planning, implementation, and outcomes measurement.

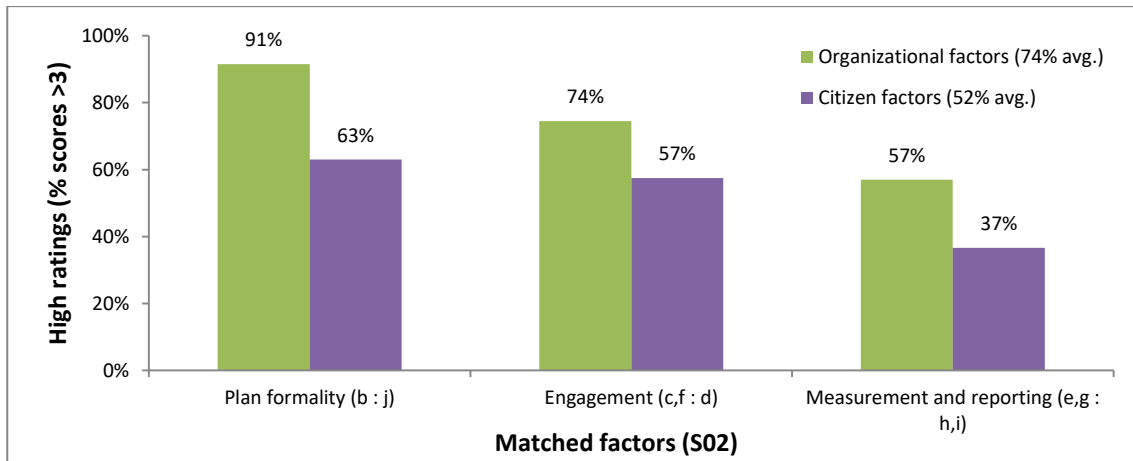


Figure 5-4: Comparative strategic implementation factor averages (S02)

The results of the comparative analysis of strategic implementation factors are illustrated in Figure 5-4. High proficiency ratings were shown to decline along the strategic implementation continuum from planning to measurement and reporting, similar to the participation section results. Further, citizen factors were rated lower overall than organizational factors by a significant margin with a 1 to 1.5 point difference in average scores. These data indicate implementation gaps in both organisational and, particularly, citizen factors. Further, these gaps increase as the strategic implementation cycle progresses from planning through to reporting.

Respondents rated other groups’ perceptions of the importance of public engagement (S06 a-e). These ratings helped to validate and further substantiate the priority ratings given above (P03b). Respondents perceived politicians as placing the highest importance on participation (4.3 average score), with 82% of respondents rating middle to high (score ≥ 3). Senior staff, citizens, and citizen groups all received similar scores (~ 3.5), while community businesses were rated 3.5 on average, with 51% of respondents indicating middle to high ratings (score ≥ 3).

Responses for all groups were similar by executives and administrators except for individual citizens which were rated 4.3 by executive and 3.5 by administrators. These results may have

reflected the role differences in relating to citizens. The overall average of ratings of importance given for all groups was 3.7.

5.3.3 Strategic measurement and reporting

Respondents generally perceived their organisations' proficiency with strategic measurement and reporting (S05b-g) as moderate to poor. Only one third of respondents (36%) rated overall strategic reporting proficiency (S05b) as high (> 3) with a 2.95 average score. Traditional internal process measures, namely efficiency (S05c) and effectiveness (S05d), were rated high by only one fifth of respondents with very moderate average scores (2.5 to 2.7). Similar results were observed in the ratings of citizen-oriented outcome measures including customer service (S05e), citizen satisfaction (S05f). Finally, measurement of citizen engagement activity (S05g) was perceived as least proficient, as only 10% of respondents rated high with an average score of 2.3. Overall ratings of the effectiveness of strategic implementation averaged 2.7.

These responses overall indicate a lower rating for reporting (S05) than planning (S02), confirming a greater confidence by decision makers in organisational visioning processes than in outcomes measurement. Further, decision makers demonstrate relatively low levels of confidence in each of the measurement areas, even in the traditional organizational areas of effectiveness and efficiency. Measurement confidence rating was lowest in measuring citizen engagement.

5.3.4 Strategy Summary

This section revealed that while decision makers were very familiar with their municipalities' strategic plans, significant gaps existed between municipal strategy and participatory implementation. LRG leaders' perceptions of organisational strategy align with the descriptions provided in Subsection 2.3.2, as the link between top level planning and operational activities and evaluation (Plant, 2009, 2010). However, respondents lacked an overall value focus and competitive analysis, as well as effectiveness in implementation and evaluation. They rated strategic effectiveness lower than optimal, particularly in examining key strategic processes related to participatory implementation, measurement and reporting, and also in citizen-centric strategic factors. A significant gap was evident in the general lack of participatory pillars in the strategic plans compared to their envisioned importance. This parallels the contrast between the overall average scores of importance (S06) and effectiveness (S05), at 3.8 and 2.7 respectively. Similar results were also observed between the high ratings of both strategic importance and formality and the low proficiency ratings in strategic

implementation and reporting. Lack of strategic implementation effectiveness is consistent with a misalignment between formal, rational mechanistic strategic processes and competing informal cognitive, management, and organic strategic processes, as identified in Subsection 2.3.1 (Hutzschenreuter & Kleindienst, 2006).

Significant gaps were also observed between ratings of organizational and citizen factors. The low ratings of organisational strategic processes, in both effectiveness and efficiency, revealed a lack of confidence in strategic measures, particularly in those related to citizen satisfaction, service, and citizen engagement specifically. Poor measurement, particularly as related to citizen-centricity, can stem from lack of value definition and identification of value generating activities (Saint-Onge & Armstrong, 2004). Further, citizen factor ratings declined from the planning (consultation) stage and across the implementation factors. These observed phenomena conflict with the emphasis in urban planning discussed in Subsections 2.3.1 and 2.3.2 on aligning value generating activities with citizen values and preferences through citizen engagement.

Finally, these data revealed significant gaps in organizational management capacity for citizen participation as observed across strategic planning, implementation, and measurement and reporting. These results demonstrate the limitations of one-dimensional evaluations of participatory methods, such as a ladder of power or IAP2 described in Subsection 2.1.2. Instead, an organisational approach to evaluating participatory effectiveness easily resonated with LRG leaders by framing participatory effectiveness in terms of specific organisational planning and management processes. The linkages between organisational strategy and public participation are thereby affirmed in terms of strategic planning, implementation, and reporting. The next section presents the ICT survey results.

5.4 Public Participation and ICT capabilities

This section of the survey examined respondents' perspectives on ICTs as strategic mechanisms and core services delivery platforms that underpin most organizational processes, as discussed in Chapter 2. This perspective explored user-facing application software, computing hardware, networking and operating systems. Similar to the preceding sections, the observations sought to discriminate between vision and perceived outcomes, as well as the degree of citizen orientation reflected in the ICT outcomes. These results are presented next in terms of ICT visioning, implementation, and effectiveness.

5.4.1 ICT visioning

The ICT visioning subsection explored LRG leaders' familiarity with their ICTs, as well as their visions for ICTs in terms of approach, goals, and barriers.

Half of the respondents indicated a high familiarity with their municipal ICTs (I01a), while another 36% indicated moderate familiarity. Two thirds of the respondents indicated a high strategic importance of their ICTs (I01b), with another 20% as moderate. More importantly, respondents rated ICT strategic importance (I01b) as significantly higher than ICT customer satisfaction (I01f). (See significance test in appendix 8.8.6.) This result infers that respondents that ICT customer satisfaction as significantly lagging ICT strategic importance. These ICT familiarity and strategic importance ratings further provided a validity baseline and a focus for exploring the remaining responses in this section by suggesting that respondents had sufficient familiarity and regarded ICTs as strategically important enough to provide meaningful responses.

Respondents' perceptions of their organizations' predominant approaches to ICTs were explored in terms of the internal versus external focus of their existing systems (I02), and also of their preferred approach (I03). Most respondents (88%) indicated that their existing IT systems were internally focused on internal customers, efficiencies, or user support. Only 12% perceived an ICT approach that was externally oriented on either products or customers. These results indicated a strong tendency toward an internally-focused IT approach which is misaligned with an externally-focused, citizen-centric approach. Further, the polarity of responses indicated that the internal versus external distinction in ICT approach resonated strongly with survey respondents as a reflection of strategic priorities relating to participatory capacity.

Most respondents (68%) preferred a change in ICT approach (I03) toward a more externally-oriented approach from an internal approach. Further, 28% of respondents preferred no change in preference from their current approach, while only 3% preferred a shift from an external to an internally-oriented approach. A desire for a more external, or citizen-centric, ICT approach, combined with their perceptions of the strategic importance of ICTs, aligns with decision-makers' emphasis on public participation as a strategic priority.

Survey participants briefly described their top ICT goals (I05) and barriers to achieving these goals (I06). The goals were analysed according to the textual analysis methods described in Chapter 3 and resulted in four dominant themes, namely, citizen support (39% of responses), software and systems development (28%), ICT strategy and governance (22%), and resources and efficiency enhancements (11%). Examples of the citizen support goals cited include improving responsiveness

to citizens, understanding citizen preferences, advancing “open government,” and enhancing citizen engagement, relationships and satisfaction preferences.

Similarly, the descriptions of ICT barriers (I06) resulted in four main themes including resource constraints including time, funding and data (54% of responses), structural issues including strategy and culture (26%), governance and policies (15%), and outdated software and systems (5%). The broad range of structural issues included security concerns, lack of response by technical staff, “technie” mindsets, lack of urgency, internal politics, user adoption concerns, lack of shared vision, and selecting and finding support for appropriate technologies amongst rapid change.

The emphasis on citizen support goals aligned with decision makers’ stated preferences for more external or citizen-focused ICT approaches, as well as the earlier stated desires for more public participation in almost all municipal service areas. However, these ICT goals were insufficiently supported by the system effectiveness ratings noted above. In particular, the software and systems goals (28%), which are resource-intensive and dependent on strategic direction in order to achieve effectiveness, faced the largest set of barriers. In contrast, the ICT strategy and governance goals (22%) are less resource-based than process and policy intensive.

These data illuminate a misalignment between identified ICT goals and perceived barriers. The majority of ICT barriers are resource constraints relate to the software and systems goals noted above, which do not constitute the majority of goals. Similarly, the lesser structural barriers (26%) relate most directly to the majority of goals, namely, citizen support (39%). These mismatches suggest perceptual gaps by decision makers that overemphasise the resource barriers in order to achieve a lower priority set of ICT goals, while minimizing the strategic barriers that would contribute to the higher priority citizen support goals for ICTs.

5.4.2 ICT Implementation

Participants rated the implementation of their ICT functions as moderate overall, and significantly different than both strategic importance and ICT customer satisfaction. Three implementation factors, namely, responsiveness (I01c), technical implementation (I01d), and user adoption (I01e) resulted in average scores of 3 – 3.4. Respondents indicated that their systems performed comparably or slightly better than other municipalities (I01g). Additionally, LRG capacity for measuring ICT-customer satisfaction (I01f) resulted in the lowest average rating (2.2), with only 7% of responses rated as high.

These implementation factors (I01c-e, g) were graphically compared against both strategic importance of ICT (I01b) and ICT customer satisfaction (I01f). Figure 5-5 plots the distributions of the ICT system ratings, specifically the implementation factors, along with the ICT-customer satisfaction (I01f) and strategic importance ratings (I01b) for comparison. Significant gaps can be observed between median ratings of each of the three implementation factors (I01c-e) compared to strategic importance of ICTs (I01b). These observations indicate that respondents perceived that implementation factors were lagging the strategic importance of ICT, particularly their municipalities' levels of responsiveness to ICT changes, implementation success, and user adoption.

Variations between all four implementation factors (I01c-e, g) compared to respondents' ratings of ICT customer satisfaction (I01f) can be observed. These variations indicate that respondents perceived that customer satisfaction related to municipal ICTs was significantly lagging all four implementation factors. Further, variations between the high strategic importance of ICT and both the implementation ratings and ICT-customer satisfaction are evident, reflecting the 1.6 difference in the scores.

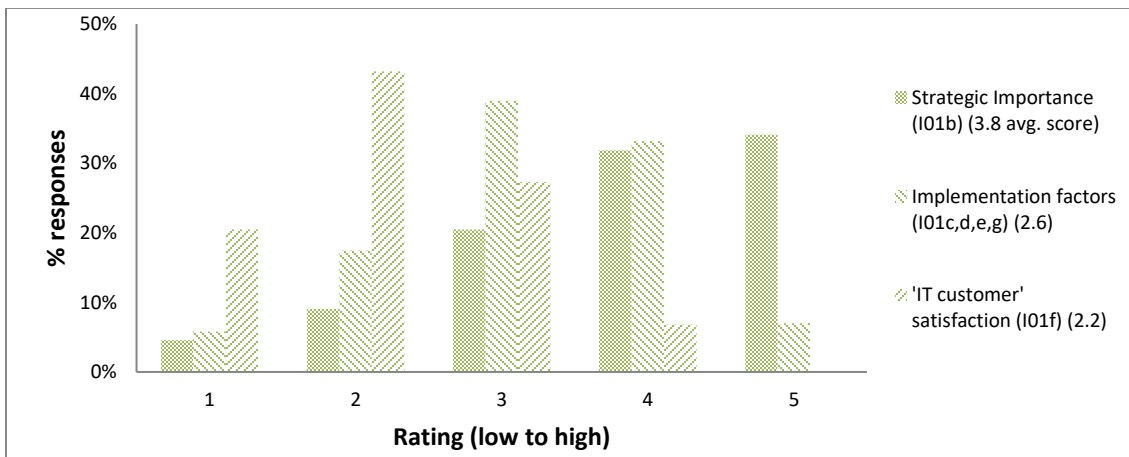


Figure 5-5: ICT System Ratings (I01)

These observations demonstrate a significant gap between strategic importance on the one hand and on the other hand the poor implementation outcomes as defined by ICT customers. These phenomena are consistent with a misaligned ICT approach as evidenced in Subsection 5.4.1, where the internally focused approaches conflicted with LRG leaders' visions for externally focused approaches. They are also consistent with the mismatch of goals and barriers described above. These results are also seen to build upon and amplify the strategic misalignment evidenced in Section 5.3 where strategic goals lacked value definition as well as implementation effectiveness in integrating

strategic priorities with organisational processes. Further, respondents strongly agreed that other municipalities ICT implementations were similar to their own.

5.4.3 ICT effectiveness ratings

LRG decision makers rated 12 attributes of ICT effectiveness (I04) based upon the cross-section of concepts discussed in Section 2.2. The attributes constituted a blend of information processing, reporting, and analytical functions relevant to both organisational management and citizen engagement. The attributes were framed within survey participants' perceptions of non-technical ICT functions and outcomes rather than on technical knowledge. ICT effectiveness was examined in terms of transactional effectiveness, citizen democracy analysis, and relationality analysis.

The overall ICT ratings indicated higher effectiveness in transactional ICT functions over citizen-oriented functions. The rating scores were moderate, averaging from 1.6 to 3.1 across each of the 12 attributes. The highest ratings, ranging from 2.6 to 3.1, suggested that ICT functions are perceived as critical and effective roles in information functions such as transaction processing and reporting, 311 services and citizen enquiries, and managing communications and internal administration. In contrast, the lowest scores ranged from 1.6 to 2.1, which pertained to social networking, reporting citizen preferences, relationship management, policy formation and evaluating citizen satisfaction. ICT effectiveness was rated higher in traditional, transactional organisational information processing functions, and lower in functions pertaining to evaluation and citizen relations.

ICT effectiveness attribute (I04)	Average scores	% >=3
a. Transaction processing	2.8	69%
b. Citizen enquiries	3.1	73%
c. Citizen mass communications	2.6	56%
d. Social networking	2.0	33%
e. Report citizen preferences	1.9	36%
f. Evaluate services	2.1	35%
g. Evaluate citizen satisfaction	1.6	16%
h. Policy development	2.0	35%
i. Citizen knowledge base	3.0	64%
j. Internal administration	2.6	58%
k. Reporting & information	2.7	69%
l. Manage relationships	2.1	33%

Table 5-2: ICT effectiveness attribute results (I04)

These data were analysed further to compare the effectiveness of ICTs on a continuum of citizen democracy as suggested by the seven categories of e-government methods described in Subsection 2.2.3 (Anttiroiko, 2004). These 12 attributes of ICT effectiveness (I04) were each matched to one of the categories and sequenced according to degree of citizen democracy as described in detail in Appendix 8.2. The percentage of mid to high ratings (≥ 3) out of all responses was then calculated for each attribute. Figure 5-6 plots the results of the analysis, ordering the twelve attributes of effectiveness from left to right according to the degree of citizen democracy.

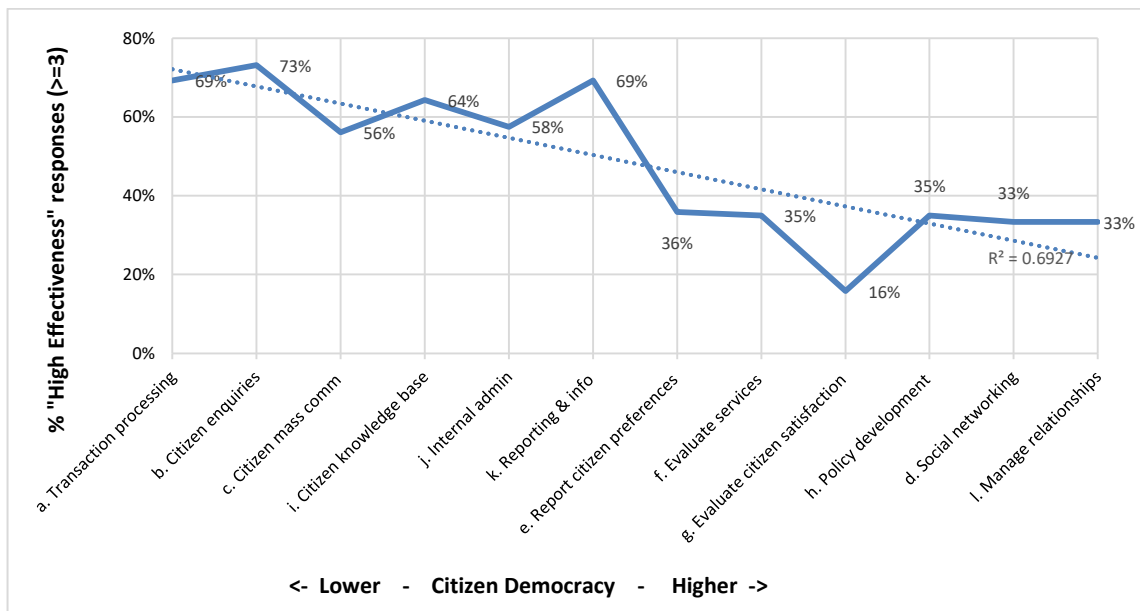


Figure 5-6: ICT Effectiveness ratings by degree of citizen democracy

Figure 5-6 illustrates an inverse correlation between the ICT effectiveness and degree of citizen democracy. The trend line demonstrates more than a 50% gap in the degree of citizen democracy across the attributes of ICT effectiveness. These data gave evidence of the decision makers' perceived low effectiveness of ICT in support of citizen democracy functions, which contrasts with decision makers' emphases on the strategic importance of both ICTs and public participation.

The effectiveness of ICTs was further analysed on a continuum of *relationality* by adapting the citizen democracy analysis to the relationship metaphor described in Subsections 2.3.1 and 2.4.7. The cognitive perspective of strategic implementation frames public participation within the strategic metaphor of citizen relationships and builds on decision makers' cognitive need for strategic sense making in complex environments described in Subsection 2.3.1 (Narayanan, et al., 2011). It was also identified as a key determinant of strategic cognition and responsiveness of decision makers to

stakeholder concerns (Bundy, et al., 2013). Relationality was described in Subsection 2.4.7 as a quantifiable perspective, and is quantified here using the percentage of high scores (≥ 3) across the 12 ICT effectiveness attributes (Pan, et al., 2006). Building upon these organisational concepts from Chapter 2, the 12 ICT effectiveness attributes (I04) were sequenced for relationality based on the extent to which the attribute likely represents transactional versus relational functions. Additional details about the sequencing methodology are described in Appendix 8.2. Figure 5-7 illustrates the results of the analysis, plotting the twelve areas of effectiveness ordered from left to right according to the estimated degree of transactionality versus relationality.

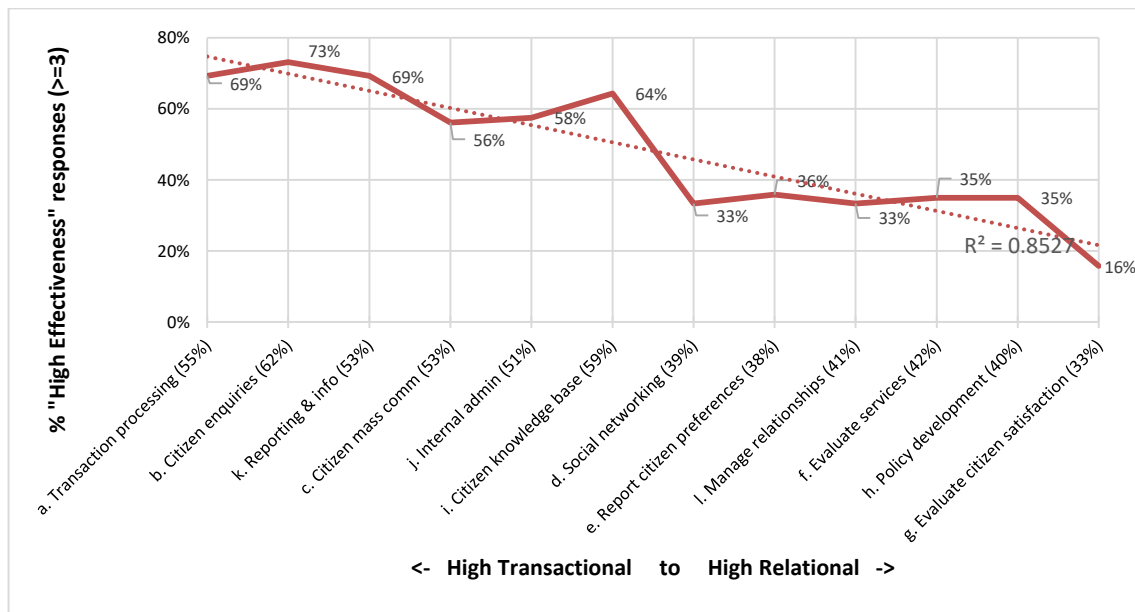


Figure 5-7: IT Effectiveness ratings by degree of relationality

The results illustrate that the ICT effectiveness responses correlate directly with the degree of transactionality (high of 73%) of the respective attributes, and inversely with the degree of relationality (low of 16%). The trend line indicated a gap of more the 50% across the attributes of ICT effectiveness. These gaps in scores between the transactional and relational orientations were evidence of decision makers' perceived effectiveness of ICT in support of transactional functions over citizen relationship functions. These results contrast with decision makers' emphasis on the strategic importance of citizen-centricity in both IT approach and public participation vision.

5.4.4 ICT Summary

The ICT section results reveal that decision makers place high strategic priority on ICTs for organizational and public services functions, but significant gaps exist between the vision for ICTs and perceived effectiveness. Further gaps are evident between desired and perceived ICT approach, as well as between stated goals and perceived barriers.

Analysis of the effectiveness ratings further reveal that perceived effectiveness is correlated with transactional functions and inversely with relational functions with more than a 50% gap in high ratings across the evaluated areas. The citizen democracy analysis of the effectiveness areas revealed a similar gap. Finally, the majority of stated goals are related to citizen support functions, whereas the primary barriers are resource related, which supports the lower priority given to software and system goals. The following section outlines the results of the CiRM component of the survey research.

5.5 Public Participation and CiRM

This section of the survey examined LRG decision makers' perspectives on CiRM generally in terms of value and vision, implementation, participatory functions. Participants' CiRM familiarity and experience is first assessed to provide a validity baseline for interpretation of results.

5.5.1 CiRM value and vision

Participants' perspectives on CiRM value and vision are explored across five areas, namely, familiarity, experience, purpose, estimated value, and vision. Although a basic level of familiarity was assumed in the survey, the assessment of familiarity and experience with CiRM helps to frame and validate participants' responses better in the remainder of the survey.

Respondents' familiarity with CiRM was rated low (C01), with an average score of 1.7. As illustrated in Figure 5-8 (A), 66% of respondents rated familiarity very low, while 24% rated moderate to very high (≥ 3). There was no difference in familiarity ratings between respondents' roles. CiRM was generally unfamiliar to these LRG leaders, thus, the remaining survey responses were deemed to represent opinions of non-experts in CiRM.

Respondents' experiences with CiRM spanned both the private and public sectors (C02). As illustrated in Figure 5-8 (B), just over half of all respondents indicated some level of CiRM experience, the majority being in the public sector. The low CiRM familiarity ratings were qualified by experience levels that lead to the observation that respondents did not feel knowledgeable about CiRM despite having used it.

Based on their familiarity and experiences, respondents described their understanding of the purpose of CiRM (C03). Textual analysis, as described in Chapter 3, identified four primary themes, namely, relationships and communications (31% of participants), organisational and transactional management (19%), measurement of satisfaction and value (6%), and management of resources (4%).

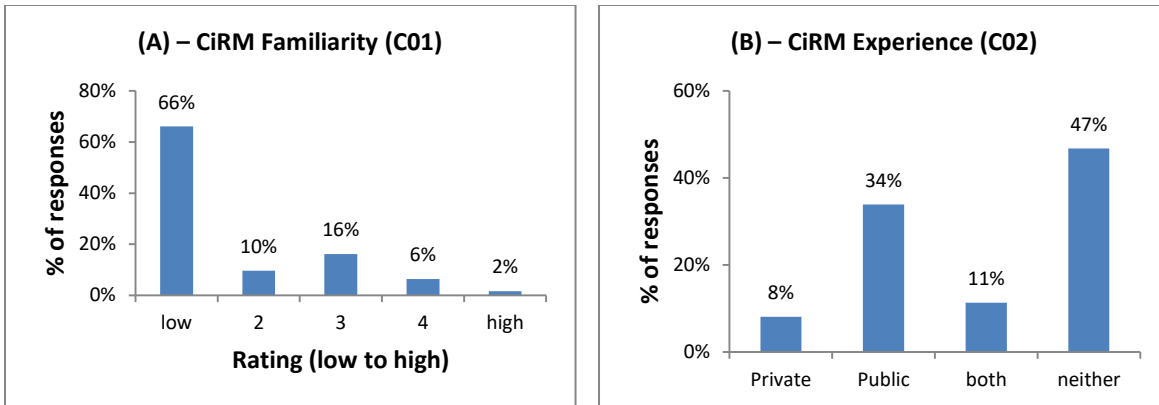


Figure 5-8: CiRM Familiarity and Experience (A – C01; B – C02)

The remainder of responses (40%) indicated no understanding of purpose. These respondents all indicated very low CiRM familiarity (C01), and included comments such as “Never heard this term before but certainly use the principles from the given definition.” This disparity between understanding and application of CiRM principles is significant as an explanation for the growing awareness and resonance of the PCM model components. Specifically, these responses are evidence of a lack of practical understanding of the conceptual models that are necessary for the effective strategic implementation of CiRM. This dissonance is evident despite an intuitive sense of citizen relationship principles and methods as a way of doing business, as described by Silverman (2001) in Subsection 2.5.1.

The largest category of positive responses described the relational capabilities of CiRM, while the next largest category identified the transactional capabilities of CiRM, which are dominant CiRM themes discussed in Chapter 2. The measurement theme, accounting for 6% of responses, closely approximated the given description of CiRM, and was comprised of respondents with a very low CiRM familiarity rating (C01), which possibly reveals a response bias based on the provided description.

The resources theme represented only 4% of respondents, who indicated both high levels of CiRM familiarity (70% in this group) and experience in both the private and public sectors (C02). The descriptions included such purposes as management of resources and maximizing outputs.

Observations from this theme of responses were of CiRM as a “very robust solution” for improving LRG process efficiencies.

Several respondents described specific management functions or software programs in use. Others focused on relational aspects such as getting input from stakeholders, creating “two-way conversations,” and citizen interactions. One comment cited, “To enhance civic engagement and satisfaction with local government, allowing [the municipality] to deliver on its promise.” The diversity of responses confirmed that respondents did not merely refer to the CiRM definition given in the survey. The strong emphasis on relational purposes for CiRM aligned with the deep citizen engagement model outlined in Chapter 2, and also with participants’ responses for more and deeper public participation as evidenced in Subsection 5.2.3. Despite their lack of CiRM familiarity, half of the respondents exhibited an understanding of purposes that were consistent either with their stated participation goals or with their existing use of CiRM.

Most respondents (87%) indicated some perceived value of CiRM (C04). Over one third of the respondents (35%) definitely affirmed its value, 52% partially affirmed (“maybe”), and the remaining 13% indicated no perceived value. Larger municipalities tended to affirm more readily the value of CiRM. Positive affirmations represented municipal populations averaging 132,000, partial affirmations 57,000, and negative affirmations 7,000. The population ranges within each response category also confirmed the trend toward higher perceived CiRM value for larger municipalities.

The question of response bias was considered in terms of whether respondents may have been positively influenced by the preceding questions thereby elevating the perceived value of CiRM. However, the survey questions relied on the capacities of these key decision-makers to assimilate contextual information for considered decision making. Specifically, by considering their experiences (C02) and CiRM purposes (C03), decision makers were able to contextualize more accurately the potential value of CiRM, thereby leading to more considered and accurate responses as opposed to a response bias. This phenomenon clearly aligned with the observation of a lack of practical understanding of CiRM contrasting with an intuitive sense of the citizen relationship principles noted above.

Participants’ descriptions of their visions for CiRM (C08) led to seven dominant themes in two main categories. The first category, namely strategic themes, comprised 42% of responses, and included engagement and governance (31%), citizen relationships (8%) and data analysis (3%). The theme of engagement and governance emphasised the importance of a variety of citizen engagement and communications functions in municipal governance. Descriptions included a “combination of

services” and technologies, implemented as “an important part of governing,” “more and better learning,” and “going beyond e-government and call centre customer relationship management to incorporate a full gamut of public participation, citizen engagement and social media.” The relationship descriptions emphasised “improving experiences of our citizens” and critiques of current poor approaches and relationships with citizens.

The second main category, namely transactional themes, included information sharing (8%) and accessibility and citizen services (7%). These themes described traditional one-way communication and tracking and reporting of citizen requests. The remaining responses were none (27%), or comments without a vision (15%), such as “we’ve been practicing CRM since the City was incorporated [158 years]...it’s simply a tool” and “I do see this as a possible benefit to our municipality and I would like to have a test program started.”

The greater emphasis on strategic vision than on transactional themes and the supporting comments were consistent with earlier findings of decision makers’ desires for more and deeper participation. The range of descriptions aligned with the modes of deeper engagement examined in Chapter 2, and thereby provide an explicit rendering of participatory visions held by decision makers.

5.5.2 CiRM implementation

This subsection explores respondents’ perceptions of their existing CiRM implementations in terms of CiRM usefulness ratings, implementation status, and scope of use. Survey respondent attrition occurred at the start of this subsection, reducing the number of respondents to 43 from the base of 75 respondents.

The impact of attrition was considered and factored into the interpretation of results, particularly in terms of the survey sample target and the sample characteristics of these remaining respondents compared to the total original sample. The key sample characteristics did not change significantly except for minimally higher responses for the “value of CiRM” (C04). The survey sample target focused on participants with CiRM interest, knowledge or experience at their municipality. Participants who dropped out indicated little familiarity with CiRM, and were therefore correctly filtered for the purposes of this subsection. The demographic characteristics of the remaining participants were similar to the original sample, according to the following sample analysis. Two primary characteristics were considered. First was the ratio of the administrative to executive positions, which remained unchanged at 2:1. The second characteristic was the average populations of

municipalities represented in each sample, which dropped slightly from 105,000 for the total original sample to 96,000 for the remaining respondents.

Finally, a comparison of question C04 (estimated value of CiRM) responses for each sample were similar. The response percentage changes were less 10%, as were the changes in average population in each response category. Table 5-3 shows the C04 CiRM value responses between the original sample (sample') and the smaller sample (sample'').

C04 Response	Sample' response %	Average population'	Sample'' response %	Average population''
“Yes”	35%	132,000	44%	137,000
“Maybe”	52%	57,000	56%	63,000
“No”	13%	7,000	0%	n/a

Table 5-3: "CiRM Value" response comparison between sample' and sample''

These respondents' ratings of CiRM usefulness (C09) were moderate, averaging 60% overall, and distributed as shown in Figure 5-9. Moderate to high ratings (≥ 3) comprise 71% of responses. Average usefulness ratings between administrative and executive respondents are similar, with scores of 3.1 and 3.0 respectively.

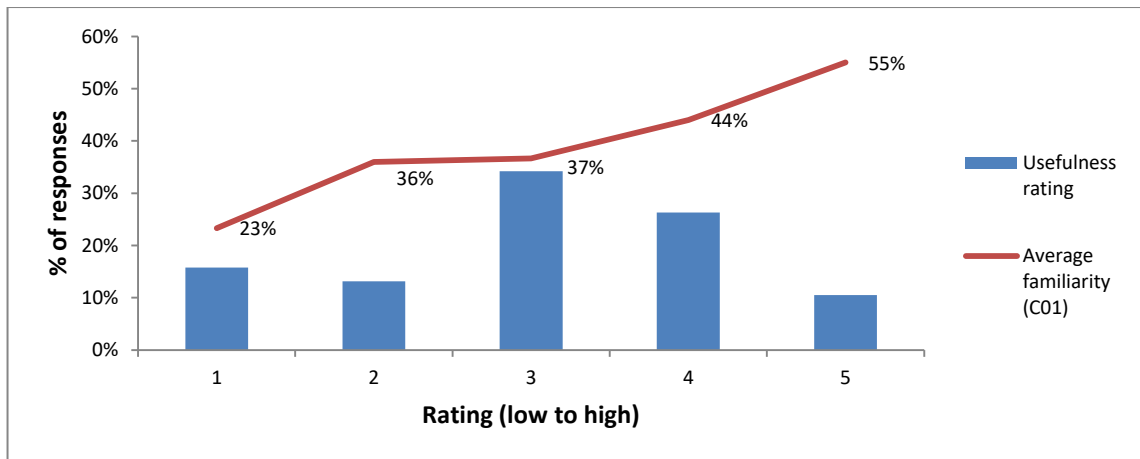


Figure 5-9: Comparison of CiRM familiarity (C01) and usefulness (C09) ratings

The moderate usefulness ratings, and particularly the 29% of low ratings (≤ 2) in Figure 5-9, may indicate a skepticism toward CiRM due to unfamiliarity. Note that these respondents more highly value or have a greater interest in CiRM than the original sample reflected in their C04 responses. Further, the low ratings among this positively-disposed subsample may have resulted from

decision makers who were looking for participation solutions while having little perspective on CiRM's participatory potential. The comparison of CiRM usefulness ratings (C09) to average respondents' CiRM familiarity (C01) illustrated in Figure 5-9 supports this hypothesis. Degree of familiarity increases (by 32%) across the range of usefulness ratings as shown by the line graph.

The broad range of familiarity, particularly among those rating usefulness greater than 3, corresponds to the broad range participants' visions and desires indicated earlier. Respondents rating usefulness as very high indicated a significant range of familiarity. This indicates a high level of interest in participatory CiRM among some respondents despite their lack of knowledge about participatory CiRM methods.

CiRM implementation status further was examined in terms of stage of implementation (C07), progress toward achieving vision (C10), and duration of use (C11). Respondents indicated a range of CiRM implementation stages for their municipalities (C07). Approximately one fifth of the respondents (21%) indicated that CiRM was in limited or full use, while 12% indicated that CiRM was under consideration or pilot, and 66% indicated no implementation. The low rate of implementation indicated by respondents in this sample differs significantly from the much higher general statistics of CiRM usage cited in Chapter 2. One likely explanation is given by the interview phase of this research discussed in Chapter 4, suggesting that participants were not aware of their municipality's CiRM ownership. This further aligns with the descriptions in Section 2.4 of users being unaware of the terminology.

Participants' ratings of progress toward achieving their CiRM vision (C10) was moderate among CiRM users (2.7 average). Only 3% of responses rated progress as high, with no very high ratings. These results indicate a perceived gap between vision and outcomes, which is consistent with the results discussed in previous sections.

Municipalities using CiRM (C11) indicated an average duration of four years, the majority being over 5 years, and also a substantial number within one year as shown in Figure 5-10. The average population of these municipalities using CiRM was approximately 150,000, whereas municipalities in the piloting stages averaged under 50,000. One respondent entered a duration of 151 years, commenting as noted earlier, "Our municipality has been practicing CiRM since the City was incorporated. CiRM software is simply a tool that may assist in that process." This strategic view of CiRM aligns with a citizen-centric, relationship-based perspective of CiRM.

A comparison of scores for familiarity (C01), usefulness (C09), progress (C10), and duration (C11) led to several observations. First, respondents rated the usefulness of CiRM (C09) as

significantly higher than progress toward implementing their CiRM goals (C10) (see appendix 8.8.7 for significance test). This gap indicates that respondents' CiRM implementation progress is lagging their high ratings of CiRM usefulness are misaligned with their ratings of CiRM progress.

The second finding was that municipalities that were using CiRM showed only somewhat higher ratings (~ 1.0 average score) for familiarity, usefulness, and progress compared to the general sample. These nominal gaps may reflect low CiRM effectiveness, high transactionality, or other gaps already identified in the previous sections. Low CiRM effectiveness resulting from lack of strategic vision was described in the history of CiRM in Chapter 2, as was the tendency toward transactional implementations rather than citizen-centric usage.

Second, progress toward CiRM vision (C10) aligns with duration of use (C11), as illustrated in Figure 5-10. Steady progress appears to occur within the first five years of use, and again after seven years.

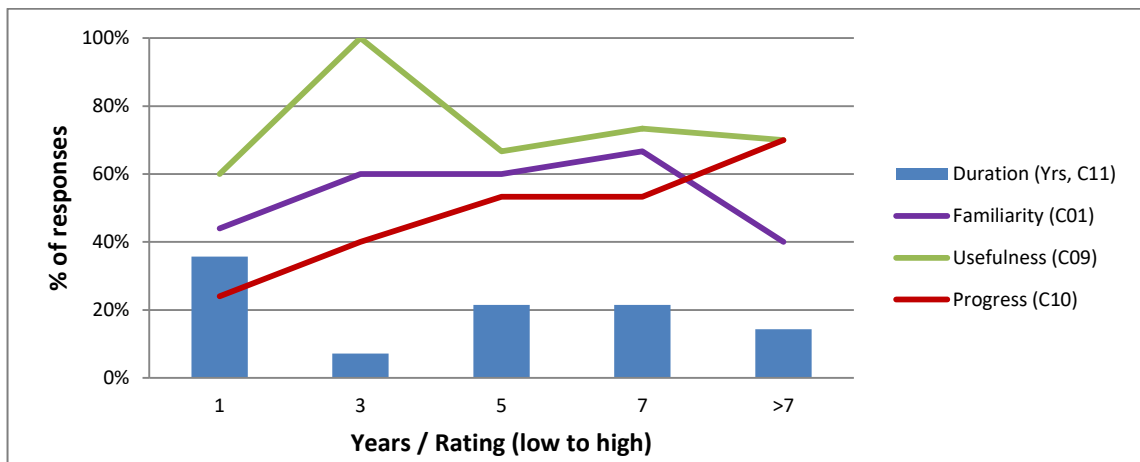


Figure 5-10: Duration of CIRM use (C11) with comparisons

The third observation reveals a general upward trend for familiarity (C01) and usefulness (C09), as illustrated in Figure 5-10, except for the usefulness peak at year 3 and the decline in average perceived usefulness and familiarity after year 7. Decision makers' CiRM familiarity may decline in time due to reduced CiRM visibility through integration into municipal systems. As expected from the C09 results, perceived usefulness will likely decline with decreased familiarity. This phenomenon is consistent with proliferation of technology leading to decreased visibility as noted in Subsection 2.2.2 (Anderson & Rainie, 2014).

The final observation results from comparisons of these implementation status data by role, as illustrated in Figure 5-11. Ratings across the familiarity (C01) and usefulness (C09) scales are largely

invariant when roles are compared across all respondents, and progress (C10) varies somewhat (12%). However, when only municipalities using CiRM are compared, familiarity and particularly progress are rated 27% and 17% higher respectively by administrators than by executives. These results may reflect the increased implementation responsibilities held by administrators compared to executives.

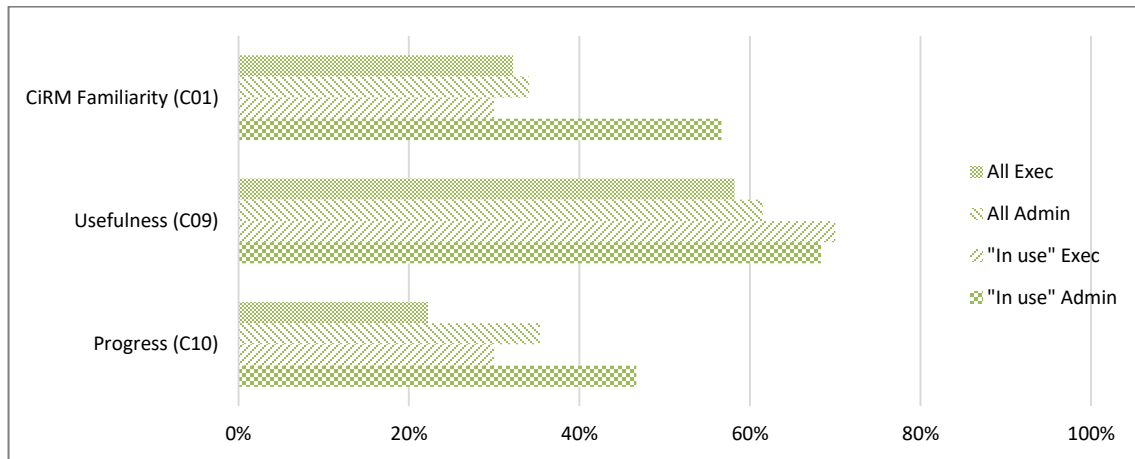


Figure 5-11: Implementation status by role

The final implementation area examined scope of CiRM use (C12), indicated by respondents as primarily Mayors, councillors, and senior staff, namely the respondents themselves, as well as communications and administrative staff. These self-selections affirm respondents' interest in and perceived importance of CiRM in their roles above other users. The least frequently selected uses were by individuals, volunteers, citizens, and call centres. The latter was one of the most common LRG applications of CiRM indicated in Chapter 2, but which, according to these data, does not match respondents' perceptions of CiRM use. Similarly, the low perception of use by volunteers and citizens highlights a lack of familiarity with citizen-centric and local knowledge applications as outlined in Chapter 2.

The perceived scope of CiRM use by average size of municipality is illustrated in Figure 5-12. The most frequently selected uses generally represent municipal populations approximating the sample average of 105,000, indicating usage by all sizes of municipalities. The communications, 311 and volunteer uses represent larger municipalities on average, and resulted in fewer responses. These responses aligned with the target municipal sizes for 311-type CiRM applications as discussed in Chapter 2. Uses by citizens and individuals represent smaller municipalities, indicating a lack of perceived value by larger municipalities in these areas.

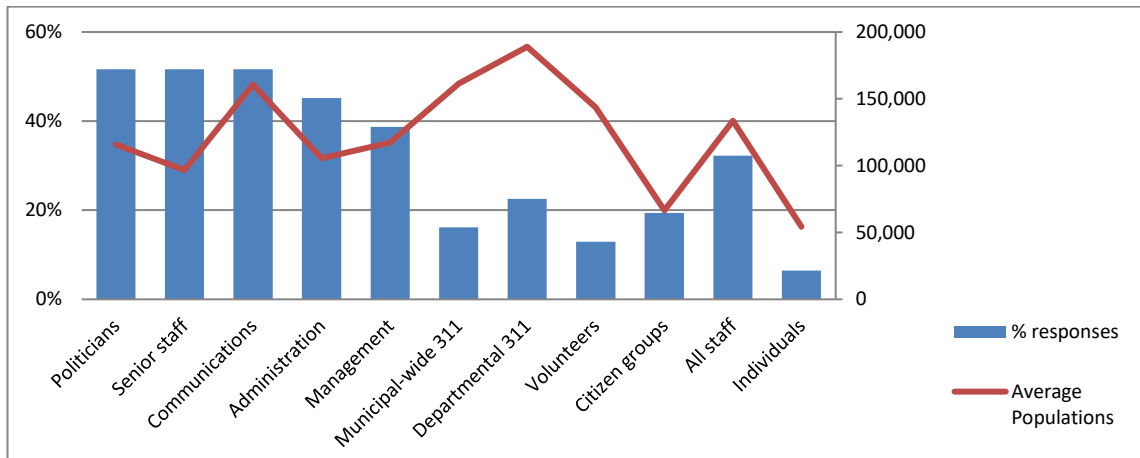


Figure 5-12: Scope of CiRM use (C12) and populations

5.5.3 Participatory CiRM

The final subsection of the survey examined technologies used for different functions (C14), goals (C15) and barriers for CiRM (C16), and respondents' understanding of analytics (C17). Further respondent attrition occurred for this subsection, resulting in only 11 participants. The survey design again offered participants the option to exit the survey following the effectiveness ratings (C12) in respect of their time. The intent of the option was to help ensure that a consistent survey sample was maintained throughout a survey section, by controlling the dropout points, which was largely the case. The disadvantage is the risk of increased survey participant attrition due merely to suggestion. In this case, the sample size reduced to eleven participants for this section.

A comparison of the sample characteristics of the remaining sample of 11 respondents to the total original sample revealed negligible demographic bias.

Table 5-4 lists the characteristics examined for C14 respondents, which is the first question in this section, compared to the total sample for each of the respective characteristics. The key demographic characteristics are administrative/executive position ratio, and municipal population size, and both show a negligible difference. CiRM familiarity (C01) increased, while experience (C02) decreased marginally. Estimated value (C04) jumped to 5.0, while usefulness (C09) increased, both results confirming expectations. Progress toward CiRM achieving vision (C10) and ownership duration of CiRM (C11) are equivalent between samples. Overall, therefore, the smaller sample in this section characterises the demographics of the larger sample, but is more familiar with the value of CiRM despite lower average experience with CiRM.

Characteristic	Total sample	C14 respondents	Effect
Admin/exec	66:33	55:45	Negligible
Municipal population (avg.)	105,000	103,000	Negligible
Familiarity (C01)	1.88	2.55	More familiar
Experience (C02)	2.97	2.18	Less experienced
Estimated Value (C04)	61%	100%	Unanimous value affirmation
Usefulness rating (C09)	3.03	4.09	Higher usefulness
Progress (C10)	1.60	1.55	Equivalent
Ownership Duration (C11)*	2.21	2.14	Equivalent
* Excludes the 151 year outlier.			

Table 5-4: Characteristics of C14 respondents

LRG decision makers’ perceptions of 12 common municipal transactional and participatory ICT functions were explored across various technologies, namely CiRM, Web-based applications, and other (C14). Respondents indicated CiRM as the least used technology overall, compared to Web or other in-house IT applications. Other IT applications and indirect provisioning through 3rd parties accounted for the largest groups of technologies used. Use of CiRM technology was indicated by respondents in eight functions, comprising 7% of all selections, and was not the most selected technology for any function. However, CiRM-based functions were indicated by the largest municipalities overall, particularly for citizen communications, evaluating service levels, knowledge-base functions, and managing workflows, as shown in Figure 5-13. The red line graph illustrates that CiRM-based functions were selected by municipalities with average populations of almost 300,000, compared to under 140,000 for all of the other technologies.

Web-based technologies accounted for 17% of all selections across the nine information functions shown in Figure 5-13. This ICT category was the most mentioned in the interview research, in contrast, although it is used by the second largest municipalities on average.

Other IT applications account for 23% of the respondents’ selections across the 11 functions, representing the most frequent selection for the citizen transaction tracking, communications, and evaluating satisfaction functions. These functions are among the primary CiRM functions described in Chapter 2, which highlights a gap in either perception or in appropriate usage of available

technologies. The citizen transactions function was also indicated across Web-based and indirect technologies, perhaps reflecting the pervasiveness of legacy technologies for this function.

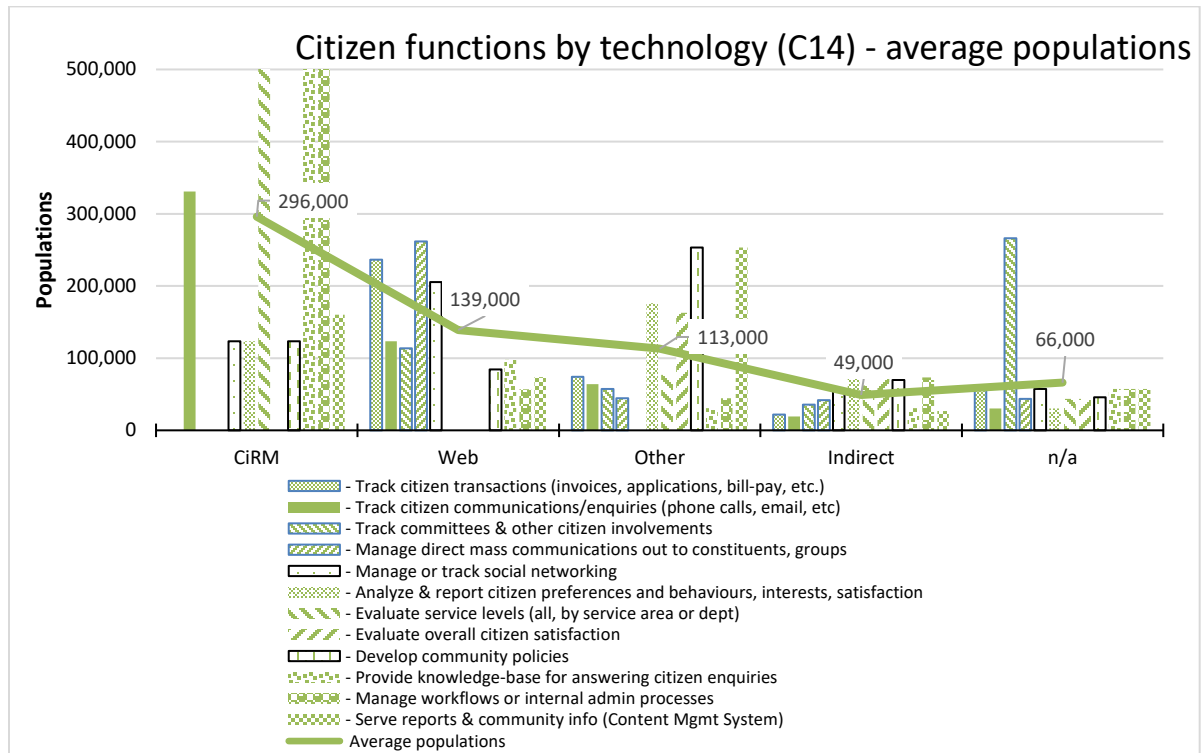


Figure 5-13: Citizen functions by technology (C14) with average populations

Indirect or 3rd party services accounted for the largest group at 35% of selections, representing all 12 functions and primarily focusing on analysis of citizen preferences, and evaluations of service levels and citizen satisfaction. These data indicated that key IT relational functions were managed outside the direct influence or control of key decision makers. CiRM is perceived overall as having a low applicability for most common municipal functions. However, while CiRM technologies appeared to be the least used overall, they were preferred by larger municipalities on average.

Participatory CiRM was also examined according to descriptions of CiRM goals (C15) and barriers (C16). The respondents, comprising a sample that was positively-disposed to CiRM, described a range of goals across four categories, according to textual analysis, that mirrored the categories identified in CiRM purposes (C03). Relationship goals (44% of responses) included more engagement, two-way communication, getting feedback, social media, and citizen decision making. Information management goals (38%) included accessibility, organisation, accuracy, ease of use, and

distribution. Measurement of service levels, satisfaction and value represented 12% of the listed goals, while resource allocations (6%) described CiRM goals that required additional funding. These CiRM goals approximated a balance between strategic, citizen-centric goals (relationship and citizen-based measures) and inward-facing organisational priorities (management and resources).

CiRM barriers (C16) were comprised of 92% organisational factors including vision and risk (46%), resources constraints (38%), and systemic issues (8%). Vision was limited by “staff and council indifference,” lack of knowledge of CiRM value, social media risks, and fears of criticism or disagreements with decisions. Resource concerns were time and money, as well as the “ability to respond in real time.” Systemic barriers concerned quality of information.

Citizen-based barriers accounted for the remaining 8% of responses, described as apathy and lack of interest and awareness. By comparison, barriers to improving participation (P09) also focused primarily on organizational factors (66%) and less on citizen factors (33%). The differences in percentages (92% vs. 66%) may reflect the higher familiarity, value, and usefulness scores of the smaller sample (n=11) in this subsection compared to the original sample (n=75).

Understanding of CiRM analytics (C17) was rated low by 70% of the respondents with a 2.1 average score. Only 10% of the respondents rated understanding of CiRM analytics as high (> 3). Overall, these results were very similar to the interview findings, indicating a minimal understanding of analytics among top municipal decision-makers. Analytics was described in Chapter 2 as a key component in information-based evaluation of citizen preferences, value and satisfaction, and as integral to the usefulness of CiRM.

5.5.4 CiRM Summary

The CiRM survey results revealed that despite top municipal decision makers’ low familiarity with CiRM, they readily conceptualized and valued the use of participatory CiRM in LRG. The high value ratings of participatory CiRM were substantiated by purpose statements for CiRM by most respondents that balanced relational with transactional functions.

Further, most respondents’ ratings of CiRM usefulness were mid to high and aligned with familiarity ratings. CiRM uses were described primarily as strategic, such as enhancing citizen engagement, governance, experience and satisfaction, and transactional such as provisioning information and tracking services. Although very few respondents had realized satisfactory progress toward their CiRM visions, progress scores increased with the years of CiRM ownership, as did familiarity and usefulness ratings.

An apparent increasing awareness of the potential for CiRM developed over course of the online survey. Top decision makers self-selected themselves as the highest potential users of CiRM applications, followed by 311 functions, communications, and recreation volunteer uses in larger municipalities. Highly participatory or citizen-centric functions, including tracking citizen communications, mass communications, citizen involvements, social networking, analysing citizen preferences, and evaluating citizen satisfaction, were dominated by all technologies other than CiRM. Among four technology approaches, CiRM was the least used on average, but was the most used among large municipalities across 6 of the 12 municipal information functions examined.

CiRM goals, described by a high CiRM-valuing sample of the respondents, represented a balance of citizen-centric, externally-oriented strategic goals and internally-oriented organizational goals. By contrast, 92% of the identified barriers were attributed to organizational factors, which notably fell within the scope of decision makers' responsibilities. Respondents revealed a low understanding of analytics, which is a key component to citizen-centric CiRM.

Despite low familiarity with CiRM, top decision makers exhibit an intuitive understanding of its potential in municipal public participation, and are able to describe valid strategic and transactional goals. While progress toward these goals increased with duration of ownership, CiRM outcomes were far short of desired outcomes. Participatory priorities were overridden by status quo technology approaches and a passive acceptance of numerous barriers apparently too daunting to change.

5.6 Summary

This chapter presented the results of the second phase of research, namely, the Canadian national survey. The participant demographics were outlined along with the survey results from the four component areas. The data highlight numerous gaps and perceptions that hinder strategic realization of citizen engagement and impede the application of appropriate ICTs to enhance a broad range of strategic participatory activities leading to effective citizen participation and, ultimately, to fulfilling the goals of citizen efficacy, as introduced in Subsection 2.1.4.

A positive response bias was considered, particularly in relation to low knowledge or familiarity questions such (C03), possibly resulting from respondents' desires to appear positively inclined toward a politically sensitive issue such as citizen engagement. However, a negligible effect was detected in the survey, consistent with arguments against response bias. Gove and Geerken (1977) minimise response bias effects particularly in research relating to participants' self-reflected perceptions as in this case. Further, these survey participants represented top decision makers who

commonly rationalise and defend their perspectives. The parallelism of questions throughout the survey helped build internal construct validity and provided a baseline for mitigating response bias.

The next chapter combines the results of the two phases of research presented in Chapters 4 and 5 in order to highlight observations and broader applications, including further reflections on the internal validity of the research, the implications of the data results, and the generalizability of the results. The conclusions also apply these research results to the initial research questions, and summarise how the results may be applied to public participation in urban planning and municipal governance generally.

Chapter 6

Research Summary and Applications

The previous chapters outlined the PCM (participatory component model) based on four interdisciplinary components, and demonstrated the use of the PCM to explore municipal leaders' perspectives on public participation specifically. Chapter 2 outlined and illustrated the conceptual interrelation of the four participatory research areas, and Chapter 3 detailed the integration of the concepts and formulation into the PCM and its application to the research. The interviews discussed in Chapter 4 helped to establish the relevance of the research framework and to refine the research model for the national survey discussed in Chapter 5. The survey results provided a meaningful dataset that revealed municipal leaders' perspectives, priorities and gaps regarding public participation across all four PCM component areas. This chapter further explores how the PCM may contribute to a better understanding of respondents' questions and gaps in public participation, and to help visualize an organisational roadmap for public participation evaluation.

In particular, the chapter continues the iterative discovery and data analysis research approach described in Chapter 3 by presenting a single unifying organisational perspective of public participation based on the research results in Chapters 4 and 5. This organisational perspective provides the common basis to integrate the research results with the PCM model and research issues discussed in Chapter 2, and to contribute to a uniquely organisational approach to municipal participatory governance. The three sections in this chapter elaborate on the contribution of the PCM's organisational perspective to this research. First, the theoretical implications of the PCM and municipal leaders' receptivity to the PCM's uniqueness are examined, particularly the contribution of the strategic component. Second, a practical application of the PCM and its organisational perspective is explored by reframing the research results according to the nine PCM elements. Finally, a graphical application of the PCM explores its contribution to organisational management as both an evaluative and prescriptive framework for enhancing participatory infrastructure in LRG.

6.1 PCM Review

This section examines the theoretical implications of the PCM as introduced in Chapter 3 (Figure 3-1), the unique strategic component, and municipal leaders' receptivity to the PCM's

uniqueness. The PCM contributes to public participation evaluation and infrastructure by incorporating an organisational perspective derived from the organisational strategy models outlined in Chapter 2. Lacking an organisational framework, public participation is merely a collection of methods and tools deployed within an evaluative vacuum. The most critical need in public participation is not for new methods or techniques, but for a proven tool for evaluating public participation effectiveness (Shiple & Utz, 2012). The PCM formulated in Chapter 3 offers such an evaluative tool not by declaring a public participation standard and a set of definitive evaluation criteria, but rather by incorporating a strategy component into a unifying public participation framework. The uniqueness of this strategic approach integrates public participation into the defined purpose and functions of the municipality, thereby requiring an articulation by municipal leaders of public participation vision, goals and organisational infrastructure as an evaluative basis.

The rationale for strategy as the organisational perspective, as framed in Chapter 2, is that organisations by definition have purpose and strategies, which are expressed, in varying degrees of formality, in terms of vision, goals, and methods intended to achieve identified outcomes. The PCM integrates public participation vision, goals, and methods into a municipality's organisational infrastructure, which thereby requires explicit management processes and measures appropriate to the municipality. As with any other organisational function, decision makers can choose the level of resources and degree of effectiveness given to public participation infrastructure. The PCM approach gives visibility and manageability to these choices, and maps them onto the organisation's structure and systems, including the ICT capacities.

Examining the research results from PCM perspective provides insight into municipal decision makers' receptivity to this organisational approach to public participation, and further helps to conceptualise decision makers' approaches, goals, questions, and perceptual gaps surrounding public participation. The responses from research participants were mostly supportive of the logic of the four component areas, and no participants questioned the four areas. Each of the four component areas led to distinctive insights for participants and for this overall research endeavour.

The research responses indicated that the PCM approach lent an effective method of unbundling the complexity of municipal citizen engagement for research participants. In particular, decoupling technological solutions from the larger questions of public participation philosophy and democratic maturity deflected the discussion from the latest technological trends and instead helped decision makers focus on citizen-centric values and other key public participation considerations. The strategy component, as a commonly accepted organisational planning methodology, helped project decision

makers' values into organizational processes. Finally, the CiRM component helped operationalise the strategic goals and consolidated the citizen-centric value delivery and public participation objectives into a relationship paradigm. These four interdisciplinary perspectives led participants through the discovery and insight process described above, particularly as evidenced in the interview results.

The research results also showed that while the component areas of the PCM are not new to municipalities, the PCM configuration defines a new approach to ICT-enabled public participation. Respondents were very familiar with their municipal strategic plans and planning processes, expressed public participation vision and goals, commented on heavy investments in ICTs, and confirmed deployments of CiRM solutions. The integration of these components into the research resonated strongly with respondents, and led to the identification of the many gaps identified in Chapters 4 and 5, as reviewed in the next section. Greater utility of the PCM emerges from this research through discovery of recurring gaps in the planning, execution, and measurement common to each component area. Analysis of quantitative and short answer responses in the surveys and the interviews uncovered recurring themes that reinforced the strategic organizational segments identified above, while the interview discussions gave greater understanding of decision makers' perspectives on organisational management.

In summary, this research affirms the utility of the PCM as both a discovery model as well as an organisational management model for public participation due to the uniqueness of the strategic component. Municipal leaders were highly familiar and very willing to discuss the public participation applications of each component area for their organisations. No respondents disagreed with the hypothesis that operationalisation and management of the PCM component areas together are enablers of participatory CiRM. Rather, the integration of the components resonated highly with interview participants, with strongly supportive comments. Further, the PCM's organisational approach helped identify gaps and opportunities with each component area that inhibit or capacitate participation. This section summarises the PCM's theoretical implications for the research and the practical contributions of the unique strategic approach to municipal leaders' perspective on organisational public participation evaluation and infrastructure. The next section reviews the research results according to the nine PCM elements labeled in Figure 3-1.

6.2 PCM Research Results

This section explores a practical application of the PCM and its organisational perspective by reframing the research results according to the nine PCM elements, thereby contextualising

respondents' perceptual gaps, priorities, and questions accordingly. Each of the following sections maps to one of the nine elements of the PCM. This examination helps to structure the large research dataset thereby leading to a better understanding of leaders' perceptions, gaps and opportunities within an organisational framework.

6.2.1 Public Participation Vision

The PCM frames public participation vision as a key element for strategic planning and as a driver for public participation methods and organisational processes. Chapter 2 presented various philosophies and social theories of public participation which provides a foundation for creating a public participation vision. Interview and survey respondents affirmed the importance of public participation along with many goals and visions, but generally lacked expression of clear philosophical or theoretical foundations. Many research participants framed their perspectives of public participation vision in terms of participatory strategy choices or “pillars”, but these were mostly deficient in quantity and quality of theoretical rationale. Participants also affirmed the importance of meeting regulatory requirements for public participation, and further expressed visions and goals in support of citizen centricity, but these public participation visions were generally not articulated within the strategic pillars nor based on philosophical foundations.

The PCM proposes that articulated public participation strategic goals and vision can be integrated into organisational processes. A unifying participatory philosophy or approach provides the foundation for substantive, strategic articulation of public participation vision. However, decision makers' articulation and scope of public participation vision was constrained by a lack of defined public participation philosophies. Most visions and goals were expressed instead as strongly held, individual and unique opinions. Several defining public participation characteristics, namely discrete public participation activities versus continuous public participation, and *depth* or intensity of citizen engagement (Prieto-Martin, 2011), were not explicitly expressed by any respondents. No respondents explicitly defined their visions of public participation in a way that gave transparency and accountability to public participation, nor that allowed citizens to understand and evaluate the level of citizen centricity or efficacy represented by a municipality's implementation of public participation initiatives.

Chapter 2 characterised public participation as extending beyond regulatory requirements and traditional public participation activities toward participatory governance, including any form of citizen activity that can be captured, measured, facilitated, enabled, or managed. This broad view of

public participation is shared by many of the respondents in expression of their goals for both public participation and CiRM, including reaching out to the “silent majority”, listening to citizens, and finding new ways to engage citizens. Further, the “depth dimension” of public participation was described in Chapter 2 as the effect of participatory activities that contribute to the magnitude of mutual value derived by participants in terms of citizen efficacy. The research confirms that such citizen relational activities are important and valued in participants’ visions for public participation, particularly for politicians. Respondents affirm that citizens’ opinions can provide important feedback for municipal decision processes, and that much more was desired, establishing public participation and citizen relationships as a strategic priority. However, only minimal evidence emerged of public participation goals that were included as strategic pillars. Instead, public participation visioning was generally expressed as individual opinions and not as planned, organisational elements.

Framed within the PCM, these findings demonstrate a lack of philosophical participatory foundations and a resultant policy deficiency. Research participants’ visions for public participation are not represented by an articulated philosophy or strategic rationale, resulting in divergent perspectives and a general lack of consistent policy basis for developing citizen relationships, targeting citizen interests, or delivering on citizen value. The lack of a participatory policy basis presents a challenge for the design of participatory ICTs, organisational processes and activities, and evaluation.

6.2.2 Strategic Plan

The PCM distinguishes between the two strands of strategy described in Chapter 2, namely planning and implementation requirements. Strategic planning was viewed by most research participants as the top-level policy method for future direction, goals and management within the organisation. Strategic planning priorities were determined by the departmental function within the municipality, and also by both the municipal council as well as other levels of government. Many specific planning tools are available that help integrate departmental strategic goals with selected strategic methodologies (Ontario Ministry of Municipal Affairs and Housing, 2013). However, very few municipal leaders described the use of comprehensive, organisation-wide planning tools to identify and communicate strategic priorities and progress effectively to citizens. Strategic planning was also generally described as either a general visioning exercise as expressed by Plant (2008, 2010) or a multi-year, complex process that some respondents felt was irrelevant and out of date.

Competitive positioning is a key component of private sector strategic planning (Porter, 2008; Rohn, 2008), and also appears in municipal planning theory (Florida, 2009; Johnson, Hays, Center, & Daley, 2004; Lorinc, 2006). However, it was given little consideration among the interview and survey respondents. Increasingly, external trends such as smart cities, smart growth, sustainability, and city resilience are impacting municipal planning. Competitive positioning is essentially a choice for proactive planning that considers external forces rather than reactive planning. Few respondents gave consideration to competitive positioning and generally seemed puzzled by the concept. Overall, respondents described their strategic planning processes as very important, useful for directing staff, but generally devoid of specific public participation directives, not effectively executed and lacking effective outcome measures.

Citizen consultation in strategic planning was perceived to be deficient despite its importance. Respondents indicated many opportunities for citizen input during their strategic planning cycles, particularly of the community visioning type, but expressed little confidence in the outcomes of these exercises and the value of the strategic plan generally. More technocratic and competitive strategic planning approaches were seen to limit citizen input and, according to respondents lengthy planning processes inhibited citizens' sense of ownership and identification with the community vision expressed in the strategic plans.

6.2.3 Strategic Implementation Requirements

Implementation methodology for strategic plans is a common deficiency in the strategic management process (Kaplan & Norton, 2008; Neilson, et al., 2008; Scholey, 2008), a deficiency reflected in the research findings. Strategic implementation, including staffing, procedures, application of appropriate technologies, and reporting, was rated much lower on average than formality of strategic planning. Deficiencies in strategic implementation led to poor public participation performance as evidenced by participants' "less than optimal" ratings of public participation outcomes, and their attribution to organisational deficiencies. An appropriate strategic implementation methodology is equally vital for public participation pillars as for all strategic pillars.

Strategic implementation helps define key organisational processes, measures, and management approaches that also include public participation as described in Chapter 2. Embedding public participation methods into a strategic implementation framework is a key premise of the PCM's organisational approach. Strategy implementation bridges the gap between vision and organisational outcomes by helping to define appropriate processes and operational priorities, including a CiRM

approach. Respondents rate highly their municipality's formality of strategic planning, and the planning approaches identified in Chapter 2 are among those utilised by respondents. However, the sophistication of the chosen methodology should match the complexity of the strategic issues. A full strategy management system as suggested by Kaplan and Norton (2008) may be too complex, while Plant's (2008) community visioning approach may be insufficient. Respondents discussed strategic planning in detail, but struggled to articulate details of their strategic implementation approach. The strategic planning mechanisms within municipalities provided the context and mechanisms for addressing the CiRM prerequisites.

6.2.4 ICT Reporting and Analytics

An organisational view of ICT reporting and analytics recognises the crucial role of ICTs in measuring organisational efficiencies and outcomes for maintaining accountability to stakeholders. Interview subjects acknowledged many reporting requirements and a multitude of organisational measures currently implemented, and recognised the importance of the principle expressed in the adage, "What gets measured gets managed." In contrast, public participation reporting is almost completely lacking. The dearth of dedicated public participation reports represents a significant gap in the effective management of participation effectiveness. While some municipalities reported on public participation activities, none reported on participation goals, and reporting of citizen preferences was among the very lowest of ICT effectiveness outcomes. No municipalities reported on the use of analytics to improve their understanding of citizen preferences.

The PCM links public participation reporting to the strategic implementation requirements. The lack of public participation reporting and analytical feedback therefore indicates a lack of guidance for managing strategic public participation goals and organisational processes that support citizen preferences and deliver strategic value. Participants' stated goals for "more and better" public involvement in most services areas are impeded by the public participation reporting gap. In this way, the PCM helps to frame an understanding of the important organisational role of reporting for strategic effectiveness affirmed by the research results, and the stark contrast presented by the lack of specific public participation reporting. This gap highlighted by the PCM illustrates a significant obstacle for these municipalities to achieve a holistic approach to citizen efficacy through participatory processes.

6.2.5 ICT Capabilities

An organisational view of ICT capacities for public participation examines the degree to which existing ICT systems and functions are positioned to support public participation. The PCM illustrates this organisational link between public participation methods and ICT capacities along the right-hand axis. ICTs in each municipality were rated as having very high strategic importance to the organisation, indicating the organisational importance of ICT capabilities. However, effectiveness of ICT implementation factors were rated significantly lower than strategic importance, and ICT customer satisfaction was rated lower still. These results highlight significant gaps between perceptions of the importance and effectiveness of municipal ICTs, indicating a deficiency in the capacity of ICTs to support public participation methods.

These phenomena were supported by the illustration of declining effectiveness when ratings were ordered along the continuum of citizen democracy as suggested by categories of e-government methods listed in Chapter 5 (Figure 5-6). This analysis indicated that ICTs that were most important to citizen democracy and public participation were rated as least effective. Similarly, ICT effectiveness attribute ratings declined when ordered from highly transactional to highly relational. This continuum was derived from the strategic relationality cognition theories described in Chapter 2 (Bundy, et al., 2013; Narayanan, et al., 2011), and support the conclusion that the ICTs that were most supportive of relational functions were rated as least effective. A possible explanation of this outcome is the traditional NPM emphasis, described in Chapter two, on managing transactional efficiencies at the cost of minimizing less tangible relational impacts in pursuit of easily quantifiable benefits.

These results are particularly critical in view of participants' stated goals which placed citizen support and relationships above ICT strategy and systems. These conclusions indicate significant gaps between the strategic importance of ICTs and the effectiveness of ICTs needed to support public participation priorities. This research outcome therefore identifies significant deficiencies in ICT capacities of municipalities to support public participation methods.

6.2.6 Public Participation Methods

An organisational perspective of public participation methods is illustrated through the PCM by integrating public participation activities into organisational structure and functions. This perspective of public participation reinforces the importance of structural, processual, and management factors necessary for integrating public participation priorities into the organisation. Municipal research

participants attributed many public participation deficiencies to organisational factors. As emphasised above, measurement of strategic performance is an essential part of an organisation's strategic alignment (Arveson, 2014). However, participants generally gave little consideration to organisational management of public participation, which resulted in deficient public participation processes, implementation outcomes, and particularly, measurement and reporting, as reflected in the low ratings.

The PCM illustrates the dependency of ICT-enabled public participation methods on the organisation's ICT capacities. Participants expressed a desire for increased use of ICTs for participation. Further, more ICT-enablement was desired across all services by the majority of respondents (55%), and another 45% of respondents desired more ICTs in at least one of all service areas. These results confirm a perception among municipal leaders of the importance of ICT-enabled public participation as a strategic goal. However, as illustrated by the PCM, the potential effectiveness of ICT-enabled public participation methods and activities are necessarily limited by the ICT capacities available within the organisation. Further, the vision for ICT-enabled public participation methods favoured Web technologies and reflected very limited awareness of CiRM'S relational potential. These results generally reveal strong desires for more public participation activity, including ICT-enablement and, in contrast, a lack of clear organisational vision or reasoned approach to selecting compatible and complementary processes within the organisation. These gaps were most evident in the lack of clear vision and goals for the form of ICT-enablement despite strong desires for more ICT-enabled public participation methods. A possible explanation for this outcome is the lack of a unified, articulated public participation vision by decision makers that would provide a basis for actionable public participation strategies, as illustrated in the PCM and further described below.

The following subsections discuss guiding principles or approaches that correspond to each of the three PCM nodes. They represent categories of policy choices illustrated by the PCM that together outline the CiRM framework and help address the participatory issues described in Chapter 2.

6.2.7 Relationship Paradigm

The PCM positions the relational paradigm as a strategic directive for public participation processes and ICT enablement that facilitates CiRM. As stated earlier, the uniqueness of the PCM is the incorporation of the strategy component and the resulting organisational perspective and policies. The relational paradigm is identified in Section 3.1.3 as one of the PCM's fundamental supporting

propositions. The PCM further advances a relationship paradigm of strategic policy choices that are intrinsic to CiRM. Municipal strategy defines value delivery according to stakeholder types, for example by distinguishing between beneficiaries and benefactors (Scholey, 2008) or stakeholder roles (Prieto-Martin, 2011). These types of strategic relationships form the basis for framing strategic priorities and thereby relationship management. The PCM captures this strategic imperative as an integrating factor between strategy and CiRM.

Research participants recognised the strategic importance of citizen relationships, for example in terms of accountability to citizens and revenue sources from citizens. Maintaining positive citizen relationships is a priority expressed not only by elected politicians but also by administrators who manage citizen services, transactions and interactions. Identification of organizational stakeholder relationships enables policy development for providing value to citizens. This can reduce the burden of ad hoc communication processes that was expressed as a significant barrier to public participation by respondents. Decision makers in this research generally expressed earnest desires to connect more directly with stakeholders but described a lack of tools to manage thousands of relationships. Interview subjects described various attributes of “good” citizen relationships along with goals for improved relationships. Similarly, survey respondents’ top ICT goals included improving responsiveness to citizens, understanding citizen preferences, advancing open government, and enhancing citizen engagement, relationships and satisfaction preferences. The strategic importance of these relationships materializes in the PCM as the relational paradigm, which helps to frame the dynamic of the multifaceted relationships between municipal decision makers and citizens. This dynamic forms a foundation for public participation infrastructure by helping to focus public participation methods and ICT enablement on stakeholder value, positive experiences, and citizen efficacy.

6.2.8 Public Participation Processes and Approach

The PCM integrates public participation vision and methods into organizational processes via a unifying approach or philosophy articulated as a democratic framework or governance approach as described in Chapter 2. Interview participants passionately described public participation as a foundation of democracy that includes citizens in decisions “early and often”, and as a form of participatory governance where citizens are customers whose involvement leads to better service. However, while these democratic visions were described by some as “common sense”, interview

respondents held singular and broadly disparate views on the form and degree of citizen involvement, presenting a broad range of disjointed rather than unifying perspectives.

Further examination of these responses in terms of their influence on municipal policy revealed that the large majority of respondents articulated *pre-policy* level public participation approaches. These are classed in Chapter 4 as primarily *functional*, having limited citizen influence on organisational policy. The minority of responses articulated *policy-level* approaches which were classed as more comprehensive and strategic than pre-policy goals. However, even these approaches were diversified across most of the six policy stages identified in Chapter 2. These data revealed that respondents' approaches to organisational public participation lacked a unifying foundation for consistent participatory processes. Rather, respondents' participatory approaches were highly diversified, grounded in personal opinion, targeted to low impact participatory goals (IAP2, 2008), and generally lacking in policy influence.

The survey responses also revealed dissonance with a unifying approach or philosophy to organisational public participation. Despite the majority of respondents in Chapter 2 desiring more citizen involvement in all municipal service areas, citizen involvement in decision processes was least desired. This research outcome is explained by a practical view of participation as providing *decision input* as distinct from citizen directly influencing policy as noted in the preceding section. This dissonance was found in both the interviews and surveys between participants' high valuation of and stated desires for more public participation on the one hand, and the diminished desire for citizen-centred decision processes on the other hand, which is at the core of citizen-centricity or participatory governance are described in Chapter 2.

Finally, the PCM's integration of public participation strategic approaches into organisational processes focuses on establishing continuous goals, processes, and measurement for public participation throughout the organisation. The citizen-centric value proposition was defined in Chapter 2 as the critical link between an organization's *raison d'être* and its day-to-day activities, providing the rationale for the organisation's planning and management approaches. This value perspective was expressed by some respondents as difficult to envision since municipalities do not sell products. This is an issue that may require special attention by decision makers. As identified earlier, value generating activities emphasize greater citizen-centricity and engage customers to identify and evaluate their service preferences, and to build relationships for sustainability and loyalty. As mentioned, while technocratic or competitive strategic planning methods may diminish citizen-centricity, the value definition defines *why* citizens would choose to engage in the

municipality. The PCM allows an organisational approach to public participation that emphasises citizen-centric value delivery by highlighting the need for an explicit unifying democratic approach or philosophy that then integrates public participation vision and methods into organisational structure and management processes.

6.2.9 Technology Platform and Architecture

The PCM also identifies the need for a strategic technology platform approach to help to integrate ICT capabilities and analytics in support of participation. This policy area articulates municipal organisational approaches and architectural choices surrounding ICTs that serve to enable or inhibit participatory CiRM.

A unifying technology platform architecture can help to articulate a vision of CiRM that resonates with decision makers desiring more public participation. This is observed in the effect of the surveys and interviews on participants who evidenced a growing awareness and intuitive self-discovery of the potential of CiRM as a participatory technology platform. This affirms the foundational principle described conceptually in Section 2.4.2 and integrated into the PCM in Sections 3.1.3. Section 3.1.4 further defines this policy area as the integration of ICT ecosystem and operationalization of the CiRM principles as they support the strategic approach to citizen value.

As the interview discussions unfolded, they questioned why they had not heard of this before or why this was not already being done, despite them having access to CiRM. The pattern of discovery evidenced from the research was a process of asking decision makers to give definition to their evaluations of and perspectives on public participation, and then framing those responses within their views of organisational strategy and ICT factors. Finally, the discussion of CiRM capabilities from this organisational perspective of public participation allowed decision makers to discover the potential of CiRM as a public participation solution.

An ICT platform perspective can also help to identify gaps between decision makers' goals and ICT outcomes. Respondents generally affirmed the strategic importance of ICTs and responsive approaches to ICTs that optimise citizen centricity and satisfaction. However, the research revealed that ICT implementation responsiveness and ICT customer satisfaction were rated significantly below respondents' desired approaches (see Chapter 5). This represented a significant gap between the respondents' public participation goals and their ratings.

Finally, the articulation of ICT platform architecture can reveal gaps or incompatibilities between vision and existing ICT resources and processes. The research revealed, for example, that the

majority of participants described their municipalities' ICT approaches as primarily focused on internal needs, in contrast to their stated desires for externally focused, citizen-centric ICT approaches. The preference for an external focus aligns with the citizen value emphasis supported by ICT valuation theory, which suggests that greater strategic value is derived from externally-oriented, customer-focused ICTs, in contrast to ICTs that are internally focused on organisational functions (Epstein & Rejc, 2005).

These data indicate that municipalities' ICT approaches are not well aligned for enabling participatory governance as envisioned in the PCM, which correlates with the significant participatory gaps identified in the research. The diversity of ICT goals and a lack of clearly articulated unifying ICT approaches indicate a lack of organisational ICT policies and architectural platform choices that serve enable participatory CiRM. Hence, the PCM identifies the lack of strategic technology platform approaches that belie their strategic importance and instead result in unintegrated capabilities that inhibit ICT-enablement of participation.

6.2.10 Summary

Reviewing the research results from the perspective of the PCM's nine elements frames the survey and interview data within an organisational public participation perspective. The PCM's strategy component forms a unique theoretical approach that highlights key gaps, opportunities, and barriers from the large research data set. Elevating public participation as a strategic priority within democratic philosophy and structured organisational processes transports public participation from the realm of individual discussion and diverse opinion to an organisational-wide imperative. This gives visibility to the problem of how to achieve citizen centrality. Further, rather than prescribing a formula of methods and practices, the PCM instead unifies the issues of public participation within organisational strategy, matching the gaps and barriers with organisational factors as described in this section. This review of the research within the PCM framework thereby substantiates public participation vision and methods within the philosophical values and policy choices of decision makers.

6.3 PCM Visualisations

Continuing the iterative discovery approach used in this research, this section advances a unifying visual application of the PCM. A graphical application of the PCM and its contribution to organisational management are explored as both an evaluative and prescriptive framework for

enhancing participatory infrastructure in LRG. This section briefly outlines a rationale for a visual approach to the PCM, and then illustrates such a visual approach, herein designated as the CiRM Efficacy Model.

6.3.1 CiRM Efficacy Model Rationale

The CiRM Efficacy Model (CEM) is the visualisation of the research results based on the PCM and grounded in several purposes. First, the CEM provides a graphical alternative for viewing and further exploring the research results. The CEM collates the quantitative research results for all municipalities into a radial graph and permits the segmentation of results by type and size of municipality. Visualisation of PCM capacities provides a method of concise communication of the complex data set that highlights possible solutions to the issues highlighted in Chapter 2. Additional details of the formulation of the CEM is provided in the following section.

Second, the CEM explores the power of visualisation to describe new theoretical perspectives of public participation, particularly for evaluation and infrastructure. The radial graphs help to visually evaluate the potential capacity for public participation effectiveness beyond a collection of tactics and methods. This approach builds on the need for more effective evaluative approaches mentioned throughout this thesis and highlighted by Shipley and Utz (2012). The CEM graphs do not propose to assess the effectiveness of any public participation methods and practices directly, but rather to illustrate the *potential capacity* for public participation effectiveness by visually integrating the research results of the four PCM areas. In this way, the CEM graphs collectively offer an innovative and prescriptive framework for participatory CiRM infrastructure planning.

Third, the CEM does not propose to validate a single model for public participation evaluation, but rather to illustrate how it supports a new “infrastructure” perspective and contributes to more effective, holistic classes of public participation evaluation. A holistic infrastructural approach to citizen participation is described by Nabatchi and Leighninger (2015) as a necessary replacement for the fragmented, traditional approaches to citizen participation. The graphical CEM illustrates the new infrastructure perspective by coupling classic management functions with the strategic, organizational foundation of the PCM. The organisational coupling of participatory structures and processes into the CEM is illustrated by the second application of the CEM. The second graphical application of the CEM illustrates the coupling of PCM’s organisational perspective with organisational management functions, which are described below. Coupling the CEM with organisational management functions

provides a visual approach to evaluating the potential capacity for public participation effectiveness in terms of organisational participatory infrastructure.

The next sections briefly describe the formulation of the graphical CEM, and then illustrate the two visualizations described above.

6.3.2 CiRM Efficacy Model – Basic

This section illustrates a basic application of the CEM as a simple visualisation approach to describe theoretical perspectives of public participation, namely evaluation and infrastructure. This application of the model communicates the survey results visually, highlighting the potential capacity for public participation effectiveness of the target municipalities. The radial graph format illustrates the strategic alignment of the foundational participatory components described by the PCM. The basic CEM thereby is intended to highlight gaps and opportunities for improving organisational capacities leading to citizen efficacy.

In this basic application of the CEM, organisational participatory capacities are illustrated by the cumulative graph (black dotted line) in Figure 6-1. The basic CEM graphs the collated quantitative scores from the Chapter 5 rating scales into a single score for each component on the graph below. It illustrates the average rating scores for 75 municipalities with an average population of 105,000. The holistic organisational participatory capacity of the municipalities is summarised by an average efficacy score of 2.6 on a 5-point rating scale. This score is comprised of the capacity scores in each component area. Participatory capacity is rated lowest at 1.9/5, while strategic capacity is rated highest at 3.3/5. This indicates that, on average for these 75 municipalities, the participatory capacities evaluated and described in Chapter 5 are perceived by participants as most enabled by their strategy processes and most inhibited by their participation approaches. This basic view of CEM illustrates participatory gaps and opportunities across all four component areas, but particularly in these municipalities' participation approaches.

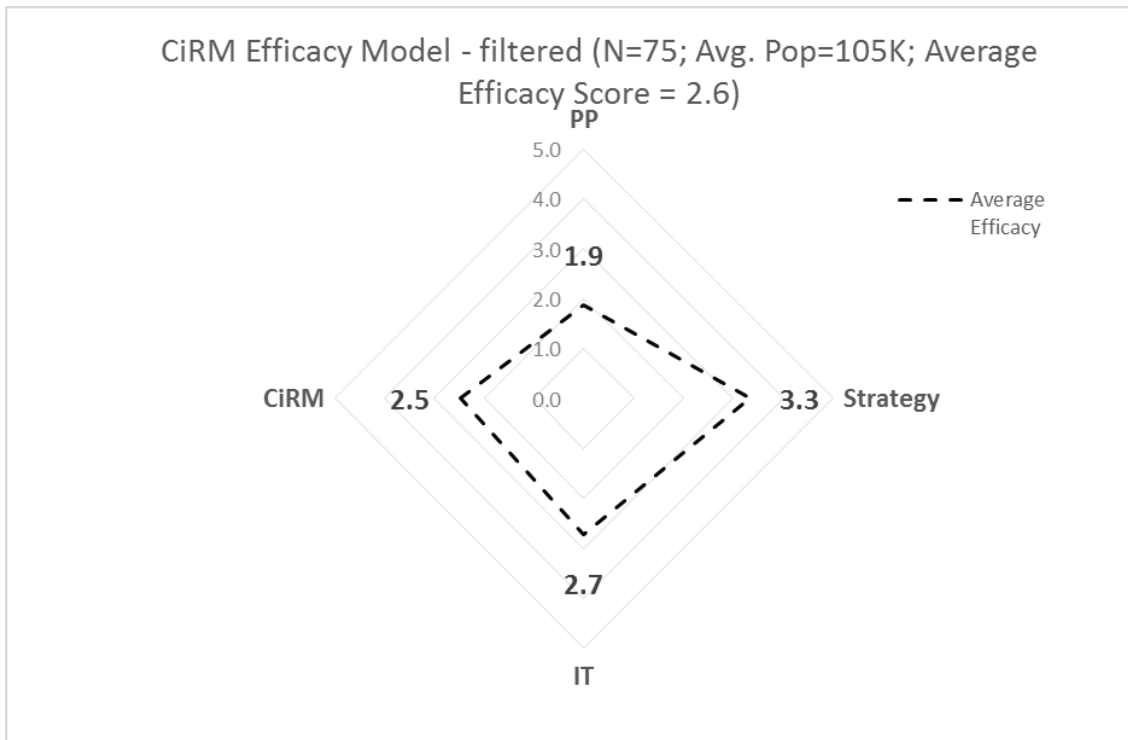


Figure 6-1: CiRM Efficacy Model – Basic

The potential of the CEM to communicate simply and effectively the public participation capacities of the municipalities in the research is further explored by comparing municipality types. For example, Figure 6-2 shows the average efficacy score of 2.9 for eight regional municipalities with average populations of 325,000. Figure 6-3 illustrates the average efficacy score of 2.4 for 15 counties and townships, possibly indicating that regional municipalities have greater participatory efficacy. The visualization of the basic CEM however is more revealing by comparing the sizes and shapes of the graphs. The graph for regional municipalities covers a larger area than from counties and townships, visually indicating greater organizational capacities for citizen efficacy as summarized by the survey results. Second, comparing the shapes of the graphs visually indicates greater organizational capacity in the areas of participation and strategy for regions as compared to counties and townships. In this way, the basic CEM clearly and simply highlights gaps and opportunities comparatively for the municipality types in these examples.

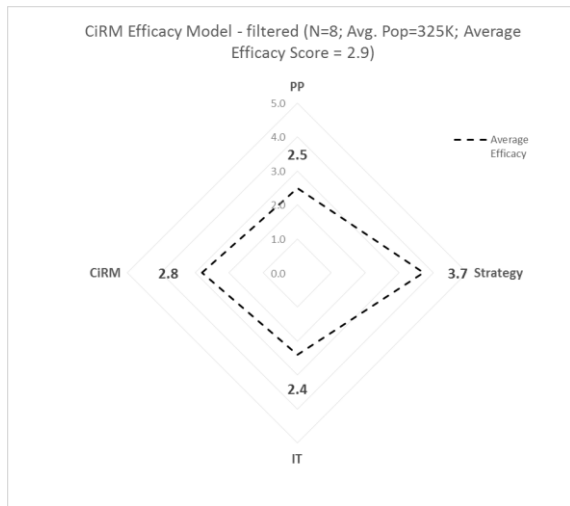


Figure 6-2: Regions

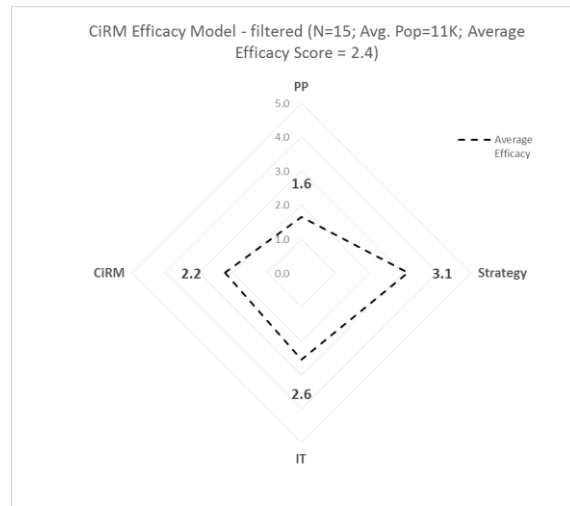


Figure 6-3: Counties and Townships

The next section presents an alternative application of the CEM that couples the PCM component areas with classic management functions.

6.3.3 CiRM Efficacy Model – VAOI Matrix

This second application of the CEM extends the previous basic application by coupling the CEM’s component area scores illustrated in the previous subsection with organisational management functions. The result is an evaluative and prescriptive participatory framework that satisfies the criteria for participatory infrastructure (Nabatchi & Leighninger, 2015). This subsection first describes the conceptual formulation of the coupling and the resulting VAOI Matrix. This matrix is also described formulaically, and then illustrated in several comparative radial graphs.

The conceptual formulation of this CEM application couples the PCM component areas with an adaptation of three classic management functions. Many variations and debates have followed the early definitions of management functions (Fayol, 1949; Mintzberg, 1973; Taylor, 1911). These variations permit flexibility to label the key management functions at a high conceptual level as *planning*, *executing*, and *measurement*, and further adapt them to reflect the terminology and perceptions that resonated with participants. The following adaptations of the management functions reflect the terminology identified in Chapter 2, particularly terms such as goals and visioning, implementation, action plans, measurement and reporting, terms with which interview respondents generally revealed close familiarity.

The planning function is adapted herein as *vision*, in order to align with the PCM's emphasis on both visioning and philosophical principles as necessary inputs to the planning function. Second, *executing* is here adapted simply as *action*, suggesting that all organisational activities are strategically relevant. More substantively, these two functions are labeled in the Gartner Magic Quadrant (Gartner, 2014), as completeness of vision (vision), and ability to execute (action), which represent the *potential* of a technology or program delivery. The *vision* and *action* functions for the purposes of this application of the CEM correspond to the *planning* and *execution* management functions, and represent the potential *visioning* and *actionable* capacity of a municipal public participation technology or program.

The third classic management function, namely measurement, is herein adapted into two categories, namely *outcomes* and *impact*. These two functions differentiate the traditional measures of outputs and *outcomes* that benefit the municipality internally from the measures of results that *impact* citizens' value perceptions, a differentiation that resulted from the interview research. Numerous interview respondents highlighted a gap between the many measures of observable outcomes compared to the lack of measures effectively reflecting the impact upon citizen satisfaction. One respondent, a 30 year veteran of municipal leadership, commented that the distinction between outcomes and impact was one of the largest insights the individual gained from the research results.

Further, while traditional measures emphasise the distinction between outputs as simple productivity measures and outcomes as fulfilment of goals, they typically do not explicitly enumerate citizen impact or value perceptions (Hatry, 2014; Kavanagh, 2013). This gap is described in Chapter 2 by the emphasis on outcomes represented by transactional or New Public Management (NPM) concepts, contrasted by the relational, democratic direct citizen influence described by *depth of relationship* or *citizen efficacy*. Rowe and Frewer (2004) describe this differentiation as outcomes vs. effectiveness measures. Research participants acknowledged this differentiation in identifying a myriad of traditional public participation outcomes that fail to effectively determine citizen satisfaction or to "understand what they think." This conceptual differentiation between *outcome* and *impact* measures is incorporated into this second CEM application.

The conceptual formulation of this application of the CEM culminates with the segmentation of each of the four PCM areas, namely public participation, S, IT, and CiRM, into the four categories of management functions described above. These functions, namely, vision, action, outcome, and impact, are designated by the letters V, A, O, and I respectively. This segmentation results in 16

categories, represented by a 4 x 4 matrix, hence “VAOI Matrix” designating this application of the CEM visualisation. The resulting segmentation of survey questions is detailed in Appendix 8.7.

Logical segmentation of the survey questions into the 16 categories was reasonably simple given the distinct demarcation between the defined management functions. For example, questions relating to planning or visioning were designated as “Vision”, while questions related to organisational processes or operational factors were designated as “Action.” The measurement functions included any questions related to evaluation or reporting. Organisational reporting and process evaluation were designated as “Outcome,” while questions related to citizen perceptions or citizen value were designated as “Impact.” Segmentation of questions into the four VAOI categories was conducted across each of the four PCM areas, resulting in 16 categories of questions. Table 6-1 illustrates the VAOI Matrix in a chart format with the four familiar PCM component areas labeled as PP, S, ICT, and CiRM across the top row, and the four VAOI management functions listed in the left hand column.

	PP	S	IT	CiRM	<i>Functions</i>
Vision	3.1	3.2	3.1	3.0	<i>3.1</i>
Action	0.6	3.9	2.8	1.2	<i>2.1</i>
Outcome	1.6	3.1	2.6	3.0	<i>2.6</i>
Impact	2.2	3.1	2.3	2.8	<i>2.6</i>
<i>Capacities</i>	<i>1.9</i>	<i>3.3</i>	<i>2.7</i>	<i>2.5</i>	<i>2.6</i>

Table 6-1: VAOI Matrix of Citizen Efficacy

VAOI Matrix unfiltered (N=75; Avg. Pop=105K; Average Efficacy Score = 2.6)

The scores for each VAOI matrix cell are similarly derived as the first CEM application above, but across 16 categories rather than four. Average scores were calculated for all the responses to the survey questions in each of the 16 categories. For example, the average score for all the responses to questions designated as “Vision” in the public participation section of the survey was calculated as 3.1/5, while the average score for all responses to the “Impact” questions in the CiRM section is 2.8/5. Note that the fifth column labeled “Functions” represents the average scores for each of the VAOI rows, while the fifth row labeled “Capacities” represents the average scores for each column of the PCM areas. The total aggregation of averages of all 16 categories, given in the bottom right of the chart as 2.6/5, represents the total average efficacy score of the survey results.

In summary, the conceptual formulation of this application of the CEM, namely the “VAOI Matrix,” began with segmenting the research questions into the 16 resulting categories, followed by

aggregating the survey results according. These categories reflect the concepts from Chapter 2, the terminology familiar to research participants, and the measurement gap highlighted in the research results. For example, the VAOI Matrix expands on the conceptual Matrix of Civic Implication (Prieto-Martin, 2011) by the inclusion of generally accepted organisational components and management functions. Coupling the four PCM areas with these four management functions directly integrates organisational processes into the visualisation of research results across 16 categories. It thereby renders a flexible participatory framework that allows the incorporation of many selected approaches and methods into an organisational evaluative framework to help highlight gaps and opportunities for enhancing citizen efficacy. Compared to the static form of the Matrix of Civic Implication, the VAOI Matrix can dynamically monitor changes in participatory capacity over time. This can be achieved by administering the survey annual, for example, and comparing results year over year.

The final step in the VAOI Matrix formulation is to graph the resulting aggregations into the following visualisations. Further analysis reveals distinct visualisation patterns for different groupings of municipalities. For purposes of illustration, the VAOI Matrix scores were calculated using the Chapter 5 results as presented in Table 6-1. The table includes scores from the 75 participants representing municipalities with average populations of 105,000, and an average efficacy score of 2.6/5. These formulations and scores provide the basis for the graphical presentation of the VAOI Matrix as illustrated next.

Plotting the VAOI Matrix data from Table 6-1 on a radial or radar graph provides a visual representation of participatory gaps and opportunities as shown in Figure 6-4. This illustrates the average scores of all survey respondents for the four component areas across the four management functions. The graph presents the first, basic application of the CEM from Section 6.3.2 as a black dotted line in Figure 6-4. In addition, the figure overlays the average scores for each of the VAOI management functions as shown by the coloured lines. The management function plots easily illustrate some of the significant differences in participatory capacities described in the results identified in Chapter 5. For example, the *action* and *outcome* plots are visibly lower (closer to the center point) compared to *vision* in the public participation and CiRM scores, while matching or somewhat exceeding the other functions in the Strategy and ICT areas. Participatory capacity ratings are visibly somewhat higher in strategic *action*, described as *implementation* in Chapter 5, and in *visioning* across all PCM component areas. The greatest opportunities to build participatory capacity revealed by Figure 6-4 are *action* functions in public participation and CiRM. This may suggest that

participatory action is primary focused on strategic planning and IT spending rather than on direct participatory activities that align with the participatory vision. Further, the low public participation score (1.9/5 average) is due primarily to a lack of explicit actions and processes (red line) that align with public participation vision, and secondarily due to measurable outcomes (green line).

The VAOI Matrix graph illustrated in Figure 6-4 thereby provides an instant visualisation of the research results across the 16 categories, namely the vision, action, outcome, and impact functions across each of the PCM areas, namely Participation, Strategy, ICTs, and CiRM. The result is a simple visualisation of participatory capacities in terms of management functions across the four component areas as perceived by municipal decision makers surveyed in Chapter 5.

These data may further be manipulated for an alternative visualisation, by transposing the matrix as shown graphically in Figure 6-5. This plots the PCM component area scores from the Chapter 5 research results across the four management functions, illustrating clear differences in decision makers' perceptions of participatory management capacities. For example, the strategy component area indicates the highest scores across all management functions. The *vision* functional scores are nearly uniform across all four PCM component areas. Public participation scores are generally the lowest across all management functions, and the greatest participatory gaps in Figure 6-5 appear in PP *outcomes* and CiRM and PP *action*. This transposed graphical view of the VAOI Matrix reveals which management function, namely *action*, is perceived by survey participants as having the greatest diversity of scores within each component area. This suggests that participatory alignment is most lacking in the *execution* of management processes, perhaps due to a lack of direct participatory policies and clarity across municipal organisations.

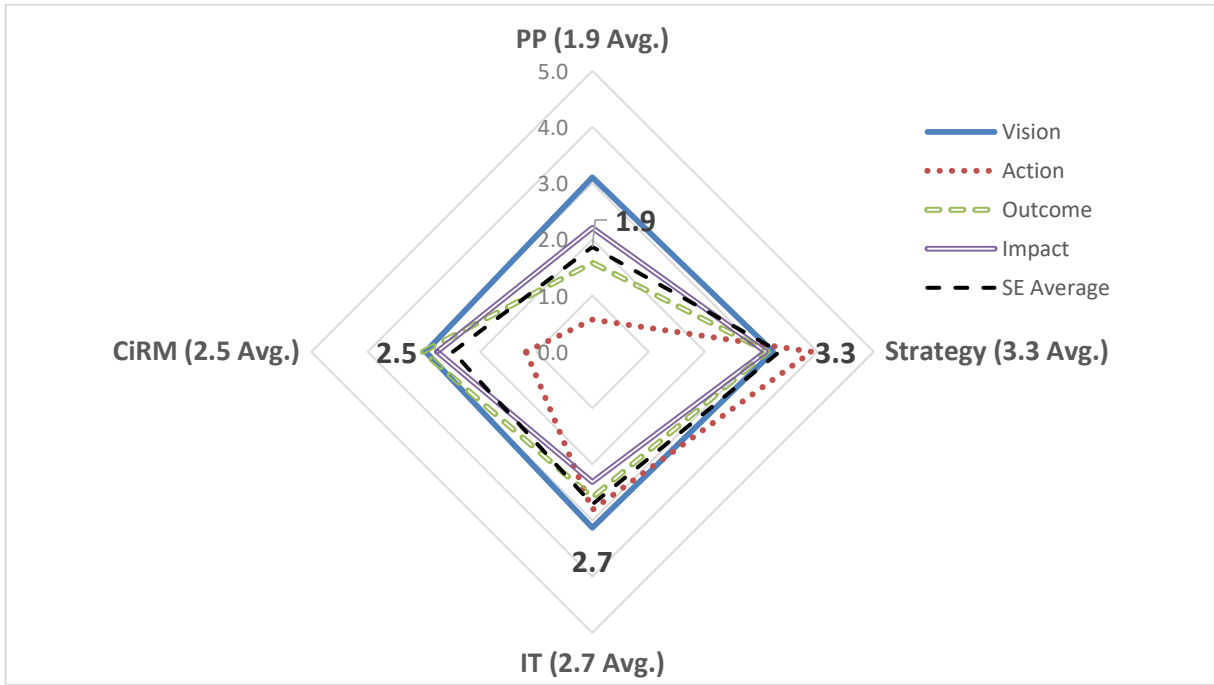


Figure 6-4: VAOI Matrix graph – unfiltered

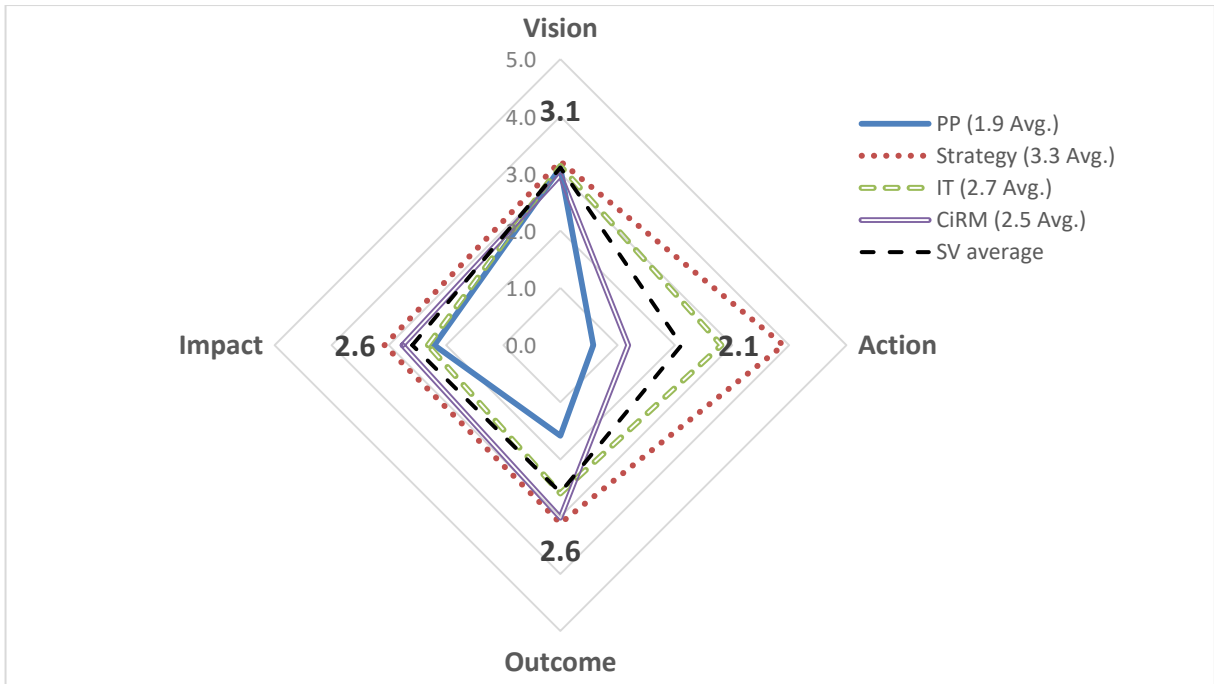


Figure 6-5: CiRM Efficacy Model – Total sample (N=75; Pop.Av.=105K)

The VAOI Matrix application of the CEM simply and effectively communicates public participation capacities in terms of municipal management functions, and is explored further by comparing municipality types and sizes. Figure 6-6 to Figure 6-9 continue with the transposed view of the VAOI Matrix application of the CEM to compare the participatory management functions across the four component areas for twelve townships (Figure 6-6), eight regional municipalities (Figure 6-7), five larger regions (Figure 6-8), and twelve larger cities (Figure 6-9).

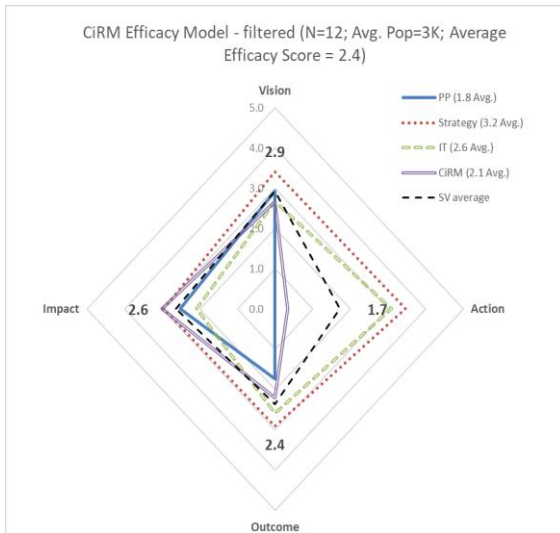


Figure 6-6: CiRM Efficacy Model-Townships

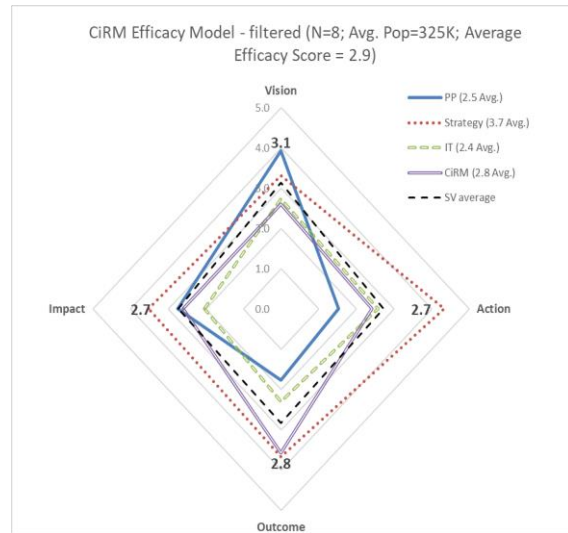


Figure 6-7: CiRM Efficacy Model-Regions

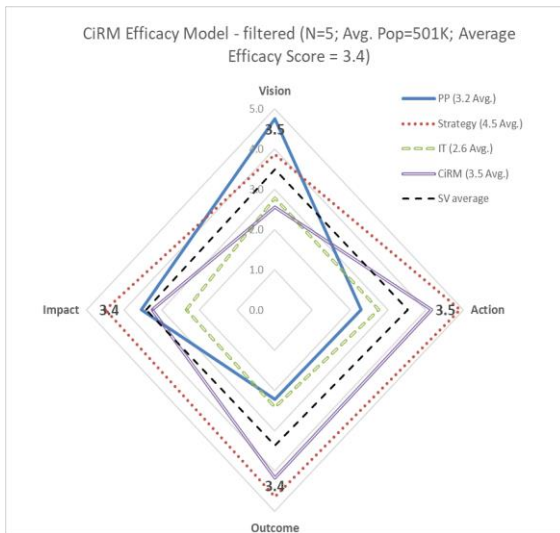


Figure 6-8: CiRM Efficacy Model-larger Regions



Figure 6-9: CiRM Efficacy Model-larger Cities

The Townships in Figure 6-6 show lower overall scores for participatory capacity, particularly in public participation and CIRM due to low *action* scores, with an overall efficacy score of 2.4. The high CiRM *vision* and *impact* scores may be a result of decision makers' close contact to constituents in the small townships (average population = 3K), and reflective of the perspective described by some Chapter 4 participants of CiRM as something they have been "doing for 150 years." The Regions in Figure 6-9 show overall higher efficacy score particularly in public participation *vision*, in all functional areas of strategy, and in average *outcome* and *action* scores, with lower scores in ICT *action*. Regions with average populations of 325K indicate that ICTs would likely be more developed and mature than townships, but significantly lagging municipal leaders' expectations as described in Chapter 5. Low regional ICT scores may also reflect the traditional, internally focused orientation of the larger municipalities.

Comparison of participatory capacities are further illustrated between larger regions (Figure 6-8) and larger cities in (Figure 6-9). Each of the four illustrations show distinctive characteristics. For example, larger regional municipalities (average populations 501K) have the highest citizen efficacy score at 3.4/5, indicating high participatory capacities in all functions of strategy, public participation *vision*, and the *action* and *outcome* functions of CiRM. These latter two management functions may reflect the more mature CiRM applications in the larger municipalities' call centres. Larger cities have somewhat greater participatory capacity than townships (2.8 vs. 2.4/5 average efficacy score), but not to the extent that might be expected by the differences in average population (300K vs. 3K). Further, larger cities have very similar patterns of management functions relative to townships as shown by the blue quadrangle. In addition, larger cities' public participation functions (blue quadrangle) are less capacitated than their PCM averages in comparison to the other municipality types. That is, the ratio of public participation efficacy, as given by the area of the blue quadrangle compared to the basic efficacy given by the area of the black dotted quadrangle appears less for larger cities than for the other three classes of respondents.

Additional patterns are evident from these four CEM illustrations. For example, the average PCM scores (as shown by the black dotted line) show moderate variation across the functions within and even between each of the municipality groups, while the function scores for each PCM component area illustrate far greater variation. For example, the average function scores for larger regions as shown by the black dotted line in Figure 6-9 are uniform, representing average scores between 3.4 and 3.5/5. However, the variation in PCM component scores range between 2 and almost 5 in each function area. These variations help to disaggregate participatory capacities in each PCM

component area to reveal opportunities for greater citizen efficacy through organisational participatory management.

Another general pattern revealed by these four CEM illustrations are similarities between municipality types regardless of size. The general pattern of citizen efficacy is shown by observing the characteristics of PCM areas across all management functions as shown by the coloured lines in each figure. For example, the general efficacy patterns for larger cities (300K average population) are more similar to townships (3K average population) than to the eight regional municipalities (325K average population). This is particularly evident in the similarity of the shapes of public participation scores across the four management functions (blue quadrangle) shared between townships and larger cities, despite similar average efficacy scores shared between larger cities and the eight regions.

The coupling of PCM component areas with the identified management functions operationalises the survey research described in Chapter 5 to summarise and communicate the comparative results of the survey scores, and thereby illustrates the evaluative and prescriptive possibilities of the Citizen Efficacy Model. The VAOI Matrix application disaggregates the research results by management function and thereby illustrates a more granular perspective of the PCM components compared to the basic application. Further, the matrix illustrates differences between municipality types and sizes in the research, and also demonstrates the possibility of discovering participatory patterns common to municipality types regardless of size as shown above.

These applications of the CEM are for illustrative purposes in this exploratory research. They are therefore intended to explore visualisations of organisational participatory capacities pertaining to the research, and to highlight additional possibilities for development which will be summarised in the following chapter. These examples illustrate how the VAOI Matrix application of the CEM allows results to be visualised, and easily communicate the participatory gaps and opportunities of the municipalities in the survey research.

6.4 Conclusion

This chapter has presented an extended PCM framework for summarising the research and as a basis for three research applications providing insight into the research results. Section 6.1 compared traditional public participation to the PCM's distinctive organisational perspective due to the addition of the strategic component. The theoretical rationale for the PCM was underpinned by municipal decision makers' receptivity to the model based on municipal organisational components that are

common among municipal leaders. The PCM integrated these common components to form an innovative model for the examination of municipal public participation.

Section 6.2 presented the first application of the PCM to summarize the research results. The research was summarised according to the nine PCM elements, and thereby helped to contextualize the perspectives of respondents within the nine elements. This approach demonstrated the ‘fit’ of this organisational approach with research respondents’ perspectives on the participatory elements, and helped highlight perceptual gaps, questions, and the public participation priorities revealed in the research, as detailed in Chapters 4 and 5.

Section 6.3 presented two visual applications of the PCM designed as the CiRM Efficacy Model (CEM), based on a quantitative, organisational analytical approach to the research results. The theoretical rationale described the communicative power of CEM visualisation, the CEM’s alignment with current research trends in participatory evaluation, and further, how coupling the organisational perspective with management functions allows its scope to be extended. The CEM was also described formulaically and transposed, and then presented in basic and extended formats. The basic format illustrated the quantitative research results in radial graphs of the four PCM component areas. The VAOI Matrix format extended the basic visualisation by coupling the four PCM component areas with four functions adapted from classic organisational management. The resulting VAOI Matrix illustration of the CEM showed a disaggregated view of the PCM research results, graphically comparing results among municipality types and sizes and revealing opportunities for improvement of participatory capacities of management functions.

The foundational premises of these applications recognise a vacuum of evaluative standards and universal best practices for public participation, and as such do not attempt to represent an ideal solution to public participation evaluation. Instead, they provide a framework that identifies areas for organisational alignment of visioning, execution and results measurement across the four PCM areas. The PCM component areas represent organisational capacities that are applicable to all areas of municipal decision making and, when applied to decision makers’ participatory perspectives, incorporate participatory goals as the basis for participatory CiRM potentially to enhance citizen efficacy.

The CEM builds upon the PCM to help visually identify desired participatory characteristics and ratings across each component area, and easily communicates the alignment of organisational management functions that support citizen efficacy goals. These applications further illustrate the distinctive participatory integration of common organisational components that provide a unique,

flexible approach to participation evaluation and infrastructure as described by Nabatchi and Leighninger (2015).

In summary, this chapter has explored how the PCM can help frame the research results for greater insights and understanding. The PCM further provided the basis for visualisations of results within the Citizen Efficacy Model. The two visual applications demonstrated a basic illustration of the research results, and coupled then with standard management functions for a more disaggregated perspective of organisational participatory capacity and infrastructure. The next chapter concludes this thesis by summarising the research findings, drawing conclusions for existing practice of public participation, particularly in municipal planning, and identifying opportunities for further research.

Chapter 7

Conclusion

This chapter reviews the research findings in light of the original research questions presented in Chapter 1, the literature reviewed in Chapter 2, and the methodological research approaches outlined in Chapter 3. The discussion also highlights theoretical and policy implications, particularly in reference to existing trends in public participation, limitations of the research, and opportunities for future research.

7.1 Summary of key findings

Chapter 1 introduced the topic of this thesis, namely, ICTs that facilitate public participation, framed as an matter of governance policy with a particular focus on organizational strategy and government to citizen relationships. CiRM was paralleled to CRM in the private sector as a collection of management strategies and technologies that aligned organisational processes with customer- or citizen-centric strategies, with the potential of enhancing citizen engagement as a vital component of healthy democracy. The problem highlighted in Chapter 1 is that while CRM has yielded return on investment to private sector companies, CiRM is overly viewed as merely a technology product that has yet to deliver on the promise of wide-spread positive returns in the municipal sector in enhancing citizen relationships.

The research context was an exploration of CiRM approaches and value for enhancing citizen-government relationships particularly regarding two factors, municipal strategy and LRG decision makers. The broad goals of this thesis as identified in Section 1.2 were to examine LRG top decision makers' perspectives on issues and approaches related to participatory CiRM in order to develop a renewed perspective and interdisciplinary framework for citizen engagement. The research focus on decision makers' perspectives acknowledges their fiduciary role as the primary power holders in municipal decision processes, providing a unique perspective in participation research. The PCM framework was proposed for participatory CiRM that integrated organisational strategy into a

participatory ICT framework in order to guide the research. Two phases of research were conducted, namely, structured interviews of LRG top decision makers and a Canadian survey of municipalities.

7.1.1 Summary of interview research outcomes

The two-hour interviews with each of 22 participants explored perspectives across the four PCM areas, namely, public participation, strategy, ICTs, and CiRM. As detailed in Chapter 4, the outcomes of the interviews were first to validate that the PCM framework helped structure the research issues in a way that resonated with LRG decision makers and led to key insights. These insights were a result of juxtaposing organisational priorities in terms of strategy with identified participatory priorities and activities and participatory ICT capacities. The overlaying of these normally diverse topics into a single conversation highlighted the contrasting, and sometimes conflicting, approaches between stated priorities and actual practices.

A second and related outcome of the guided interview discussions was that decision makers expressed a growing self-awareness of differences between their personal visions and the organisational support for public participation. In this respect, the interview discussions focused more on participatory strategy, management and measurement than on CiRM technologies per se, which aligns with the description in Chapter 2 of CiRM as a collection of management approaches. This outcome reinforces the importance of organisational and management dimensions of CiRM over the purely technological. Further, this outcome differentiates between organisational participation *activities* and organisational participatory *capacities* including strategy, structure, policies, and management.

A third outcome of the interviews was to highlight both the uniqueness and the utility of organisational strategy as a distinguishing feature of the PCM. Decision makers confirmed both the strategic importance of public participation, and the general lack of strategic participation “pillars.” In addition, the participatory strategy component reinforced the definition of “CRM as strategy” described in Chapter 2, lending validity to the PCM model as described in Chapter 3. In this respect, organisational strategy becomes a critical but often overlooked component in prioritising and embedding participatory practices in LRGs and points to CiRM as a strategic participatory technology.

A fourth outcome was the importance of participatory philosophy or approach for aligning decision makers’ participatory goals. Participants’ emphasis on the importance of public participation as a foundation of democratic society was belied by the lack of an overarching, unifying philosophy

or approach among decision makers. This suggests that the selection and articulation of a single unifying vision for and approach to public participation by municipal leaders within a municipality is essential to strategic participatory planning and execution. This presents both a challenge and opportunity to enhance citizen engagement. The challenge is that a lack of organisational capacity in strategic planning and execution, or a lack of willingness of decision makers to select a unified vision and approach to public participation, can be seen as undermining the potential effectiveness of the PCM approach. Conversely, citizens may find greater efficacy in advocating for participatory vision, approaches and strategic implementation as described by the PCM rather than continually pursuing ineffective or discrete public participation activities.

7.1.2 Summary of survey research outcomes

The survey phase of the research was administered online to top municipal decision makers from a cross section of Canadian municipalities. The first outcome of the surveys was to extend the research sample size numerically and geographically to 75 respondents representing 51 municipalities of varying population sizes and types across Canada as detailed in Chapter 5 and illustrated in Appendix 8.1. The survey data provided more quantitative data for both the numerical analysis as presented in Chapter 5, as well as for the further exploration of the visualisation of the survey results as presented in Chapter 6. The Chapter 5 analyses revealed that many of the perspectives about the challenges and opportunities of public participation described by survey respondents were similar to the interview results described in Chapter 4. While the interviews revealed greater depth of insight through the opportunity to explore municipal leaders' perspectives on participatory issues, the surveys allowed a broader reach of these issues and the opportunity for numerical analysis and comparison of results to the qualitative data from the interviews. Together, the combination of these two phases of research provided a logical sequence of exploration beginning with a general examination of the PCM approach, leading to a deep understanding of decision makers' perspectives on key issues.

A second outcome of the survey phase was to help examine the validity of the PCM as an organisational strategy approach to public participation against a broader research sample. This is particularly relevant considering that the online survey format, in contrast to the interviews, did not allow for discussion with respondents about the rationale of the strategy approach. Lacking any discussions, survey respondents still expressed a clear familiarity with their organisation's strategic priorities, responded fully to the strategy survey questions, and raised no questions about the strategic structural approach of the PCM. Survey respondents also acknowledged that, in principle, strategic

goals reflect organisational priorities, and therefore, public participation goals are not an organisational priority where they are omitted as strategic goals or pillars. In this respect, the survey responses paralleled the interviews in affirming the validity of the structural approach of the PCM, and particularly the uniqueness of the organisational strategy component and the link to participatory priorities. While the survey results did not provide significant additional insight into municipal leaders' perspectives on the participatory issues addressed in the interview phase, the survey phase helped to validate the strategic approach of the PCM and provided the quantitative data for the visualisations and comparisons that were explored in Chapter 6. The next section examines the original research questions in light of these key research findings.

7.1.3 Research Questions

These research outcomes inform the answers to the research questions that were posed in Chapter 1. The research questions formed an initial guide for exploratory research methodology as described in Chapter 3. The exploratory nature of the research allowed for deviation away from the original research questions and toward the development and exploration of the PCM as a research framework and the CEM as a visualisation tool. However, re-examining the original research questions helps illuminate changes in the perspective on the research issues and how the research may have led to a new understanding of these issues. The first group of questions sought to develop an objective understanding of the form and value of CiRM to LRGs by examining the readiness factors, strategic importance, and evaluation measures of CiRM.

First, is there readiness for CiRM adoption in LRGs, and what are the readiness factors? A significant discovery of the research was that the majority of municipalities are beyond the readiness stage and have already implemented CiRM technologies. Further, some respondents evidenced a more advanced understanding of CiRM by identifying with CiRM as a collection of management approaches as is described in Chapter 1, and also reflected positively on the concept of CiRM as a participatory technology. This reveals two potential readiness factors for participatory CiRM, namely, that CiRM technologies are already used, and that decision makers acknowledge CiRM as a participatory technology.

However, most respondents identified their municipality's use of CiRM technologies as transactional systems for handling citizen communications and financial interactions and not as participatory technologies. The literature review in Chapter 2 identified the planning and execution functions of organizational strategy as potential CiRM readiness factors. The research conclusions

reveal, first, that all research municipalities practice strategic planning. Second, public participation priorities were generally not identified in strategic plans, and third, strategic plans were generally not well executed. Public participation strategic priorities and capacity for strategic execution are revealed as a readiness factor for participatory CiRM.

The second research question asked whether LRGs currently identify or engage CiRM as a strategic technology, and how do CiRM objectives fit into the strategic plan? The research revealed that municipalities deployed CiRM to handle transactional functions such as citizen enquiries and invoice handling, and focused on achieving efficiencies in administering citizen services. There was practically no use of CiRM approaches focused directly on citizen satisfaction and enhancing engagement, and no strategic priorities linked directly to CiRM.

The third question was how can CiRM effectiveness be reported? The scope of this question included identifying substantive and strategic measures, identifying the recipients of the reports, and how measures were evaluated. Chapter 6 showed that no municipality reported formally on CiRM effectiveness, and that citizen engagement and satisfaction reporting was minimal or lacking. Respondents acknowledged the importance of reporting in managing organizational priorities and that many reports were already implemented, but typically in support of financial and regulatory measures. The burden of current reporting requirements will likely continue to be a barrier to CiRM effectiveness reporting, particularly in relation to participatory outcomes, until public participation goals become a strategic priority or a regulatory requirement.

The remaining research questions sought to determine the participatory design and implementation parameters for CiRM in LRGs. First, how important is an integrated approach in CiRM planning and adoption for citizen engagement? Response from the interviews indicated strong support for the integration of CiRM with citizen engagement. As described in Chapter 4, some respondents asked why they weren't already using CiRM for citizen engagement and expressed interest in further pursuit of the topic. Secondly, how might CiRM help to facilitate participation in the short and long terms? Respondents from both the interviews and surveys expressed strong visions and numerous goals for improving public participation, along with interest in exploring participatory systems and automation. However, the diversity of visions and goals expressed by individuals precluded any unified vision necessary for any single implementation of CiRM. Finally, the implications for planners in the LRG context are that, lacking a unified vision and strategic goals, resources to implement CiRM for public participation is a long-term possibility at best.

The research concludes that existing municipal CiRM implementations are generally used for transactional purposes and not for enhancing public participation, despite strong individual participatory visions expressed by respondents. Additional readiness factors would include unified, articulated strategic public participation priorities and further exploration of CiRM as a participatory technology. The next section explores the contribution of the research to participation theory and urban planning research.

7.2 Theoretical implications

This thesis advances research in the participation literature that represents an organisational perspective of public participation in LRG. This perspective focuses on municipal organisational factors such as structure, leadership decisions, management functions and day-to-day processes that direct and constrain public participation, as illustrated in the PCM. Organisational management literature describes these factors in terms of organisational strategy. Respondents in this research affirmed the strategic importance of public participation, and also identified the lack of strategic implementation of participatory priorities throughout their organisations.

An organisational perspective of public participation is implicitly supported by governance theory as surveyed in Section 2.1, which highlights governance success factors that address some of the democratic deficiencies and power imbalances inherent in today's complex participatory environments. The socio-structural perspective of democratic governance presented in this thesis supports these success factors by operationalising a defined democratic vision, and integrating the application of appropriate participatory methods and tools. The PCM outlines the interdependencies between democratic factors and organisational processes, thereby guiding municipal understanding, visioning and implementation leading to creative and innovative citizen engagement paradigms.

Contrasting with governance theory, an organisational perspective of public participation in LRG is effectively absent from the public participation research literature. The dominant themes in the prolific participation literature, as outlined Chapter 2, include citizen actions and methods, participatory effectiveness, and participatory initiatives and technologies. Several articles suggest the importance of an organisational perspective of public participation, but fall short of describing a structural framework. These articles include the CRM strategy framework (King, 2007), participation architecture (Gonzalez & Gonzalez, 2012) and others (Chang & Chen, 2007; Keramati, Mehrabi, & Mojir, 2010). The Matrix of Civic Implication (Prieto-Martin, 2011) integrates an organisational structure perspective with Arnstein's (1969b) participation ladder. Taylor (2014) advocates for

institutional approaches to participation, while Nabatchi and Leighninger (2015) identify the need for participatory infrastructure in government. These articles support or allude to an organisational perspective of public participation, but none of them examine the core organisational factors such as strategy and process that impact how public participation is operationalised.

This thesis advances an organisational perspective of public participation in LRG by, first, introducing organisational strategy as a participatory component. Second, a PCM framework is proposed that links public participation practices and technologies with organisational structure and processes through the strategy component. Third, the PCM framework was validated by municipal decision makers in the interview results presented in Chapter 4. They affirmed organisational strategy as a valid perspective of public participation that could directly enhance strategic implementation of participatory priorities by linking them directly with organisational structure and processes. This research, particularly the PCM, thereby advances an organisational strategy perspective of public participation research.

Several challenges with this organisational perspective can be identified. First is, as with many interdisciplinary models, the complexity of combining multiple disciplines, namely participation theory, organisational strategy, and participatory ICTs. Combined participation and ICT research is fairly mature, but has little relation to organisational theory or strategy. Further, introducing CRM as a combination of organisational management, strategic factors, and technologies adds additional complexity to the theoretical discussions. The visualization tools (CEM) introduced in Chapter 6 illustrate one approach to the challenge of complexity.

Additional considerations are surfaced by the potential for an organisational approach to empower decision makers to exploit participatory technologies wherein full accountability and transparency standards are not maintained. For example, social media, analytics and data mining may lead decision makers to a better understanding not just of citizen interests, but also can also be abused to misinform the public and create ‘alternative facts’ and public polarisation. Citizen-centricity and citizen value delivery can become distorted whereby citizens are merely the objects of persuasion and, similar to the era of NPM, become a mechanism to ameliorate public concerns and promote confidence in ‘the experts.’ Misaligned communication strategies and misappropriation of ICTs can lead to exacerbation of power differentials between citizens and decision-makers. Recent controversies illuminate the challenges associated with social media companies mining and sharing citizen data to levels far beyond citizen awareness, highlighting the need to consider the significance

of the political influence of these external parties and big data resources in municipal participatory strategies.

Further consideration of the emergence of big data and analytics acknowledges its unique and potentially persuasive role as a passive proxy for citizen participation. Tremendous insight and knowledge can be gained from data analytics, but a dependency on how those insights generated and presented can lead to unintended consequences. Big data insights are typically generated through machine learning and artificial intelligence algorithms, which can both amplify and entrench harmful biases inherent in the collected data (Wood, 2018). These biases can result from data collected from narrowly defined populations that are misapplied to represent broader populations, or data that represent harmful existing biases that oppose democratic or other noble values, but are reinforced by the applied algorithms. Similarly, the presentation of data insights can be a key determinant in how data are perceived by decision makers and applied as passively representations of citizen interests. Data are “meaningless without curation, interpretation, and representation” (Davila, Diamond, & Szigeti, 2017). These presentation processes can significantly shape the meaning and interpretations extracted from data, regardless of how unbiased the algorithms used. These and other unintended consequences of big data can result from inherent data biases, algorithmic misrepresentations, and misleading presentation of data.

Another challenge is to identify direct implications for urban planning theory. The PCM is an immature introduction to organisational strategy frameworks for public participation. However, it suggests that integrating organisational strategy theory with participatory planning research could lead to new participatory models and practices. Public participation that is purposely designed and integrated into municipal strategy would require new continuous participatory practices embedded into daily organisational processes, requiring new systems and approaches to managing and analysing potentially continuous streams and large volumes participatory communications. Strategic public participation, for example, embedded into municipal processes could both supplement and enhance the public voice in urban planning as collaborators in all planning decisions. Further, the form of strategic public input may depend more on passive participatory modes, for example analytics and internet-of-things, and less on direct citizen communications on discrete issues. The implications of these new technology trends on additional research is discussed more below. The point here is that strategic public participation would raise the challenge for planners to consider statistical and representational validation of citizen input.

An additional consideration of the research is the changes in participatory context between the time the research was conducted and the time of this writing, a gap of a few years. Some of these changes include, particularly, the open government and open data movements referred to in Section 2.4, which provide access to data resources previously unavailable outside government and are intended to promote citizen innovation and informed participation. Further, over this time period, new forms and understandings of citizen participation in the local municipal context have emerged in response to developments such as smart city initiatives, citizens' new role as authors of place-based data through their location-aware devices, and increasingly heterogeneous methods of communication between citizens and government (e.g. social media, web apps, etc.). These developments potentially alter the government to citizen relationship and power balance in ways as yet unforeseen, but potentially introduce decision influences and even alternative decision processes. These data sets may also be accessed by external organisations to potentially influence participatory processes or sway public opinion according to specific interests. These dynamics further emphasise the present and growing need for defined participation strategies and proactive, integrated participatory processes throughout the municipal organisation that better prioritise citizen interests and sustain citizen-centricity.

These are the contributions of this research to participation research and urban planning theory, as well as some challenges. The next section examines the contributions of this research to methods and practice in public participation and urban planning.

7.3 Contribution to methods and practice

The broad contributions of this research toward methods and practice of public participation in LRGs, and particularly in urban planning include, first, a unique perspective of participation research, second, a methodology for the assessment of participatory capacity in LRGs, and third, a visualisation approach for the communication and comparison of assessment results. Implications for urban planning are identified, as well as numerous challenges to the adoption of PCM methods and practices.

Providing a unique perspective in participation research, this research focuses on decision makers' perspectives, acknowledging their fiduciary role as the primary power holders in municipal decision processes. This unique perspective complements most participation research that focuses on citizens' perspectives and, for example, whether they feel their voices are heard and influential in municipal decision processes. This research, however, seeks to examine how municipal leadership

listens to citizens, and how municipal organisations structurally and procedurally incorporate citizen voices into decision processes. Fiduciary power holders are treated as central actors in the participatory context, and thereby provide a key perspective in developing an organisational perspective of public participation.

The methodology for assessing participatory capacity in LRGs is suggested by the survey discussed in Chapter 5, which builds upon the theoretical framework of the PCM. The PCM-based survey was a core component of this research, and also demonstrates a methodology for conducting future organisational assessments by public participation practitioners. The key contribution of the PCM survey methodology is to illustrate the assessment of participatory capacities in terms of organisational strategy. Stated simply, the survey aims to assess how well the LRGs are able to support continuous public participation through organisational structure and management functions.

The PCM-based survey instrument is, to be clear, not intended to be used to evaluate particular participatory methods or outcomes relative to an universal metric or standard. Rather, it may be described as a meta-model that provides a framework for the definition of municipal public participation standards, but does not define the actual standards. The instrument focuses on assessing the strategic factors in support of public participation, including planning, management functions, and reports. It does not suggest the best approaches, methods and technologies for supporting effective participation that each municipality must specify. For example, the assessment evaluates for the explicit articulation of a unifying public participation philosophy or approach, but does not assess the quality or depth of the philosophy which citizens must evaluate. Similarly, the PCM assessment evaluates for the continuous, formal reporting of citizen satisfaction but does not specify the method or measures for reporting.

Conceptualising the PCM as a meta-model is significant to recognising the contribution of the PCM in helping LRGs set and evaluate participatory capacities relative to their own standards. A pertinent example is drawn from ISO standards that indirectly impact quality but do not directly specify quality measures. ISO 9001 specifies quality management systems and types of measurement systems, not the specific manufacturing processes and measurements required for specific products. An ISO 9001 certification ensures that an organisation has defined its quality management system and documented its implementation processes, but it does not ensure that the organisation achieves specified quality levels (ASQ, 2015). ISO 9001 indirectly leads to quality by providing a foundation for the definition, evaluation, and continuous improvement of processes. Similarly, the purpose of the PCM methodology assesses the explication of goals, measures and standards defined by the

municipality for citizens to evaluate. It thereby potentially provides a foundation for the definition, evaluation, and continuous improvement of public participation.

One implication for participation practice is the refinement and continued administration of the PCM survey throughout LRGs. Annual collection, aggregation, and anonymization of survey results could grow into a database of results for individual municipalities to evaluate the variation of participatory perspectives within their leadership teams, and to identify opportunities to improve their participatory infrastructure and capacities. Such a database could also be useful for benchmarking purposes, and with significant numbers of responses and over time, could lead to identification of best practices for participatory infrastructure as well as trend analysis.

Finally, the CEM exemplifies visualisations of the PCM-based evaluation results. The CEM facilitates the visual comparative analysis of participatory capacity by municipal attribute, such as population or type, as illustrated in Chapter 6. Chapter 6 also illustrated the visualisation of participatory capacity by strategic management functions. The CEM could be extended to facilitate other evaluations, such as individual benchmarking or time-based comparisons for example. Visualisation consolidates the PCM evaluation results into a format that easily communicates the strategic definition of the municipal participatory capacity, and helps to easily identify gaps and opportunities for the improvement of participatory capacity. The PCM and CEM visualisation may help public participation practitioners to advocate for a public participation infrastructure by easily communicating the gaps and opportunities in the municipality's participatory capacities.

Implications for urban planning methods lie in two areas, namely, supplemental practices, and organisational advocacy. Planners can supplement current participatory methods with strategy- and organisationally-oriented practices by, for example, establishing persistent standards and processes for participation reporting, or by identifying strategic participation initiatives such as multi-modal citizen experience or analytics programs relevant to LRG planning initiatives. In addition, promoting continuous, non-discrete participatory activities as described in Chapter 2 can be both a challenge to and significant advancement of current methods. The PCM survey can help planners meet this challenge by identifying strategic participatory opportunities. The survey results, when contributed to a central database as proposed above, may help other planners compare organisational capacities and effectiveness of various approaches. At the organisational level, planners can advocate for strategic organisational methods and practices that align with the PCM model. For example, planners are uniquely positioned to educate and advocate for the identification and articulation of a unified public participation philosophy, as well as strategic participatory pillars and goals. The PCM provides a

framework that helps planners align their advocacy efforts with their LRGs existing participatory capacity.

The implications of the PCM survey for participation methods and practice may raise several challenges to current practices. First, the PCM's emphasis on organisational strategy will highlight deficiencies in non-rationalistic strategy methods that are insufficiently linked to organisational processes. This will create a need for training in strategic planning methods, as well as promotion of a cultural of strategic alignment. Second, while increasing planners' responsibilities, the PCM approach creates opportunities to promote dialogue around strategic visioning, how the vision incorporates the voice of the citizen in terms of methods and representation, and how the vision is executed consistently throughout organisational processes. This dialogue may need to address lack of familiarity by decision makers of organisation strategy, or even cynicism or aversion toward ineffective strategic planning. Third, early adopters of organisational strategy participation approaches may experience reduced benefits due to a lack of critical mass of survey results. A small database of survey results provides reduced statistical validity and little historical baseline for trend analysis. Formalisation of core survey elements around the PCM framework and a standard for sharing results throughout LRGs across Canada will help planners address this challenge.

The key contributions of this research for methods and practice of public participation and urban planning in LRGs include a framework for assessing participatory capacity in LRGs. The framework includes the survey as a mechanism for assessment. The framework also suggests numerous learning opportunities for planners to explore the linkages between the strategy, technologies, and public participation. The framework also suggests a visualisation approach for the communication and comparison of assessment results. Finally, the framework suggests a comparative assessment platform whereby LRGs may compare their participatory capacities to one or more similar municipalities. Implications for urban planning are identified, as well as numerous challenges to adoption of the PCM methods and practices. The following section summarises the recommendations for future research, many of which have already been highlighted or alluded to throughout this thesis.

7.4 Recommendations for future research

Recommendations for further research are identified in three broad areas, namely, theoretical foundations for organisational perspectives on public participation, PCM methods, and alignment with current technology trends.

Additional research on the theoretical foundations for organisational perspectives of public participation focuses on rationalistic approaches to describing organisational and structural models of public participation. Particular attention is on structural and dynamic organisational factors as determinants of the role of municipalities as actors in the government-to-citizen (G2C) relationship. Historical perspectives represent G2C relationships as transactions between a static local government and relatively mobile citizens (Tiebout, 1956). Growing relational technology capabilities that improve municipal responsiveness to citizens may lead to increased municipal competitive agility in attracting citizens. The organisational factors described by the PCM are exposed by this research as among key determinants in harnessing relational capabilities. Further research is required to refine the selection and definition of organisational factors in the PCM. The existing factors depend on the organisational strategy literature identified in Chapter 2. Evolving technological capabilities will continue to impact organisational structure and operations, and may afford new models for LRG participatory capacities and G2C relationships.

Additional research on PCM methods and practice may extend and further validate the PCM and survey instrument, as well as performing comparative and supplemental research. Standardisation of core questions can facilitate benchmarking and trend analysis, and may lead to identification of standardised performance indicators common to LRGs, particularly through annual administration of the survey to Canadian municipalities. Additional extension of the survey instrument can allow customisation to the needs of particular municipalities. Further research can evaluate the impact of the PCM upon public participation levels, evaluation, and citizen perceptions and efficacy. Additional questions related to the applicability of the PCM approach to municipalities of different attributes, such as population and type, may be investigated, looking for differences and patterns among factors such as municipality types, sizes, strategic profiles, community profiles, and citizen engagement profiles. Comparative and supplemental research would additionally seek to build directly upon the existing research by repeating the Phase 2 survey, with refinements, and also seek the perspectives of citizens. Repeating the survey would provide comparative data to determine if and how decision makers' perspectives have shifted, particularly with a potentially heightened awareness of big data and AI trends. Surveying citizens would provide then comparative data to examine gaps and differences between the perceptions of decision makers and citizens.

Another area for future research surrounds municipal strategy, in terms of both methods and competitive positioning. As described in Chapter 2, the proliferation of public sector strategic planning methods has not resulted in strategic effectiveness in LRGs, and is a particular weakness

among municipal leadership in Canada (Hume, 2016). This conclusion is also drawn in interview and survey research and attributes some of the contributing factors to misalignment of strategic priorities among decision makers, low understanding of and importance given to strategic planning, and lengthy, complex strategy processes. The PCM conceptually frames the importance of strategy as it relates to organisational processes, ICT initiatives, and citizen value, while the PCM survey and visualisation tools help to assess and communicate gaps in strategic alignment. Additional research would assess the PCM's degree of effectiveness for strategic conceptualisation and implementation in relation to ICT and participatory planning. Strategic competitive positioning is identified in Chapter 2 as a component in municipal planning theory (Florida, 2009; Johnson, Hays, Center, & Daley, 2004; Lorinc, 2006) in planning attractive and sustainable cities. Research is suggested into how the PCM linkages between organisational capacity and citizen value offer a framework for comparing diverse strategic approaches and identifying effectiveness factors. The suggested online database of survey research offers an analytical basis for such research.

The PCM's alignment with technology trends, the final area of future research possibilities, investigates the key trends impacting local government including, for example, customer experience models, analytics and Internet of Things (IoT). Customer experience is described as the last sustainable source of competitive differentiation (Thompson & Sorofman, 2015). In the same way, LRGs may increase both competitiveness in attracting citizens and efficiency in delivering citizen services by exploiting technologies and strategic processes that optimise citizen experience or efficacy. The amount of research into providing exceptional customer service in the public sector is negligible particularly compared to private sector practices (Lue & Fleming, 2015). This presents research opportunities into how the PCM may provide a framework for assessing and modeling the alignment of organisational factors to enhance citizen experience.

Secondly, related to customer experience and CiRM is the effect of multi-modal or multi-channel communication between LRGs and citizens. Chapter 2 describes LRG ICTs in terms of Web portals, social media, online collaborative software applications, crowd-sourcing and mobile apps, the effect of ubiquitous data access, and IoT. Chapter 2 also highlighted the challenge for LRGs to, amidst the continuing proliferation of ICT innovations, to address the many shifting LRG priorities, lack of best practices, cost reductions, and over-emphasis on transactional e-government. ICT innovations and social media growth necessarily requires a renewed understanding of participation in the current social context, and the increase of citizen interactions by more LRG departments. LRGs are confronted with increasing demands to accommodate more diverse modes of citizen

communication and feedback, to respond to citizens quicker and with more information, and to provide more opportunities citizen involvement with decision making across a range of participatory methods. The PCM offers a way of navigating these complexities and providing transparency and information access that are increasingly demanded.

Third, analytics and IoT are rapidly growing technology trends that generate and process large amounts of environmental, social and mobility data. Increasing reliance by municipalities on these types of data raises concerns about the impact on citizen privacy, creating the need for data governance policies and decisions on methodologies (Alder, 2015). These issues directly parallel the strategic planning and organisational process elements in the PCM, which potentially provide opportunities for research into the PCM as a framework for citizen privacy and protection in relation to technology.

Finally, research opportunities into CRM as both an approach and a technology platform for citizen engagement continue to expand in step with CRM growth. The rate of CRM sales growth currently leads all enterprise software categories, and CRM is projected to be the largest enterprise software category in 2016 as a result of analytics, IoT, mobile technologies, and customer experience as the key growth drivers (Gartner Inc., 2016). Current municipal CiRM designs relegate citizen engagement and satisfaction as an outcome of transactional and 311 applications as described in Chapter 2, rather than as a core objective. CiRM is not viewed as primarily an enabling technology for relational C2G interactions or communications. This is exemplified by the EU-SmartCities website (European Commission, 2015), which identifies 15 categories of “action clusters” that each typically list dozens of document submissions. However, the “Citizen and Stakeholders Communications Platforms” category lists exactly 0 documents. This reinforces the need for further research into models, such as the PCM, that reposition citizen engagement, communications and satisfaction as strategic pillars within the municipal structures.

These are three broad areas for further research surrounding an organisational approach to public participation, namely, theoretical foundations for organisational perspectives on public participation, PCM methods, and alignment with current technology trends.

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Appendices

8.1 Demographics figures

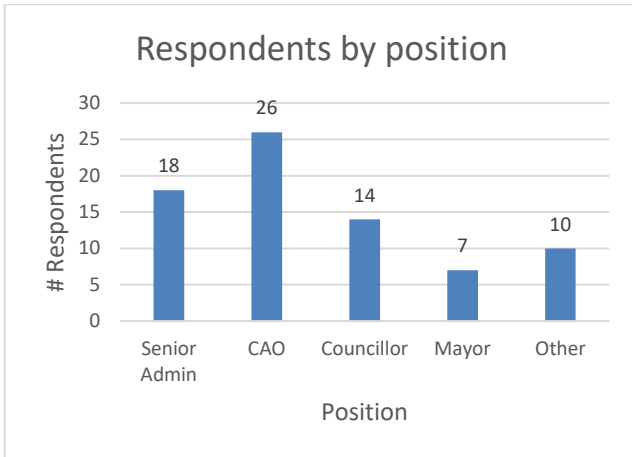


Figure 8-1: Respondents by position

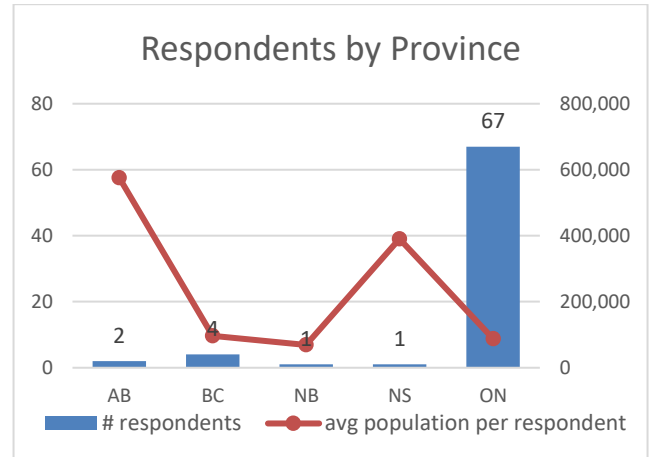


Figure 8-4: Respondents by province

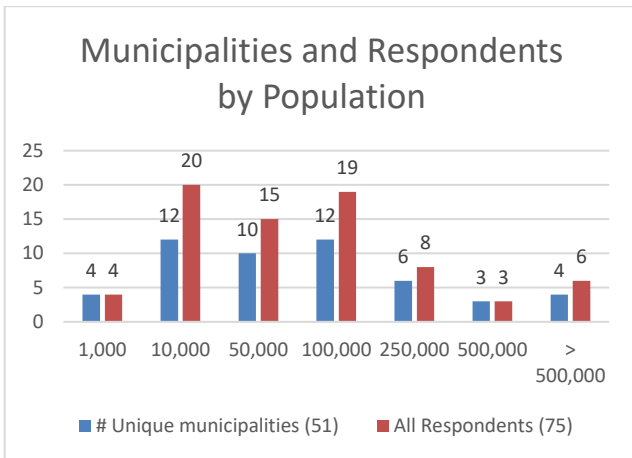


Figure 8-2: Municipal populations

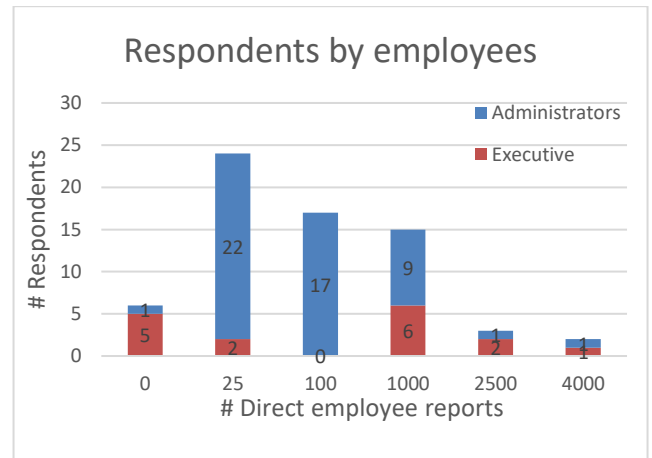


Figure 8-5: Respondents by # of employees

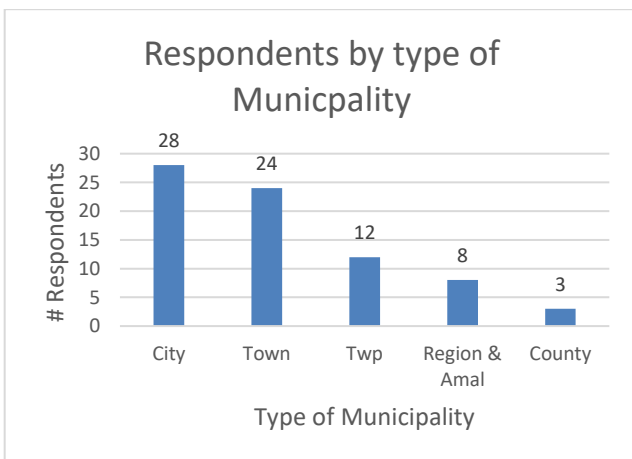


Figure 8-3: Types of Municipalities

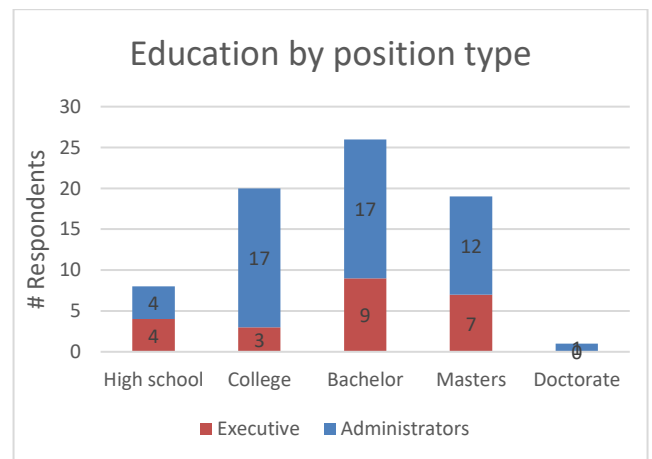


Figure 8-6: Respondents' Education/Position

8.2 Appendix - ICT effectiveness analysis details (I04)

The 12 ICT effectiveness attributes (survey question I04) were analysed according to citizen democracy and relationality as presented in Subsection 5.4.3.

The citizen democracy analysis was based on seven categories of e-government methods representing increasing degrees of citizen democracy (Anttiroiko, 2004). The 12 attributes in I04 were each matched to one of the categories, thereby providing the sequencing used in the analysis. The percentage of mid to high ratings (scores greater than or equal to “3”) was calculated against the total number of scores in each area of IT effectiveness. Only the first five of the seven categories were applicable, and resulted in the sequence and scores listed in Table 8-1. Note that the index letters preceding each attribute name indicates the order of the attributes as presented in the survey.

Citizen democracy category	ICT effectiveness attribute (I04)	% ≥ 3
1. Facilitating information processes	a. Transaction processing	69%
	b. Citizen enquiries	73%
	c. Citizen mass communications	56%
	i. Citizen knowledge base	64%
	j. Internal admin	58%
	k. Reporting & info	69%
2. Supporting communication and negotiation	e. Report citizen preferences	36%
3. Citizen consultation	f. Evaluate services	35%
	g. Evaluate citizen satisfaction	16%
4. Citizen involvement in hands-on planning	h. Policy development	35%
5. Community-based deliberation and participation, including networks	d. Social networking	33%
	l. Manage relationships	33%

Table 8-1: ICT effectiveness attributes (I04) by citizen democracy category

The effectiveness of ICTs was further analysed on a continuum of *relationality* as adapted from the citizen democracy analysis. The continuum of relationality gives substance to the relationship metaphor described in subsection 2.3.1. Further, the ICT concepts and organisational process discussed throughout Chapter 2 provide the conceptual basis for the attribute sequencing. Transactional functions are orientated to serve the internal, typically high volume transaction processing needs of the organization. Relational functions, by contrast, help build to knowledge of citizen traits and preferences and facilitate deep interaction with citizens. The 12 ICT attributes were sequenced for relationality based on the degree to which each attribute was estimated to represent

transactional compared to relational attributes, thereby providing the sequencing used in this analysis as listed in Table 8-2. The calculation of percentages of mid to high ratings in each area of IT effectiveness was utilised from the citizen democracy analysis. Note that the index letters preceding each attribute name indicates the order of the attributes as presented in the survey.

Degree of relationality	ICT effectiveness attribute (I04)	% >=3
High transactionality	a. Transaction processing	69%
	b. Citizen enquiries	73%
	k. Reporting & info	69%
	c. Citizen mass communications	56%
	j. Internal admin	58%
	i. Citizen knowledge base	64%
	d. Social networking	33%
	e. Report citizen preferences	36%
	l. Manage relationships	33%
	f. Evaluate services	35%
	h. Policy development	35%
High relationality	g. Evaluate citizen satisfaction	16%

Table 8-2: ICT effectiveness attributes (I04) by degree of relationality

8.3 Appendix – Interview questions reference chart

Note that the questions below are listed in the order of the interview questionnaire (C,S,I,P), not as presented in the interview results in Chapter 4 (P,S,I,C).

PP and CiRM (C)	PP and Strategy (S)
<p><i>CiRM value and vision</i> C01,04 – Familiarity (CRM, CiRM) C03,06 – Experience (CRM, CiRM) C07 – CiRM value and vision</p> <p><i>CiRM purpose and goals</i> C02,05 – Purpose (CRM, CiRM) C13,15 – Goals C19 – CiRM alignment with strategic goals</p> <p><i>CiRM implementation</i> C08-12 – CiRM development priority - C08 – Development stage - C09 – Development duration to date - C10 - # of initiatives - C11 – Priority ranking of CiRM initiatives - C12 – Rate of development C14,16 – Implementation barriers (personal, organisational) C17,18 – support for CiRM goals (personal, organisational) C20 – CiRM effectiveness measures</p> <p><i>Participatory CiRM</i> C21 – CiRM usefulness by citizen engagement types C22 – Understanding of CiRM analytics C23 – CiRM usefulness by citizen measurement types C24-C26 – Social networking: Interest, vision, and barriers -</p>	<p><i>Strategic planning</i> S01 – Approach to Strategic Planning (SP) S02 – Familiarity with Strategic vision S03 – Effectiveness of strategic planning S04 – Structure of strategic planning approach S13 – Formality in comparison S14 – Effectiveness in comparison S17 – Strategic planning approach (Organic or Mechanistic) S18 – Strategic planning philosophy (Ackoff)</p> <p><i>Strategic implementation</i> S05-08 – Strat. planning activity matrix, frequency; rankings S09-12 – Org effectiveness factors - S09 – Guiding employees - S10 – Service delivery - S11 – Community development - S12 – Citizen satisfaction S15 – Proficiency with SP S16 – Importance of external analysis</p> <p><i>Strategic reporting</i> S19,20 – Municipal reporting matrix, frequency S21-26 – Strategic Value of reports - S21 – Strategic goal reporting - S22 – Strategy feedback - S23 – Reports based on citizen input - S24 – Citizen access - S26 – Citizen satisfaction reporting S27-32 – Organisational effectiveness of reports - S27 – Comparative sophistication - S28 – Comparative effectiveness - S29 – Strategic reporting proficiency - S30 – Org. efficiency measures - S31 – Org. effectiveness measures - S32 – Customer service measures S33 – Comments</p>

PP and ICT (I)	Public Participation Questions (P)
<p><i>ICT vision</i> I01 – Familiarity I02,03 – Strategic importance, comparison I04 – IT planning approach: internal vs. external I23 – Vision for IT-driven PP I24 – Appropriate technologies for vision</p> <p><i>ICT performance</i> IT software system evaluation matrix (I06-13) - I06 – IT software systems list - I07 – Strategic importance - I08 – Cost effectiveness - I09 – Data Quality - I10 – Internal vs. external benefits - I11 – Public accessibility - I12 – Analytic capabilities - I13 – Transaction orientation</p> <p><i>ICT goals and resources</i> I20,21 – IT goals I05 – IT resources</p> <p><i>ICT goals and resources</i> I14-18 – Adaptability - I14 – IT responsiveness to technology changes - I15 – Technical implementation capacity - I16 – User adoption - I17 – External competitive analysis - I18 – Incremental vs. re-engineering approach I19 – IT customer satisfaction measurement I22 – Barriers to IT effectiveness</p>	<p><i>Vision and motivations</i> P01 – Optimality of participation P02 – Desired participation improvements P07a – Citizen satisfaction feedback P08 – Other municipalities optimality P19 – barriers to PP</p> <p><i>Goals and philosophies</i> P16 – Visions for PP; pre-policy & policy level</p> <p><i>PP implementation</i> P09-12 – Structure & processes - P09 – Manual - P10 – Plan - P11 – Reports - P12 – Officer P13 – Link to strategic plan P14 – Strategic importance of PP P15 – Participatory activities and methods P20-24 – Participation by organisational function P26 – Desire for more PP by service area P05 – 311 service</p> <p><i>PP evaluation</i> P03 – PP in strategic planning P04 – PP in community dev’t planning P06 – PP in emergency response P07 – Citizen satisfaction feedback P17 – Methods of “listening” to citizens P18 – Methods of measuring PP</p>

8.4 Appendix – Interview Questionnaire

Notes:

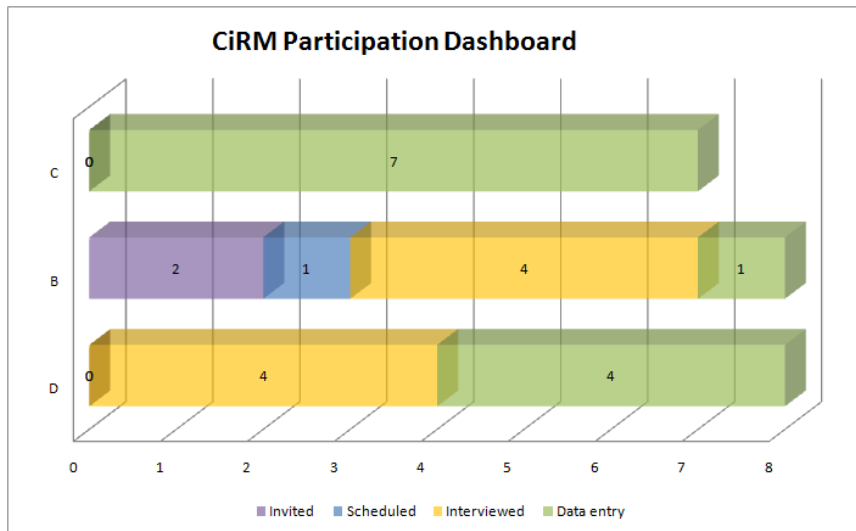
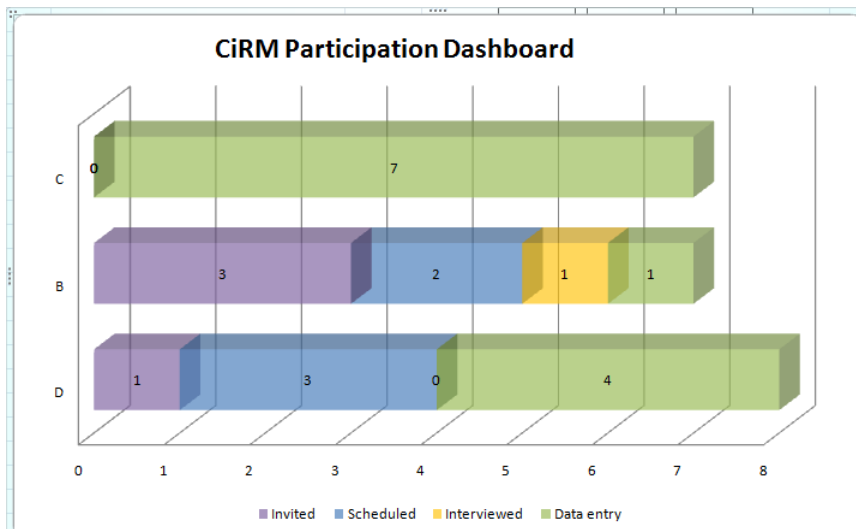
- The interview questions are referred to in the results analysis in the form Yxx, where “xx” is the two-digit sequential question number, and where the “Y” prefix designates the interview section as follows:
 - - 1) Public participation questions – Pxx
 - 2) Strategy questions – Sxx
 - 3) ICT questions - Ixx
 - 4) CiRM section questions – Cxx
 -
- The opening demographic questions are not included in the question numbering scheme.

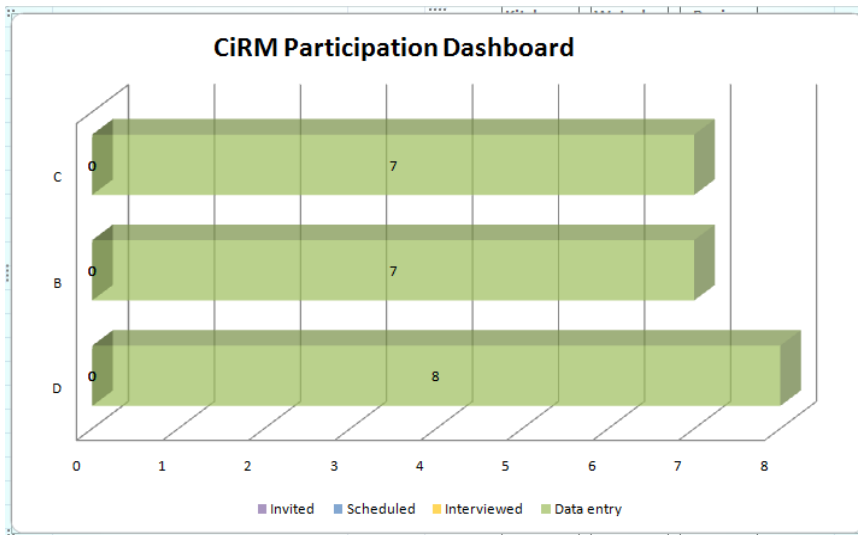
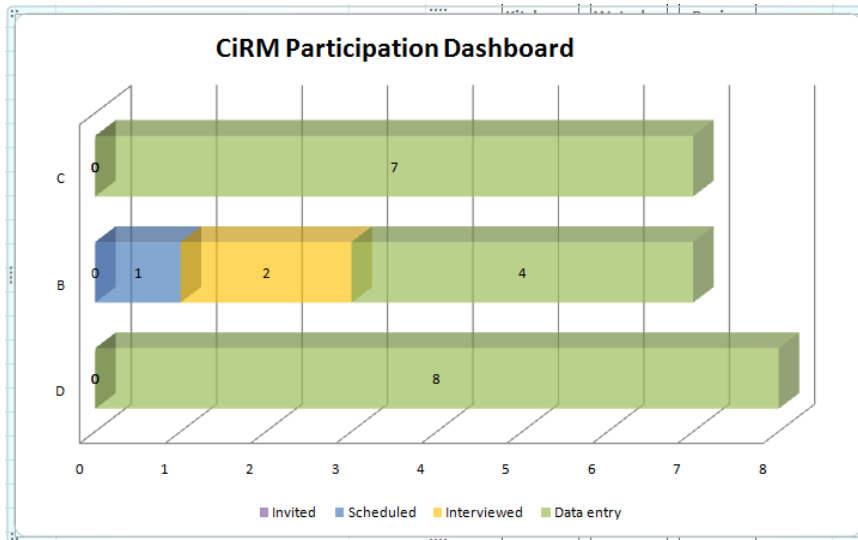
Please refer to “Interview Questionnaire.pdf”

8.5 Appendix – Recruitment Letters and Process

8.5.1 Recruitment Process

The recruitment process used a CRM system to track contacts, send recruitment letters, and track progress. The recruitment process included four stages, namely: a) invitation; b) interview scheduled; c) interview completed; d) data entered. A CRM dashboard was implemented to visually track progress of the interviews. The following snapshots of the dashboard illustrate the progression of the interview process.





8.5.2 Recruitment Letters Introduction

The following pages include six letter templates used in the recruitment and follow up process.

- 1) Municipality invitation
- 2) Participant invitation
- 3) Information letter for participants
- 4) Consent of participant
- 5) Participant thank you
- 6) Municipality thank you



Date

Dear *(Insert Name of Mayor)*,

This letter invites the participation of *(Name of Municipality)* in a research study conducted by Jim Huebner of the University of Waterloo regarding citizen relationship management software and public participation.

The objective of the research study is to investigate the use of strategic planning and management and its relationship to a Citizen Relationship Management system (CiRM) as a Public Participation technology. We are seeking the participation of at least three local municipalities. The result of the study should lead to a better understanding of the readiness factors and barriers relating to the planning and use of relationship management technologies in local government, and in particular, CiRM, as it relates to enhancing citizen engagement, satisfaction and community development. The accompanying information sheet provides further details about the study and format.

Participation in this study by your municipality will mean permitting the recruitment of five to seven key individuals for individual, onsite interviews not to exceed 90 minutes, and permitting ready access to a few, existing support materials (if not already available online). Participants will be sought that represent the municipality's strategic vision, technology priorities, and views on public participation from differing perspectives. More specifically, we are seeking participation by the Mayor, two or three councilors, and two or three top administrators with responsibilities and/or interests in the relevant areas.

Your municipality's participation would be highly valued, and most gratefully acknowledged. You will be contacted shortly by telephone as a follow up to this letter for further discussion regarding participation in this study. In the meantime, should you have any questions about the study, please contact Jim Huebner or Rob Feick (see below).

I would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. However, the final decision about participation is yours. Comments or concerns about your participation in this study may be directed to Dr. Susan Sykes, Director, Office of Research Ethics, University of Waterloo, at 1-519-888-4567 ext. 36005 or by email at ssykes@uwaterloo.ca.

Thank you for considering participation in this study.

Sincerely,

Jim Huebner
PhD Candidate
University of Waterloo, School of Planning
519 888 4567 X 37865
jhuebner@uwaterloo.ca

Dr. Rob Feick
University of Waterloo, School of Planning
519 888 4567 X 35493
rdfeick@uwaterloo.ca

University of Waterloo

Date

Dear *(Insert Name of Participant)*,

You are invited to participate in a research study conducted by Jim Huebner, of the University of Waterloo.

The objective of the research study is to investigate the use of strategic planning and management and its relationship to a Citizen Relationship Management system (CiRM) as a Public Participation technology. We are seeking the participation of at least three local municipalities, and five to seven senior individuals at each municipality. While public participation in municipal elections continues to decline, public participation in other forms, including online social engagement, is expanding rapidly in many contexts including municipal affairs. Based on Customer Relationship Management (CRM) software in the corporate sector, CiRM has proven to be a valuable eGovernment technology, and requires examination for its potential to enable and manage meaningful forms of public participation beyond eGovernment. Strategic planning, as a key to success in CRM systems, shall be evaluated as a catalyst in the adoption of CiRM as a public participation technology, by reducing the complexity of CiRM planning and aligning CiRM goals with community services and development goals that benefit municipal officials, staff and citizens.

The data collected during the interviews will contribute to a better understanding of the readiness factors and barriers relating to the planning and use of relationship management technologies in local government, and in particular, CiRM, as it relates to enhancing citizen engagement and satisfaction and improving our communities.

Participating in this study means you will be asked to complete a combined questionnaire and interview in this research lasting between 90 and 120 minutes. Questions focus on four areas: 1) use and impact of strategic management and planning; 2) perceptions and goals of CiRM; and 3) perceptions and goals for public participation; and 4) use and types of current information technologies and initiatives. The questionnaire will be provided and may be partially completed in advance of the interview. The interview will allow time to complete any remaining questions, for the interviewee to ask questions about the questionnaire or the research, and for the researcher to ask for more detail regarding any of the questions. Interviews will be held at the municipal offices, in the particular office and at a time that are mutually agreeable. With the participant's permission, each interview may be audio recorded. Also, anonymous or attributed quotations may be used in subsequent reports with permission.

Participation in this study is voluntary and a decision not to participate will not negatively impact your relationship with your employer. However, at any point, you may decline to answer any questions that you do not wish to answer and you can withdraw your participation at any time by not submitting your responses. There are no known or anticipated risks from participating in this study.

It is important for you to know that any information that you provide will be confidential. All of the data will be summarized and no individual could be identified from these summarized results. The data, with personal identifiers removed, collected from this study will be maintained on a password-protected computer database in a restricted access area of the Faculty of Environment building of the University of Waterloo. As well, the data will be electronically archived after completion of the study and maintained indefinitely. Further, if you would like to receive a copy of the results of this study, they will be available by contacting either individual.

You will be contacted shortly by telephone as a follow up to this letter for your decision regarding participation in this study. In the meantime, should you have any questions about the study, please contact Jim Huebner or Rob Feick (see below).

I would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Dr. Susan Sykes, Director, Office of Research Ethics, University of Waterloo, at 1-519-888-4567 ext. 36005 or by email at ssykes@uwaterloo.ca.

Thank you for considering participation in this study.

Sincerely,

Jim Huebner
PhD Candidate
University of Waterloo
School of Planning
519 888 4567 X 37865
jhuebner@uwaterloo.ca

Title of Project: Investigating the prevalence of municipal strategy and its relationship to advancing CiRM as a municipal public participation technology.

Supervisors: Rob Feick and Brent Hall
University of Waterloo, Faculty of the Environment, School of Planning
(519) 888-4567 Ext. 35493

Information Letter for Participants

RE: Research Project “Investigating the prevalence of municipal strategy and its relationship to advancing CiRM as a municipal public participation technology”

Thank you for your participation in this research project. Enclosed please find the research questionnaire that will be used during the interview process.

The interview is set for (date, time) at (Place). No preparation is needed, except to have a copy of the attached questionnaire. You may complete any parts of the questionnaire in advance, with the understanding that the interview session may review any question, with particular focus and discussion surrounding the open-answer questions. (Consent for non-politicians) Attached also find a consent form which you may sign and return at the start of the interview.

If there is any change in the time or place of the interview, please contact me immediately. If you have any questions about the questionnaire or the research study, please contact Jim Huebner or Rob Feick.

Thank you again, and I look forward to what is hoped to be a mutually rewarding study.

Sincerely,

Jim Huebner
PhD Candidate
University of Waterloo
School of Planning
519 888 4567 X 37865
jhuebner@uwaterloo.ca

Supervisors: Rob Feick and Brent Hall
University of Waterloo, Faculty of the Environment, School of Planning
(519) 888-4567 Ext. 35493

Consent of Participant

I have read the information presented in the information letter about the study being conducted by Jim Huebner of the School of Planning at the University of Waterloo.

I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I want. I am aware that I may withdraw from the study without penalty at any time by advising the researchers of this decision.

This project has been reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact Dr. Susan Sykes, the Director, Office of Research Ethics, at 519-888-4567 ext. 36005.

Yes, with full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

No, I do not agree to participate in this study.

University of Waterloo

Date

Dear ***(Insert Name of Participant)***,

I would like to thank you for your participation in this study. As a reminder, the objective of the research study is to investigate the use of strategic planning and management in local government and its relationship to a Citizen Relationship Management system (CiRM) as a Public Participation technology.

The data collected during interviews will contribute to a better understanding of the readiness factors and barriers relating to the planning and use of relationship management technologies in local government, and in particular, CiRM, as it relates to enhancing citizen engagement and satisfaction and improving our communities.

Please remember that any data pertaining to you as an individual participant will be kept confidential. Once all the data are collected and analyzed for this project, I plan on sharing the compiled information with the research community through seminars, conferences, presentations, and journal articles. If you are interested in receiving more information regarding the results of this study, or if you have any questions or concerns, please contact me at either the phone number or email address listed at the bottom of the page if you have not already done so. If you would like a summary of the results, please let me know now by providing me with your email address. When the study is completed, I will send it to you. The study is expected to be completed within two months.

As with all University of Waterloo projects involving human participants, this project was reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. Should you have any comments or concerns resulting from your participation in this study, please contact Dr. Susan Sykes in the Office of Research Ethics at 519-888-4567, Ext., 36005.

Sincerely,

Jim Huebner
PhD Candidate
University of Waterloo
School of Planning

519 888 4567 X 37865
jhuebner@uwaterloo.ca

University of Waterloo

Date

Dear ***(Insert Name of Mayor)***,

I would like to thank you very much for your municipality's participation in the research study regarding strategic planning and CiRM Public Participation technologies.

As a reminder, the objective of the research study is to investigate the use of strategic planning and management in local government and its relationship to a Citizen Relationship Management system (CiRM) as a Public Participation technology.

The data collected during interviews will contribute to a better understanding of the readiness factors and barriers relating to the planning and use of relationship management technologies in local government, and in particular, CiRM, as it relates to enhancing citizen engagement and satisfaction and improving our communities.

Please remember that any data pertaining to any of the individual participants will be kept confidential. Once all the data are collected and analyzed for this project, I plan on sharing the compiled information with the research community through seminars, conferences, presentations, and journal articles. If you are interested in receiving any additional information regarding the results of this study, or if you have any questions or concerns in the meantime, please contact me at either the phone number or email address listed below.

As with all University of Waterloo projects involving human participants, this project was reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. Should you have any comments or concerns resulting from your participation in this study, please contact Dr. Susan Sykes in the Office of Research Ethics at 519-888-4567, Ext., 36005.

Sincerely,

Jim Huebner
PhD Candidate
University of Waterloo
School of Planning

519 888 4567 X 37865
jhuebner@uwaterloo.ca

8.6 Appendix – Online survey form

Notes:

- The questions are designated in the left margin by section, where “xx” is the two digit sequential question number, and the prefix indicates the section as follows:
 - - 1) Public participation questions – Pxx
 - 2) Strategy questions – Sxx
 - 3) ICT questions - Ixx
 - 4) CiRM section questions – Cxx
 -
- The form navigation questions, according to the branching survey design as described in Chapter 3, subsection 3.3.1, are included in the numbering scheme, but were not subject to the research results analysis.
-
- The opening demographic and survey termination questions are not included in the numbering scheme.

Please refer to “Online survey printout.pdf”

8.7 Appendix – Survey questions reference chart

PP	Survey Q#		Corresponding Interview Q#
Current vision and importance of PP (P01-P03)			
P01	i	- overall PP rating	P01
P02		comments-desired PP behaviors	P02
P03a	i	- customer satisfaction feedback	P07a
P03b	v	- importance in strategic plan	P03a, P14a
P03c	v	- PP goals link to strategic plan	P13a
P03d	o	- measuring citizen engagement	P18
P03e	o	- PP levels compared to others	P08
Formalization in the organization			
P04a	a	- PP manual?	P09
P04b	a	- PP formal plan	P10
P04c	a	- PP officer	P12a
PP reporting			
P05	o	- PP report?	P11a
P06	o	- reporting frequency	?
P07	o	- reporting 'object'	?
P08	o	- content/measures	?
P09	-	comments-barriers	P19
P10	v	- desire for more PP by area	P26
		P10 cont'd	
P11	v	- more IT-enabled PP areas by IT and by area - Web	P20-24?
		- other IT	
		- NA	
		P11 cont'd- CiRM	
		- web	
		- other IT	
		- NA	
P12		comments-how to do more PP	P26?

Str	Survey Q#		Interview Q#
Strategic visioning factors			
S01	v	- familiarity with SP	S02
Organizational factors			
S02a	i	- overall effectiveness	S03
S02b	a	- formality	S04, S13
S02c	v	- comprehensiveness	S03, 04?
S02e	o	- measurable goals	S21, 22?
S02f	a	- guides senior staff	S09
S02g	o	- regular council reporting	--
Citizen-related factors			
S02d	v	- citizen consultation	P03?
S02h	i	- measures citizen value	S23, 26
S02i	o	- reporting to citizens	S24, 25
S02j	o	- online availability	S24, 25
S03	v	- # of 'pillars' in SP	--
S04	-	list PP pillars	--
Strategic effectiveness factors			
S05a	v	- SP proficiency	S15
S05b	o	- strategic reporting proficiency	S29
S05c	o	- measure overall efficiency	S30a
S05d	i	- measure overall effectiveness	S31a
S05e	o	- measure customer service	S32a
S05f	i	- measure citizen satisfaction	S26 & P07?
S05g	v	- measure PP	P23?
Importance of PP by group			
S06a	v	- politicians	--
S06b	a	- senior staff	--
S06c	i	- individual citizens	--
S06d	v	- community businesses	--
S06e	a	- organized citizen groups	--
S07	-	other comments	S33

ICT	Survey Q#		Interview Q#
System ratings			
I01a	v	- familiarity with municipal's IT	I01
I01b	v	- strategic importance	I02
I01c	i	- responsive to change	I14
I01d	o	- Implementation success (technical)	I15
I01e	o	- User adoption success	I16
I01f	i	- IT customer satisfaction measurement	I19
I01g	a	- how 'advanced' IT systems are (con)	I03
IT approach			
I02	-	- current approach	I04
I03	-	- desired approach	--
IT effectiveness ratings (citizen services)			
I04a	a	- transaction processing	~I13
I04b	a	- communications admin	--
I04c	a	- manage mass communications	--
I04d	i	- social networking	--
I04e	i	- report citizen preferences, interest	--
I04f	o	- evaluate services levels	--
I04g	o	- evaluate overall citizen satisfaction	--
I04h	v	- manage community policy dev't	P22?
I04i	a	- knowledge base for enquiries	--
I04j	a	- manage workflows/internal proces	~I10
I04k	a	- serve reports and community info	~I11, P21
I04l	i	- manage relationships with citizens	--
I05	-	list goals	I20, 21
I06	-	List barriers	I22

CiRM	Survey Q#		Interview Q#
CiRM knowledge, value			
C01	v	- familiarity	
C02	i	- experience w/ CRM/CiRM	C03, 06
C03	-	comment-understanding of CRM	C02, 05
C04	o	- estimate of value	C07a*
C05	-	Describe no value reason	C7b
CiRM vision & implementation			
C07	o	- CiRM implementation status	C08
C08	-	Describe CiRM vision	C13, 15*
C09	i	- usefulness (potential value)	C07a*
C10	a	- CiRM progress rating (toward visio	C12
C11	-	- duration of CiRM ownership	C09
C12	-	who uses CiRM	~C21, 23
C14	-	Tech used by service	P20-25
C15	-	CiRM goals	C13, 15*
C16	-	CiRM barriers	C14, 16
C17	-	understanding of analytics	C22
C18	-	other comments	C27

8.8 Appendix – Non-parametric Statistical Tests Summary

Statistical tests were applied to estimate the significance of differences in survey samples. The “samples” here are represented by the collection of responses for one survey question, or groups of questions. These samples are representative of the target population, in this case, of top decision makers in Canadian municipalities. Differences in average scores, or median scores in the case of non-parametric data such as ordinal and equi-interval ratings scale responses, were investigated for several survey items.

The Wilcoxon Signed Rank test is a non-parametric test that compares median scores for dependent or paired sample items. Wilcoxon Signed Rank was used to test for differences in median scores between single pairs of ordinally-scaled samples, using both direction and magnitude information. Paired samples include, for example, the responses to two different questions provided by a single group of respondents. This contrasts to unrelated or independent samples such as, for example, the responses to one survey item provided by two distinct respondent groups.

Significant gaps or differences between key questions are estimated by asymptotic significance, or probability (“p”) of the results being due to pure chance (null hypothesis). P values of less than 0.05 infer that the results are very unlikely due to chance, leading to the rejection of the null hypothesis, and instead provide sufficient evidence to conclude that the median scores are significantly different.

Non-parametric tests of differences in median scores were applied to several key survey items from each of the four survey sections to supplement the observations and analysis presented in Chapter 5. These test results are summarized next.

8.8.1 Citizen Satisfaction (P03a) vs PP Strategic Importance (P03b)

The Wilcoxon test examined the significance of the difference between responses to P03a (citizens' level of providing "Customer Satisfaction") and P03b (strategic importance of public participation). The "NPAR" Test Statistic results from the test are illustrated below in abbreviated form, lacking the ranking and frequency calculations removed. The full test results for each test are included further below.

The Wilcoxon test for the comparison of citizen satisfaction responses (P03a) and strategic importance (P03b) results in a ".001" probability (exact significance) that the response differences are due to chance, thus allowing the rejection of the null hypothesis. The directionality of the Wilcoxon test therefore provides both the 1-tailed and 2-tailed results. The 2-tailed test result is a better indicator of the probability of significance, since the null hypothesis is that the medians are equal, and we are testing for significance in the difference in medians in either direction (greater or less than). The resulting zero probability, being less than .05, infers evidence of a significant gap between respondents' ratings of strategic importance compared to levels of citizen customer service feedback. This supports the conclusion of a significant disconnect between decision-makers' high emphasis on public participation and their low consideration of citizen feedback in decision processes.

NPAR TESTS - PP Citizen Satisfaction (P03a) vs PP Strategic Importance (P03b)

NPAR TEST
/WILCOXON P03a WITH P03b (PAIRED)

Test Statistics

	<i>P03a - P03b</i>
<i>Exact Sig. (2-tailed)</i>	<i>.001</i>
<i>Exact Sig. (1-tailed)</i>	<i>.001</i>
<i>Point Probability</i>	<i>.001</i>

The full test output follows.

NPAR TEST
/WILCOXON P03a WITH P03b (PAIRED)
/SIGN P03a WITH P03b (PAIRED)

Ranks		<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>
<i>P03a - P03b</i>	<i>Negative Ranks</i>	38	23.32	886.00
	<i>Positive Ranks</i>	5	12.00	60.00
	<i>Ties</i>	7		
	<i>Total</i>	50		

Test Statistics	
	<i>P03a - P03b</i>
Z	-5.10
Asymp. Sig. (2-tailed)	.001

Frequencies		
		<i>N</i>
<i>P03a - P03b</i>	Negative Differences	38
	Positive Differences	5
	Ties	7
	Total	50

Test Statistics	
	<i>P03a - P03b</i>
Exact Sig. (2-tailed)	.001
Exact Sig. (1-tailed)	.001
Point Probability	.001

8.8.2 Strategic Planning (S02a) and Strategic Effectiveness (S05a)

The Wilcoxon test determined a significant difference between the medians of respondents' scores of strategic vision effectiveness (S02a) – 3.2 and strategic planning proficiency (S05a) – 2.2. The test indicates .017 probability of the difference in medians being attributed to chance, supporting the conclusion that respondents' higher ratings of strategic vision are insufficiently supported by strategic planning proficiency. This test infers that respondents rate the effectiveness of the strategic vision significantly higher than the capacity to execute upon that vision.

/WILCOXON S02a WITH S05a (PAIRED)
/SIGN S02a WITH S05a (PAIRED)

Ranks				
		<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>
<i>S02a - S05a</i>	<i>Negative Ranks</i>	8	11.00	88.00
	<i>Positive Ranks</i>	18	14.61	263.00
	<i>Ties</i>	17		
	<i>Total</i>	43		

Test Statistics	
	<i>S02a - S05a</i>
<i>Z</i>	-2.38
<i>Asymp. Sig. (2-tailed)</i>	.017

Frequencies		<i>N</i>
<i>S02a - S05a</i>	<i>Negative Differences</i>	8
	<i>Positive Differences</i>	18
	<i>Ties</i>	17
	<i>Total</i>	43

Test Statistics	
	<i>S02a - S05a</i>
<i>Exact Sig. (2-tailed)</i>	.076
<i>Exact Sig. (1-tailed)</i>	.038
<i>Point Probability</i>	.023

8.8.3 Strategic Planning Formality (S02b) and Comprehensiveness (S02c) vs. Citizen Consultation (S02d)

The Kruskal-Wallis test determined significant differences between respondents' scores of strategic planning formality (S02b) and comprehensiveness (S02c) compared to their ratings of citizen consultation in strategic visioning (S02d). The low probability scores (.006, .001 respectively as shown below) provide evidence of significant gaps between each of the median comparisons. These results support the conclusion that respondents perceive the formality and comprehensiveness of their strategic visioning processes as insufficiently supported by citizen consultation.

NPAR TEST
/KRUSKAL-WALLIS S02b, S02c BY S02d (1, 5)

Ranks			
	<i>S02d</i>	<i>N</i>	<i>Mean Rank</i>
<i>S02b</i>	1	4	26.63
	2	10	16.55
	3	6	14.08
	4	15	24.83
	5	11	32.00
	<i>Total</i>	46	
<i>S02c</i>	1	4	28.00
	2	10	14.70
	3	6	12.25
	4	16	25.81
	5	11	34.77
	<i>Total</i>	47	

Test Statistics		
	<i>S02b</i>	<i>S02c</i>
<i>Chi-Square</i>	14.43	19.17
<i>df</i>	4	4
<i>Asymp. Sig.</i>	.006	.001

8.8.4 Measuring Strategic Goals (S02e) and “Citizen Value” Outcomes (S02h)

The Wilcoxon test determined a significant difference between the medians of respondents’ scores for measuring strategic goals (S02e) compared to “citizen value” outcomes (S02h).

The test indicates .001 2-tailed probability of the difference in medians being attributed to chance, supporting the conclusion that respondents rated the measurement of strategic goals significantly higher than the measurement of citizen value outcomes. This test infers that respondents perceive greater emphasis given to strategic goals rather than citizen value in the strategic visioning process.

NPAR TEST
 /WILCOXON S02e WITH S02h (PAIRED)
 /SIGN S02e WITH S02h (PAIRED)

Ranks				
		<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>
<i>S02e - S02h</i>	<i>Negative Ranks</i>	1	8.50	8.50
	<i>Positive Ranks</i>	24	13.19	316.50
	<i>Ties</i>	22		
	<i>Total</i>	47		

Test Statistics		<i>S02e - S02h</i>
<i>Z</i>		-4.29
<i>symp. Sig. (2-tailed)</i>		.001

Frequencies		<i>N</i>
<i>S02e - S02h</i>	<i>Negative Differences</i>	1
	<i>Positive Differences</i>	24
	<i>Ties</i>	22
	<i>Total</i>	47

Test Statistics		<i>S02e - S02h</i>
<i>Exact Sig. (2-tailed)</i>		.001
<i>Exact Sig. (1-tailed)</i>		.001
<i>Point Probability</i>		.001

8.8.5 Strategic Council Reporting (S02g) compared to Citizen Reporting (S02i)

The Wilcoxon test determined a significant difference between the medians of respondents' scores for strategic reporting to council (S02g) compared to reporting to citizens (S02i). The test indicates .002 2-tailed probability of the difference in medians being attributed to chance, supporting the conclusion that respondents rated the strategic reporting to council significantly higher than to citizens. This test infers that respondents perceive significantly greater strategic emphasis given to reporting to council than to citizens.

NPAR TEST
 /WILCOXON S02g WITH S02i (PAIRED)
 /SIGN S02g WITH S02i (PAIRED)

Ranks				
		<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>
<i>S02g - S02i</i>	<i>Negative Ranks</i>	3	4.50	13.50
	<i>Positive Ranks</i>	14	9.96	139.50
	<i>Ties</i>	28		
	<i>Total</i>	45		

Test Statistics	
	<i>S02g - S02i</i>
<i>Z</i>	-3.04
<i>Asymp. Sig. (2-tailed)</i>	.002

Frequencies		
		<i>N</i>
<i>S02g - S02i</i>	<i>Negative Differences</i>	3
	<i>Positive Differences</i>	14
	<i>Ties</i>	28
	<i>Total</i>	45

Test Statistics	
	<i>S02g - S02i</i>
<i>Exact Sig. (2-tailed)</i>	.013
<i>Exact Sig. (1-tailed)</i>	.006
<i>Point Probability</i>	.005

8.8.6 Strategic Importance of ICT (I01b) vs. ICT Customer Satisfaction (I01f)

The Wilcoxon test determined a significant difference between the medians of respondents' scores of strategic importance of ICT (I01b) compared to ICT customer satisfaction (I01f). The test indicates 0% probability of the difference in medians being attributed to chance, supporting the conclusion that respondents' high ratings of strategic importance and their lower ratings of ICT customer satisfaction presents a significant gap. This result infers that respondents perceive that ICT customer satisfaction is significantly lagging ICT strategic importance.

NPAR TEST
 /WILCOXON I01b WITH I01f (PAIRED)
 /SIGN I01b WITH I01f (PAIRED)

Ranks				
		N	Mean Rank	Sum of Ranks
I01b - I01f	Negative Ranks	1	7.00	7.00
	Positive Ranks	36	19.33	696.00
	Ties	6		
	Total	43		

Test Statistics	
	I01b - I01f
Z	-5.27
Asymp. Sig. (2-tailed)	.001

Frequencies		
		N
I01b - I01f	Negative Differences	1
	Positive Differences	36
	Ties	6
	Total	43

Test Statistics	
	I01b - I01f
Exact Sig. (2-tailed)	.001
Exact Sig. (1-tailed)	.001
Point Probability	.001

8.8.7 CiRM Usefulness (C09) vs. CiRM Progress (C10)

The Wilcoxon test determined a significant difference between the medians of respondents' scores of CiRM usefulness (C09) compared to CiRM progress (C10). The test indicates .1% probability of the difference in medians being attributed to chance, supporting the conclusion that respondents' high ratings of CiRM usefulness are misaligned with their ratings of CiRM progress. This test infers that respondents rate the importance of CiRM as significantly higher than progress toward implementing their CiRM goals.

NPAR TEST
 /WILCOXON C09 WITH C10 (PAIRED)
 /SIGN C09 WITH C10 (PAIRED)

Ranks				
		<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>
<i>C09 - C10</i>	<i>Negative Ranks</i>	1	13.50	13.50
	<i>Positive Ranks</i>	26	14.02	364.50
	<i>Ties</i>	7		
	<i>Total</i>	34		

Test Statistics	
	<i>C09 - C10</i>
<i>Z</i>	-4.28
<i>Asymp. Sig. (2-tailed)</i>	.001

Frequencies		
		<i>N</i>
<i>C09 - C10</i>	<i>Negative Differences</i>	1
	<i>Positive Differences</i>	26
	<i>Ties</i>	7
	<i>Total</i>	34

Test Statistics	
	<i>C09 - C10</i>
<i>Exact Sig. (2-tailed)</i>	.001
<i>Exact Sig. (1-tailed)</i>	.001
<i>Point Probability</i>	.001

8.9 Appendix – Analysis of Rating Scale (Likert-type) data

8.9.1 Rating scales

The rating scales deployed in the Chapter 5 survey are independent items, sometimes referred to as Likert-type scales. The Chapter 5 survey formats groups of rating scale questions as a contextual aid for respondents' understandings of the questions. These groupings are distinct from Likert scales, which are a group of ratings scales that focus on a single issue, each question exploring a deeper understanding of the target issue (Likert, 1932). Likert scales therefore may be subject to alternate analysis as a single group, compared to independent ratings scales which are analysed individually (Uebersax, 2006).

8.9.2 Parametric Properties of ratings scales

The determination of means and other parametric statistics generally of ratings scales a matter of debate (Carifio & Perla, 2007). On one side, statistical purists hold that rating scales are strictly ordinal, and therefore reliability, accuracy, and significance can only be determined with non-parametric tests such as those applied in this appendix. On the other side are arguments for an underlying continuous variable based on symmetrical appearance and interval-type properties. For example, extensive analysis of rating scale responses reveal strong tendencies toward parametric properties. Analyses by Munshi (2014) of small subsets of large data sets reveals three interrelated characteristics of Likert-type responses:

- 1) the presence of symmetry and equidistance is a visual representation of continuousness;
- 2) The visual representation of continuousness, if “well presented will behave more like an interval-level measurement.”
- 3) Since Likert-type scales emulates interval-level measurements, there are notions of central tendency at the item level (Munshi, 2014).

Likert's (1932) original paper similarly identifies an underlying, continuous, interval variable that represents respondents' attitudes. Burns and Burns (2008) further argue that “balance,” as the visual symmetry achieved whereby the distance between each candidate value is the same, allows for quantitative comparisons such as averaging to be valid across items.

The debate of statistical validity of Likert-type scales is augmented by another consideration, namely the useful communication of results. That is, communicating statistically valid conclusions effectively to, for example, decision makers so that they are understood, believed, and used optimally in the decision processes. Ineffective communication of results, no matter how precise, can create

confusion and unintended consequences. Use of averages is common and easily understood, particularly in collating large data sets. Such analyses are valid where assumptions of quasi-normal distributions and resulting conclusions are supported by both a) the characteristics of symmetry and equidistance in the test instrument, and b) additional, non-parametric testing (Allen & Seaman, 2007).

8.9.3 Implications

The implications of parametric properties of ratings scales are applied to the survey results presented in Chapter 5 in several ways. First, the use of the survey platform SurveyMonkey.com helped to ensure the presence of symmetry and equidistance in the online format, and also presented average scores in the results summary. Second, average scores were used to easily survey the results of the large data set across the range of survey responses obtained to identify possible trends. Third, parametric testing was used to validate the significance of responses to key questions. Finally, these scores led to the graphical representations of results presented in Chapter 6, namely the radial graphs derived from the VAOI Matrix. These graphs allow for the comparison of aggregate results between respondent groups, and the identification of gaps and opportunities that are not evident and easily communicable in a non-parametric statistical format.