

Evaluation in Planning: An Investigation into Plan Quality and its Application to Official Plans  
in the Ontario-Greater Golden Horseshoe (GGH) Region

by

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## **Author's Declaration**

This thesis consists of material all of which I authored and co-authored: see Statement of Contributions included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

## **Statement of Contributions**

This thesis comprises four manuscripts which were submitted to various journals for publication. Two manuscripts (referred to as Manuscripts 1 and 2) were co-authored with Dr. Mark Seasons, Advisor, while the remaining two manuscripts (referred to as Manuscripts 3 and 4) were sole-authored. For co-authored manuscripts, I contributed extensively to the conceptualization and writing process of each manuscript.

## Abstract

Evaluation is an established activity in public sector organizations. Evaluation is rooted in the principle that government interventions should have demonstrable benefits. In the realm of planning, there are two broad areas of evaluation: (1) *planning* evaluation and (2) *plan* evaluation. *Planning* evaluation is concerned about evaluating planning processes and planning practice, while *plan* evaluation focuses on assessing plans and their outcomes. Plan evaluation includes assessing the quality of plans, the success of plan implementation, and the outcomes of plans. While both forms of evaluation remain relatively unexplored, when compared to other areas of planning literature, the gap in knowledge regarding plan evaluation is particularly pronounced. This research contributes to our understanding of plan evaluation, particularly in regards to assessing the quality of official plans.

This dissertation follows an article-based format and includes four manuscripts. At the time of submission, two manuscripts (Manuscripts 1 and 2) were published in the *Journal of Planning Practice and Research* and *Journal of Planning Education and Research*, while the remaining two manuscripts (Manuscripts 3 and 4) were under review at the *Journal of the American Planning Association* and *Journal of Planning Education and Research*. Manuscripts 1 and 2 were co-authored with Dr. Mark Seasons, Advisor.

Manuscripts 1 and 2 reviewed the existing literature on evaluation in planning. Manuscript 1 examined the factors that contribute to the under-use of plan outcome evaluation in local government planning practice. The concept of evaluation was explained and the relationship that exists between program evaluation and plan evaluation was explored. Manuscript 2 reviewed the major approaches of program evaluation and evaluation in planning, including formative, summative, *ex ante*, on going, and *ex post* evaluations. The challenges to

evaluating plans were also discussed including the reliance on *ex ante* evaluations; a lack of outcome evaluation methodologies; the attribution gap; and institutional hurdles. Areas requiring further research were highlighted in both of these manuscripts.

Manuscripts 3 and 4 discussed the results from survey research and content analysis. Manuscript 3 discussed the results of a web-based anonymous survey administered to 290 municipalities across the province of Ontario. The findings indicated that practicing planners generally regard plan quality as important; researchers and practitioners should not treat plan quality principles equally; and implementation and monitoring and evaluation principles were undervalued as being very important contributors to plan quality when compared to other principles.

Manuscript 4 discussed the findings from content evaluations of 63 official plans found in the Greater Golden Horseshoe (GGH) region using 70 indicators to measure nine plan quality principles discussed in the literature. The findings indicated that goals and policies were the strongest principles; fact base, monitoring and evaluation, and public participation were the weakest principles; implementation and inter-organizational coordination were somewhat weak; and plan organization and presentation and legislative requirements were reasonably strong.

Based on the findings from the literature review, survey research, and content analysis, several strategies to enhance the quality of official plans are proposed, including: strengthening the importance of the provincial government's role in planning as a means of improving the quality of local official plans; enhancing implementation and monitoring and evaluation provisions in planning initiatives; better describing the empirical foundation and participation process used to inform plan development; and extending plan quality evaluations to planning practice.

## Acknowledgements

Undertaking this PhD required great fortitude, hard work, sacrifices, and, above all, perseverance. This has been a life changing experience and it would not have been possible without the support and guidance from many people.

I would like to express my sincerest gratitude to my advisor Dr. Mark Seasons for his guidance and mentorship throughout this process. I started this process with a plan to finish my dissertation in less than four years and you helped me to achieve this goal. I would also like to thank my committee members Dr. Daniel Henstra, Dr. Harry Cummings, Dr. Pierre Filion, and Dr. Tara Vinodrai for their assistance and guidance throughout the development and execution of this dissertation. Their knowledge and feedback was instrumental in shaping my research.

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I would like to thank Dr. Steven Webber. You have been a strong source of encouragement since my undergraduate studies. I am grateful for our friendship.

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## **CHAPTER ONE: INTRODUCTION**

This chapter introduces the research problem and research questions explored in this dissertation. The chapter provides an overview of plan quality and a discussion into the Ontario-Greater Golden Horseshoe (GGH) region, including the government structures found in Ontario and key planning legislation. The chapter concludes with an outline of the structure of the dissertation.

### **Research Problem and Research Questions**

Plans are important products of the planning profession (Balsas, 2012; Ryan, 2011). Plans are used to tackle many complex issues facing communities, such as shaping physical development patterns, promoting economic development, advocating for environmental justice, and responding to climate change (Allred & Chakraborty, 2015; Berke et al., 2015; Horney et al., 2016). Given the importance of plans, there is an expectation that they should be of high quality, based on established principles.

Plan quality, a measure of the extent of the presence or absence of key components within a plan, has sparked much discussion in the planning literature. Researchers have evaluated a range of plans, including comprehensive plans, pedestrian plans, climate change plans, and hazard mitigation plans using a variety of prescribed indicators of plan quality (Berke et al., 2015; Manta Conroy & Jun, 2016; Evenson et al., 2012; Horney et al., 2016). The depth and scope of plan quality research is welcomed, as researchers have developed a robust set of principles they argue should comprise high quality plans (Woodruff & BenDor, 2016). These principles include: fact base; goals; policies; implementation; monitoring and evaluation; inter-organizational coordination; public participation; plan organization and presentation; and

meeting legislative requirements (Berke & Godschalk, 2009; Berke et al., 2006b; Lyles & Stevens, 2014; Stevens, 2013). Plan quality research is also appealing because plans are widely used in practice, and the methodology for evaluating plan quality is becoming more standardized (Lyles & Stevens, 2014; Woodruff & BenDor, 2016). Perhaps the most important benefit of plan quality research is the ability to highlight specific issues and elements that are needed to improve plans and planning outcomes (Woodruff & BenDor, 2016).

Although this research area is constantly evolving, there are several opportunities for advancing our understanding of plan quality. While researchers have developed a conceptual consensus around the core principles contributing to a high quality plan, an important missing element in this discourse is the views of planning professionals about the importance and impacts of these plan quality principles. Further, the majority of plan quality studies centre on the US context. In contrast, research on the Canadian landscape is sparse with the majority of studies focusing only on the province of British Columbia (BC). Stevens and Shoubridge (2015) examined the extent to which municipalities in the Greater Vancouver region of BC included provisions in their community plans for reducing natural hazard risk and vulnerability. Baynham and Stevens (2014) evaluated the mitigation and adaption content of community official plans in BC. Stevens (2013), which is the first Canadian plan quality study, evaluated the quality of official plans in southern BC.

This dissertation contributes to our understanding of plan quality by exploring the above gaps in the literature. A survey was administered to 290 municipalities across the province of Ontario (Canada) to obtain the views of practicing planners on the importance of plan quality and the principles identified in the literature. The quality of 63 official plans within the Greater Golden Horseshoe (GGH) region, one the fastest growing areas of Ontario and Canada (MMAH,

2013), were also evaluated using the principles identified in the plan quality literature. The dissertation was guided by the following research questions:

1. What are the characteristics and attributes of high quality plans?
2. What is the state of official plans in the Greater Golden Horseshoe (GGH) region of Ontario?
3. What strategies do we need to enhance the quality of plans?

This is the first plan quality research to focus on the Ontario context. The findings are important because it builds on, and extends, our understanding of plan quality by exploring how practicing planners conceptualize plan quality. My findings from survey research indicated that practicing planners generally agree with the principles identified in the literature. It was also noted that practicing planners regard plan quality as important, because it helps facilitate plan implementation, better communicates the intentions of decision makers, and ensures that plans include accurate information and reflect community values.

Another contribution of this research is the identification of the strengths and weaknesses of official plans in the GGH region. My findings indicated that goals and policies were the strongest plan quality principles; fact base, monitoring and evaluation, and public participation were among the weakest principles; implementation and inter-organizational coordination were somewhat weak principles; and plan organization and presentation and legislative requirements were reasonably strong principles. These findings suggest that many GGH region official plans are not of a high quality.

The findings from this research also helped to identify strategies to enhance the quality of official plans. This includes strengthening the importance of the provincial government's role in planning as a means of improving the quality of local official plans; enhancing implementation

and monitoring and evaluation provisions in plans; better describing the empirical foundation and participation process used to inform plan development; and extending the use of plan quality evaluations to planning practice.

## **Overview of Plan Quality Research**

This research explored the theoretical and practical development of evaluation in the field of planning. The planning literature identifies two broad areas of evaluation: *planning* evaluation and *plan* evaluation. *Planning* evaluation is concerned about evaluating planning processes and planning practice, while *plan* evaluation focuses on assessing plans and their outcomes. Plan evaluation includes assessing the quality of plans, the success of plan implementation and/or the outcomes of plans. While both forms of evaluation remain relatively unexplored, when compared to other areas of planning literature, the gap in knowledge regarding plan evaluation is particularly pronounced. This research contributes to our understanding of plan evaluation, particularly in regards to assessing the quality of official plans.

The plan evaluation literature can be grouped into three broad categories: plan implementation, plan outcomes, and plan quality. Despite having a common focus on assessing plans, the planning literature has generally treated these categories independent of each other. Plan implementation research is mainly focused on assessing the extent to which a plan is implemented as intended. It generally involves identifying initial plan outcomes as the plan implementation process evolves. Plan implementation is measured using three approaches: conformance-based, performance-based, and integrative-based. According to Laurian et al. (2004), these approaches rely on different sets of assumptions about the function of plans. The conformance-based approach considers plans successfully implemented if on-the-ground

outcomes adhere to plan policies and objectives. The performance-based approach considers implementation successful as long as the plan was consulted, irrespective of outcomes. That is, plans perform their role if and when they help decision makers make sense of their situations, and so they need to be evaluated in this light (Faludi, 2000). The integrative-based approach integrates both conformance and performance-based approaches. A review of the literature on plan implementation indicates that the performance and integrative approaches have a more limited focus when compared with the conformance-based approach. This is largely due to the ease at which plan outcomes can be assessed.

Plan outcome research is concerned about providing guidance on how to gauge the success of plans in terms of assessing the impacts of plan goals on-the-ground (Berke et al., 2006a; Brody et al., 2006a). Based on a review of the literature, there is a lack of generally accepted plan outcome evaluation methodologies (Brody & Highfield, 2005; Oliveira & Pinho, 2011). There are also challenges associated with establishing causal relationships between plans and their outcomes and a lack of clear indicators and monitoring strategies.

This dissertation was focused on plan quality. The literature on plan quality has increased in volume and sophistication since the 1990s. Lyles and Stevens (2014) identified some forty-five empirical publications on plan quality over the past two decades, with the number of studies steadily increasing. This growth can be attributed in part to greater conceptual consensus among researchers on the principles that contribute to a high quality plan. These principles include: fact base; goals; policies; implementation; monitoring and evaluation; inter-organizational coordination; public participation; plan organization and presentation; and meeting legal requirements (Berke & Godschalk, 2009; Lyles & Stevens, 2014; Stevens, 2013) (refer to Table 1-1 for a review of each principle).

**Table 1-1: Definition of Plan Quality Principles and Examples of Plan Quality Indicators**

Plan Quality Principles	Definition <sup>a</sup>	Examples of Indicators Used to Operationalize Plan Quality Principles
Fact Base	Analysis of current and desired future conditions of a community	Current and Future Population (and Composition); Current and Future Economy; Existing Land Uses; Natural Heritage; Constraints to Development
Goals	Broad statements of the desired future conditions that reflect community values	Land Use and Growth Management; Housing; Transportation; Waste Management; Sewer and Wastewater; Energy Supply; Natural Heritage, Parks & Open Space; Cultural Heritage; Mineral Aggregates; Economic Development
Policies	Principles to be followed in order to guide public and private decisions to achieve goals	
Implementation	Commitments to carry out the plan once adopted	Implementation Section; Plan Priority; Department/Organization Responsibility; Timelines; Funding Sources
Monitoring and Evaluation	Provisions for tracking changes in the community in relation to plan goals	Monitoring and Evaluation Section; Department/Organization Responsibility; Timeline for Plan Update; Indicators; Quantifiable Goals and Policies
Inter-organizational Coordination	Recognition of the interdependent nature of plan making and implementation	Horizontal and Vertical Coordination (e.g., coordination with other governments)
Public Participation	Recognition of formal and informal actors involved in the plan making process	Stakeholders Involved; Purpose of Participation; Public Participation Techniques; Effects on Citizens
Organization and Presentation	A usable and attractive plan	Executive Summary; Cross-Referencing; Table of Contents; Glossary of Terms; Illustrations; Maps
Legislative Requirements	Required elements included in a plan as required by planning legislations	Intensification Target; Population and Employment Projections; Density Targets

<sup>a</sup>Source: Berke & Godschalk, 2009; Berke et al., 2006b; Berke et al., 2012; Horney et al., 2016

Berke et al. (2012) and Berke and Godschalk (2009), among others, have argued that plan quality research is a valuable tool for systematically analyzing and improving plans. Plan quality

research can be used to identify the strengths and weaknesses of a plan, judge whether its overall quality is good, and provide a basis for ensuring that plans reach a desirable standard (Berke & Godschalk, 2009). For example, Stevens' (2013) study revealed that while plans are well crafted in laying out a vision for the future and specifying goals and policies to achieve its vision, they are weak with regard to implementation, monitoring, and evaluation. This research arrived at a similar conclusion for official plans across the GGH region (discussed in Chapter Six).

### **Central and Local Government Structures**

Canada has a multi-level system of government that is formally divided into two levels of government – federal and provincial. Under the *Constitution Act (1867)*, the local level of government, also referred to as the municipal level, is not formally recognized as a government entity, but rather a “creature of the provinces” (Sancton, 2015). The local level of government must rely on the provincial governments for their legal existence (Sancton, 2015). Generally, the federal level of government is concerned about establishing policies that affect the entire country, while the provincial level is responsible for providing services that have an impact on the entire province, such as education and health care (Parliament of Canada, 2009). The local level is responsible for delivering services to cities and towns, including parks and recreation, and water and wastewater.

The various levels of government, specifically the provincial and local level, are often engaged in multi-level governance, which is a process of acting collaboratively to address issues that transcend jurisdictional boundaries (Sancton, 2015). For example, within the realm of planning, both provincial and local governments must regularly collaborate to address a variety

of complex issues that have a bearing on neighbouring cities and towns, such as transit and economic development.

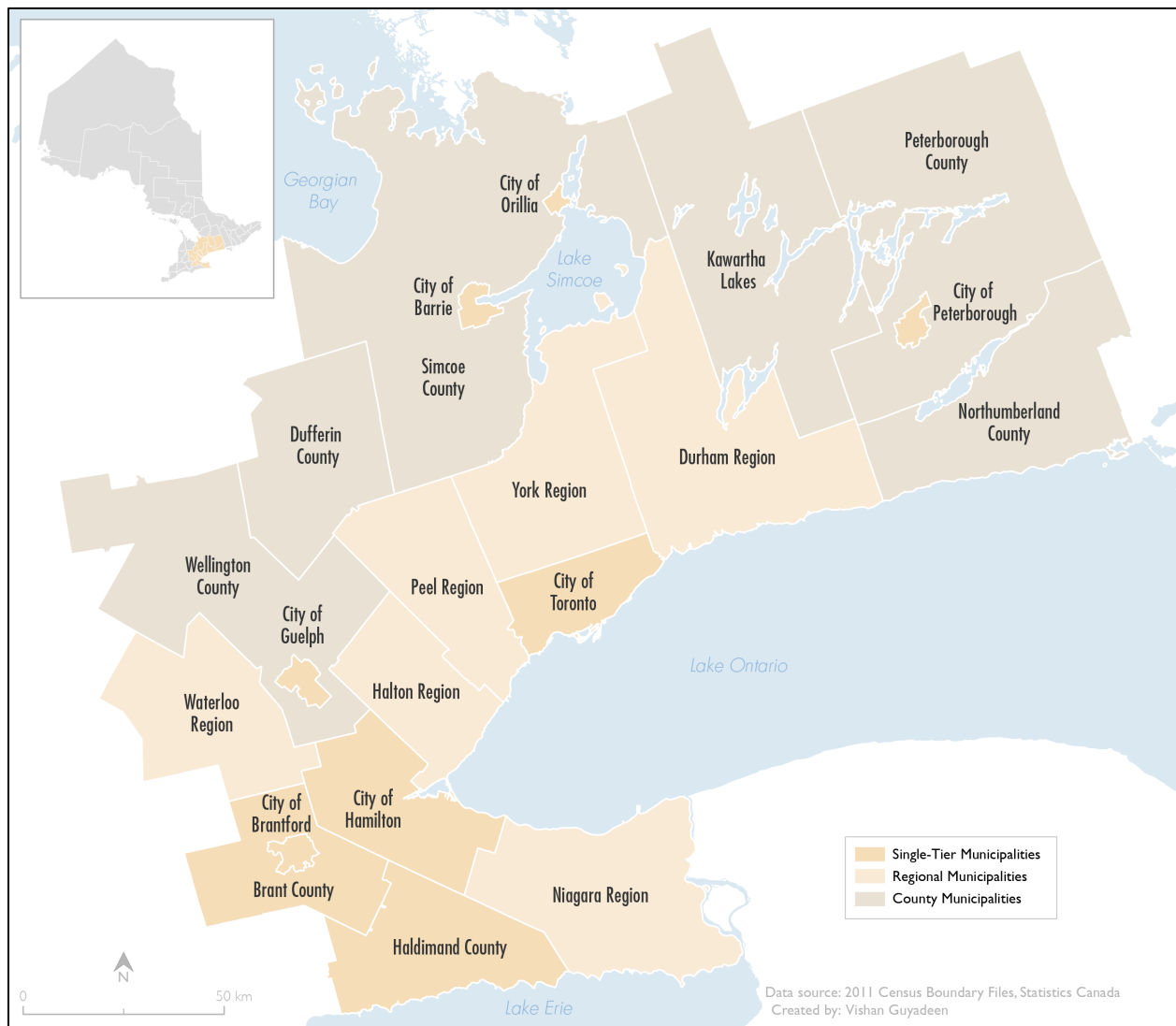
Provincial governments are central governments in that their primary function is to, among other things, establish the basic framework within which local governments must operate. This generally involves establishing a variety of legislation that gives local governments the necessary legal authority to carry out specific functions that are related to local affairs, such as land use planning and regulation, building regulations, and parks and recreation (Sancton, 2015).

Local governments play a critical role in delivering services to citizens. Sancton (2015) has argued that local governments help promote efficiency by ensuring that services and taxes provided by governments closely match what residents actually want; local governments help facilitate better citizen participation in local decision-making, as this is the closest form of government to residents; and finally, the presence of multiple levels of government helps to promote a pluralistic political system that sees a distribution of power, albeit unequal, to different governments. Local governments can be divided into single-tier, upper-tier (i.e., county or regional municipalities), and lower-tier municipalities (i.e. a city, town or township located in upper-tier municipalities). Single-tier municipalities include both separated municipalities that are geographically located within a county and former county or regional municipalities that have been amalgamated (AMO, 2016). In Ontario, there are 444 local municipalities which include 414 single- and lower-tier municipalities and 30 upper-tier municipalities (Sancton, 2015).

## The Greater Golden Horseshoe (GGH) Region

The GGH region, shown in Figure 1-1, is located in southern Ontario. The region covers almost 32,000 square kilometres and consists of 110 separate municipal jurisdictions (21 upper- and single-tier municipalities and 89 lower-tier municipalities) (Neptis, 2013). Municipalities range from highly urbanized cities to rapidly growing suburban municipalities, mid-sized centres, small towns and villages, and rural areas (Neptis, 2013).

**Figure 1-1: The Greater Golden Horseshoe (GGH) Region**



The GGH region was selected as a case study because it is one of Canada's fastest growing urbanized areas. In 2011, the population of the GGH region was approximately 9 million, representing two-thirds of the population of Ontario and nearly one-third of the total Canadian population; the region is forecasted to increase to 13.5 million people by 2041 (Hemson, 2013; Neptis, 2013; MMAH, 2013). The region is also the economic engine of Ontario, generating two-thirds of Ontario's Gross Domestic Product (MMAH, 2016). Some of the main economic activities include financial services, information technology and telecommunications, automotive, food and beverage, biomedical and biotechnology, and aerospace (MMAH, 2016). As Stevens (2013) argued, it is important for highly populated regions to have a high quality plan to guide future growth and development, because the absence of a high quality plan can have severe impacts on these regions and their inhabitants (e.g., economy and infrastructure).

Planning in the Ontario-GGH region is primarily governed by the *Ontario Planning Act (RSO 1990)*, which divides planning authority between the provincial level of government and the local levels of government (Doumani & Foran, 2012). Under the Planning Act, municipal official plans – single-, upper, and lower-tiers – must conform to a range of provincial policies depending on their location. Once a single- or upper-tier municipality has created or updated its official plan, and received approval from their local Council, the plan must be submitted to the province, specifically the Ministry of Municipal Affairs and Housing (MMAH), for final approval. Provincial planners review municipal official plans to ensure conformity with applicable provincial policies. Lower-tier official plans are approved at upper-tier level.

A main role of the provincial government is to provide the statutory framework within which local planning operates. This includes developing policies and plans that take into

consideration the entire province of Ontario. While there are numerous policies and plans that apply province-wide, there are two main policy frameworks that apply to all municipalities across the GGH region. These are the *Provincial Policy Statement (PPS) (2005 and 2014)* and the *Growth Plan for the Greater Golden Horseshoe (2006)*. Below is a description of each policy. It is important to note that I have omitted a range of other provincial policies that have a bearing on official plans because they do not apply to all municipalities in the GGH region. These include the *Niagara Escarpment Plan (1990)*, *Oakridges Moraine Conservation Plan (2001)*, and *Greenbelt Plan (2005)*. As demonstrated in Figure 1-2, while these plans apply to a range of municipalities across the GGH region, not all municipal official plans are required to conform to these policies, as they might not have lands that fall within the legislative limits of the plans.

The PPS (2005 and 2014) sets the policy foundation for regulating land use planning and development across the province of Ontario (MMAH, 2015). The PPS (2005 and 2014) focuses on three broad policy areas: (1) building strong and healthy communities (policies include development and land use patterns, employment, housing, public spaces, infrastructure, economic development, and energy conservation); (2) managing resources (policies include natural heritage, water, agriculture, minerals and petroleum, mineral aggregate resources, and cultural heritage); and (3) protecting public health and safety (policies include natural and human-made hazards). These policy areas serve as the foundation for official plan goals and policies across the entire province of Ontario.

The Growth Plan for the Greater Golden Horseshoe (2006), referred to as the Growth Plan (2006), is the primary policy framework that guides planning within the GGH region. The Growth Plan (2006) focuses on a number of policy areas, including transportation, infrastructure,

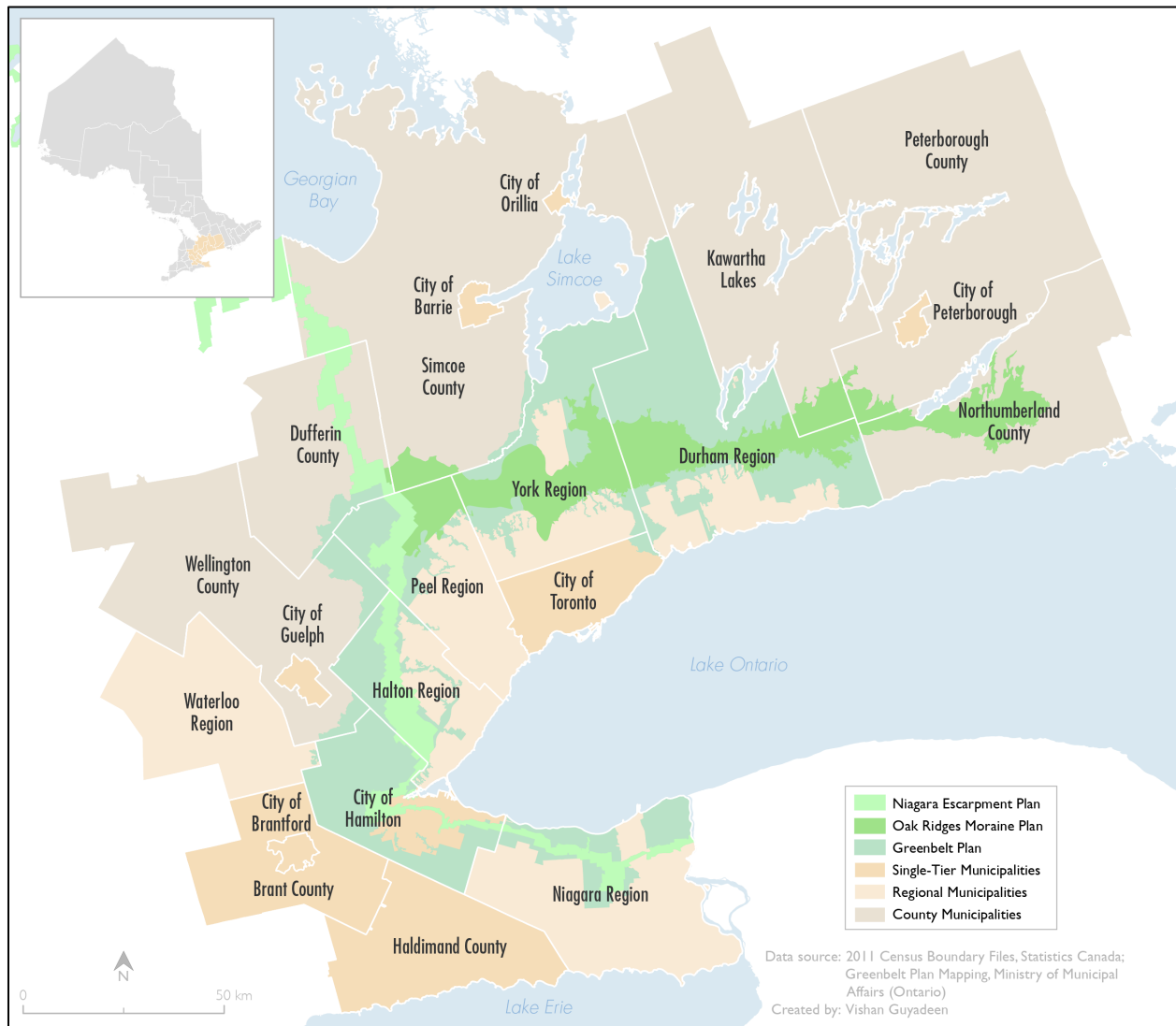
land use planning, urban form, natural heritage and resource protection, and economic development. The Growth Plan (2006) also identifies two targets that all GGH region municipalities must meet: (1) achieve a minimum of 40 percent intensification within the existing built boundary, and (2) achieve a minimum gross density target that varies between 150 to 400 residents and jobs combined per hectare for urban centres. The Growth Plan (2006) also identifies the distribution of population and employment for the GGH region to the years 2031 and 2041, referred to as Schedule 3 and 7 Projections, to which municipalities must accommodate. These targets are important, as municipal official plans must include them as part of meeting the legislative requirements for plan content. If there is a conflict between the PPS (2005 and 2014) and the Growth Plan (2006), the more stringent policy framework will prevail.

It is important to note that there are two iterations of the PPS (2005 and 2014) and Growth Plan (2006). In the case of the PPS, there is a 2005 version and a 2014 version. For the Growth Plan, the first iteration was in 2006 and has a planning horizon that extended to 2031. A second consolidated version of the Growth Plan was introduced in 2013 and has a planning horizon that extended to 2041. The main difference between the 2006 and 2013 Growth Plans is the updated population and employment projections. While some municipalities have updated their official plans to the current provincial plans, a majority of official plans still refer to the 2005 PPS and initial 2006 Growth Plan. As such, this research relied on both versions of the PPS (2005 and 2014) and the Growth Plan (2006) as the basis for the plan quality evaluations (discussed in Chapter Six).

Within the context of this research, the GGH region was a prime case study. The composition of regional and local governments and the role of the provincial government provided an ideal setting to explore the importance of plan quality and the state of official plans.

The GGH region allowed me to examine the various ways in which plan quality manifests itself in official plans across the different levels of local government.

**Figure 1-2: Select Provincial Planning Policies and their Influence on Local Municipalities**



## Structure of Dissertation

This dissertation follows an article-based format, also known as thesis by publication, which is different from the conventional monolithic dissertation model. The article-based format comprises a series of manuscripts interconnected by a central theme. In the case of this

dissertation, four manuscripts were produced, each of which focused on different aspects of evaluation in planning. At the time of submission, two manuscripts (Manuscripts 1 and 2) were published in the *Journal of Planning Practice and Research* and *Journal of Planning Education and Research*. The remaining two manuscripts (Manuscripts 3 and 4) were under review at the *Journal of the American Planning Association* and *Journal of Planning Education and Research*. It is important to note that there were inevitable repetitions in content throughout the dissertation due to the article-based format.

This dissertation comprises two types of chapters: chapters that are included to provide a context for the dissertation (Chapters One, Two, and Seven), and chapters that are manuscripts (Chapters Three, Four, Five, and Six). Following the introduction, Chapter Two discusses the research design and methodology used to explore the research questions. This includes a review of preliminary considerations for selecting a research design and a discussion of major research components, including literature review, survey research, and content analysis. The limitations to the research design and methodology are also discussed.

Chapters Three and Four represent my two literature review manuscripts. These chapters discuss the concept of evaluation in planning, including the benefits and challenges of evaluation. Chapter Three examines the factors that contribute to the under-use of plan outcome evaluation in local government planning practice. The concept of evaluation is explained and the relationship that exists between program evaluation and plan evaluation is explored. Chapter Four reviews the major approaches of program evaluation and evaluation in planning and the challenges to evaluating plans and planning. Areas requiring further research are highlighted in both of these chapters.

Chapters Five and Six represent my two data collection manuscripts. Chapter Five discusses the results of a web-based anonymous survey administered to 290 municipalities across the province of Ontario. Chapter Six discusses the findings from content evaluations of 63 officials plan found in the GGH region using 70 indicators to measure nine plan quality principles discussed in the literature.

Chapter Seven synthesizes the findings from the four manuscripts (Chapters Three, Four, Five, and Six). Strategies for enhancing the quality of plans, the implications of the findings for planning theory, education and practice, and areas requiring further research are also discussed.

## **CHAPTER TWO: RESEARCH DESIGN AND METHODOLOGY**

This chapter discusses the research design and methodology used to explore the research questions outlined in Chapter One. The chapter begins with a review of preliminary considerations for selecting a research design. This is followed by a discussion of the major research components used to inform my methodology, including literature review, survey research, and content analysis. The chapter also discusses the limitations to the research design and methodology.

### **Preliminary Considerations**

According to Creswell (2014), there are three approaches to research: qualitative, quantitative, and mixed methods. Qualitative research involves various kinds of non-numerical data, such as interviews, written texts or documents, visual images, observations, and case studies (Remler & Van Ryzin, 2011). By contrast, quantitative research focuses on using instruments that produce measurable or numerical data to investigate characteristics, behaviours or attitudes (Remler & Van Ryzin, 2011). Mixed methods research follows a triangulated approach whereby elements from both qualitative and quantitative approaches are integrated. Creswell (2014), among others, has argued that the various research approaches should not be viewed as dichotomous, but rather complementary depending on the nature of the research being explored. That is, qualitative research helps explore individual or group perceptions while quantitative research helps examine relationships among variables. Having a mixed methods approach can help to strengthen the credibility of the research findings by utilizing multiple lines of inquiry.

There are advantages and challenges to qualitative, quantitative, and mixed-methods research. Qualitative research is useful in exploratory studies where the researcher is trying to understand the “how” and “why” questions and often focus on emotions, beliefs and other intangible characteristics (Remler & Van Ryzin, 2011; Yin, 2014). It is generally case study based and involves a relatively small purposively selected sample (i.e., small-n studies); case studies involve investigating a phenomenon (i.e., the case) in depth and within its real-world context (Remler & Van Ryzin, 2011; Yin, 2014). The challenge to qualitative research is that because researchers consider a variety of sources (e.g., interviews and content analysis), different researchers using alternative measures will get distinctive results, which brings into question the reliability of study findings (Neuman & Robson, 2009). Further, it is challenging to generalize findings to other contexts given the small sample sizes used (Remler & Van Ryzin, 2011; Yin, 2014).

Quantitative research is useful when examining the relationships (i.e., explanatory) between and among parsimonious variables that are tightly controlled through design and statistical analysis (Creswell, 2014). That is, quantitative researchers develop techniques that involve quantitative data that is numerically measurable (Neuman & Robson, 2011). Quantitative research generally involves probability (i.e., random) sampling and large sample sizes (large-n studies) (Remler & Van Ryzin, 2011). While qualitative research focuses on cases, quantitative research is grounded in understanding a phenomenon through some set of variables. The benefit of this approach is that studies are often reliable in that the numerical results produced do not vary because of characteristics of the measurement process or measurement instrument (Neuman & Robson, 2009). Also, the findings are often generalizable (i.e., valid) to the larger context given the use of large-ns to explore issues. This challenge to this approach however, is that a

focus on numerical variables does not often provide a clear understanding of the “why” and “how” (Neuman & Robson, 2009; Remler & Van Ryzin, 2011).

Mixed methods research helps address many of the drawbacks to qualitative and quantitative research and argues that these two approaches are complementary rather than distinct. For example, Remler and Van Ryzin (2011) argued that sometimes the analysis of qualitative interviews or observations involve counting words or behaviors. The intent of mixed methods research is to use more than one research methods to investigate a research question (Neuman & Robson, 2009). The benefit of this approach is that it integrates exploratory and explanatory research in data collection and analysis (Remler & Van Ryzin, 2011). A drawback to this approach however, is that it can be time consuming and expensive to conduct such research. For example, it often involves mixed method sampling which includes both qualitative and quantitative sampling (Neuman & Robson, 2009).

This research followed a mixed methods approach to exploring the issue of plan quality. Both qualitative and quantitative approaches were used to: explore professional planners’ opinions and viewpoints regarding plan quality, and measure the extent of the presence and absence of key plan quality principles in official plans across the GGH region. Table 2-1 highlights the specific research tools used to explore this research, including literature review, survey research (a quantitative research instrument), and content analysis or plan content analysis (a qualitative research instrument).

**Table 2-1: Research Tools and Research Questions**

Research Questions	Research Tools
1. What are the characteristics and attributes of high quality plans?	Literature Review + Survey Research
2. What is the state of official plans in the Greater Golden Horseshoe (GGH) region of Ontario?	Survey Research + Content Analysis
3. What strategies do we need to enhance the quality of plans?	Literature Review + Survey Research + Content Analysis

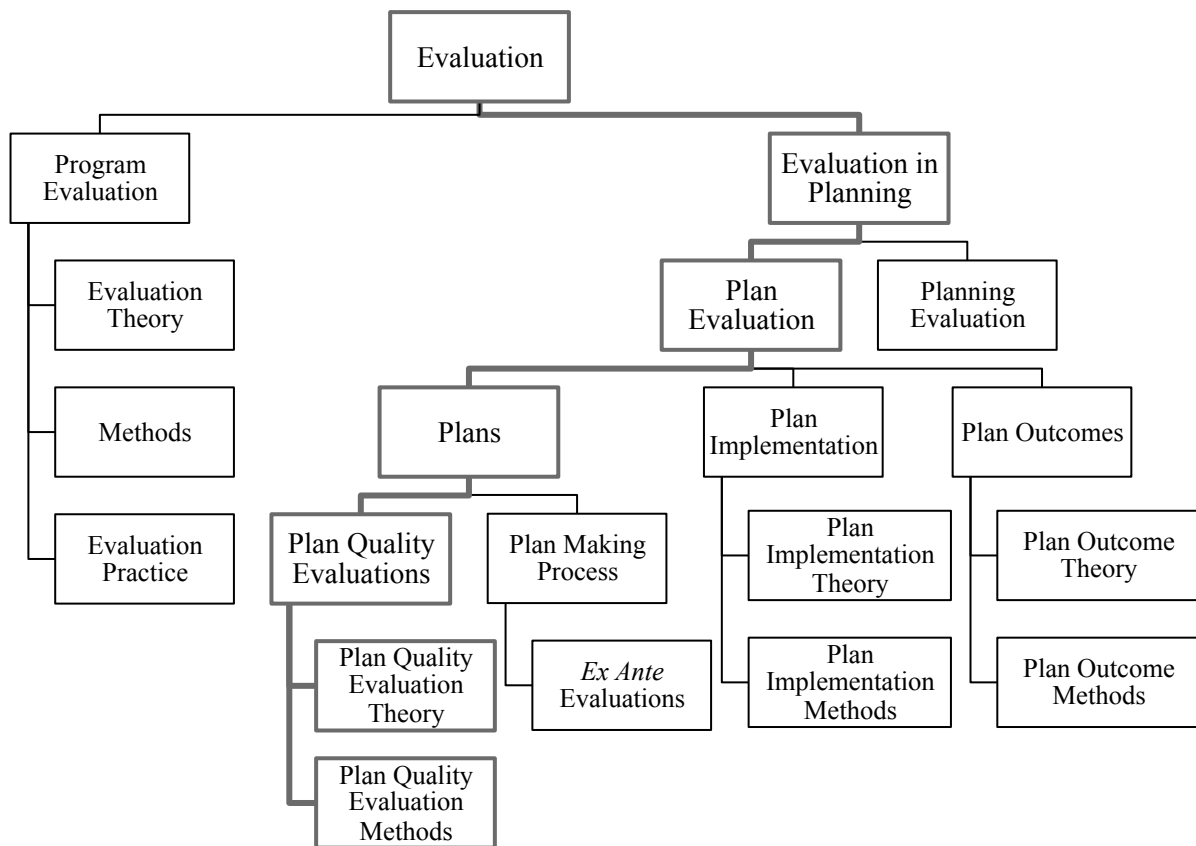
**Literature Review**

Before conducting survey research and content analysis, a review of the literature was completed to identify general themes and potential gaps in research. The literature review was also used to explore current approaches to assessing the quality of a variety of plans, from hazard mitigation to pedestrian plans. As identified in Figure 2-1, the literature review was focused on several major areas in the literature, from assessing the theories of evaluation from the program evaluation and planning fields, to methods used to assess the quality of various plans. The first step in this process was to critically review the theoretical and practical development of evaluation. This included examining how different fields, such as health, education, and planning, utilized evaluation. The literature review also included an in-depth review of how the planning field has utilized evaluation – both planning and plan evaluations (discussed in Chapter Three) – and emerging challenges. From here, a specific review into plan quality evaluations was completed, including identifying the most commonly referenced high quality plan principles, and major methodological approaches and their limitations to evaluating plans.

The literature review mainly involved a theoretical exploration of evaluation and plan quality. Having a theoretical understanding of these concepts was important as it provided a

framework for understanding how evaluation and plan quality are conceptualized. This helped to inform the development of the survey and content analysis and facilitate a systematic assessment of the findings. Specifically, as Creswell (2014) noted, the literature review helped to develop the theoretical lens, which assisted in shaping the types of questions asked, how the data was collected and analyzed, and in crafting recommendations.

**Figure 2-1: Scope of Literature Review**



In this regard, theories play an important orienting role. Neuman and Robson (2009, p. 24) defined a theory as “a system of interconnected abstractions or ideas that condenses and organizes knowledge”. All theories must contain concepts, scope, assumptions, and relationships (Neuman & Robson, 2009). Concepts are the building blocks of theory and are often expressed as symbols or words; theories often contain a collection of concepts (Neuman & Robson, 2009).

The scope of a theory relates to its level of abstraction, for example some theories can be applied to a much broader perspective while others focus on specific phenomena (Neuman & Robson, 2009). All theories are guided by a set of assumptions about the nature of things that are not observable or testable, while relationships help to explain how concepts are related to one another (Neuman & Robson, 2009). For example, in developing and understanding the theory of plan quality, concepts such as evaluation and methods, quality, and plans must be explored including their relationships and underlying assumptions. It is important to note that theories can come from either induction or deduction (Neuman & Robson, 2009; Remler & Van Ryzin, 2011). Inductive theories begin with an abstract relationship among concepts and then move toward concrete empirical evidence, while deductive theories begin with detailed observations and then move towards developing an abstract relationship (Neuman & Robson, 2009).

The findings from the literature review were included in each manuscript. Manuscript 1 (Chapter Three) discussed the importance of evaluation in government institutions, and rationale for evaluation in planning. This manuscript also reviewed, at a macro level, the challenges to conducting evaluation in planning, and the benefits to linking program evaluation and evaluation in planning.

Manuscript 2 (Chapter Four) reviewed the major approaches of program evaluation and evaluation in planning, including formative, summative, *ex ante*, on going, and *ex post* evaluations. Key concepts such as plans and programs, program evaluation, and *plan* and *planning* evaluations were operationalized. This manuscript also traced the theoretical and practical development of both program evaluation and evaluation in planning, including the major differences and similarities between the two fields of evaluation. Further, an in depth

discussion into the benefits of, and challenges to, evaluation in planning were included in this manuscript.

Manuscripts 3 and 4 (Chapters Five and Six) focused primarily on plan quality. The literature review for these manuscripts included an in depth discussion into the characteristics and attributes that contribute to plan quality. The survey research manuscript (Manuscript 3) included a review of forty-nine plan quality studies and their use of the various plan quality characteristics and attributes. The content analysis manuscript (Manuscript 4) included a discussion of the methodology used to assess plan quality.

## **Survey Research**

To solicit the views of professional planners, I administered a web-based anonymous survey to 290 municipalities across the province of Ontario. The survey was designed to explore the attitudes and perceptions of municipal practicing planners regarding plan quality, specifically in relation to their community's official plan. Municipal official plans were used as a reference point, because they are the primary guiding document for many municipalities, is viewed as the major currency in the field, and has a legal standing that gives it prominence among all types of plans (Berke et al., 2015; Ryan, 2011). Respondents were asked a series of closed- and open-ended questions probing why plan quality is important, the merits of the plan quality principles, and the level of influence each plan quality principle has on plan implementation and decision-making. Respondents were also asked to reflect on the quality of their respective official plans and comment on why certain principles were or were not incorporated (see Chapter Five).

Municipal planners were targeted because they develop and maintain official plans. Municipal planners must engage a variety of stakeholders during the planning process to identify

the goals and policies needed to guide decision-making in their community. The survey was sent to 29 upper-tier municipalities, 29 single-tier municipalities, and 232 lower-tier municipalities. This represented approximately 65 percent of all Ontario municipalities (n=444 municipalities) and excluded northern Ontario jurisdictions. I did not focus on northern Ontario because the municipal structure varies from that of the rest of Ontario (MMAH, 2015). For example, it is common for municipalities in northern Ontario to have no municipal organization, making it challenging to engage in planning. This makes it difficult to consistently compare findings from northern Ontario to that of the rest of Ontario.

The contact information for planners was gathered from publicly accessible municipal websites. The survey was administered through the online platform Survey Monkey. This was a cost effective method to deliver the survey to a wide range of respondents over a large geographic area. The survey was emailed to respondents with a valid email address. The survey was available for 17 days, from October 5, 2016 to October 21, 2016. To increase the response rate, two reminders were sent out to respondents during the course of the survey.

There were several benefits and challenges to using this research instrument. Survey research allowed for a larger sample size (n=290), helped to cover a large range of issues related to plan quality using both closed- and open-ended questions (i.e., participants were allowed the opportunity to discuss their opinions and viewpoints), and questions from respondents were comparable because they were asked in the same order (Neuman & Robson, 2009). The challenges to this method, however, were that respondents might have understood the questions differently, busy workloads which might have resulted in respondents rushing through questions, and the impersonal nature given the absence of an interviewer (Neuman & Robson, 2009).

## **Content Analysis**

The content analysis was based on a sample of 63 official plans found throughout the GGH region, representing approximately 57 percent of all GGH municipalities. My sample included all single-tier municipalities (totaling 10), all upper-tier municipalities (totaling 11), and 42 of the most populated lower-tier municipalities. These lower tier municipalities belonged to the Regional Municipalities of Durham, Halton, Niagara, Peel, Waterloo, and York. The average year for official plan adoption for the sampled municipalities was 2014, with official plans as old as 2006 and as current as 2016. The average population for the sampled municipalities was 212,894 in 2011, and ranged from a low of 6,356 in the Township of Wainfleet to a high of 2,615,060 in the City of Toronto (refer to Chapter Six).

Official plans were content-analyzed to assess the extent to which the plan quality principles discussed were included or excluded. The content analysis process was replicated from previous studies (e.g., Baker et al., 2012; Brody, 2003a & 2003b; Horney et al., 2016; Horney et al., 2012; Norton, 2008; Saunders et al., 2015) because, as Stevens (2013) argued, this helps to facilitate cross-study comparisons and contribute to greater consensus on the plan quality principles. In order to conduct the content analysis, a plan quality evaluation protocol and accompanying coding scheme was created.

The plan quality evaluation protocol was built on, and extended, Berke et al.'s (2006b) evaluation protocol (Appendix to Chapter 3 of Berke et al. (2006b)) and Stevens' (2013) protocol used to evaluate community official plans (Appendix A of his article). Both authors focused their discussion on plans that guide general land use planning rather than having a specific emphasis, such as focusing on climate change (e.g., Baynham & Stevens, 2014; Berke et al., 2015), hazard mitigation (e.g., Horney et al., 2016; Stevens & Shoubridge, 2016),

sustainability (e.g., Manta Conroy & Jun, 2016; Manta Conroy & Berke, 2004), emergency management (e.g., Saunders et al., 2015), transportation (e.g., pedestrian plans (e.g., Aytur et al., 2011; Jones et al., 2010)) or staff reports (e.g., Johnson & Lyles, 2016).

In order to ensure that my evaluation protocol took into consideration the Ontario-GGH planning framework, I modified the goals, policies, and legislative requirement protocols to reflect the policy direction from the PPS (2005 and 2014) and Growth Plan (2006). In total, 70 indicators were developed, which included 19 indicators for fact base, 13 indicators each for goals and policies, 5 indicators each for implementation and monitoring and evaluation, 2 indicators for inter-organizational coordination, 4 indicators for public participation, 6 indicators for organization and presentation, and 3 indicators for legislative requirements (refer to Chapter Six). In keeping with past studies, the plan quality principles were equally weighted. This technique ensured that value judgments were not used to assign weights to each principle (Lyles & Stevens, 2014).

I applied my evaluation protocol using a coding procedure similar to past studies. Specifically, I utilized both a binary (i.e., “0” and “1”) and three-level ordinal scale (“0”, “1” and “2”). For the binary scale, “0” denoted that the plan quality principle was not included, while “1” denoted that the principle was present in the plan. For the ordinal scale, “0” denoted that the plan quality principle was not identified, “1” denoted that the principle was identified but vague, and “2” denoted a clear and detailed principle. The binary scale was applied to the goals, policies, and legislative requirement principles, as I was only interested in assessing whether plans included the general policy areas identified in the PPS (2005 and 2014) and the intensification and density targets and population and employment projections identified in the Growth Plan

(2006). The ordinal scale was applied to the fact base, implementation, monitoring and evaluation, inter-organizational coordination, and plan organization and presentation principles.

In keeping with previous plan quality evaluation studies, the scoring protocol for each principle was standardized using three steps (Berke & Godschalk, 2009; Horney et al., 2016). First, the scores for the indicators were summed within each of the principles. Second, the summed scores were then divided by the total possible score for each principle. Finally, this score was multiplied by 10, placing each score on an index scale of 0-10. It is important to note that I did not combine individual plan categories to identify an overall plan quality score because a plan with a higher overall score might not be better than a plan with a lower overall score (Stevens, 2013). For example, a plan might have detailed goals and policies but poor implementation and monitoring and evaluation provisions or vice versa. As Stevens (2013) argued, the differences in these plans will have different implications for influencing growth and development.

To explore the extent to which plan quality varied with local planning context, correlational analysis was computed on two variables, year of official plan adoption and municipal population. Several researchers have found that municipalities with larger populations generally have high quality plans (Bunnell & Jepson, 2011; Stevens, 2013; Tang & Brody, 2009). Others have also noted that newer plans are generally of a higher quality than older plans (Stevens, 2013; Tang, Bright & Brody, 2009; Tang & Brody, 2009).

The main limitation to the content analysis was the absence of intercoder reliability, which helps to increase the reliability of content analysis (Krippendorff, 2013; Stevens, Lyles & Berke, 2014). Stevens et al. (2014) argued that replicable content analysis is best achieved by employing two or more researchers to independently code and evaluate plans. That is, the greater

the frequency of agreement between two more coders on the scores for a given item, the greater the reliability of the results (Stevens, Lyles & Berke, 2014). Researchers working at different points in time and under different circumstances should get the same results when applying the same technique (Krippendorff, 2013).

An approach to improving the reliability for single-coded studies is to provide detailed direction regarding the evaluation protocol and coding scheme (Neuendorf, 2002; Krippendorff, 2013). In this regard, I have included direction on my method so that other researchers can fully understand and apply my evaluation protocol and coding scheme. More importantly, this research conformed to the content analysis methodology employed in past plan quality evaluation studies, as a means of increasing reliability and replicability.

### **Relation between Survey Research and Content Analysis**

These methods – survey research (a quantitative technique) and content analysis (a qualitative technique) – complemented each other and helped to increase the validity of the research findings. Individually, these techniques were useful in terms of: exploring the attitudes and perceptions of municipal practicing planners regarding plan quality, and assessing the quality of official plans. However, when combined using a convergent parallel approach, I was able to compare and relate the plan quality attributes practicing planners consider as important against their official plans. This helped me to determine the extent to which the principles considered important actually manifested themselves in the official plans planners created. By triangulating the findings using different sources of information, I was able to improve the overall validity of the research by comparing the perception of plan quality principles against its manifestation in plans.

## **CHAPTER THREE: LITERATURE REVIEW MANUSCRIPT 1**

### **Plan Evaluation: Challenges and Directions for Future Research**

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#### **Overview**

Plan evaluation is a well-established part of the planning canon. While this subject has received considerable attention from planning scholars in recent years, plan evaluation methods are not commonly used in practice. This paper examined the factors that contribute to the under-use of plan outcome evaluation in local government planning practice. The concept of evaluation was explained and the relationship that exists between program evaluation and plan evaluation was explored.

**Keywords:** Plan evaluation, program evaluation, outcomes, implementation, local government

#### **Introduction**

Planners who work in local government are expected to demonstrate their effectiveness in a political and decision-making environment that demands greater accountability and transparency. Planning is often criticized for being costly, highly regulatory, and failing to make a difference (Laurian et al., 2010). Planning and the plans that we produce would seem to have limited value if we failed to demonstrate their benefits to society and to stakeholders in the planning process (Millard-Ball, 2012). Within this context, we argue that evaluation – the

production of information about the merit, worth, and demonstrable benefits of an initiative (Davidson, 2005) – could improve planners’ and stakeholders’ understanding of plan outcomes and impacts. This paper examined the factors that contribute to the under-use of plan outcome evaluation in planning practice.

Plan evaluation is relatively unexplored territory (Oliveira & Pinho, 2011), despite research contributions over the past 15 years from Lichfield (2000), Seasons (2003), Khakee (2003), Alexander (2006), Laurian et al. (2010), and Oliveira and Pinho (2011). Alexander (2006) and Khakee (2003) have traced the evolution of evaluation through policy program and planning theory perspectives, while Laurian et al. (2010) and Oliveira and Pinho (2011) have developed outcome evaluation methodologies that incorporate elements from the field of program evaluation. These researchers have only begun to lay the foundation for further advancements in the area of outcome evaluation in planning.

This paper, which is based on a review of the current literature on evaluation, is structured into five sections. Following the introduction, we operationalize key concepts found in the literature, including program evaluation and plan evaluation. Next, we discuss the practice of evaluation in local government, including the main drivers and benefits of evaluation. Third, we discuss the rationale for evaluation in planning, and examine the factors that have contributed to our gap in understanding of outcome evaluations. This includes a continued focus on plan making and plans, and issues of implementation and evaluating outcomes. The fourth section explores the benefits of having stronger linkages between program evaluation and plan evaluation, including plan evaluability, supportive organizational culture, consistent evaluation methodologies, and communicating evaluation findings. Finally, given the scarcity of outcome

evaluation, we identify directions for future research to advancing the plan evaluation theory and practice.

### **Concepts: Program Evaluation and Plan Evaluation**

Evaluation tells decision makers whether, and how effectively, their projects, policies, processes, and/or plans have achieved their intended goals and objectives. Patton (2008) defined program evaluation as “the systematic collection of information about the activities, characteristics, and results of programs to make judgments about the program, improve or further develop program effectiveness, inform decisions about future programming, and/or increase our understanding” (p.38). Program evaluation implies the evaluation of the operation and outcomes of government activities. Evaluation provides the critical final link of any decision-making process by informing the public, decision makers, taxpayers, and other stakeholders about the worth of government initiatives (Chouinard, 2013; Cousins et al., 2014).

Evaluation in planning, commonly referred to as plan evaluation, is defined as the “systematic assessment of plans, planning processes, and outcomes compared with explicit standards or indicators” (Laurian, 2010, p. 741). More specifically, plan evaluation should evaluate identified outputs and outcomes to determine to what degree planning has been a success or failure (Alexander, 2011). Plans are products of the planning process. Plans in this context are defined as long-range policy documents that provide the legal, political, and logical rationale behind a community’s development-management program, and ultimately settlement patterns within a local jurisdiction over a 20–30-year time frame (Berke et al., 2006b). Plans should provide the facts, goals, and policies that are necessary to translate a community’s vision for future development into a physical development pattern (Berke et al., 2006b).

## **Evaluation and Local Government**

Local governments have been paying much more attention to evaluation since the 1990s (Bernstein, 2001; Leeuw & Furbo, 2008; Alkin, 2013). This has been driven by the continued influence of the New Public Management (NPM) movement in public institutions. NPM is focused on improving the efficiency and effectiveness of public activities and policies (McDavid & Hawthorn, 2006; Rodriguez et al., 2006; Chouinard, 2013). The NPM movement has led to an increased use of evaluations and performance measurement to assess outputs and outcomes, and to provide information for evidence-based policy making (Mueller & Hersperger, 2014). Another driver for evaluation is the increasing demand for accountability and transparency in decision-making by citizens and elected officials (Bernstein, 2001).

Evaluation is now considered a legitimizing function and good governance practice (Chouinard, 2013). Cousins et al. (2014) suggest that evaluation has two primary functions: to promote accountability (by informing the public, decision makers, taxpayers, and other stakeholders about the effectiveness of government initiatives); and to improve government management. Evaluation achieves accountability by providing information about the progress of government policies and programs, including their effectiveness and the achievement of both intended, and unintended, outcomes (Leeuw & Furbo, 2008; Weiss et al., 2008). Evaluation is also used to demonstrate policy and program relevance, the continued need for various initiatives, and alignment with government priorities (Chouinard, 2013). Evaluation provides the evidence needed by government to assess the appropriateness of interventions, quality of the intervention, and effectiveness of implementation, all of which feed back in to the decision-making process and program delivery considerations (Vedung, 1997; Blalock, 1999).

Two types of evaluation are used to enhance accountability and improved government management: formative and summative evaluations. According to Cousins et al. (2014) and McDavid and Hawthorn (2006), summative evaluations assess changes caused by a policy or program and help determine whether observed outcomes are closely aligned with intended outcomes. Formative evaluation occurs in the early phases of an initiative and provides feedback and advice to fine-tune program elements and enhance opportunities to achieve intended program outcomes (Weiss, 1998; McDavid & Hawthorn, 2006).

### **Rationale for Evaluation in Planning**

Evaluation is important in planning for a number of reasons, including increasing its legitimacy, improving decision-making, and fostering continuous learning. According to Alexander and Faludi (1989), “if planning is to have any credibility as a discipline or a profession, evaluation criteria must enable a real judgment of planning effectiveness” (p. 127). Local government planners in particular need to demonstrate the benefits of their efforts since, as Waldner (2006) notes, planners use public funds and act to further the common good. Evaluation can be used to increase the legitimacy of planning and to improve citizens’ understanding of the impacts of planning (Oliveira & Pinho, 2010a & 2011).

Evaluation can also be used to foster a more pragmatic, evidence-based approach to decision-making by basing plans and policies on sound, established reasoning (Krizek et al., 2009). Evaluation could act as a source of information and knowledge by enabling planners to examine prior strategies, obtain a clear sense of how existing or historical initiatives performed, and determine the applicability to their situation. Properly done, evaluation can help to create or extend institutional capacity to better develop, implement and assess planning initiatives, and to

identify lessons that can be used to guide present and future planning (Faludi, 2000; Roberts, 2006).

Evaluation fosters continuous learning in planning, which not only promotes an assessment of plans, but also supports constant improvement in the profession (Oliveira & Pinho, 2010a, 2010b, 2011; Balsas, 2012). In other words, evaluation enables planners to assess what constitutes good planning from bad planning (Baer, 1997). Such improvements can be used to improve the planning process, the implementation of plans, and the achievement of intended outcomes (Seasons, 2003).

Evaluation is carried out during three phases of the planning process: first, *ex ante* evaluations occur during plan preparation when one solution path is chosen from among alternative plan-proposals; second, *ongoing* evaluation takes place during plan implementation; and third, *ex post* evaluations occur after the plan is implemented to determine if the plan achieved its intended outcomes (Khakee, 2000; Oliveira & Pinho, 2010a). *Ongoing* and *ex post* evaluations are closely related as they assess the final phases of planning. To date, the planning profession has mainly focused on *ex ante* evaluations, largely neglecting *ongoing* and *ex post* evaluations.

### *Plan evaluation approaches*

There are three general approaches to plan evaluation: a rational approach, a communicative approach, and a pragmatic integrative approach. These approaches are closely associated with the evolution of planning theory and reflect recent debates about the best way to evaluate plans, their implementation, and plan outcomes (Khakee, 2003; Alexander, 2006a; Khakee et al., 2008; Laurian et al., 2010; Oliveira & Pinho, 2010a).

The *rational approach* focuses on the linkages between plans and actual developments (Laurian et al., 2004). This is considered conformance-based, and assumes that there are direct observable causal linkages between planning goals, activities, and outcomes (Laurian et al., 2010). Plans are considered blueprints whereby development must adhere to plan goals and policies (Laurian et al., 2004; Berke et al., 2006a). The success (or otherwise) of planning is judged by the degree of conformance between outcomes on-the-ground and planning policy prescriptions, and the promotion of planning goals and objectives through available implementation instruments (Alexander, 2006a; Oliveira & Pinho, 2010a). The rational approach has been criticized because of difficulties associated with adequately defining planning problems, identifying direct causal linkages between plan goals and outcomes and in quantifying goals in measurable terms. Despite these limitations, the rational approach continues to guide evaluation in planning practice.

The *communicative approach* is discursive and considers plans as a framework for decision-making and consensus building (Faludi, 2000; Alexander, 2006a). This approach is performance-based and focuses primarily on the planning process. Here, plans are considered guides for future planning rather than blueprints that require strict adherence to plan goals and objectives (Laurian et al., 2004; 2010). A plan is successful if it is used during decision-making, regardless of whether the actual outcomes adhere to plan goals (Laurian et al., 2004; Alexander, 2006a). This includes examining how a plan fares during negotiations, whether stakeholders use it, whether it helps clarify choices, and whether the plan forms part of the definition of subsequent decision situations (Faludi, 2000). The communicative approach has been the subject of much criticism in planning practice, specifically the claim that communicative planning has

influenced the evaluation process (Alexander, 2006a). This approach can also be prohibitively costly and time-consuming.

Recently, there has been a shift to a more pragmatic *integrative approach* to plan evaluation (Lichfield, 2001; Hoch, 2002; Alexander, 2006a; Balsas, 2012; Oliveira & Pinho, 2010a & 2010b). The integrative approach argues that using a single line of plan evaluation is not feasible given the complexity of planning problems. Depending on the context and the plan, a rationally-based approach may be required, while in other situations a communicative-based approach may be more appropriate, or a combination of both (Faludi, 2006; Oliveira & Pinho, 2010a; Soria & Valenzuela, 2013). According to Alexander (2006), it is important to consider the function of the plan. If a plan is meant to be implemented, then a conformance approach is required. However, if the plan aims to frame lower order plans and subsequent implementation decisions, a performance approach is needed. Overall, there seems to be strong adherence to the *rational* evaluative approach.

#### *Continued Focus on Plan Making and Plans*

Given widespread concerns for and expectations of accountability, transparency and value-for-money, we would expect plan evaluation to be a common element in local government planning practice (Laurian & Shaw, 2008). Christensen (2015) notes that exemplary planners emphasize both process and outcome in planning. Despite the apparent benefits, evaluation is not commonly used (Oliveira & Pinho, 2010a). Hoch (2002) argued that professional planners rarely evaluate their plans, or at least not in the same manner as they go about making them. Rather, assessments of the success or failure of planning and plans are based on perceptions and assumptions rather than evidence (Laurian et al., 2004). This is especially true for *ongoing* and

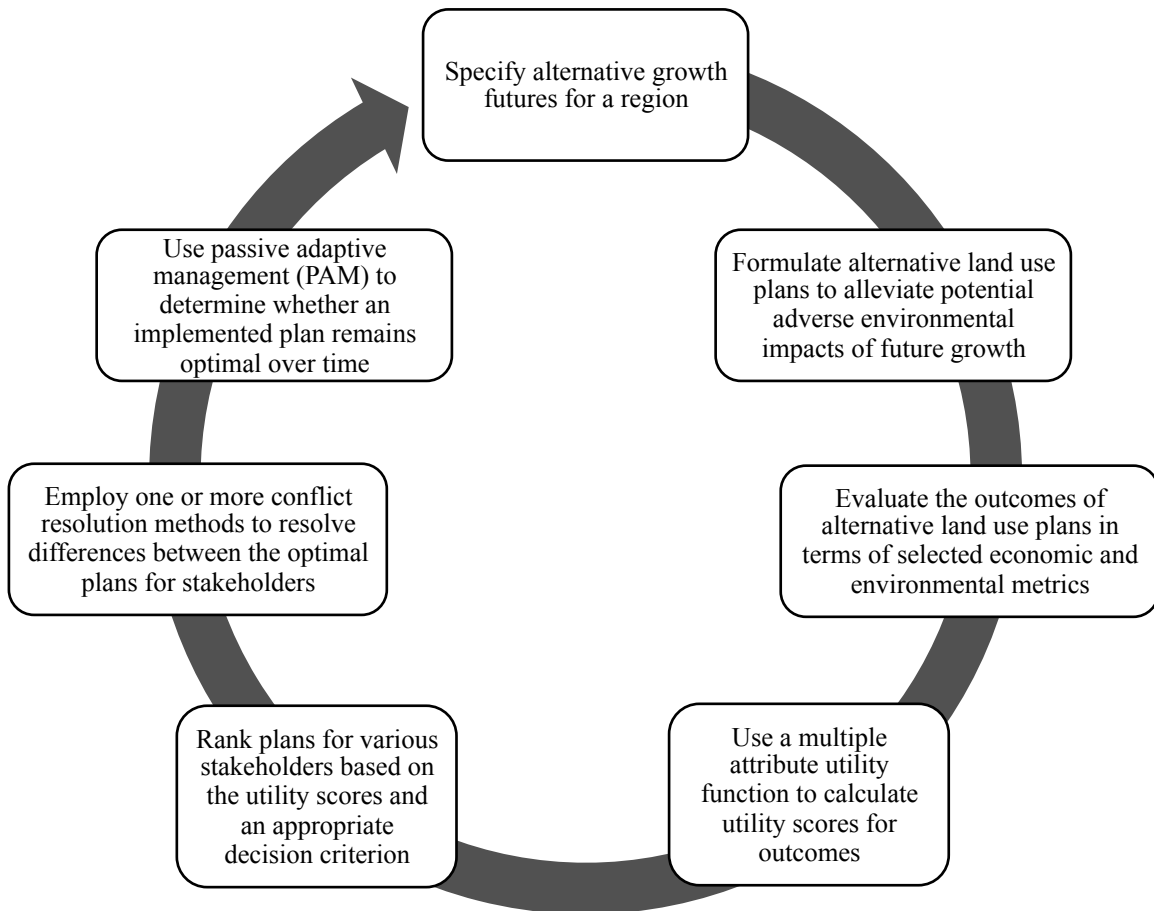
*ex post* evaluations which are often considered the “forgotten phases” in planning practice (Carmona & Sieh, 2004, 2005, 2008; Seasons, 2003; Berke et al., 2006a; Laurian et al., 2010).

In practice, *ex ante* evaluations are dominant with an emphasis on the plan making process. This is not surprising, given planners’ strong interest in process and adherence to rational planning, which advocates the systematic assessment of plan alternatives before selecting a solution approach. Most studies have concentrated on two main themes: first, developing *ex ante* evaluative methods to select optimal policy solutions; and second, strengthening the planning process through better stakeholder consultations.

Discussion of the evaluation of plan alternatives emerged in the 1950s in planning theory and research and continues today (Oliveira & Pinho, 2010a). For example, Prato (2007) developed a method to assist planners in selecting an optimal land use plan. This method has a strong emphasis on the plan making process, and is based on seven steps (see Figure 3-1). While there is mention of assessing plan outcomes, Prato (2007) fails to demonstrate how an outcome evaluation could be successfully achieved in planning practice.

For other scholars, the focus has been on the development of plans and their resource requirements. Hoch (2009) examined the nature of plan composition with reference to several elements, including precedent, protocol, policy, and prototype. His approach is highly theoretical and ignores the evaluative aspect of plan outcomes. Tang and Brody (2009) found that the number of planners involved in plan making, and the sharing of information, contribute significantly to plan quality.

**Figure 3-1: Prato's (2007) Optimal Land Use Plan Method**



Improving stakeholder consultation during the planning process is another important consideration. Brody et al. (2003) analyzed the strengths and weaknesses of citizen involvement mandates in state growth management laws and local planning practices. Burby (2003) examined stakeholder involvement in the making of comprehensive plans in Florida and Washington State. Their findings suggested that broader stakeholder involvement contributed to stronger plans and the implementation of proposals. Manta Conroy and Berke (2004) reached a similar conclusion when investigating the factors that promoted sustainable development in planning practice. In all

of these studies, the emphasis has on been improving the planning process, rather than how to evaluate the outcomes of plans and planning.

Another research area is that of plan quality which emerged during the 1990s. Since then, scholars have produced more than forty-five publications on the topic (Lyles & Stevens, 2014). According to Berke et al. (2012) and Berke and Godschalk (2009), plan quality research has been proposed as a valuable tool for systematically analyzing and improving plans. Plan quality research is used to identify a plan's strengths and weaknesses, judge whether its overall quality is good, and to provide a basis for ensuring that plans reach a desirable standard (Berke & Godschalk, 2009). Stevens' (2013) study revealed that while plans are well crafted in laying out a vision for the future and specifying goals and policies to achieve its vision, they are weak with regard to implementation, monitoring, and evaluation. This can cast doubt on the extent to which their vision statements will be realized and goals achieved.

Plan quality evaluations have focused on issues such as natural hazard mitigation, coastal plans, watershed protection, and comprehensive plans. Berke et al. (2012) used six principles of evaluation to determine how well coastal state plans supported mitigation. Although plans scored moderate to low for all plan quality principles, plan quality had improved over the past decade. Their study argues that further research is needed to investigate whether higher quality plans lead to successful implementation and better outcomes. Berke et al. (2013) examined how well comprehensive plans support watershed protection. Their findings revealed that, on average, plans are not supportive of water resource protection. The more pressing issue was the need to identify and test methods and metrics to evaluate plan effectiveness and outcomes.

Most of the plan quality research advocates for demonstrable and enhanced linkages between plans, implementation efforts, and outcomes (Berke & Manta Conroy, 2000). Without

fully understanding this relationship, it is difficult to assess whether communities are making progress in achieving sought-after goals.

### *Issues of Implementation and Evaluating Outcomes*

There are three general approaches to plan evaluation: a *rational* approach that is conformance-based; a *communicative* approach that is performance-based; and a pragmatic *integrative* approach that integrates conformance and performance-based evaluations. According to Laurian et al. (2004), these approaches rely on different sets of assumptions about the function of plans. For example, the conformance-based approach considers plans successfully implemented if on-the-ground outcomes adhere to plan policies and objectives. On the other hand, the performance-based approach considers implementation successful as long as the plan was consulted, irrespective of outcomes. In other words, plans perform their role if and when they help decision makers make sense of their situations, and so they need to be evaluated in this light (Faludi, 2000).

A review of the literature on plan implementation indicates that the performance-based approach has a more limited focus when compared with the conformance-based approach. Faludi (2000) is among the few who have examined how strategic spatial plans can be evaluated using a performance-based framework. While there is some discussion of linkages to Dutch planning, Faludi (2000) does not demonstrate applications to practice. On the other hand, Laurian et al. (2004), Brody and Highfield (2005), and Brody et al. (2006) focus primarily on conformance-based approaches. Laurian et al. (2004) presented a conformance-based plan implementation evaluation (PIE) methodology, which concentrates on the land development permitting process.

They found that in many cases, policies were not written to include specific plan evaluation techniques, or the techniques are vaguely written, making plan evaluation difficult.

Brody and Highfield (2005) used a conformance approach to test the effectiveness of comprehensive planning and plan implementation by examining the spatial patterns of wetland development permits in Florida between 1993 and 2002. Their findings indicated that the degree to which spatial clusters of wetland development permits conform to the original spatial design of local plans varied across watersheds. Brody et al. (2006) conducted a similar study that assessed the efficacy of planning and plan implementation in Florida by measuring the degree to which wetland development conformed to adopted plans. They argue that in order to better assess the implementation of plans, plan implementation should be supported by multiple methods of analysis, both quantitative and qualitative.

More recently, there has been a greater emphasis on plan implementation approaches that combine conformance and performance-based approaches. For example, Berke et al. (2006a) sampled permit applications from district councils in New Zealand. They make a strong case for better plan implementation evaluative frameworks after their findings revealed that implementation was generally weak. Altes (2006) used a similar approach to measure the success of Dutch national urbanization policies. The findings indicated that urban containment policies conform well to its plan, but perform poorly in terms of improving current decision-making on the stagnation of housing production in the Netherlands. Recently, Zhong et al. (2014) used an integrated approach to evaluate the implementation of the National General Land Use Plan (1997-2010) in China. The results illustrated that the plan had conformed badly and performed poorly, demonstrating a lack of understanding about implementation in practice.

As Berke et al. (2006a) argued, this failure to implement plans presents a significant barrier to effective planning. They suggest that because only a few studies have focused on this issue, local government planners have received limited guidance from the literature. Planners and their communities have had little guidance about how to gauge success in the implementation of plans and on the actions they can take to enhance success.

Another challenge to evaluating plan outcomes relates to a lack of generally accepted outcome evaluation methodologies and performance measurement challenges. There are few studies that inform the evaluation of plan outcomes. Laurian et al. (2010) appears to be the first comprehensive study to propose and test a plan-outcome evaluation (POE) methodology in New Zealand. Laurian et al. (2010) argued that there is a substantive lack of *ex post* outcome evaluations that focus on plans, which makes it difficult for planners to demonstrate the impact of their plans and activities.

Oliveira & Pinho (2009 & 2010b) proposed a methodology for plan evaluation, the Plan-Process-Results (PPR) model, which integrates elements from three different types of plan evaluation, based on rationality *ex ante*, performance, and conformance. This methodology was applied to two case studies in the cities of Lisbon and Oporto in Portugal. The findings indicate that evaluating planning practice in a systematic way, specifically in relation to plan outcomes, is both difficult and complex. Recently, Soria and Valenzuela (2013) developed a conformance-based method for metropolitan plan evaluation, called the MPE methodology, that can be used for *ongoing* and *ex post* evaluations. This methodology was applied to the Andalusian Metropolitan Planning System in Spain, and revealed, among others, weak internal coherence between metropolitan planning and municipal planning, and poor regulatory capacity at the metropolitan level.

There are also challenges related to performance measurement that impede the evaluation of plan outcomes. Carmona and Sieh (2008) and Laurian et al. (2010) have noted that it is difficult to draw clear and distinct causal links between planning actions and planning outcomes. This is referred to as the “attributability gap” (Carmona & Sieh, 2008), which occurs because it is difficult to isolate planning outcomes from the myriad external influences that might also have bearing on the situation. Further, the issue of time, knowing when to make final judgments about a program, and availability of data impedes planners’ ability to adequately assess their planning outcomes. Establishing a comprehensive range of indicators that covers key economic, social, and environmental consequences of planning and gathering such data is resource intensive (Carmona & Sieh, 2005 & 2008). This is a disincentive to include appropriate monitoring and evaluation provisions in plans, and to carry out evaluation exercises.

### **Linking Program Evaluation and Plan Evaluation**

Despite these challenges to plan evaluation, there are benefits to having stronger linkages to program evaluation theory and methods. These include improving the evaluability of plans, promoting an organizational and professional culture that supports evaluation, developing consistent evaluation methodologies, and disseminating evaluation findings.

In program evaluation, there are two important factors that drive the evaluability of programs: 1) program statements (e.g., goals, objectives, policies) should be clear and measurable; and, 2) attribution should be easily established. Developing clear and measurable program statements allows for effective program mandates, which in turn facilitates implementation, and then evaluation (McDavid & Hawthorn, 2006). This also allows for the identification and continual monitoring of appropriate performance indicators that are needed to assess programs.

Evaluators are also concerned about identifying causal links between program goals, objectives, inputs, and resultant outputs, outcomes, and impacts. This is facilitated through program theories, which are used to clarify the operation and outcomes of programs (Posavac & Carey, 2007; Brouselle & Champagne, 2011). Testing linkages may also come easily since program evaluators can use control groups or quasi-experiments to isolate the effects of a program intervention (Laurian et al., 2010).

The challenge for planners is to craft planning processes and plans to support and facilitate evaluation. Although planners cannot rely on test groups or replicated interventions to establishing causal relationships between plans and outcomes (Laurian et al., 2010), they can increase outcome evaluations by framing plans in a manner that encourages evaluation. In addition, the program evaluation literature recognizes the need for organizational and professional cultures conducive to, and supportive of, evaluation; this usually includes a ‘champion’ for evaluation who could be internal or external to the organization. Evaluations must respond to the organization’s needs.

To be effective, evaluation processes must have sufficient resources, including properly trained staff, financial resources, and technical support for evaluation research (Bell, 2004). These organizations typically position evaluation as a decision-support and learning tool (Winberg, 1986; Wholey, 2003). However, this is often easier said than done in most local government planning departments, where staff is already stretched (Seasons, 2003; Hoch et al., 2000). In fact, planning organizations tend to “front-load” resources (Waldner, 2004) during plan development, which leaves limited resources for evaluation once plans are implemented. This is not surprising since planners (and their employers) are notoriously future oriented and may be biased toward generating future plans rather than evaluating old ones (Waldner, 2004).

Moreover, both the program evaluation and plan evaluation literature advocates a rigorous approach to research that combines qualitative and quantitative research methods, following the principle of triangulation, and reflecting a social science research philosophy (see Caudle, 2004; Newcomer & Triplett, 2004; Newcomer et al., 2004). However, unlike our program evaluation counterparts, we need to question whether planners have sufficient training in research methods, and the time required for effective research. The reality is that many planning departments emphasize reductive efficiencies, such as development review (current planning) to the detriment of policy planning and evaluation (Seasons, 2003). This inhibits the use of evaluation as a learning tool whereby planners are able to assess and improve upon the plans they create.

In addition, the program evaluation community acknowledges the need to tailor evaluations to organizational realities. Evaluations are quite practical exercises; they use applied research methods (Newcomer and Triplett, 2004). Evaluators must identify real problems and develop practical solutions (Patton, 1986, p. 113). This is not, as Rossi et al. (1999, p. 96) explain, the generation of ‘knowledge for knowledge’s sake’. Effective communication, including the dissemination of results, is essential to evaluation.

The communication strategy should be designed to keep clients and stakeholders informed about, and confident in, the evaluation process (Winberg, 1986). Clients and stakeholders must see themselves in the process for them to support its activities and end results, thus communication media must be carefully selected to address the recipients’ varying information needs (Rossi et al., 1999; Grob, 2004; Patton, 2008). The reporting media can be varied and could include mass media; social media platforms; interest groups; policy networks;

technical reports, articles in professional or academic journals, newsletters and personal contact at meetings of stakeholder associations (Mertens, 1998; Weiss, 1998).

### **Conclusions and Directions for Future Research**

Evaluation has become a formalized component of a well-functioning public institution, especially in senior government agencies. It is used to promote greater accountability to citizens and decision makers and to improve organizational management. Summative and/or formative evaluations can be used to examine whether the intended outcomes of government policies and programs are achieved.

Evaluation is a well-established part of the planning canon. Evaluation could be used to increase the legitimacy of planning, improve decision-making, and foster continuous learning, all of which are important in a profession that is criticized for being too costly, highly regulatory, and often with little evidence that demonstrates benefit to society or stakeholders. Despite these apparent benefits, the planning profession has been unable to embrace and apply evaluation methods, particularly the evaluation of plan outcomes.

These challenges present many opportunities for research. First, although there has been an increase in plan quality research, there are few empirical studies that explore whether high quality plans lead to successful implementation and better outcomes. An understanding of the linkages between plans, implementation, and outcomes is needed to enable planners and stakeholders to assess whether they are achieving plan goals.

Further, the research on plan implementation and outcomes is limited when compared with other areas of planning research, such as improving the planning process. There is a need to develop methods and metrics that are designed to evaluate plan outcomes. Specifically, there is

insufficient research regarding the development of consistent implementation methodologies that integrate both performance and conformance-based evaluative frameworks.

Finally, we need to further explore the institutional and political framework within which planning operates to identify the factors that support and inhibit plan evaluations, particularly with regard to plan outcomes. We need to develop and implement evaluative frameworks that encourage planners to continually assess their efforts. Only with the evidence generated by plan evaluation might planners demonstrate the benefits of planning to themselves, and to the clients and stakeholders of planning.

## CHAPTER FOUR: LITERATURE REVIEW MANUSCRIPT 2

### Evaluation Theory and Practice:

#### Comparing Program Evaluation and Evaluation in Planning

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### Overview

This paper reviews the major approaches of program evaluation and evaluation in planning. The challenges to evaluating plans and planning are discussed including the reliance on *ex ante* evaluations; a lack of outcome evaluation methodologies; the attribution gap; and institutional hurdles. Areas requiring further research are also highlighted including the need to develop appropriate evaluation methodologies; creating stronger linkages between program evaluation and evaluation in planning; examining the institutional and political contexts guiding the use (and misuse) of evaluation in practice; and the importance of training and educating planners on evaluation.

**Keywords:** Planning Evaluation, Plan Evaluation, Program Evaluation, Evaluation Challenges and Benefits

### Introduction

Planning scholars have explored the theoretical and application aspects of evaluation since the 1960s. The evaluation literature, generally classified as program evaluation, is broad and encompasses a range of fields such as health, education and social welfare. Similar to many disciplines, the field of planning has its own brand of evaluation which can be broadly

categorized as plan evaluation and planning evaluation. Traditionally, evaluation in planning was considered independent of program evaluation and involved the use of planning-specific evaluation approaches. The planning discipline now argues that there is a benefit to building stronger linkages between program evaluation and evaluation in planning (Alexander, 2006a; Khakee, 2003; Laurian et al., 2010; Lichfield, 2000; Oliveira & Pinho, 2011). For example, the broad scope and practice of program evaluation has allowed for comprehensive models and application of evaluation, whereas evaluation in planning has generally focused on the planning process and the development of plans with limited attention on plan outcomes (Oliveira & Pinho, 2011).

The linkages between program evaluation and evaluation in planning have been explored using various approaches. Alexander (2006a) and Khakee (2003) examined the evolution of evaluation from the program and planning theoretical perspectives. Laurian et al. (2010) and Oliveira and Pinho (2009, 2010a, 2010b, 2011) developed planning-specific evaluation methodologies that incorporate elements from the fields of program evaluation and evaluation in planning. These scholars have laid the foundation for further research in the field of evaluation in planning. However, Oliveira and Pinho (2011), among others, maintain that this link remains relatively unexplored. This article contributes to our understanding of evaluation in planning – both plan and planning – by comparing and assessing its relationship to program evaluation. Unlike previous attempts, we compare the ideological frameworks and approaches of program evaluation with evaluation in planning in an attempt to demonstrate the importance of having stronger linkages between these two similar yet distinct fields.

This paper is divided into five sections. Following the introduction, we discuss the difference between programs and plans and define program evaluation, plan evaluation and

planning evaluation. We also discuss major approaches to program evaluation and evaluation in planning and critically review their relationship. In the third section, we explore the benefits of plan evaluation and planning evaluation, while the fourth section identifies emergent challenges that should be explored if evaluation is to be enhanced. We conclude with directions for future research to advance the theory and practice of plan evaluation and planning evaluation.

### **Evaluating Programs and Plans**

In the public sector, evaluation plays an important part in policy and plan making processes. Both processes follow a problem identification and definition phase, formulation phase, implementation phase, and evaluation phase. Evaluation is about determining how successful an intervention has been and the identification of areas for improvement (Pal, 2014). It is a structured process that aims to create and synthesize information about interventions in order to make judgments regarding resultant changes, the desirability of an intervention, and the degree of fit between intended and unintended outcomes (McDavid & Hawthorn, 2006). Judgments can also be made regarding the cost effectiveness of programs and plans. Evaluation is especially important in public sector organizations because they are required, for political accountability or legislative reasons, to demonstrate the benefits of their actions to the public (Vedung, 2010).

Government interventions can take many forms. Programs and plans are two common yet distinct tools used by public sector organizations to achieve their objectives. Programs are used to actualize fairly abstract and general policies. Programs are composed of clusters of activities intended to achieve an objective or related set of objectives (McDavid & Hawthorn, 2006; Pal, 2014). Programs are generally thought of as means-ends whereby resources are transformed into

activities to produce an intended outcome (McDavid & Hawthorn, 2006). For example, a municipality might have a policy to reduce waste in landfills. To achieve this policy objective, a recycling program could be implemented. While the scale at which programs operate can vary – for example, international, national or local – they include a defined set of activities needed to achieve an objective.

Plans play a prominent role in planning. Plans are considered the main “printed currency” of the planning profession. Plans can act as, among other things, a vision, blueprint or land use guide for a community (Baer, 1997; Ryan, 2011). Plans can be broader than programs because they offer a vision for future development; they contain facts, goals and policies that translate a vision into a physical development pattern (i.e., they contain a spatial element); and they address multiple community concerns such as climate change and the effort to create complete communities (Berke et al., 2006b). Programs can be part of plan implementation strategies. For example, a community might have a plan that is intended to direct development to specific areas in a community. In order to achieve this, a growth management program, which provides incentives to attract development or disincentives to dissuade development, might be introduced to implement the overall goal of the plan. It is important to note that plans are evolving instruments that must undergo continual revisions and updates in order to remain relevant to changing needs, knowledge and experiences (Brody, 2003a & 2003b). In this regard, evaluation should play a critical role in ensuring the applicability and relevance of both plans and programs.

### *Program Evaluation*

Program evaluation can be broadly defined as the “systematic assessment of the operations and/or outcomes of a program, compared to a set of explicit or implicit stands, as a

means of contributing to the improvement of the program” (Weiss, 1998, 4). There are several key elements in this definition. First, program evaluation requires a systematic assessment that is governed by acceptable social science research methods (Rossi et al., 2004). Evaluation is considered an empirically oriented discipline that generates information about programs in order to improve the program or guide future decisions (Pal, 2014). Second, there is an emphasis on both program operation and outcomes. That is, evaluation is not only concerned with program effectiveness, but also the process of delivering programs such as the organizational methods used to deliver the program, program inputs (e.g., resources), program outputs (e.g., tangible measures of a program) and cost effectiveness (Howlett et al., 2009). Finally, program evaluation is used to help make programs work both efficiently and effectively (Weiss, 1998), and as a means to ensure accountability and quality assurance (Cousins et al., 2014; Pal, 2014).

There are generally two main types of program evaluation – formative and summative. Evaluations that focus on improving the performance of a program are known as formative. A formative evaluation provides feedback in order to improve the outcomes of programs or to increase its efficiency (McDavid & Hawthorn, 2006; Posavac & Carey, 2007). Formative evaluations generate information to influence immediate decisions about a program, such as improving component parts and processes (Shadish et al., 1991).

On the other hand, evaluations that focus on outcomes are known as summative and occur once a program is complete or substantially complete. Summative evaluations provide information to decision makers regarding whether a program has achieved its stated goals or is worthwhile to continue (McDavid & Hawthorn, 2006; Posavac & Carey, 2007; Shadish et al., 1991).

### *Major Approaches to Program Evaluation*

The ways in which program evaluation is designed and takes place can be categorized in four models – postpositivism, pragmatism, interpretivism and critical normative science (see Table 4-1) (Greene, 1994). This section discusses these models to demonstrate the established nature of program evaluation when compared with evaluation in planning. Our argument is that there is value to further strengthening the linkages to program evaluation in an effort to advance evaluation in planning. It is important to note that there has been, and continues to be, much debate regarding the appropriateness of these models. For example, there is a longstanding debate between Donald Campbell and Lee Cronbach regarding the context and generalizability of different evaluation designs (see Patton, 2002). This debate centers on the importance of experiments and quasi-experiments versus the more contextualized approaches when explaining the causal relationships of programs and their outcomes (Cronbach, 1991). While our discussion does not focus on these debates, it is important to recognize that there might be disagreement on the purpose of the various approaches to program evaluation.

**Table 4-1: Major Approaches to Program Evaluation**

<b>Philosophical Framework</b>	<b>Key Values Promoted</b>	<b>Key Audience</b>	<b>Preferred Methods</b>
Postpositivism	Effectiveness, efficiency, causal knowledge	Decision makers	Quantitative: experiments and quasi experiments, cost-benefit analysis
Pragmatism	Management, practicality, quality control	Program managers, administrators and other decision makers	Surveys, questionnaires, interviews, observations
Interpretivism	Pluralism, understanding, diversity	Program staff, program beneficiaries	Qualitative: case studies, interviews, document reviews
Critical, normative science	Emancipation, empowerment, social change	Program beneficiaries and other “powerless” groups	Participatory: stakeholder participation in qualitative and quantitative designs

Source: Adopted from Greene 1994

The first, and historically dominant, evaluation model is science-driven and highly technical with a strong emphasis on quantitative methods. Scientific research methods and techniques such as systematic randomized research designs and experiments are considered integral to the evaluation process (Alkin, 2013). This approach to evaluation focuses on measuring effectiveness and efficiencies (Greene, 1994). For example, a common measure for evaluation might include the extent to which programs promote or impede the realization of goals or objectives. Such an approach requires that evaluators clearly identify goals and objectives, and be able to measure them through quantitative processes.

The second evaluation model emerged as a response to the over-reliance on scientific research and the difficulties associated with identifying objectives to be evaluated (Alkin, 2013). This model adopts a pragmatic approach to evaluation and argues that evaluation methods should be matched with the program being evaluated (Greene, 1994). The CIPP model (Context, Input, Process, and Product evaluations) is an example of a pragmatic evaluation model that was developed to engage decision makers in the evaluation process. The intent of the CIPP model is to provide support for efficient and effective program management by providing continuous information to decision makers (Alkin, 2013; Greene, 1994).

The third evaluation model is grounded in the interpretivism philosophical framework. This model places a strong emphasis on pluralism and in understanding the diverse stakeholders involved in an evaluation (Greene, 1994). Qualitative methods are often used to enhance the understanding of programs from the perspectives of the stakeholders directly involved in the program (Greene, 1994). Stakeholders are considered critical as they are seen as having a direct stake (e.g., money and vested interest) in the evaluation. Guba and Lincoln's (1989) fourth generation evaluations is an example of the interpretivism framework whereby the claims,

concerns and issues of stakeholders involved in a program are considered central to the evaluation.

The fourth evaluation model follows a normative approach (Greene, 1994) and emphasizes collaboration and negotiation among stakeholders (e.g., decision makers, program recipients and evaluators) during the evaluation process. In this phase, evaluators attempt to acknowledge and recognize the multiple realities and stakeholder perspectives associated with the evaluation process (Alkin, 2013). Participatory evaluation (Cousins, 2004), empowerment evaluation (Fetterman, 2004), collaborative evaluation (Rodriquez-Campos, 2012) and, more recently, developmental evaluation (Patton, 2011) closely aligns with this category (see Table 4-2).

**Table 4-2: Normative Approaches to Program Evaluation**

Evaluation Approach	Description
Participatory Evaluations	Involves the stakeholders of a program in the evaluation process. Stakeholders can be involved during any phase of the evaluation process – evaluation design, data collection, data analysis, and communication. The advantages to this process are that it empowers stakeholders, builds their capacity, and identifies locally driven issues to be explored.
Empowerment Evaluations	Involves providing communities with the tools and knowledge that allows them to monitor and evaluate their own performance. The advantage of this process is that it builds community buy-in which allows for greater evaluation use.
Collaborative Evaluations	Involves building a relationship between the evaluation team and program staff with the goal of building the capacity of program staff to use evaluation results and promote program improvement. The advantage of this process is that it leads to customized evaluation designs which reflect the nuances of the program being evaluated. It also allows for greater buy-in among stakeholders.
Developmental Evaluations	Involves providing real-time, or close to real-time, feedback to program staff thus facilitating a continuous development loop. This is useful in highly complex, ever changing environments.

Source: Fetterman 2004; Rodriquez-Campos 2012; Patton 2011

## *Evaluation in Planning*

There are two general forms of evaluation in planning: (a) *plan* evaluation (i.e., plan quality evaluation, plan implementation evaluation and plan outcomes evaluation) and (b) *planning* evaluation (i.e., the evaluation of planning processes and of planning practice). While evaluating planning involves determining whether the planning process was effective, evaluating plans and their outcomes involves assessing the quality of the plan, the success of plan implementation and the achievement of plan goals and objectives (Morckel, 2010). These forms of evaluation are similar to program evaluation because they seek to improve decision-making, yet differ due to their emphasis on the plan, how it is created, and the outcomes generated by the plan.

There are generally three types of evaluation in planning: *ex ante* (or *a priori*), *ongoing* and *ex post*. According to Oliveira and Pinho (2010a), these types of evaluation correspond to the different stages of planning which include plan preparation, implementation and plan revision (i.e., once implemented). *Ex ante* evaluation occurs when one solution or strategy that best addresses the planning issues, plan goals and objectives is chosen from among alternative proposals (Khakee, 2003). *Ex ante* evaluation involves defining plan objectives, examining solution options, assigning costs and benefits, and anticipating outcomes (Roberts, 2006). *Ongoing* evaluation occurs during plan implementation and focuses on the identification of initial plan outcomes as the plan implementation process evolves (Oliveira & Pinho, 2010a). With ongoing evaluation, appropriate indicators have to be identified and monitored regularly to determine whether adjustments should be made to ensure successful implementation.

*Ex post* evaluation is used once the plan is implemented and matured to determine whether the plan achieved its stated goals and objectives, and to use knowledge to improve

subsequent planning efforts (Laurian et al., 2010; Khakee, 2003). *Ex post* evaluation models include conformance and performance-based approaches. A *conformance-based* evaluation considers whether plan goals and objectives have been realized. Evaluators focus on the outcomes of plans by examining the linkages between plans and actual development (Laurian et al., 2004). In conformance-based evaluations, plans are considered blueprints whereby plan goals translate into policies to be implemented, and thereby address a problem and yield expected outcomes (Berke et al., 2006a; Laurian et al., 2010). In this application, plans are considered a success (or failure) with reference to one of two criteria: 1) the degree to which outcomes on the ground conform to plan goals, or 2) the extent to which implementation instruments support plan goals (Alexander, 2011; Oliveira & Pinho, 2010a).

A competing style of evaluation, the *performance-based* approach, focuses on planning processes and considers the plan as a guideline for practice rather than a blueprint (Alexander, 2006a; Faludi, 2000, 2006; Mastop & Faludi, 1997). Plans are considered successful if decision makers consult them regularly (Alexander, 2011; Mastop & Faludi, 1997). The conformance-based approach accepts that planners should, and can, evaluate their work – indeed, this is considered a professional obligation – while the performance-based approach suggests that plans and planning exercises need not be precise or wholly rational to effect change and influence decision makers.

### *Approaches to Evaluation in Planning*

The principles of plan evaluation and planning evaluation have been understood since the dominance of the rational comprehensive model in planning practice and theory, in the 1950s and early 1960s (Hambleton & Thomas, 1995). Indeed, there is evidence of growing interest in,

and use of, evaluation principles and methods in a variety of planning applications (see Allred & Chakraborty, 2015). We can categorize the development of evaluation in planning in terms of two applications: 1) plan preparation and 2) plan outcomes.

The plan preparation application is dominant and coincides with the rise of the rational comprehensive model as well as the emergence of program evaluation theory. Similar to the first model of program evaluation, the evaluation methodologies used in plan making advocated highly rational and technical analyses of planning goals and solution proposals. Early conceptualizations of evaluation included *ex ante* or *a priori* evaluations to assess the most appropriate course of action. The aim was to assist decision makers to arrive at rational decisions that optimized the impacts of planning policies and programs. These methods were characterized by highly structured, quantitative and technically demanding analyses of planning goals and proposals. Techniques such as cost-benefit analysis, planning balance sheets and goals achievement matrices were promoted in this approach to evaluation.

Cost-benefit analysis (CBA) was the dominant evaluation method for many years because of its ability to measure the incidence of benefits and costs generated by a plan in monetary terms (Alexander, 2006b). While an influential analytical tool in specific circumstances (i.e. technical decision-making), planning practitioners found the monetary value and market orientation of CBA too restrictive. It could neither provide a nuanced view of the complex nature of planning issues, nor could it take into account the political value of decisions (e.g., risk and uncertainty). For example, it was not designed to address policy concerns such as distributional fairness (Miller & Patassini, 2005). CBA later evolved into cost-effectiveness analysis (CES) and then fiscal impact analysis.

The *Planning Balance Sheet Analysis* (PBSA) is another plan making evaluation method advocated by Litchfield in the 1950s. The PBSA sought to acknowledge the complexity and multidimensionality of plan and project alternatives (Alexander, 2006a). The PBSA recognized that not all impacts could be interpreted in monetary terms. It also acknowledged that planning decision-making was an inherently political process. The PBSA method uses both qualitative and quantitative information to examine the consequences of planning options and decisions. PBSA can be used to evaluate a range of planning exercises such as neighborhood plans, regional development plans and proposed urban developments (Alexander, 2006b).

The *Goals Achievement Matrix* (GAM), advocated by Morris Hill, is another plan making evaluation method grounded in Litchfield's PBSA. The GAM extends the PBSA by introducing goals and objectives as key elements of the analytical process. The GAM aims to determine the extent to which alternative plans could achieve a predetermined set of objectives or goals (Bracken, 1981). The intent is to establish a numerical standard of performance whereby goals are identified and prioritized by assigning weights. Miller and Patassini (2005) note that this method can help determine how well planning options perform in terms of pre-determined criteria. These evaluation methods are closely related to the work in policy sciences and management sciences on multi-attribute utility theory (MAUT), which addresses the challenges associated with making decisions in a context of complexity, multiple objectives and interests (see Von Winterfeldt & Fischer, 1973).

The plan preparation application of evaluation has been the subject of much criticism. Evaluation in the context of rational planning is driven by the need to identify idealized plans (Khakee et al., 2008). These evaluation methods, while elegant and impressive in theory, eventually faded from view as planners realized that rational planning was rarely attainable in

practice for reasons of, among others, interpretive capacity, cost and time. For example, given competing stakeholder interests, plan goals were often vague and ambiguous leading to operational challenges to measuring the impacts and outcomes associated with goals and objectives.

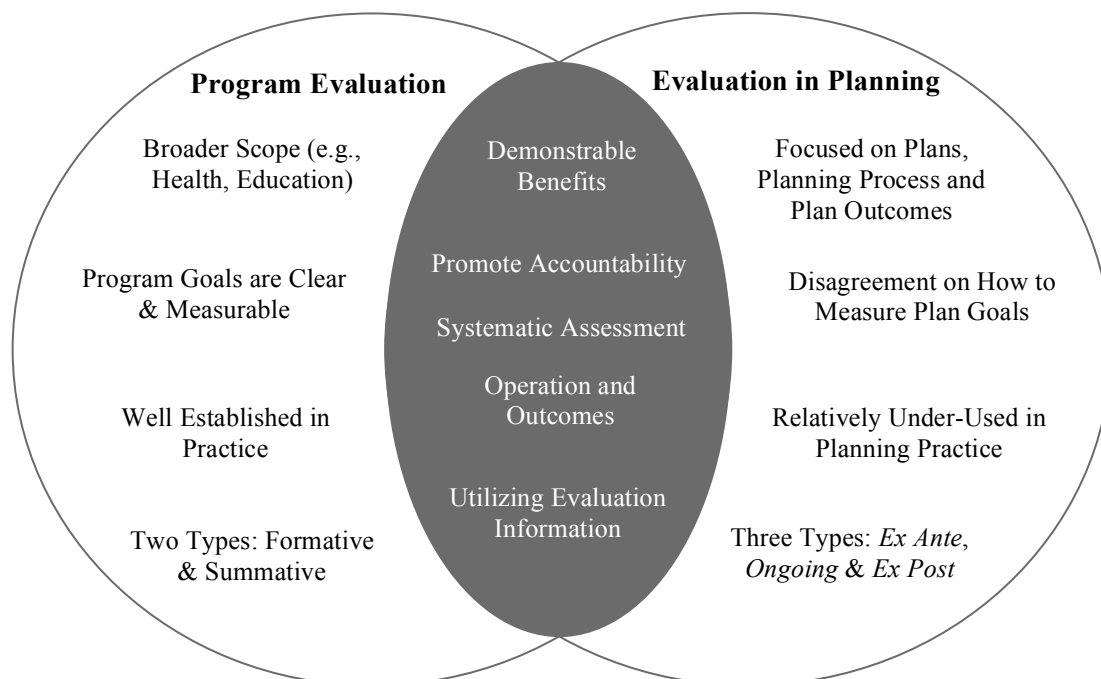
The plan outcomes application is used less in planning for a number of reasons (discussed later). This use of evaluation follows two paths – 1) *ex post* evaluation approaches, and 2) plan context approaches. The first path concerns improving existing evaluation methods. This literature examines the nature and roles of monitoring and evaluation in the context of strategic planning, new decision-making technologies (e.g. Geographic Information Systems), and outcomes and impacts. These *ex post* models include conformance and performance-based approaches.

The second path is more reflective and less prescriptive. It advocates the incorporation of less tangible factors in evaluation exercises and challenges the assumptions of rational decision-making. There is a far greater understanding here of the nuances and subtleties that characterize what is often an informal, sub-rational decision-making process. Non-market forces and considerations have been recognized in planning evaluation methods such as scenario building and integrated evaluation (see Barbanente & Khakee, 2005; Lichfield, 2005; Miller & Patassini, 2005). There is now a much better sense of the importance of values, inter-personal dynamics and the realities of political power. This closely aligns with the empowerment and collaborative phase of program evaluation. The ability to reach consensus is a common challenge associated with multi-stakeholder participation in any decision-making exercise.

## Comparing Program Evaluation and Evaluation in Planning

Program evaluation and evaluation in planning – plan evaluation and planning evaluation – share many similarities (see Figure 4-1). Both are rooted in the principle of committing resources to produce demonstrable benefits. Evaluation provides a form of legitimacy for interventions and, ultimately, it is the mechanism by which decision makers are held accountable for their actions (Chouinard, 2013). Both forms of evaluation are intended to produce credible and trustworthy information through some form of systematic assessment (Oliveira & Pinho, 2011; Seasons, 2003). This includes the use of qualitative, quantitative and triangulated methodologies (McDavid & Hawthorn, 2006; Seasons, 2003). These methods are becoming common practice within the planning profession. For example, Laurian et al. (2010) conducted an *ex post* evaluation using a triangulated approach that integrated both qualitative and quantitative methods of data collection to generate systematic evaluation information about plan outcomes.

**Figure 4-1: Comparison of Program Evaluation and Evaluation in Planning**



Further, both approaches are concerned with the operation and outcomes of programs and plans. In the case of program evaluation, the intent is to inform program development while providing opportunities for improvement based on evidence (Cousins et al., 2014). In planning, evaluation helps to track the development, implementation and outcomes of plans in an effort to provide recommendations to improve the quality of plans (e.g., identifying the critical characteristics that contribute to effective implementation), the planning process (e.g., assessing citizen involvement during plan making), and plan outcomes (e.g., assessing the extent to which plan goals are realized) (Brody et al., 2003; Burby, 2003; Oliveira & Pinho, 2010a).

There are also several differences between program evaluation and evaluation in planning.

Oliveira and Pinho (2011) argue that the scope and practice of evaluation differentiates these two fields. Evaluation in planning has an exclusive focus on planning activities (Faludi & Altes, 1997; Khakee, 2000), especially the consideration of alternative solution paths (*ex ante* evaluation) and planning process evaluation. On the other hand, program evaluation is commonly used in other disciplines and professions such as health, education and social services (Oliveira & Pinho, 2011) in response to evaluation obligations that are legislated or policy-driven. As a result, program evaluation tends to be an integrated component of the program development phase. This enhances the potential evaluability of programs by ensuring that goals and objectives are written in clear, measurable ways so that direct causal linkages between programs and observed outcomes are achievable (McDavid & Hawthorn, 2006; Posavac & Carey, 2007). Integrating evaluation elements also encourages the identification of discriminating variables that are needed for program monitoring.

However, in planning practice, monitoring and evaluation is often absent or incompletely explained in plans. Also, there is often disagreement over how to measure and define the success

(or failure) of plans. This makes it difficult to establish clear causal linkages between plans and outcomes (Brody & Highfield, 2005; Laurian et al., 2010). As Talen (1996a, 1996b, 1997) noted, this is perplexing as it is extremely difficult to determine plan effectiveness – impacts and outcomes – without proper evaluation.

Another notable difference is the use of evaluation in practice. Evaluation has remained relatively under-used and overlooked in planning practice (Alexander, 2006a), although there is evidence of increasing interest in the subject. Several factors impede evaluation in planning practice including a lack of resources (e.g., constraints of time, staff capacity and financial resources), political realities, organizational culture, and poorly developed evaluation methods (Seasons, 2003). For example, planners are often engaged in the “front-loading” of resources (Waldner, 2004, 15) whereby substantial resources are dedicated towards the development of the plan while limited resources are directed towards the evaluation of plans once implemented. This includes developing appropriate monitoring and indicator frameworks and allocating sufficient resources to carry out these tasks. On the other hand, the field of program evaluation is well established with organizations regularly setting aside resources for evaluating programs. This is often done through established and routine evaluation procedures and policies connected to budgetary processes (Cousins et al., 2014). It should be noted that the evaluation of plans and associated programs is well established in the context of international development.

### **Benefits of Evaluation in Planning**

Evaluation has long been considered an integral component of the planning canon, at least in theoretical terms (Oliveira & Pinho, 2010a; Seasons, 2003). Evaluation can be used to enhance the quality and implementation of plans; improve the planning process; and demonstrate

the effectiveness of plans. According to Laurian et al. (2004), poor quality plans generally result in weak implementation. Evaluation should play a critical role in ensuring that plans reflect the highest quality of thought and practice (Berke & Godschalk, 2009; Baer, 1997). Evaluation can provide an objective and systematic approach to study plans, improve the plan preparation process, and assess whether plans achieved their stated goals and objectives. Through an evaluation, we can empirically document the deficiencies and strengths in plans and identify specific weaknesses that undermine implementation and plan effectiveness (Berke et al., 2012).

In order for plans to be effective and evaluable, there needs to be a clear relationship between the main components of a plan (i.e., its goals, objectives and policies) and implementation mechanisms (Oliveira & Pinho, 2010b). Plan goals and objectives should be clear, policies measurable and concepts clearly operationalized. This allows planners to identify indicators needed to support successful monitoring and evaluation of plans. Poorly defined goals and a lack of connection between policies and plan implementation gives rise to the possibility that plans will be unable to achieve their stated goals and, more importantly, make monitoring and evaluation difficult (Baynham & Stevens, 2014; Stevens, 2013).

Evaluation also helps to improve the planning process, specifically with regard to public participation. It is widely accepted that meaningful public participation can result in enduring plans and can be one of the strongest contributors to plan quality (Brody, 2003a; Brody et al., 2003). For example, Brody et al.'s (2003) study of stakeholder engagement in Florida and Washington (US) found that when planners involved a broader array of stakeholders, they tended to produce stronger plans and policies that were much more likely to be implemented. Public participation helps promote accountability and transparency during decision-making. This can generate trust, credibility and commitment to implementing plans. Public participation is also

used to enhance the quality of decisions by producing experience-based knowledge about local circumstances and issues (Brody, 2003a; Brody et al., 2003; Faehnle & Tyräinen, 2013; Laurian & Shaw, 2008).

Further, evaluation helps to improve the public participation process by enabling planners to determine which methods work best, to identify barriers to meaningful participation, and to provide ways to improve the engagement process (Laurian & Shaw, 2008). Evaluation also helps to empirically assess whether, and how effectively, participation has influenced planning decisions, implementation and outcomes. It also ensures that the resources of planners, decision makers and local taxpayers are managed effectively (Faehnle & Tyräinen, 2013; Laurian & Shaw, 2008).

Currently, the evaluation of public participation in planning is sparse. Laurian and Shaw's (2008) research found that planners' propensity to evaluate participation varied greatly by the participatory method. For example, workshops are evaluated more frequently; participation in environmental, community and economic development projects are more likely to be evaluated; participation is often evaluated in large communities; and experienced planners tend to conduct evaluations more frequently (Laurian & Shaw, 2008). The evaluation of public participation is important because the engagement of the public can foster mutual learning, which can enhance the quality of plans and lead to more desirable plan outcomes (Brody, 2003a).

According to Christensen (2015), exemplary planning practice should focus on both process and outcome. Evaluation can be used to demonstrate the value of the planning process and of plans. Plans and planning activities are regularly criticized by the public, politicians and other professions who claim that planning is costly, imposes undue controls and burdens on

landowners, and fails to make a difference (Laurian et al., 2010). Evaluation helps planners respond to these criticisms by demonstrating the outcomes and impacts associated with plans. Perhaps the greatest benefit of evaluation is that it holds planners and those involved in plan preparation accountable; this can be a way to legitimize the field of planning (Brody & Highfield, 2005; Laurian et al., 2010; Oliveira & Pinho, 2010a). Plan evaluation provides the critical final link between plan preparation, implementation and outcomes. It is through evaluation that planners are able to discern whether a plan is being implemented as intended, and to identify the effects of plans. Evaluation is also used to determine whether plans should be reviewed in order to realign goals and policies so that a preferred outcome is achieved (Laurian et al., 2004; Stevens, 2013).

### **Challenges to Evaluation in Planning**

Increasing interest in plan evaluation and planning evaluation over the past decade has sparked much discussion and debate about approaches to evaluating planning, plans, plan implementation, and plan outcomes. The literature has identified several challenges to the theoretical and methodological development and use of evaluation, specifically in relation to plan evaluation. These challenges include a strong adherence to plan preparation and *ex ante* evaluation; a lack of generally accepted outcome evaluation methodologies; an attribution gap; and institutional hurdles.

#### *Dominance of Plan Preparation and Ex Ante Evaluations*

Despite an increased focus on implementation and outcomes, there remains a strong emphasis on plan preparation and the use of *ex ante* evaluations in planning practice. Well-

established methods are used to evaluate plan alternatives prior to selecting a course of action. *Ex post* evaluations, often considered the “forgotten phase” of planning, track and assess the implementation of plans and achievement of stated outcomes (Carmona & Sieh, 2005 & 2008; Seasons, 2003; Berke et al., 2006a; Laurian et al., 2004; Laurian et al., 2010). Many plans suffer from “new plan syndrome” because they are adopted without any attempts to measure progress towards achieving stated goals (Brody & Highfield, 2005). A contributing factor is a planning culture that values plan preparation over all other aspects of planning.

Hoch (2002) argues that planners are rarely interested in evaluating their plans once adopted, or at least not in the same manner as they go about making them. Planning has an ingrained culture of valuing plans and plan preparation which can be traced, in part, to the training and education of planners. For example, Balsas (2012) argues that planning studio courses educate future planners about the process of plan preparation as a means of resolving planning problems and creating favourable future conditions. These courses, which emphasize the value of *ex ante* evaluations as a basis for improving plans, include creating vision statements, conducting fact base studies, and developing corresponding goals and policies. However, the value and importance of evaluation is rarely communicated.

Further, there tends to be a lag between the adoption of plans and the development of monitoring and evaluation strategies. This was apparent in the adoption of the Province of Ontario’s *Greenbelt Plan (2005)* and *Growth Plan for the Greater Golden Horseshoe (2006)* in Ontario, Canada. In both instances, monitoring and evaluation strategies were not formulated until many years after implementation. In the case of the *Greenbelt Plan (2015)*, a preliminary evaluation strategy was introduced in 2010, five years after plan rollout. For the *Growth Plan for the Greater Golden Horseshoe (2006)*, an evaluation strategy was not released until 2014, eight

years after the plan's adoption. Such delays suggest that evaluation is often an afterthought in the planning process. The development of monitoring and evaluation strategies including indicators should be developed concurrently with plan preparation (Briassoulis, 2001).

### *Lack of Generally Accepted Outcome Evaluation Methodologies*

Another challenge is the lack of generally accepted plan outcome evaluation methodologies (Brody & Highfield, 2005; Oliveira & Pinho, 2011). As a result, there is limited guidance about how to gauge the success of plans, whether in terms of implementation or outcomes (Berke et al., 2006a; Brody et al., 2006). Laurian et al. (2010) were among the first to develop a comprehensive approach to evaluating plan outcomes, formally known as the Plan-Outcome Evaluation (POE) methodology. This methodology builds on the field of program evaluation and involves three steps. First, plan evaluators track the logical sequence and coherence of plan elements including issues, goals, objectives, policies, methods, regulations, anticipated results and monitoring provisions. Second, plan goals are compared against observable outcomes using monitoring data. Finally, steps are taken to explain the outcomes observed by building on local and contextualized knowledge. The authors applied their methodology in the New Zealand planning context and found that: 1) the lack of robust monitoring data made it impossible to evaluate the outcomes of policies related to water quality and ecological protection, and 2) planners tend to focus on administrative efficiency (i.e., processing permits) rather than assess the quality of development (Laurian et al., 2010).

Oliveira and Pinho (2010b & 2009) incorporated elements from the field of program evaluation to develop a Plan-Process-Results (PPR) approach to evaluate the implementation and outcomes of plans by using a checklist procedure. The authors evaluated plans in the cities of

Lisbon and Oporto (Portugal) using nine evaluation criteria: internal coherence; plan relevance to the city's needs and ambitions; interpretation of the planning system; external coherence; public participation in plan-making and implementation; plan utilization in decision-making; commitment of human and financial resources; effectiveness (plan results); and direction for the urban development process (Oliveira & Pinho, 2010b). The authors' findings revealed that the built environment, specifically road networks, conformed to plan policies. They also noted that both Lisbon and Oporto's plans had strong internal coherence (Oliveira & Pinho, 2009).

Chapin et al. (2008) used a parcel-based geographic information system (PBGIS) methodology to assess conformance between residential development patterns at the parcel level and hurricane zones identified in community comprehensive plans. Their findings indicated that substantial new development occurred in areas deemed hazard zones by comprehensive plans (Chapin et al., 2008). Loh (2011) presented a conformance-based framework for evaluating plan implementation premised on a GIS-based comparison of planned versus actual land use to assess the issue of nonconformity between plan goals and outcomes. Loh (2011) developed a classification system for non-conformance in land use – Type A, Type B and Type C. Type A occurs when there is a natural succession in the land development process, but the land is planned for more intensive use; Type B occurs when there is a “grandfathered” use in an area planned for a different use in the future; and Type C occurs when land-use decisions have been made which directly contradict the plan's future land-use designations (Loh, 2011). Loh's (2011) findings indicated that there was widespread nonconformance (Type C) between future land-use and existing land-use maps depending on the location being analyzed, such as areas with encroaching residential development.

The results from the various outcome evaluation studies seem to suggest that a gap exists between plan intentions and plan implementation. Implementation should signify a commitment to implement the plan once adopted, and can be defined as the extent to which measures and outcomes called for in a plan materialize on the ground (Berke & Godschalk, 2009; Brody, 2003b; Millard-Ball, 2012). There seem to be several factors that contribute to widespread nonconformance. These include the quality of plans, the capacity of the planning agency, and the actors involved in implementation. Having a clearer understanding of the forces that shape implementation can (and should) guide the development of future evaluation criteria and methods.

The quality of a plan can influence its potential to be implemented effectively. According to Berke et al. (2006b), a high quality plan will clearly identify the issues facing a community; contain a strong fact base that explains the issues; identify goals, objectives and policies; and provide clear guidance on how a plan should be implemented. Implementation provisions should translate a plan's policies, tools and strategies into specific tasks and a clear schedule for performing these tasks including appropriate resource commitment (e.g., human and financial) (Brody, 2003b; Tang et al., 2011; Tang, 2008). Failing to include these provisions can make it challenging to discern whether a plan is having the desired impact on a community (Stevens, 2013).

Another factor influencing implementation relates to the capacity of planning agencies. In order for a plan to be successfully implemented, planning agencies should be committed to the plan; for example, there should be some degree of political support (Laurian et al., 2004). Planning agencies should also commit sufficient resources to support the successful introduction of plans, their adoption, implementation and, ultimately, their evaluation.

The actors involved in implementation also influence the extent to which a plan's goals are realized. David (2015) argues that the implementation process requires a consensus among the multitude of actors involved, including planners, politicians and other stakeholders. For example, developers play a critical role in ensuring that their applications for development conform (or perform) to stated plan goals (Berke et al., 2006a). A lack of consensus amongst key plan stakeholders can jeopardize the success of plan implementation and result in nonconformance.

#### *The Attribution Gap – Indicators and Monitoring*

A critical component of an evaluation should be the establishment of causal links between plan inputs, plan goals and objectives, and plan outputs and outcomes. These linkages allow planners and other stakeholders to identify the specific role played by plans in relation to the range of other intervening factors that might have a bearing on observed outcomes. This is also referred to as an issue of multi-causality wherein planners attempt to determine the degree of impact of plans while taking into consideration all other aspects such as engineering and legal constraints (Talen, 1996a). For example, Wong et al. (2006) argue that although plans provide a framework to achieve the objectives of sustainability, plan delivery is heavily reliant upon the actions of different actors, agencies and other plans from across different sectors. As a result, the cause-effect relationship between plans and materialized outcomes can be difficult to identify and assess (Carmona & Sieh, 2008; Mascarenhas et al., 2015). According to Laurian et al. (2010), the attribution issue is common given the absence of control groups, quasi-experiments and statistical analysis that identify the independent effects of plans, as practiced in program evaluation.

In order for an evaluation to be successful and effective, extensive empirical evidence is required; this includes the selection of indicators of success that link plan goals and objectives to outcomes (Laurian et al., 2010). Indicators and monitoring are principal components of an evaluation. Indicators are used in evaluations to operationalize abstract concepts (Poister, 2003; Posavac & Carey, 2007; Rae & Wong, 2012). They are often, but not always, uni-dimensional, measurable parameters that provide a simple interface with complex dynamic systems (Perdicoúlis & Glasson, 2011). Indicators help to define the scope of relevant information needed to make judgments regarding a program or plan's performance, identify problems, or make changes to strengthen a program or plan (Perdicoúlis & Glasson, 2011; Poister, 2003; Seasons, 2003).

Indicators feed into a monitoring strategy. This is the routine collection and review of information about the progress made towards achieving intended goals and objectives (Hoernig & Seasons, 2004; Morrison & Pearce, 2000; UNDP, 2009). Monitoring assesses the linkages between program or plan development, their implementation, and their ability to achieve stated goals. It does this by providing the framework within which data can be collected, managed, analyzed, synthesized and presented (Hoernig & Seasons, 2004).

However, this is much easier said than done. Challenges include ambiguous rationale for selecting indicators; difficulties in measuring planning goals; and access to appropriate data. In order for monitoring to be successful, planners must have a clear understanding of the relationship between the choice of indicators and their ultimate purpose. If the function of indicators is to measure procedural or administrative efficiencies (e.g., speed of processing planning applications), then its theoretical framework (i.e., the purpose of the indicators) matters less (Carmona & Sieh, 2005 & 2008). However, if the intent of indicators is to measure the

effectiveness of plans to improve future plans and guide decision-making, then the conceptual development and interpretation of indicators matters a great deal (Baker & Wong, 2006; Wong et al., 2006).

Planners who do not understand the intent of monitoring will haphazardly collect data that fails to assess the outcomes of plans (Laurian et al. 2010). For example, Baker and Wong's (2006) analysis of the development of regional monitoring systems in England (UK) found that planning agencies did not fully grasp the purpose of indicators. They tended to consider this exercise as "bean counting." However, once a clear intent was established, planning agencies began to develop better-focused indicator frameworks which supported meaningful analysis of planning activities (see Talen, 1996b).

Another challenge concerns the complexity of measuring plan goals. Morrison and Pearce (2000) argue that plan goals and policies are difficult to describe in measurable terms. They are often vaguely written with no mention of either the degree of change sought by goals and policies or the timing for achieving targets (Carmona & Sieh, 2008; Gennaio et al., 2009; Morrison & Pearce, 2000). This makes it challenging to isolate the information needed to develop indicators. For example, Agol et al. (2014) argue that it is methodologically difficult to measure policies related to sustainability because its multifaceted nature includes environmental, economic, social and institutional dimensions. As a result, there is a tendency to rely on highly simplified or proxy indicators which might be too removed from the planning context to tell us much about the outcomes of plans (Laurian et al., 2010).

Lastly, indicator selection and monitoring requires readily accessible data that covers key economic, social and environmental factors (Carmona & Sieh, 2005; Seasons, 2003). This is a resource-intensive task that requires planners to locate and reconcile multiple data sources which

feed into the development and monitoring of key indicators. The lack of accessible data can hinder the successful evaluation of plans. Laurian et al. (2010) found that the lack of monitoring data made it impossible to assess the outcomes of water quality and ecological protection policies in local plans. In Ontario (Canada), the absence of consistent and accurate data has undermined efforts by senior government planners to develop an appropriate monitoring framework for the *Growth Plan for the Greater Golden Horseshoe (2006)*. Planners have been forced to rely on a narrow set of quantitative indicators with some indicators measuring plan outcomes more directly than others (Burchfield, 2014). Talen (1996a) expressed a similar sentiment twenty years ago when attempting to demonstrate how a variety of quantitative methods could be used to gauge the implementation success of plans. Talen (1996a) concluded that developing systematic evaluation approaches in planning is both time consuming and resource intensive and, ideally, might be better conducted by research planning centers.

### *Institutional Hurdles to Conducting Plan Evaluation*

Two main institutional challenges inhibit the use of evaluation in planning agencies – organizational culture and political constraints. Organizational culture refers to the dominant ways of doing things in an organization (Kernaghan et al., 2005; Mills et al., 2007). For plan evaluation and planning evaluation to be recognized as important functions in planning agencies, the organizational culture must recognize and value the benefits of evaluating plans and their outcomes. Organizations must be willing to dedicate sufficient resources (e.g., time, money and staff) to conduct plan evaluations. Based on Seasons' (2003) study of evaluation practices in planning departments across Ontario (Canada), it was noted that evaluation was often considered discretionary rather than necessary mainly due to the change averse nature of public sector

organizations. This could also be fueled by a professional planning culture that is inherently biased towards generating plans, given its future-oriented nature (Waldner, 2004), and by the tendency to direct resources to planning activities that generate revenue (e.g. plan review, development applications) rather than policy planning and associated research activities.

Political constraints also present a hurdle to evaluation. The creation of plans is inherently a political process because politicians use plans to garner public support and, more importantly, elected officials are usually the decision makers in planning. There can also be genuine fear among politicians that an evaluation could reveal failures or inadequacies that reflect political decisions (Laurian et al., 2010). Similarly, planners can be concerned about their individual and collective accountability – real or perceived – for factors beyond their control that could affect the performance of a planning process, policies, plan outcomes or impacts.

## **Summary and Conclusions**

Evaluation should play an important role in public sector organizations. Evaluation is founded on the principles that government interventions need to have demonstrable benefits and that decision makers must be held accountable for their actions. In the realm of planning, evaluation is used to assess plans, the planning process and the outcomes generated by plans, while taking into consideration the institutional context within which planning operates. This is different from program evaluation which has a broader focus that extends into many fields such as health, education and social services. However, unlike program evaluation, which has an established theoretical and practical foundation, evaluation in planning remains relatively unexplored and under-used. This is perplexing since we know that plan evaluation and planning

evaluation can enhance the quality and implementation of plans, improve the planning process, and demonstrate the effectiveness of plans.

The findings from this paper highlight a number of gaps requiring further research. First, the literature on plan implementation and outcomes is rather limited when compared with other areas of planning research such as plan preparation. The dearth of research provides little guidance for planning practice regarding how best to assess and improve plan implementation and the realization of stated plan goals. Researchers such as Laurian et al. (2010), Oliveira and Pinho (2010b & 2009), Chapin et al. (2008) and Loh (2011) have found that plans generally lack appropriate direction regarding implementation and the evaluation of plan outcomes. The lack of consistent plan evaluation methodologies, including the challenges involved in selecting appropriate indicators to monitor, can contribute to the poor performance of plans.

Second, the links between program evaluation and evaluation in planning need further exploration. While both fields share a common goal of assessing the operation and outcomes of programs and plans, they have generally been developed independent of each other. Research that bridges these two fields of evaluation is needed. Program evaluation is well established and can therefore be used to help improve the use of evaluation in planning practice. This includes exploring ways of increasing the evaluability of plans, identifying clear causal relationships to the greatest extent possible, using evaluation findings in subsequent decision-making, and communicating the findings of evaluations to decision makers and plan stakeholders generally. Further, we call for training and education about the principles, methods and applications of evaluation in planning practice. There is a need to acknowledge and integrate evaluation with policy development and decision-making in planning practice. However, evaluation in planning is unevenly addressed in university planning programs with surprisingly few examples of

dedicated courses on the subject. Courses in evaluation should be part of the curriculum in planning programs; ideally, these courses should be mandatory. In addition, training in evaluation should be offered to practitioners by the professional institutes and associations that oversee planning practice.

Finally, research about the uses of evaluation in planning practice is needed. This includes exploring the institutional and political contexts that influence the use (and misuse) of evaluation. In order for researchers and planners to develop appropriate evaluation methodologies, a better understanding of the factors that support and inhibit the use of evaluations in practice is needed, especially in a period of fiscal restraint. There is a need to narrow the gap between the theoretical and methodological development of evaluation and its use in practice. Evaluation is important in planning because it is the mechanism through which the planning profession and planners can demonstrate the merit, worth and significance of their efforts.

## CHAPTER FIVE: SURVEY RESEARCH MANUSCRIPT

### **Do practicing planners value plan quality?**

#### **Insights from a survey of planning professionals**

**Dave Guyadeen**

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#### **Overview**

Plan quality, measured through the presence or absence of key components within a plan, has sparked much discussion within the planning literature. It is only recently that researchers have begun to build conceptual consensus around the core elements of a high quality plan. This research sought the views of practicing planners about plan quality principles identified in the literature.

A web-based anonymous survey was sent to 290 municipalities across the province of Ontario, Canada. Respondents were asked to discuss why plan quality is important; rank the importance of plan quality principles identified in the literature; estimate the influence that individual plan quality elements have on plan implementation and decision-making; and reflect on the quality of their community's official plan.

The response rate for the survey was approximately 36 percent (n=104 respondents). The findings indicate that practicing planners generally regard plan quality as important. Respondents mentioned that plan quality facilitates more effective implementation, better communicates the intentions of decision makers, and ensures that plans include accurate information and reflect community values. The findings also advance the notion that researchers and practitioners should

not treat plan quality principles equally. I also found that implementation and monitoring and evaluation principles were somewhat undervalued as being very important contributors to plan quality when compared to other principles.

Two recommendations are offered to planning practice. First, we must continually build the capacity of planners to create high quality plans. The majority of planners surveyed mentioned that they did not include key plan quality principles, due to lack of knowledge and experience regarding plan quality. Second, we must promote the importance of provisions for monitoring and evaluation in plans. This includes describing how to track the progress of a plan towards achieving its goals and policies.

**Keywords:** Plan Quality, Plan Quality Evaluation, Official Plan Quality, and Plan Quality Survey

## **Introduction**

Plans are important products of the planning profession (Balsas, 2012; Ryan, 2011). Plans are used to tackle many complex issues facing communities, such as shaping physical development patterns, promoting economic development, advocating for environmental justice, and responding to climate change (Allred & Chakraborty, 2015; Berke et al., 2015; Horney et al., 2016). Given the importance of plans, there is an expectation that they should be of high quality, based on established principles.

Plan quality, a measure of the presence or absence of key components within a plan, has sparked much discussion within the planning literature. Recently, researchers have developed some conceptual consensus around the core principles contributing to a high quality plan (Horney et al, 2016; Lyles & Stevens, 2014). However, an important missing element in this

discourse is the views of planning professionals about the importance and impacts of these plan quality principles.

This paper explored the attitudes and perceptions of practicing planners about plan quality principles identified in the literature. The findings from this research advance our understanding of plan quality and shed new light on how we can improve the quality of plans. Specifically, the findings indicated that practicing planners generally agree with the plan quality principles identified in the literature, and, more importantly, regard plan quality as being an important consideration when creating official plans or updating existing plans.

From a research perspective, the findings also indicated that not all plan quality principles should be weighted equally. From a practicing perspective, the findings suggested that there might be areas in plan making that could undermine the effectiveness of the plans planners create. Specifically, implementation and monitoring and evaluation seem to be undervalued as high quality plan principles.

Based on the findings from this research, two recommendations are offered to planning practice. First, greater attention must be devoted to building the capacity of planners to create high quality plans. The majority of planners surveyed indicated that they had little knowledge of plan quality and lacked experience in applying its principles. Second, implementation and monitoring and evaluation must be given greater emphasis in the plan creation process. This includes describing how to implement plans (e.g., identifying timelines and funding sources) and how to track the progress of a plan towards achieving its goals and policies (e.g., including measurable targets, clear assignment of responsibilities, and a timetable for plan updates). Without these elements, assessing the implementation and outcomes of plans is difficult, if not impossible.

This paper is organized into five sections. Following the introduction, I discuss the principles of a high quality plan, drawing on studies utilizing these principles. Next, I discuss the survey used to assess practicing planners' opinions regarding plan quality principles. The fourth section discusses the major findings from the survey. The paper concludes with key findings and implications for planning practice.

### **The Principles of a High Quality Plan**

The literature on plan quality has increased in volume and sophistication since the 1990s. Lyles and Stevens (2014) identified some forty-five empirical publications on plan quality over the past two decades, with the number of studies steadily increasing since the mid-2000s. This growth can be attributed in part to greater conceptual consensus among researchers on the principles that contribute to a high quality plan. These principles include having: 1) a fact base; 2) goals; 3) policies; 4) direction on implementation; 5) monitoring and evaluation provisions; 6) approaches to inter-organizational coordination; 7) a description of the public participation process; and 8) a clearly organized and presented plan (Berke & Godschalk, 2009; Lyles & Stevens, 2014). These plan quality principles were initially outlined by Kaiser et al. (1995) and have been further refined by various researchers over the years. For example, Stevens (2013) included "meeting minimum legal requirements for plan content" (i.e., compliance) as a ninth component of plan quality. These principles can help researchers and practicing planners to judge the overall quality of plans, identify specific weaknesses that could undermine plan effectiveness, and ensure that plans achieve a desirable future standard (Allred & Chakraborty, 2015; Berke et. al., 2015; Horney et al., 2016). Below is a description of each principle.

The *fact base* provides the empirical foundation to ensure that key problems are identified and prioritized in a plan (Berke et al., 2013; Horney et al., 2016). This includes a description of the current and future local conditions, such as present and projected population, demand for community facilities (e.g., recreational centres) and infrastructure (e.g., roads and sewer), and vulnerabilities to the natural environment (Berke et al., 2006b; Brody, 2003b; Horney et al., 2016). Plans containing a limited or inaccurate fact base can result in misinformed goals and policies (Horney et al., 2016; Stevens, 2013). For example, Brody's (2003b) study of ecosystem plans found that those plans with a limited fact base failed to address many of the issues associated with managing ecological systems.

The *goals* of a plan are used to describe the desired future conditions that reflect the values and aspirations of a community (Honey et al., 2016). Plan goals help prioritize issues, and should be clearly specified and thorough to ensure that they can be achieved in a timely manner (Berke et al., 2006b; Brody, 2003b, Tang, 2011). Weak plan goals can result in misguided policies, inconsistent implementation provisions, and ineffective monitoring and evaluation strategies (Stevens, 2013).

The *policies* of a plan serve as a guide to decision-making and assure that plan goals are achieved (Berke et al., 2012; Horney et al., 2016). Policies generally address matters related to, among others, the type, location, and timing of future development (Berke et al., 2006b). Effective policies should be clear, correspond to various plan goals, and utilize a range of tools such as regulations (e.g., zoning) and incentives (e.g., density bonuses) to achieve the desired plan goals (Berke & Godschalk, 2009). Poorly crafted policies can frustrate the decision-making process and hinder the achievement of plan goals.

Plans should also include mechanisms for *implementation*. Implementation represents a commitment to adhere to plan policies once a plan is adopted (Berke & Godschalk, 2009; Brody, 2003b; Brody et al., 2004). Plans should include appropriate tools for implementation, including details regarding timing for implementing various aspects of the plan, the funding and agencies responsible for carrying out specific tasks, and the sanctions for failing to comply with the plan (Baer, 1997; Brody, 2003b; Tang et al., 2011). Plans that lack adequate implementation provisions may be subject to being “dead on arrival” owing to their inability to outline the activities needed for plan goals to materialize (Burby, 2003; Lyles et al., 2016; Stevens, 2013).

Plans should outline appropriate *monitoring and evaluation* provisions. Monitoring and evaluation consists of continually tracking implementation activities and assessing the outcomes of those activities (Lyles et al., 2016). Monitoring and evaluation helps to assess how well plan goals are being implemented and the degree to which changes in development is consistent with the plan (Berke et al., 2006a, 2006b). The results from monitoring and evaluation can be used to improve the development of future plans and promote accountability to stakeholders. Effective monitoring and evaluation requires that plan goals and policies be framed in measurable terms and utilize targets (e.g., intensification targets and density targets) to aid in tracking progress (Stevens, 2013).

Plans should take into consideration *inter-organizational coordination*, which is the recognition of the interdependent nature of plan preparation and implementation, involving multiple public and private actors (Berke et al., 2012; Horney et al., 2016). For example, the implementation and monitoring of plans require participation and support from organizations both internal and external to planning departments (Stevens, 2013). During plan preparation, collaboration among different individuals, decision-making bodies, and the acknowledgement of

other plans is required. Inter-organizational coordination can identify existing or potential conflicts between agencies and stakeholders, and ensure the proper horizontal and vertical coordination of plans from other departments and jurisdictions (Berke & Godschalk, 2009; Tang et al., 2011).

Plans should also foster meaningful *public participation*. This includes involving both formal and informal actors – e.g., other governmental bodies, private-sector institutions, nonprofits, and individual citizens – during plan preparation (Berke et al., 2012; Horney et al., 2016). Participation can help foster community and political support for plans which can aid in successful plan adoption and implementation (Manta Conroy & Berke, 2004; Manta Conroy & Jun, 2016). This principle requires plans detail the public participation process, including the role and method of identifying stakeholders and the types of public engagement used (Baer, 1997; Stevens, 2013).

Plans should be *clearly organized and presented*. Plans serve a critical function in communicating the vision of a community and the goals and policies needed to achieve this vision (Norton, 2008; Bunnell & Jepson, 2011). Plans must also connect with readers in an effort to promote the vision of the plan. Plans should be written and organized in a manner that maximizes its readability, interpretability, and user-friendliness (Stevens, 2013).

Finally, plans should strive to meet *minimum legal requirements* specified for its community (i.e., compliance). In the case the United States, these requirements are important considerations in communities where plans are mandatory. In Canada, the provincial levels of government often specify minimum legal requirements for plans. For example, municipal official plans in Ontario, Canada are required to meet minimum requirements outlined in a number of

provincial documents such as, among others, the *Ontario Planning Act* and *Provincial Policy Statement (2014)*.

### *Plan Quality Studies*

Researchers have relied upon plan quality principles, to varying extents, in order to assess a range of plans and issues. Table 5-1 provides an overview of some forty-nine plan quality studies including their areas of investigation and the plan qualities used in each study. The breadth of studies highlights the versatility of the plan quality principles.

Manta Conroy and Jun (2016) examined how the planning process and local context influence plan quality through a sustainability lens. The researchers analyzed forty-six township comprehensive plans throughout the Central Ohio region, focusing on fact base, policies, implementation, monitoring, and public participation. The findings from this research indicated that participation breadth is positively related to sustainability scores. That is, when a variety of groups are involved in plan making, the principles of sustainability are more likely to be addressed in a comprehensive manner during the planning process (Manta Conroy & Jun, 2016).

Honey et al. (2016) developed an evaluation protocol for assessing hazard mitigation plans using the plan quality principles – fact base, goals, policies, implementation, monitoring, inter-organizational coordination, and participation – as a foundation. The researchers applied their evaluation protocol to eighty-four rural counties in the Southeastern United States. The findings indicated that most plans contained elements for each of the plan quality principles. The highest scoring principles included fact base, goals and participation, while the lowest scores were inter-organizational coordination, policies and implementation (Horney et al., 2016).

**Table 5-1: Summary of Plan Quality Evaluations – Select Studies**

Investigators	Topic	Fact Base	Goals	Policies	Implementation	Monitoring and Evaluation	Inter-organizational Coordination	Organization and Presentation	Public Participation	Compliance
Horney et al. (2016)	Hazard Mitigation	✓	✓	✓	✓	✓ <sup>a</sup>	✓		✓	
Johnson & Lyles (2016)	Staff Reports	✓						✓		
Manta Conroy & Jun (2016)	Comprehensive Plans – Sustainability	✓		✓	✓	✓			✓	
Berke et al. (2015)	Local Plans – Hazards and Climate Change	✓	✓	✓			✓			
Saunders et al. (2015)	Land Use and Emergency Management Plans	✓	✓	✓	✓	✓		✓		
Stevens & Shoubridge (2015)	Hazard Mitigation	✓	✓	✓	✓		✓ <sup>b</sup>			
Baynham & Stevens (2014)	Official Community Plans – Climate Change	✓	✓	✓	✓					
Lyles & Stevens (2014)	Plan Quality Meta Analysis	✓	✓	✓	✓	✓ <sup>a</sup>			✓	
Berke et al. (2013)	Comprehensive Plans – Watershed Protection	✓	✓	✓	✓	✓	✓		✓	
Stevens (2013)	Community Official Plans	✓	✓	✓	✓	✓	✓	✓	✓	✓
Baker et al. (2012)	Climate Adaption Plans	✓	✓	✓	✓	✓ <sup>a</sup>				
Berke et al. (2012)	Hazard Mitigation Plans	✓	✓	✓	✓	✓ <sup>a</sup>	✓		✓	
Evenson et al. (2012)	Pedestrian Plan	✓	✓	✓	✓	✓ <sup>a</sup>			✓	
Horney et al. (2012)	Hazard Mitigation Plans	✓	✓	✓	✓	✓ <sup>a</sup>	✓		✓	
Aytur et al. (2011)	Pedestrian and Bicycle Plans	✓	✓	✓	✓			✓	✓	
Bunnell & Jepson (2011)	Plan Quality							✓	✓	✓
Tang et al. (2011)	Coastal Zone Management Plans	✓	✓	✓	✓	✓ <sup>a</sup>	✓			
Kang et al. (2010)	Coastal Zone Hazard Mitigation Plans	✓	✓	✓	✓	✓ <sup>a</sup>			✓	
Jones et al. (2010)	Pedestrian Master Plans	✓	✓	✓	✓					
Tang et al. (2010)	Local Climate Change Action Plans	✓	✓	✓	✓	✓			✓	
Berke & Godschalk (2009)	Plan Quality Meta Analysis	✓	✓	✓	✓	✓	✓	✓	✓	✓
Evans-Cowley & Gough (2009)	Long Range Plans – Environmental Protection	✓	✓	✓	✓		✓			
Steelman & Hess (2009)	Open Space Plans	✓			✓	✓	✓	✓	✓	
Tang and Brody (2009)	Local Environmental Plans	✓	✓	✓	✓	✓			✓	
Norton (2008)	Local Master Plans	✓			✓	✓		✓	✓	
Evans-Cowley & Gough (2008)	Long Range Plans – Environmental Protection	✓	✓	✓	✓		✓			

Investigators	Topic	Fact Base	Goals	Policies	Implementation	Monitoring and Evaluation	Inter-organizational Coordination	Organization and Presentation	Public Participation	Compliance
Tang (2008)	Coastal Zone Management Plans	✓	✓	✓	✓	✓	✓		✓	
Hoch (2007)	Local Municipal Plans Affordable Housing	✓								✓
Edwards & Haines (2007)	Local Comprehensive Plans – Smart Growth		✓	✓						
Termorshuizen et al. (2007)	Landscape Development Plans	✓	✓	✓			✓			
Brody et al. (2006)	Comprehensive Plans – Sprawl Reduction			✓						
Srivastava & Laurian (2006)	Comprehensive Plans – Hazard Mitigation	✓	✓	✓						
Norton (2005a)	State-Mandated Local Plans	✓	✓	✓	✓	✓			✓	✓
Norton (2005b)	State-Mandated Local Plans	✓	✓	✓	✓	✓			✓	✓
Brody et al. (2004)	Ecosystem Management Plans	✓	✓	✓	✓	✓	✓			
Davis (2004)	Coastal Management		✓	✓	✓	✓				
Manta Conroy & Berke (2004)	Sustainable Development Plans	✓	✓	✓	✓				✓	
Brody (2003a)	Comprehensive Plans – Natural Hazard	✓	✓	✓						
Brody (2003b)	Comprehensive Plans – Ecosystem Management	✓	✓	✓	✓	✓	✓			
Brody et al. (2003)	Citizen Participation in Plans								✓	
Burby (2003)	Citizen Participation in Plans								✓	
Berke et al. (2002)	Local Plans – Human Rights	✓	✓	✓	✓	✓			✓	✓
Nelson & French (2002)	Comprehensive Plans – Natural Hazards	✓	✓	✓						
Berke & Manta Conroy (2000)	Comprehensive Plans – Sustainable Development			✓						
Berke et al. (1999)	Regional & District Plans – Environmental Management	✓	✓	✓		✓	✓	✓		✓
Deyle & Smith (1998)	Comprehensive Plans – Coastal Management	✓	✓	✓						✓
Baer (1997)	Plan Quality Research	✓	✓	✓	✓	✓	✓	✓	✓	✓
Berke et al. (1996)	Comprehensive Plans – Natural Hazard	✓	✓	✓						✓
Kaiser et al. (1995)	Plan Quality Research	✓	✓	✓						

<sup>a</sup> Assessment of monitoring was included in implementation category  
<sup>b</sup> Assessment of inter-organizational coordination was included in implementation category

More recently, Johnson and Lyles (2016) developed a staff report evaluation tool to assess the quality of staff reports. Although the researchers' evaluation protocol differed from the plan quality principles, several commonalities were observed. This includes assessing staff reports on the information they provide as background (i.e., the fact base), organization and presentation, and references to soliciting public participation. The findings from this research indicated that most staff reports did not include maps, arguments for recommendations, or references to soliciting public input (Johnson & Lyles, 2016).

## **Methodology**

To solicit the views of professional planners, I administered a web-based anonymous survey to 290 municipalities across the province of Ontario, Canada. The survey was designed to explore the attitudes and perceptions of municipal practicing planners regarding plan quality, specifically in relation to their community's official plan. Municipal official plans were used as a reference point, because they are the primary guiding document for many municipalities, is viewed as the major currency in the field, and has a legal standing that gives it prominence among all types of plans (Berke et al., 2015; Ryan, 2011). Respondents were asked a series of closed- and open-ended questions regarding why plan quality is important, the merits of the plan quality principles discussed above, and the level of influence each plan quality principle has on plan implementation and decision-making. Respondents were also asked to reflect on the quality of their respective official plans and comment on why certain principles were or were not incorporated (see Appendix A for survey).

Municipal planners were targeted because the *Ontario Planning Act*, which sets out the rules for planning, divides planning responsibilities between the provincial level and local

municipalities, whose jurisdiction is further subdivided between upper tier (i.e., county or region) and lower tier municipalities (i.e., city, town, or township) (Doumani & Foran, 2011). Single tier municipalities include both separated municipalities that are geographically located within a county, and former county or regional municipalities that have been amalgamated (AMO, 2016). The survey was sent to 29 upper tier municipalities, 29 single tier municipalities, and 232 lower tier municipalities. This represented approximately 65 percent of all Ontario municipalities (n=444 municipalities) and excludes northern Ontario jurisdictions. I did not focus on northern Ontario as the municipal structure varies from that of the rest of Ontario (MMAH, 2015). For example, it is common for municipalities in northern Ontario to have no municipal organization, making it challenging to engage in planning. This makes it difficult to consistently compare findings from northern Ontario to that of the rest of Ontario.

The contact information for planners was gathered from publicly accessible municipal websites. The survey was administered through the online platform Survey Monkey. This was a very cost effective method to deliver the survey to a wide range of respondents over a large geographic area. The survey was emailed to respondents with a valid email address. The survey was available for 17 days, from October 5, 2016 to October 21, 2016. To increase the response rate, two reminders were sent out to respondents during the course of the survey.

## **Survey Results and Discussion**

The response rate for the survey was approximately 36 percent (n=104 respondents). This included 26 upper tier respondents (regional and county level), 13 single tier respondents, and 65 lower tier respondents (local level). Responses were gathered from a range of individuals, including planning directors and managers, senior and junior policy and land use planners, chief

building officials, and several planning consultants acting on behalf of municipalities. The mix of governments and positions allowed for a broader perspective regarding the opinions of practicing planners on plan quality.

### *Plan Quality is Important*

Almost all respondents (95 percent) agreed that plan quality should be an important consideration when creating new official plans or updating existing plans. Respondents indicated that the quality of an official plan matters because: 1) it can facilitate better implementation; 2) it helps communicate the intentions of decision makers and the community; and 3) it ensures that the most accurate and relevant information is used to develop plans which reflect community values.

*“Plan quality is directly linked to implementation. Quality means that the plan is legible, easily understood, and tackles complex problems in a manner that is clear and transparent. Wording in a plan should be clear, and interpretation of policies should be consistent.” – Anonymous Respondent*

Many respondents agreed that a high quality plan – one that generally meets the principles identified in the literature – aids in better implementation and is more likely to achieve its full potential. Better implementation is facilitated by having a clearly described and easy-to-navigate plan that can be understood by planning staff, the development community, the public, and other stakeholders involved in its implementation. This includes having clearly described goals, policies, and implementation tools. Many respondents were of the opinion that a poor quality plan can lead to the plan being viewed as an obstacle to overcome rather than a guide to decision-making. Consequently, a poor quality plan can lead to poor decisions and results.

*“An official plan describes the type of community we want to be. If the strategic direction for our community is contained in a substandard plan, it will be quickly dismissed.” – Anonymous Respondent*

Respondents also indicated that the quality of an official plan matters because it helps to better communicate the intentions of decision makers and the community. An official plan is the primary document used to guide municipal decision-making – from identifying strategic priorities to financial planning – while also articulating the future vision of the community. Given the importance placed on an official plan, it is imperative that it be of a high quality. As a respondent indicated, “a poorly developed plan will be irrelevant, fail to provide a cohesive community vision, and seldom be referenced in decision-making.”

*“When staff and council are referring to an official plan as the basis of justifications for development decisions, one wants to be sure the plan was created with a high degree of thought and appropriateness.” – Anonymous Respondent*

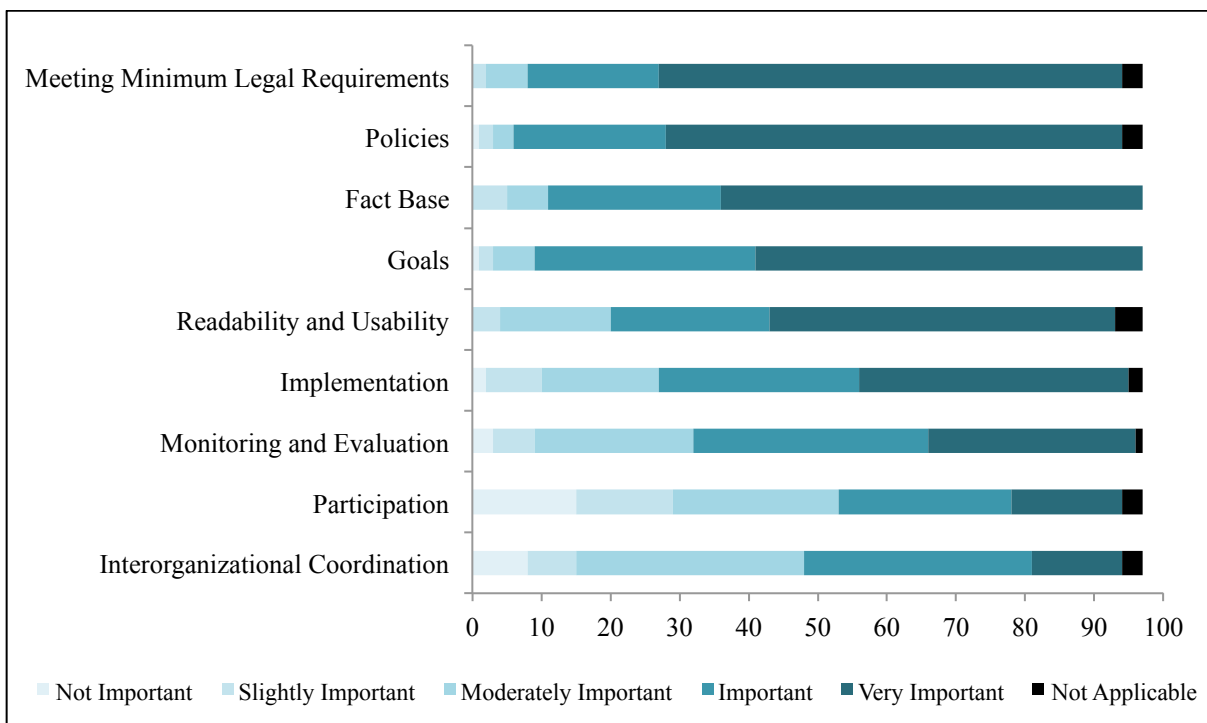
Because an official plan plays such a critical role for a municipality, it is expected that a high degree of effort go into the plan making process. Many respondents mentioned that the quality of the plan is a reflection of the quality of the plan making process. If care is taken to research and develop the plan, then it is likely to gain support from politicians and the community. This includes relying on accurate data to assess the current and future challenges facing a community, and ensuring that community members contribute to developing plan goals and policies. Such an approach ensures that the document is relevant to the community it serves, thereby increasing its chances of being used by decision makers. As one respondent explained, “plan quality is a reflection of the work and oversight that goes into drafting a plan. A poor

quality plan does not reflect well on a municipality and the importance they place on developing a quality long term document to guide development.”

*Contributors to Plan Quality*

Figure 5-1 identifies respondents’ opinions regarding the extent to which principles identified in the literature contribute to plan quality. The findings suggested that although practicing planners might not fully agree with all plan quality principles, they do believe that the principles contribute to plan quality in some manner.

**Figure 5-1: Contributors to Plan Quality**



Generally speaking, the top cited principles considered very important contributors to plan quality included meeting minimum legal requirements (i.e., compliance) and policies. The least cited principles included describing the participation process and inter-organizational

coordination. Respondents also indicated that having a plan that is internally consistent and flexible are other important principles to consider.

Amongst respondents (n=97), 69 percent and 68 percent agreed that meeting minimum legal requirements and policies are very important contributors to plan quality, respectively. This finding is not surprising, particularly within the Ontario context, since municipalities are obligated to comply with a variety of provincial legislations regarding municipal official plans, including the *Growth Plan for the Greater Golden Horseshoe (2006)*, the *Greenbelt Plan (2005)*, and *Oakridges Moraine Plan (2002)*. Policies are another important consideration as they are seen as the primary vehicle through which plan goals are realized.

Further, almost two-thirds of respondents (63 percent) agreed that having a fact base is a very important contributor to plan quality. This includes discussing, among other things, population and economic trends, demography, land uses and land needs, and state of the natural environment. Respondents also cited goals (58 percent) and plan readability and usability (52 percent) as very important contributors to plan quality. Goals are detailed descriptions of the desired future conditions of a community, while readability and usability refers to a visually attractive format and layout including having an executive summary, table of contents, glossary of terms, and illustrations.

Interestingly, fewer respondents agreed that plan implementation (40 percent) and monitoring and evaluation (31 percent) are very important contributors to plan quality. Implementation refers to describing how the plan will be implemented once adopted, while monitoring and evaluation involves describing how to track the progress of the plan towards achieving its goals and policies.

The two least cited principles included describing the participation process (13 percent) and inter-organizational coordination (16 percent). These principles should not be discounted as contributing to plan quality as respondents still consider the participation process (68 percent) and inter-organizational coordination (50 percent) as moderately important to important.

In addition to the principles identified in the literature, respondents also cited having an internally consistent and flexible plan as important contributors to plan quality. In past studies, researchers have mentioned that internal consistency should be a consideration when assessing plan quality (e.g., Baer, 1997; Berke & Godschalk, 2009). Internal consistency means plan contents, including goals, policies, implementation, and monitoring and evaluation provisions, should mutually reinforce each other. Goals must be comprehensive to achieve a community's vision; policies must be clearly linked back to goals and forward to implementation provisions; and monitoring should be used to assess the realization of plan goals (Berke et al., 2006b; Berke & Godschalk, 2009). As one respondent explained, "the plan has to hang together in order for the goals of one section to not override or contrast with the goals of another section. For example, if significant natural environment features are to be protected, then there must not be any other goal in the plan that appears to exempt or override this requirement."

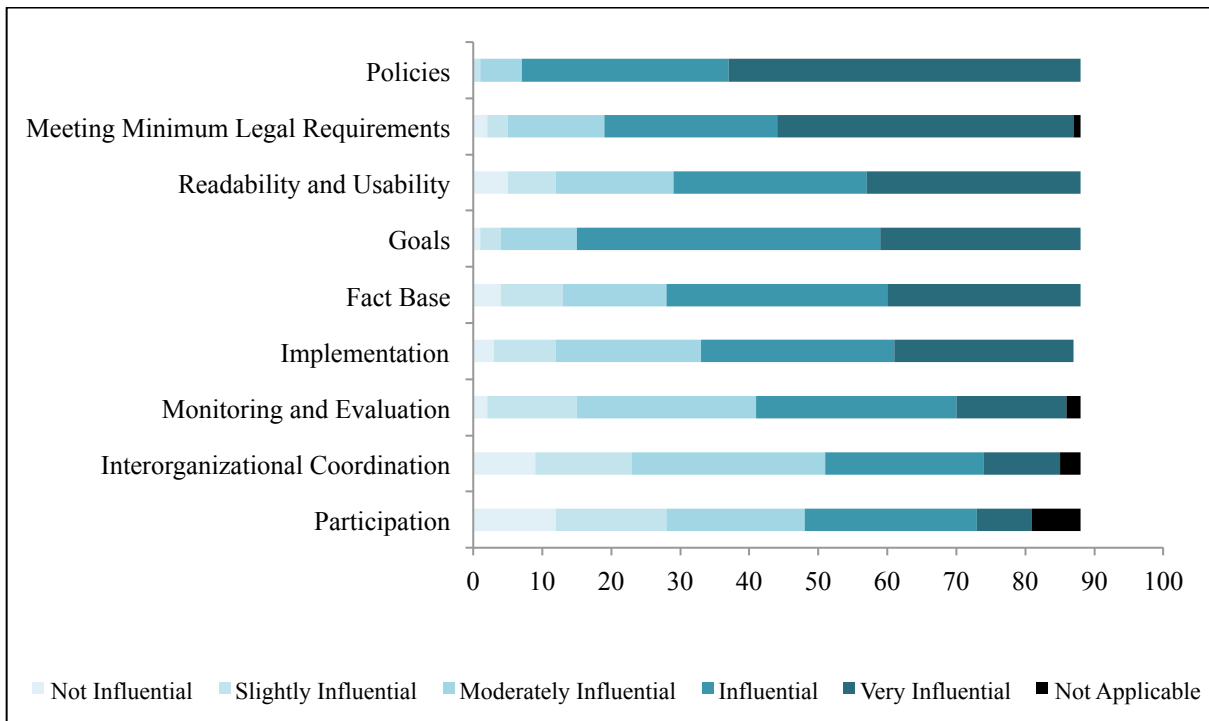
Another notable principle is having a flexible plan that is sensitive to changing circumstances. According to respondents, flexibility means having wording that affords implementers some leeway as to how policies are interpreted and enforced. For example, one respondent mentioned that a plan which uses the wording "shall" versus "may" when referencing the need to complete studies limits a planner's ability to waive requirements that might not be directly relevant to a particular development proposal. This can lead to frustration when attempting to implement the plan, both for planners and applicants.

The other aspect of plan flexibility relates to being able to respond to changing circumstances. A plan needs to be able to respond to unpredictable changes, for example economic, social or political, that can have a negative impact on a municipality. In order for a plan to remain flexible, it needs to be monitored regularly and updated frequently to account for demographic, economic, and physical changes occurring in the community.

*Principles that Enhance Implementation and Decision-making*

Figure 5-2 identifies respondents’ opinions regarding the principles they consider as enhancing plan implementation and decision-making. The findings suggested that a critical component to ensuring plans are implemented and relied upon during decision-making relates to having policies that are sufficiently specific and tied to definite actions.

**Figure 5-2: Principles that Enhance Implementation and Decision-Making**



The top cited principles that enhance plan implementation and decision-making included having clear policies and meeting minimum legal requirements. The least cited principles included monitoring and evaluation, inter-organizational coordination, and a description of the participation process.

Amongst respondents (n=88), 58 percent and 49 percent agreed that policies and meeting minimum legal requirements are very important contributors to enhancing plan implementation and decision-making, respectively. This is not surprising since the majority of planners surveyed indicated that these two principles are considered very important plan quality principles.

Interestingly, respondents weighted plan readability and usability (35 percent), goals (33 percent), fact base (32 percent), and implementation (30 percent) as somewhat equal contributors to plan implementation and decision-making. It is not surprising that respondents agreed that readability and usability enhance implementation since many indicated that a user friendly plan is more likely to be used during decision-making instead of one that is difficult to understand.

According to respondents, the least valued principles considered very important contributors to plan implementation and decision-making included monitoring and evaluation, inter-organizational coordination, and describing the participation process. Only 18 percent of respondents are of the opinion that describing how to track the progress of a plan towards achieving its goals and policies (e.g., including measurable targets, identifying monitoring responsibilities, and a timetable for updating the plan) helps with plan implementation and decision-making. This is an interesting finding since monitoring and evaluation can help demonstrate to decision makers, planners, and stakeholders the evidence needed to support implementation.

Further, only 13 percent of respondents believed that describing how departments and organizations both internal and external to the planning department can help implement a plan. This is another interesting finding because official plans often have to rely on other departments and organizations to assist with implementation. Plans are also required to align either vertically or horizontally to other plans and initiatives. For example, official plan policies related to transportation generally manifest themselves in other plans such as in a municipality's master transportation plan.

Regarding a description of the participation process, only 9 percent of respondents agreed that this helps with plan implementation and decision-making. This is surprising considering the participation process holds such high regard throughout the planning process (e.g., Brody et al., 2003; Burby, 2003).

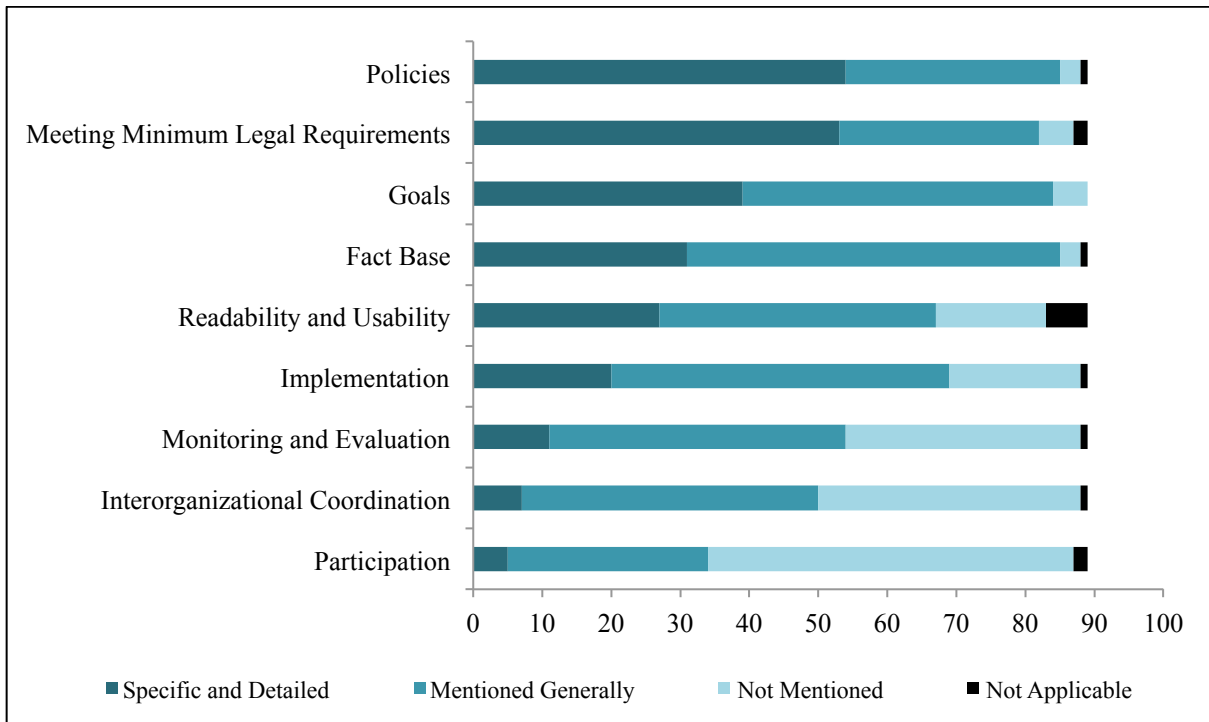
### *Respondents' Assessment of their Official Plan*

Figure 5-3 identifies respondents' assessment of their community's official plan based on the plan quality principles. For this question, respondents were asked to identify whether plan principles were specific and detailed, mentioned generally, not mentioned, or not applicable in regards to their community's official plan. The findings suggested that Ontario practicing planners' believe that their official plans generally adhere to the plan quality principles identified in the literature.

The majority of respondents indicated that the policies of their official plan were specific and detailed and that their plans met the minimum legal requirements for plan content. On the other hand, goals, fact base, implementation, monitoring and evaluation, and inter-organizational coordination were mentioned generally. A description of the participation process seemed to be

missing in most respondents' official plan. The main reasons cited for omitting certain plan quality principles included political will, organizational culture, links to other documents, dated official plans, and a mismatch regarding the role of the plan.

**Figure 5-3: Respondents' Assessment of their Official Plan**



Amongst respondents (n=89), 61 percent and 60 percent indicated that their official plan contained specific and detailed policies and met the minimum legal requirements, respectively. This is not surprising given the emphasis on these two principles as contributing to plan quality and enhancing plan implementation and decision-making.

Further, 61 percent, 55 percent, and 51 percent of respondents indicated that their community's official plan generally mentioned a fact base, included a description of how to implement their plan, and goals, respectively. An interesting finding that emerged from this question was that some 21 percent of respondents indicated that their plans had no mention of implementation, including timelines and responsibilities for implementing their plans. One

respondent suggested that a description of how implementation would occur was not included because it is inherently understood that plan policies would be implemented.

A majority of respondents (60 percent) indicated that their community's official plan did not contain any description of the participation process, such as the different stakeholders engaged during plan making and techniques used to engage stakeholders. This is not surprising given the limited emphasis placed on this principle as contributing to plan quality and plan implementation.

This question also revealed the limited focus placed on inter-organizational coordination and monitoring and evaluation. While 48 percent of respondents agreed that their community's official plan generally mentioned these principles – inter-organizational coordination and monitoring and evaluation – a large percentage of respondents also indicated that their official plans did not include these principles. In fact, 43 percent of respondents mentioned an absence of how coordination would occur among departments and organizations external to planning departments. Another 38 percent indicated that their plans included no mention of monitoring and evaluation provisions. The absence of monitoring and evaluation guidelines is, in many ways, not surprising since most respondents agreed that such provisions should be in an external document to their official plan. For example, a respondent indicated that, “a high quality official plan should lend itself intuitively to its implementing documents, and not be too bogged down with implementation and monitoring information itself.”

Many respondents shared a similar viewpoint regarding why certain plan quality principles were omitted from their respective official plans. These included political will, an inexperienced staff, reliance on links to other documents, dated official plans, and a mismatch regarding the role of the plan.

Many respondents indicated that their Council did not focus on the importance of the official plan as a guiding tool. This resulted in limited resources (staff and time) being directed towards creating or updating official plans. The lack of political will often resulted in planners following the previous plan and making only minor changes to their updated plans. As such, if a plan was of a poor quality before an update, then these principles were carried forward into the new plan. As one respondent indicated, “many plan quality principles were excused from their official plan because there was no budget to complete a comprehensive review”. Other respondents indicated that updating official plans was more about getting the minimum completed in a timely manner rather than having a quality document.

Another issue cited by respondents was inexperienced staff. Respondents mentioned that planning staff did not appear to be fully engaged in the plan making process, did not have an understanding of the principles regarding high quality plans, and were inexperienced plan writers. For example, a respondent indicated that the lack of understanding regarding the importance of monitoring led to the omission of appropriate monitoring and evaluation provisions.

Many respondents also indicated that certain principles were not included because they were discussed in other external documents. For example, a respondent mentioned that a description of the participation process was not included in their official plan because it was discussed extensively in an official plan background study and recommendation report. This also applied to other plans that help with implementation, such as sustainability plans, business improvement plans, and master plans. Many respondents did not see the need or benefit of having certain principles included in their official plans, especially those principles that extended beyond shaping how the community would be developed.

The currency of official plans was another reason for omitting certain principles. One respondent mentioned that inter-organizational coordination was never included because their plan was created during a time when this principle was not thoroughly considered. Other respondents mentioned that their plan was created during a time when participation was thought of as something to do before the plan was written and not described in their official plan.

On a final note, several respondents mentioned that certain plan quality principles might have been excluded because of the purpose being given to the plan. For example, a plan might be viewed as a more technical document rather than a document to help guide decision-making. A technical document would contain more details than a guiding document. This is an interesting finding in that it highlights the notion that the role of a plan will influence how it is created, implemented, and evaluated. This sentiment was echoed by Baer (1997) some two decades ago where he argued that the criteria for evaluating plans would depend on the plan's function. For example, there are visionary plans that are broad and general, land use plans which offer direction on development decisions, and plans that focus on specific issues such as economic development (Baer, 1997). Depending on the function of the plan, the criteria for evaluation, and success, would vary considerably.

### **Practicing Planners Value Plan Quality**

The aim of this research was to explore the attitudes and perceptions of practicing planners about plan quality principles identified in the literature. The short answer to this issue is, yes, practicing planners generally agree with the plan quality principles, and, more importantly, regard plan quality as being an important consideration when creating official plans or updating existing plans. Respondents indicated that plan quality is important because it can

facilitate better plan implementation, help communicate the intentions of decision makers and the community, and ensures that the most accurate and relevant information is used to develop plans which reflect community values.

The results from this research advance our understanding of plan quality and shed new light into how we can improve the quality of the plans we create. From a research perspective, the findings indicated that not all plan quality principles should be weighted equally. From a practicing perspective, the findings suggested that there might be areas in plan making that could undermine the effectiveness of the plans planners create. Specifically, implementation and monitoring and evaluation seem to be undervalued as high quality principles.

Plan quality principles are a useful baseline for assessing plans. A challenge, however, to applying these principles relates to deciding whether to weight each principle equally or assign varying weights based on value judgments (Brody, 2003a; Lyles & Stevens, 2014). According to Lyles and Stevens (2014), there is an overwhelming lack of acknowledgement in the literature of the implicit equal weighting used by researchers when assessing plan quality. This is partly due to the absence of a strong theoretical or empirical justification for assigning weights to each principle (Lyles & Stevens, 2014).

This research advances the notion that researchers and practitioners should not treat plan quality principles equally. Rather, the weight we assign to each principle would depend on the function of the plan and the local context within which the plan operates. For example, based on the results of the survey, it was noted that meeting the minimum legal requirements (i.e., compliance) and polices were considered very important contributors to plan quality. Within the Ontario context, it is expected that meeting the minimum legal requirements should carry greater weight over all other principles, because the Ontario planning structure is governed by highly

rigid system of planning that extends from the provincial level of government to the municipal level.

Berke et al. (2012) argued that the application of plan quality principles allows planners, and researchers, to identify gaps in plan making that could undermine the effectiveness of plans. An important contribution from this research is an indication that there might be weak points in the plan making process that can inhibit the effectiveness of plans. For example, on the issues of implementation and monitoring and evaluation, it was interesting to note that these principles were somewhat undervalued as being very important contributors to plan quality, when compared to other principles. Respondents also indicated that their respective official plans only contained general directions regarding plan implementation and the ongoing monitoring and evaluation of their plans. These findings seem to reflect a common sentiment found within the planning literature regarding plan implementation and evaluation. Researchers such as Altes (2006), Brody and Highfield (2005), Chapin et al. (2008), Laurian et al. (2004b), and Zhong (2014) have found that plans generally lack appropriate direction regarding implementation and the evaluation of plan outcomes.

Failing to consider implementation and monitoring and evaluation makes it challenging, if not impossible, to assess if the plan is being implemented as intended, and to track the progress of a plan towards achieving its goals. As Stevens (2013) argued, plans will have little value if they do not identify and hold specific organizations accountable for implementing policies, specify implementation timelines and sources of funding and develop appropriate monitoring and evaluation provisions.

Based on the findings from this research, I offer two recommendations to planning practice. First, the planning profession must continually build the capacity of planners to create

high quality plans. The majority of planners surveyed indicated that a high quality plan fosters better implementation. For example, creating plans that are visually appealing and easy to navigate and read can encourage stakeholders to consult the plan more frequently. Unfortunately, based on the responses, it seems many planners did not include key plan quality principles owing to inexperience and a lack of understanding regarding plan quality. In this regard, we must continually engage practicing planners on how we can improve the plans we create.

Furthermore, we must promote the importance of monitoring and evaluation provisions in plans. Planning is often criticized for being costly and failing to make a difference (Laurian et al., 2010). Monitoring and evaluation provisions can enable municipal planners to respond to these criticisms by demonstrating the benefits that have resulted from the plans they created. In order to do this, monitoring and evaluation needs to be an integrated component of plans, from developing measurable policies to identifying indicators to measure plan progress.

## **CHAPTER SIX: CONTENT ANALYSIS MANUSCRIPT**

### **Evaluating Plan Quality: An Assessment of 63 Official Plans in the Greater Golden Horseshoe (GGH) Region of Ontario, Canada**

**Dave Guyadeen**

*Under review at the Journal of Planning Education and Research | January 2017*

#### **Overview**

This research builds on, and extends, the research on plan quality by evaluating the quality of 63 official plans in Ontario, Canada. The findings indicated that goals and policies were the strongest principles; fact base, monitoring and evaluation, and public participation were the weakest principles; implementation and inter-organizational coordination were somewhat weak; and plan organization and presentation and legislative requirements were reasonably strong. These findings are important because it suggested that many official plans are not of a high quality, and, more significantly, the provincial government has a strong influence on the quality of official plans.

**Keywords:** Plan Quality, Plan Quality Evaluations, Plan Content Analysis, High Quality Plan Principles

#### **Introduction**

The evaluation of plan quality, based on established principles, has increased over the last decade, particularly within the United States and, to a lesser extent, Canada. Researchers have evaluated a range of plans, including comprehensive plans, pedestrian plans, climate change plans, and hazard mitigation plans using prescribed indicators of plan quality (Berke et al., 2015;

Manta Conroy & Jun, 2016; Evenson et al., 2012; Horney et al., 2016). The increase in plan quality evaluations is welcomed, as researchers have developed a robust set of principles that they argue should comprise high quality plans (Woodruff & BenDor, 2016). Plan quality evaluations are also appealing to researchers because plans are widely used in practice and the methodology for evaluating plan quality is becoming more standardized (Lyles & Stevens, 2014; Woodruff & BenDor, 2016). Perhaps the most important benefit of plan quality evaluations is the ability to highlight specific issues and elements that are needed to improve plans and planning outcomes (Woodruff & BenDor, 2016).

The majority of studies on plan quality centre on the US context. In contrast, research focusing on the Canadian landscape is sparse, with the existing research focusing only on the province of British Columbia (BC). Stevens and Shoubridge (2015) examined the extent to which municipalities in the Greater Vancouver region of BC included provisions in their community plans for reducing natural hazard risk and vulnerability. Baynham and Stevens (2014) evaluated the mitigation and adaption content of community official plans in BC. Stevens (2013), which is the first Canadian plan quality study, evaluated official plans in southern BC.

This research contributes to the limited Canadian-based research by assessing the strengths and weaknesses of 63 official plans in the Greater Golden Horseshoe (GGH) region in the province of Ontario. It does so by building on, and extending, the plan quality principles identified in the literature. This approach helps to facilitate further cross-jurisdictional analysis among regions, particularly in relation to conducting plan quality meta-analyses. This research also contributes to our understanding regarding the extent to which plan quality varies with local planning context, such as municipal population and currency of plans.

The GGH region is located in southern Ontario. This region was selected as a case study because it is one of Canada's fastest growing urbanized areas. In 2011, the population of the GGH was approximately 9 million, representing two-thirds of the population of Ontario and nearly one-third of the total Canadian population; the region is forecasted to increase to 13.5 million people by 2041 (Hemson, 2013; Neptis, 2013; MMAH, 2013). The region is also the economic engine of Ontario, generating two-thirds of Ontario's Gross Domestic Product (MMAH, 2016). As such, planning and official plans play an important role in effectively guiding the current and future growth and development in this region. Poorly developed official plans can lead to misguided goals and policies which can have devastating impacts on the region, such as increased congestion and reduced quality of life.

The findings from this research indicated that goals and policies were the strongest plan quality principles; fact base, monitoring and evaluation, and public participation were among the weakest principles; implementation and inter-organizational coordination were somewhat weak principles; and plan organization and presentation and legislative requirements were reasonably strong principles. These findings are important because they suggest that many official plans are not of a high quality, which is troubling given the importance of this region as a population and economic hub for the province and country. More significantly, the findings revealed that the provincial government has a strong influence on the quality of official plans.

This paper is organized into six sections. Following the introduction, the principles of a high quality plan are discussed. Next, an overview of the Ontario-GGH planning framework is provided. This is followed by a review of the data collection protocol and analytical techniques used to explore this research. The fifth section discusses the results from the plan content analysis. The paper concludes with key implications and direction for future research.

## High Quality Plan Principles

Plan quality is a measure of the extent of the presence or absence of key components within a plan; plan components can be operationalized using a variety of indicators (see Table 6-1). Since the 1990s, researchers have identified, and built upon, a range of principles that contribute to a high quality plan. Kaiser et al. (1995), initial contributors to the literature, defined plan quality as being associated with clear goals, policies, and fact base. Recently, Lyles and Stevens (2014), through their meta-analysis of plan quality studies, argued that researchers have developed a consensus around the core principles that comprise a high quality plan. These include: fact base; goals; policies; implementation; monitoring and evaluation; inter-organizational coordination; public participation; plan organization and presentation; and meeting legislative requirements (Berke & Godschalk, 2009; Berke et al., 2006b; Lyles & Stevens, 2014; Stevens, 2013). Table 6-1 provides an overview of these principles and examples of indicators to operationalize each principle.

The *fact base* provides the empirical and rational foundation for a plan, particularly in relation to selecting goals and prioritizing policies (Baer, 1997; Berke et al., 2013; Horney et al., 2016). The fact base involves assessing existing and projected community conditions and the issues that might arise from these conditions. For example, prior to identifying goals and policies, a plan must consider the current and future population and economic conditions of a community, current land supply for future development, existing and future infrastructure needs (e.g., roads, water, and wastewater), and impacts to the natural environment (e.g., water bodies and natural heritage) (Berke et al., 2006b; Brody et al., 2003). Failing to consider the fact base can lead to misinformed goals and policies (Horney et al., 2016; Stevens, 2013).

The *goals* of a plan are broad statements of the desired future conditions that reflect the results from the fact base analysis and community values (Berke & Godschalk, 2009; Berke et al., 2006b; Berke et al., 2012; Horney et al., 2016). Goals should be clearly specified and thorough, and help decision makers identify priorities to be achieved (Brody, 2003a & 2003b; Tang et al., 2011). Examples of typical plan goals include, among others, land use and growth management, housing, transportation, natural heritage, economic development, and climate change.

The *policies* of a plan are the principles to be followed in order to guide public and private decisions to achieve goals (Berke & Godschalk, 2009; Berke et al., 2006b; Berke et al., 2012; Horney et al., 2016). Policies should be directly linked to goals. For example, policies should offer direction on matters related to, among others, the type and location of future development (i.e., land uses), steps needed to support the local economy (i.e., economic development), and actions needed to protect and enhance the natural environment (i.e., water bodies and natural heritage) (Berke et al., 2006b).

The *implementation* principle represents a commitment to consult and carry out the actions identified in the plan (Berke & Godschalk, 2009; Berke et al., 2006b; Berke et al., 2012). Implementation represents the steps needed to translate plan policies into actions (Lyles et al., 2016). The implementation section of a plan can include information on how decision makers and the community will apply plan policies, such as specific organizational responsibilities, sources of funding, timelines, and methods of enforcement (Horney et al., 2016; Lyles et al., 2016).

The *monitoring and evaluation* principle represents a commitment to track changes in the community in relation to plan goals (Berke & Godschalk, 2009). This includes continually

tracking implementation activities and assessing the outcomes of those activities (Lyles et al., 2016). The monitoring and evaluation principle can include organizational responsibilities, timelines for plan updates, and indicators for measuring plan progress (Berke et al., 2006b). Effective monitoring and evaluation is aided by having quantifiable and measurable goals and policies, such as, among others, intensification and density targets. A benefit of monitoring and evaluation is that it can help adjust ongoing plan implementation efforts and subsequent revisions to the plan (Lyles et al., 2016).

The *inter-organizational coordination* principle acknowledges the multiple actors involved in the plan creation and implementation processes. In order for plans to be effectively implemented, there must be coordination among organizations and agencies between the different levels of government and across public and private sectors (Horney et al., 2016). Inter-organizational coordination is particularly important as it can help identify existing or potential conflicts between agencies and stakeholders, and ensure the successful horizontal and vertical coordination of plans from other jurisdictions (Berke & Godschalk, 2009; Tang et al., 2011).

The *public participation* principle recognizes the formal and informal actors involved in the plan making and plan implementation processes (Berke & Godschalk, 2009; Berke et al., 2006b; Berke et al., 2012; Horney et al., 2016). Through public participation, community concerns and issues can be identified and addressed in the plan (Tang, 2008). Greater public participation can help foster community and political support for plans, further aiding in plan adoption and implementation (Manta Conroy & Jun, 2016). This principle includes describing the stakeholders involved, the purpose and techniques of public participation, and effects on citizens (Berke et al., 2006b).

The *organization and presentation* principle centres on creating a usable and attractive plan which encourages its use. Plans need to communicate a host of information, from the goals and policies that reflect community values to implementation and monitoring and evaluation mechanisms. As such, it is imperative that plans are readable and can be used by the range of actors involved in its implementation, such as land developers and residents (Bunnell & Jepson, 2011; Norton, 2008). A readable and usable plan should include an executive summary, glossary of terms, illustrations and maps, and easy navigation (Berke et al., 2006b).

Finally, plans should *meet legislative requirements* for plan content. This is particularly critical within the Ontario-GGH context as the provincial level of government (i.e., the senior level) outlines a number of policies and programs that must be adhered during plan creation. Notable provincial policies and programs include the *Planning Act (RSO 1990)*, *Provincial Policy Statement (2005 and 2014)*, and *Growth Plan for the Greater Golden Horseshoe (2006)*. Failing to adhere to these policies, where applicable, can make it difficult to gain official plan approval (discussed in proceeding section).

These principles have aided in developing a systematic methodology to evaluating plans against normative principles that constitute a high quality plan (Berke et al., 2006b; Berke & Godschalk, 2009; Lyles & Stevens, 2014). This enables researchers and practicing planners to make judgments regarding the overall quality of plans, identify specific weaknesses that could undermine plan effectiveness, and ensure that plans achieve a desirable standard and stated plan goals (Berke et al., 2012; Berke & Godschalk, 2009).

Plan quality evaluations generally employ content analysis to identify and assess the characteristics of plans using plan quality principles (Brody, 2003b; Lyles & Stevens, 2014; Stevens, 2013). Content analysis is a method used to interpret the contents of a plan based on a

systematic classification process of coding to identify themes or patterns (Hsieh & Shannon, 2005). The process of conducting a plan content analysis involves developing and administering a measurement protocol and constructing a scoring scheme. Protocols must be developed to measure whether, and, to what extent, plans contain the plan quality principles. The protocol is then administered to a sample of plans with a score being assigned to each plan content criteria using a scoring scheme (Stevens et al., 2014).

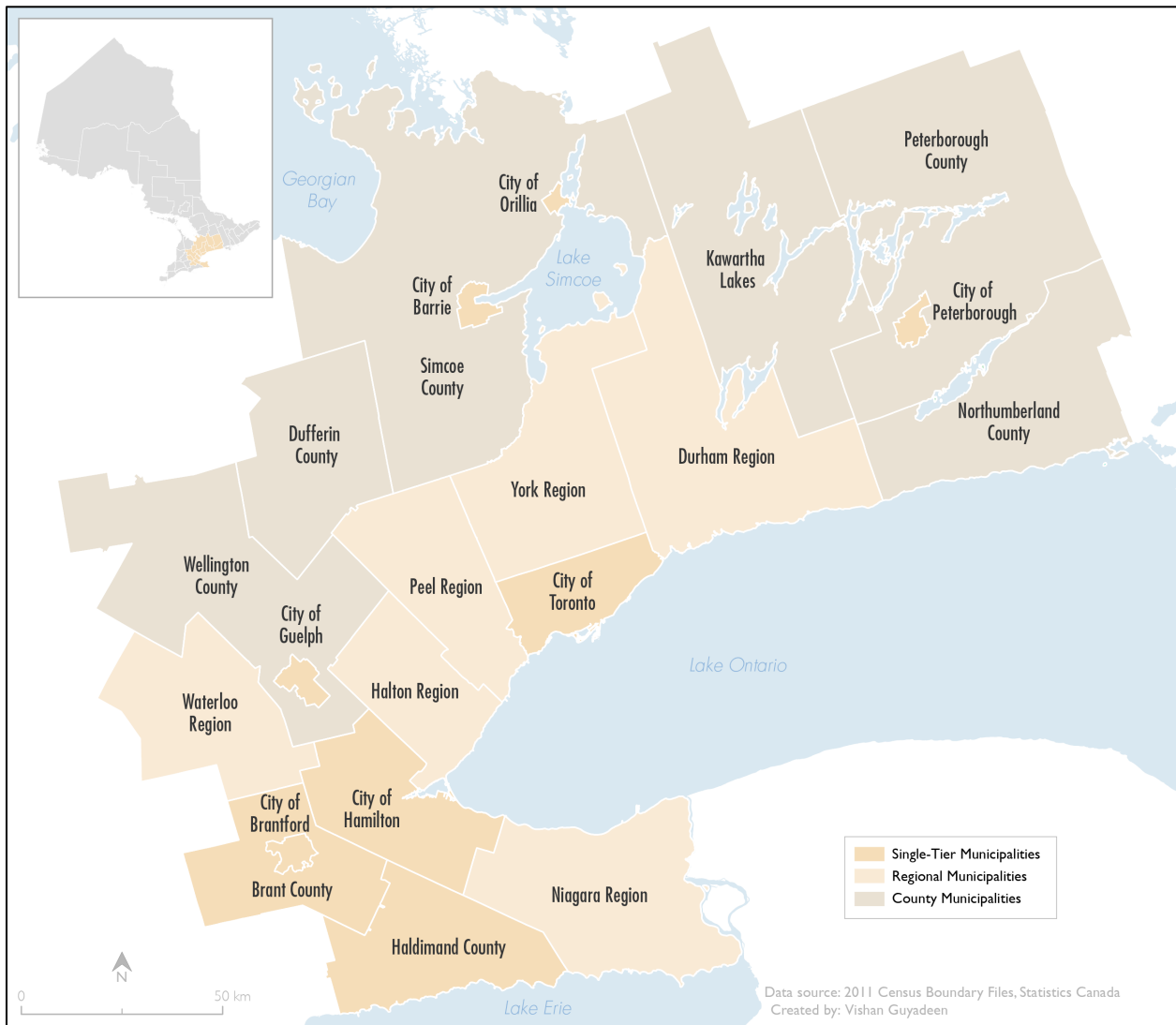
**Table 6-1: Definition of Plan Quality Principles and Examples of Plan Quality Indicators**

Plan Quality Principles	Definition <sup>a</sup>	Examples of Indicators Used to Operationalize Plan Quality Principles <sup>b</sup>
Fact Base	Analysis of current and desired future conditions of a community	Current and Future Population (and Composition); Current and Future Economy; Existing Land Uses; Natural Heritage; Constraints to Development
Goals	Broad statements of the desired future conditions that reflect community values	Land Use and Growth Management; Housing; Transportation; Waste Management; Sewer and Wastewater; Energy Supply; Natural Heritage, Parks & Open Space; Cultural Heritage; Mineral Aggregates; Economic Development
Policies	Principles to be followed in order to guide public and private decisions to achieve goals	
Implementation	Commitments to carry out the plan once adopted	Implementation Section; Plan Priority; Department/Organization Responsibility; Timelines; Funding Sources
Monitoring and Evaluation	Provisions for tracking changes in the community in relation to plan goals	Monitoring and Evaluation Section; Department/Organization Responsibility; Timeline for Plan Update; Indicators; Quantifiable Goals and Policies
Inter-organizational Coordination	Recognition of the interdependent nature of plan making and implementation	Horizontal and Vertical Coordination (e.g., coordination with other governments)
Public Participation	Recognition of formal and informal actors involved in the plan making process	Stakeholders Involved; Purpose of Participation; Public Participation Techniques; Effects on Citizens
Organization and Presentation	A usable and attractive plan	Executive Summary; Cross-Referencing; Table of Contents; Glossary of Terms; Illustrations; Maps
Legislative Requirements	Required elements included in a plan as required by planning legislations	Intensification Target; Population and Employment Projections; Density Targets
<sup>a</sup> Source: Berke & Godschalk, 2009; Berke et al., (2006b); Berke et al., 2012; Horney et al., 2016		
<sup>b</sup> Refer to Appendix B for Plan Content Analysis Code Book		

## Overview of the Ontario-GGH Region

The GGH region, shown in Figure 6-1, is located in southern Ontario. The region covers almost 32,000 square kilometres and consists of highly urbanized cities to rapidly growing suburban municipalities, mid-sized centres, small towns and villages, and rural areas (Neptis, 2013).

**Figure 6-1: The Greater Golden Horseshoe (GGH) Region**



The GGH region was selected as a case study because it is one of Canada's fastest growing urbanized areas. In 2011, the population of the GGH was approximately 9 million,

representing two-thirds of the population of Ontario and nearly one-third of the total Canadian population; the region is forecasted to increase to 13.5 million people by 2041 (Hemson, 2013; Neptis, 2013; MMAH, 2013). The region is also the economic engine of Ontario, generating two-thirds of Ontario's Gross Domestic Product (MMAH, 2016). As Stevens (2013) argued, it is important for highly populated regions to have a high quality plan to guide future growth and development as the consequences of the absence of a high quality plan can have severe impacts on these regions and their inhabitants.

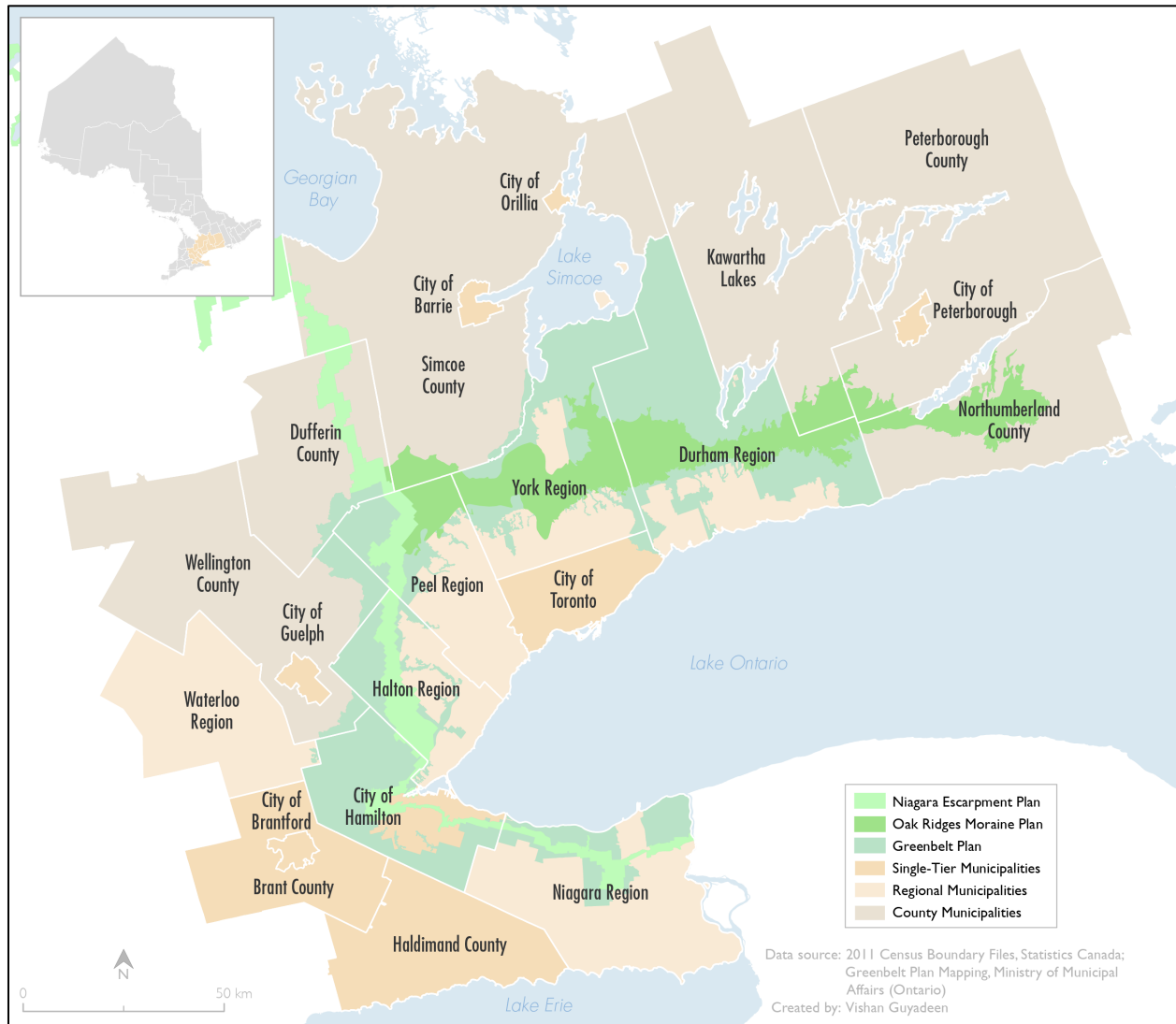
Planning in the Ontario-GGH region is primarily governed by the *Ontario Planning Act (RSO 1990)*, which divides planning authority between the provincial level of government and the local levels of government (Doumani & Foran, 2012). The local levels of government are further subdivided into single-tier municipalities, upper-tier municipalities (i.e., county or regional municipalities) and lower-tier municipalities (i.e., city, town, or township). Single-tier municipalities include both separated municipalities that are geographically located within a county and former county or regional municipalities that have been amalgamated (AMO, 2016). The GGH region comprises 21 upper- and single-tier municipalities (10 single-tiers and 11 upper-tiers) and 89 lower-tier municipalities, for a total of 110 municipalities.

The Planning Act also identifies the minimum contents required in official plans, including: goals, objectives and policies; a description of the measures and procedures proposed to attain plan objectives; and a description of measures for informing and obtaining the views of the public with respect to official plan amendments (Ontario Planning Act, 2016). These requirements are considerably broad and generalizable, thereby giving municipalities greater leeway when creating official plans. The disadvantage to this, however, is that the quality, and contents, of official plans can vary substantially among jurisdictions.

Planning in the Ontario-GGH region can be best characterized as navigating layers of provincial policies. Under the Planning Act, single-, upper-, and lower-tier official plans must conform to a range of provincial policies depending on their location. Once a single- or upper-tier municipality has created, or updated, their official plan, and received approval from their local Council, the plan must be submitted to the province, specifically the Ministry of Municipal Affairs and Housing, for final approval. Provincial planners review official plans to ensure conformity with applicable provincial policies. Lower-tier municipalities are approved at the upper-tier level.

Apart from approving official plans, a primary role of the provincial government is to provide the statutory framework within which local planning operates. This includes developing policies and programs that take into consideration the entire province of Ontario. While there are numerous policies and programs that apply province-wide, there are two main policy frameworks that apply to all municipalities across the GGH region. These are the *Provincial Policy Statement (PPS) (2005 and 2014)* and the *Growth Plan for the Greater Golden Horseshoe (2006)*. Below is a description of each policy. It is important to note that I have omitted a range of other provincial policies that have a bearing on official plans because they do not apply to all municipalities in the GGH region. These include the *Niagara Escarpment Plan (1990)*, *Oakridges Moraine Conservation Plan (2001)*, and *Greenbelt Plan (2005)*. As demonstrated in Table 6-2, while these plans apply to a range of municipalities across the GGH region, not all municipal official plans are required to conform to these policies, as they do not have lands that fall within the legislative limits of the plans.

**Figure 6-2: Select Provincial Planning Policies and their Influence on Local Municipalities**



The PPS (2005 and 2014) sets the policy foundation for regulating land use planning and development across the province of Ontario (MMAH, 2015). The PPS (2005 and 2014) focuses on three broad policy areas: (1) building strong and healthy communities (policies include development and land use patterns, employment, housing, public spaces, infrastructure, economic development, and energy conservation); (2) managing resources (policies include natural heritage, water, agriculture, minerals and petroleum, mineral aggregate resources, and

cultural heritage); and (3) protecting public health and safety (policies include natural and human-made hazards). These policy areas serve as the foundation for official plan goals and policies.

The Growth Plan for the Greater Golden Horseshoe (2006), referred to as the Growth Plan (2006), is the primary policy framework that guides planning for the entire GGH region. The Growth Plan (2006) focuses on a number of policy areas, including transportation, infrastructure, land use planning, urban form, natural heritage and resource protection, and economic development. The Growth Plan (2006) also identifies targets that all GGH region municipalities must meet, including: (1) achieve a minimum of 40 percent intensification within the existing built boundary, and (2) achieve a minimum gross density target that varies between 150 to 400 residents and jobs combined per hectare for urban centres. The Plan also identifies the distribution of population and employment for the GGH region to the years 2031 and 2041, referred to as Schedule 3 and 7 Projections, which municipalities must accommodate. These targets are important, as municipal official plans must include them as part of meeting the legislative requirements for plan content. If there is a conflict between the PPS (2005 and 2014) and the Growth Plan (2006), the more stringent policy framework prevails.

It is important to note that there are two iterations of the PPS (2005 and 2014) and Growth Plan (2006) to consider. In the case of the PPS, there is a 2005 version and a 2014 version. For the Growth Plan, the first iteration was in 2006 and has a planning horizon that extends to 2031. A second consolidated version of the Growth Plan was introduced in 2013 and has a planning horizon that extends to 2041. The main difference between the 2006 and 2013 Growth Plans is the updated population and employment projections. While some municipalities have updated their official plans to the current provincial plans, a majority of official plans still

refer to the 2005 PPS and initial 2006 Growth Plan. As such, this research relied on both versions of the PPS (2005 and 2014) and the Growth Plan (2006) as the basis for the plan quality evaluations.

## **Methodology**

### *Case Studies*

This research is based on a sample of 63 official plans found throughout the GGH region, representing approximately 57 percent of all GGH municipalities. My sample included all single-tier municipalities (totaling 10), all upper-tier municipalities (totaling 11), and 42 of the most populated lower tier municipalities. These lower tier municipalities belonged to the Regional Municipalities of Durham, Halton, Niagara, Peel, Waterloo, and York. Table 6-2 provides a breakdown of sampled municipalities, including the year of official plan adoption, the 2011 population, and projected population to 2031. While the average year for official plan adoption was 2014, there were still plans as old as 2006 and as current as 2016. The average population for the sampled municipalities was 212,894 in 2011, and ranged from a low of 6,356 in the Township of Wainfleet to a high of 2,615,060 in the City of Toronto. The profile of the GGH region made for a prime study area, as it allowed for an assessment of the extent to which the local planning context (measured by year of official plan adoption and municipal population) had a bearing on the quality of official plans.

**Table 6-2: Sampled Municipalities (n=63)**

<b>Municipality</b>	<b>Plan Adoption</b>	<b>2011 Population</b>	<b>2031 Population</b>
Barrie (City) <sup>a</sup>	2014	135,711	210,000
Brant County <sup>a</sup>	2012	35,638	47,000
Brantford (City) <sup>a</sup>	2016	93,650	126,000
Dufferin County <sup>b</sup>	2014	56,881	80,000
Durham Region <sup>b</sup>	2015	608,124	960,000
Ajax (City) <sup>c</sup>	2016	109,600	137,670
Brock (Township) <sup>c</sup>	2014	11,341	14,015
Clarington (Municipality) <sup>c</sup>	2014	84,548	140,340
Oshawa (City) <sup>c</sup>	2016	149,607	197,000
Pickering (City) <sup>c</sup>	2010	88,721	225,670
Scugog (Township) <sup>c</sup>	2014	21,569	25,390
Uxbridge (Township) <sup>c</sup>	2014	20,623	26,965
Whitby (Town) <sup>c</sup>	2010	122,022	192,860
Guelph (City) <sup>a</sup>	2014	121,688	175,000
Haldimand County <sup>a</sup>	2009	44,876	56,000
Halton Region <sup>b</sup>	2015	501,669	780,000
Burlington (City) <sup>c</sup>	2015	175,779	193,000
Halton Hills (Town) <sup>c</sup>	2008	59,008	94,000
Milton (Town) <sup>c</sup>	2008	84,362	238,000
Oakville (Town) <sup>c</sup>	2015	182,520	255,000
Hamilton (City) <sup>a</sup>	2012	519,949	660,000
Kawartha Lakes (City) <sup>a</sup>	2012	73,214	100,000
Niagara Region <sup>b</sup>	2015	431,346	511,000
Fort Erie (Town) <sup>c</sup>	2011	29,960	38,877
Grimsby (Town) <sup>c</sup>	2012	25,325	30,582
Lincoln (Town) <sup>c</sup>	2010	22,487	28,583
Niagara Falls (City) <sup>c</sup>	2015	82,997	100,341
Niagara-on-the-Lake (Town) <sup>c</sup>	2013	15,400	20,688
Pelham (Town) <sup>c</sup>	2014	16,598	23,387
Port Colborne (City) <sup>c</sup>	2014	18,424	20,888
St. Catharines (City) <sup>c</sup>	2016	131,400	137,919
Thorold (City) <sup>c</sup>	2016	17,931	24,086
Wainfleet (Township) <sup>c</sup>	2014	6,356	8,195
Welland (City) <sup>c</sup>	2016	50,631	61,464
West Lincoln (Township) <sup>c</sup>	2014	13,837	16,990
Northumberland County <sup>b</sup>	2015	82,126	96,000

<b>Municipality</b>	<b>Plan Adoption</b>	<b>2011 Population</b>	<b>2031 Population</b>
Orillia (City) <sup>a</sup>	2013	30,586	41,000
Peel Region <sup>b</sup>	2014	1,296,814	1,640,000
Brampton (City) <sup>c</sup>	2015	523,911	727,000
Caledon (Town) <sup>c</sup>	2015	59,460	108,000
Mississauga (City) <sup>c</sup>	2016	713,443	805,000
Peterborough County <sup>b</sup>	2016	134,933	61,000
Peterborough (City) <sup>a</sup>	2015	78,698	88,000
Simcoe County <sup>b</sup>	2016	446,063	667,000
Toronto (City) <sup>a</sup>	2015	2,615,060	3,080,000
Waterloo Region <sup>b</sup>	2015	507,096	729,000
Cambridge (City) <sup>c</sup>	2014	126,748	176,000
Kitchener (City) <sup>c</sup>	2014	219,153	319,500
North Dumfries (Township) <sup>c</sup>	2008	9,334	16,000
Waterloo (City) <sup>c</sup>	2014	98,780	140,000
Wellesley (Township) <sup>c</sup>	2015	10,713	12,500
Wilmot (Township) <sup>c</sup>	2006	19,223	28,500
Woolwich (Township) <sup>c</sup>	2012	23,145	36,500
Wellington County <sup>b</sup>	2016	208,360	122,000
York Region <sup>b</sup>	2016	1,032,524	1,500,000
Aurora (Town) <sup>c</sup>	2010	53,203	70,200
East Gwillimbury (Town) <sup>c</sup>	2014	22,473	86,500
Georgina (Town) <sup>c</sup>	2010	43,517	70,300
Markham (City) <sup>c</sup>	2014	301,709	421,600
Newmarket (Town) <sup>c</sup>	2014	79,978	97,100
Richmond Hill (Town) <sup>c</sup>	2016	185,541	242,200
Vaughan (City) <sup>c</sup>	2015	288,301	416,600
Whitchurch-Stouffville (Town) <sup>c</sup>	2011	37,628	60,600
Mean	2014	212,894	282,778
Max	2016	2,615,060	3,080,000
Min	2006	6,356	8,195
Standard Deviation	2.42	394,483	490,197
<sup>a</sup> Single-tier Municipalities <sup>b</sup> Upper-tier Municipalities <sup>c</sup> Lower-tier Municipalities			

### *Data Collection and Coding*

Official plans were content-analyzed to assess the extent to which the plan quality principles were included or excluded. The content analysis process was replicated from previous studies (e.g., Baker et al., 2012; Brody, 2003a & 2003b; Horney et al., 2016; Horney et al., 2012; Norton, 2008; Saunders et al., 2015) because, as Stevens (2013) argued, this helps to facilitate cross-study comparisons and contribute to greater consensus on the plan quality principles. In order to conduct the content analysis, a plan quality evaluation protocol and accompanying coding scheme were created.

The plan quality evaluation protocol was built on, and extended, Berke et al.'s (2006b) evaluation protocol (Appendix to Chapter 3 of their book) and Stevens' (2013) protocol used to evaluate community official plans (Appendix A of his article). These protocols were consulted as they both focus their discussion on plans that guide general land use planning rather than having a specific emphasis, such as focusing on climate change (e.g., Baynham & Stevens, 2014; Berke et al., 2015), hazard mitigation (e.g., Horney et al., 2016; Stevens & Shoubridge, 2016), sustainability (e.g., Manta Conroy & Jun, 2016; Manta Conroy & Berke, 2004), emergency management (e.g., Saunders et al., 2015), transportation (e.g., pedestrian plans (e.g., Aytur et al., 2011; Jones et al., 2010)) or staff reports (e.g., Johnson & Lyles, 2016). In order to ensure that my evaluation protocol took into consideration the Ontario-GGH planning framework, I modified the goals, policies, and legislative requirement protocols to reflect the policy direction from the PPS (2005 and 2014) and Growth Plan (2006). Table 6-3 identifies the total number of indicators used to operationalize each plan quality principle. In keeping with past studies, the plan quality principles were equally weighted. This technique ensured that value judgments were

not used to assign weights to each principle (Lyles & Stevens 2014). Refer to Appendix B for the plan evaluation protocol.

**Table 6-3: Plan Quality Variables**

<b>Variable Name</b>	<b>Number of Indicators</b>
Fact Base	19
Goals	13
Policies	13
Implementation	5
Monitoring and Evaluation	5
Inter-organizational Coordination	2
Public Participation	4
Organization and Presentation	6
Legislative Requirements	3
<b>Total</b>	<b>70</b>

An evaluation protocol was applied using a coding procedure similar to past studies. Specifically, I utilized both a binary (i.e., “0” and “1”) and three-level ordinal scale (“0”, “1” and “2”) to analyze official plans. For the binary scale, “0” denoted that the plan quality principle was not included, while “1” denoted that the principle was present in the plan. For the ordinal scale, “0” denoted that the plan quality principle was not identified, “1” denoted that the principle was identified but vague, and “2” denoted a clear and detailed principle. The binary scale was applied to the goals, policies, and legislative requirement principles, as I was only interested in assessing whether plans included the general policy areas identified in the PPS (2005 and 2014) and the intensification and density targets and population and employment projections identified in the Growth Plan (2006). The ordinal scale was applied to the fact base, implementation, monitoring and evaluation, inter-organizational coordination, and plan organization and presentation principles.

### *Analytical Techniques*

In keeping with previous plan quality evaluation studies, the scoring protocol for each principle was standardized using three steps (Berke & Godschalk, 2009; Horney et al., 2016). First, the scores of the indicators were summed within each of the principles. Second, the summed scores were then divided by the total possible score for each principle. Finally, this score was multiplied by 10, placing each score on an index scale of 0-10. For the plan quality analysis, the mean (average), standard deviation, and maximum and minimum scores were highlighted. The standard deviation is a measure of how far each observation is, on average, from the mean (Remler & Van Ryzin, 2011). It is important to note that I did not combine individual plan categories to identify an overall plan quality score, because a plan with a higher overall score might not be better than a plan with a lower overall score (Stevens 2013). For example, a plan might have detailed goals and policies but poor implementation and monitoring and evaluation provisions, or vice versa. As Stevens (2013) argued, the differences in these plans will have different implications for influencing growth and development.

To explore the extent to which plan quality varied with local planning context, correlational analysis was computed on two variables – year of official plan adoption and municipal population. Researchers have generally found that municipalities with larger populations tend to have higher quality plans (Bunnell & Jepson, 2011; Stevens, 2013; Tang & Brody, 2009). Others have also noted that newer plans are generally of a higher quality than older plans (Stevens, 2013; Tang et al., 2009; Tang & Brody, 2009).

### *Research Limitation*

The main limitation to this research is the absence of intercoder reliability, which helps to increase the reliability of content analysis (Krippendorff, 2013; Stevens et al., 2014). Stevens et al. (2014) argued that replicable content analysis is best achieved by employing two or more researchers to independently code and evaluate plans. The greater the frequency at which two more coders agree on the scores for a given item, the greater the chances that the results will be reliable (Stevens et al., 2014). That is, researchers working at different points in time and under different circumstances should get the same results when applying the same technique (Krippendorff, 2013).

An approach to improving the reliability for single-coded studies is to provide detailed direction regarding the evaluation protocol and coding scheme (Neuendorf, 2002; Krippendorff, 2013). In this regard, I have included a comprehensive discussion of my method so that other researchers can understand and apply my evaluation protocol and coding scheme. More importantly, this research conformed to the content analysis methodology employed in past plan quality evaluation studies as a means of increasing reliability and replicability. For example, the 0-10 coding scheme allows for further meta-analyses with other plan quality studies.

## **Plan Quality Evaluation Results and Discussion**

### *Goals and Policies were the Strongest Plan Quality Principles*

Table 6-4 provides an overview of the plan quality scores for all jurisdictions (n=63). Across all jurisdictions – single-, upper-, and lower-tiers – there was a strong presence of goals and policies in official plans. This finding can be attributed to the Ontario planning framework. The mean score for plan goals was 8.29 (standard deviation=1.83) while the mean score of plan

policies was 9.73 (standard deviation=0.52). A high standard deviation suggested that there was greater variation across all jurisdictions regarding the inclusion of plan goals, while a low standard deviation (closer to 0) indicated that almost all municipalities tended to include policies in their official plan. The emphasis on official plan policies over goals is because policies are the principles that need to be followed in order to actually guide decision-making.

**Table 6-4: Plan Quality Scores for All Jurisdictions (n=63)**

Plan Quality Variables	Mean	Standard Deviation	Minimum	Maximum
Fact Base	3.92	0.90	2.37	7.63
Goals	8.29	1.83	0.00	10.00
Policies	9.73	0.52	7.69	10.00
Implementation	6.06	1.31	3.00	10.00
Monitoring and Evaluation	3.95	1.56	1.00	7.00
Inter-organizational Coordination	6.11	1.95	5.00	10.00
Public Participation	2.34	2.37	0.00	10.00
Organization and Presentation	7.37	1.25	5.00	10.00
Legislative Requirements	7.94	3.81	0.00	10.00

The strong presence of goals and policies is, in many ways, expected as the Ontario planning framework dictates the inclusion of these components. Under the Planning Act, all official plans must include goals and policies to manage and direct physical change and the effects on the social, economic, and natural environment of a municipality (Ontario Planning Act, 2016). This is one of few explicit directions regarding the contents of an official plan. Failing this requirement makes it challenging, if not possible, to gain provincial approval for an official plan.

Further, all municipalities must adhere to the PPS (2005 and 2014), which sets the foundation for official plan goals and policies. The PPS (2005 and 2014) highlights the core

policy areas that must be discussed in an official plan, including land use, employment, housing, and natural heritage; official plans are the most important vehicle for implementing these policies (MMAH, 2015). Similar to the Planning Act, failing to adhere to the PPS (2005 and 2014) can result in an official plan being unable to obtain provincial approval. The explicit direction provided by the province makes it less challenging for municipalities to identify relevant goals and develop clear policies regarding their jurisdiction.

*Fact Base, Monitoring and Evaluation, and Public Participation were the Weakest Plan Quality Principles*

Across all jurisdictions, fact base, monitoring and evaluation, and public participation were among the weakest plan quality principles. The fact base had a mean score of 3.92, monitoring and evaluation had a score of 3.95, and public participation had the lowest score of 2.34. The standard deviation for the fact base was 0.90, while monitoring and evaluation and public participation had a standard deviation of 1.56 and 2.37, respectively. A relatively lower standard deviation for fact base suggested that the majority of plans did not provide a clear and detailed description of the empirical foundation used to develop official plans. A larger standard deviation, particularly in regards to public participation, implied that there was greater variation across all official plans.

The fact base provides a foundation for selecting and prioritizing goals and policies for a plan. A limited fact base can result in misinformed plan goals and policies (Horney et al., 2016; Stevens, 2013). Almost all municipalities included a statement of the current and future population and economy in their plan. This is almost expected as the Growth Plan (2006) identifies the projected population and employment for single- and upper-tier municipalities. In

the case of lower-tier municipalities, the upper tier provides the allocation of future population and employment. However, beyond a statement of population, municipalities did not provide a clear discussion of where the future population should be directed. Further, almost no municipalities included a discussion of the population composition, such as age and gender distribution, either current or in the future. This brings into question whether municipalities are appropriately planning for the needs of its inhabitants.

Municipalities did not include a discussion into the existing and future need for infrastructure, particularly with respect to water and wastewater and future community facilities (e.g., community centres). Regarding the existing and future road infrastructure, almost all municipalities included a map which outlined existing and proposed roadways, but no accompanying discussion into the rationale for proposed roadways. It is important to note that this finding does not imply that a municipality did not conduct an empirical assessment before developing their plan, as my analysis did not extend beyond official plans. However, the absence of this information in official plans makes it challenging to be certain that a comprehensive empirical analysis was actually completed before the selection of plan goals and policies.

Monitoring and evaluation was another weak plan quality principle in many official plans. This included having a monitoring and evaluation section within official plans, a description of the various departments and organizations responsible for conducting monitoring and evaluation, timelines for updating the official plan, indicators for measuring plan performance, and having quantifiable goal and policies. Municipalities were strongest in following the direction prescribed by provincial legislations. For example, almost all municipalities had a monitoring and evaluation section which identified the timelines for official plan updates. This was not surprising given that the Planning Act dictates that municipal official

plans must be updated every five years. Further, municipalities generally had quantifiable goals and policies, however, these were often related to the intensification and density targets identified by the Growth Plan (2006).

Furthermore, many municipalities did not identify the process for monitoring plan progress, including identifying departments responsible for monitoring, and the inclusion of indicators. Very few municipalities had a list of indicators needed to measure the progress of plan implementation and plan outcomes. Those municipalities with a list of indicators were far and few. For example, the Regional Municipality of Halton identified a number of indicators (and reports) to be used as part of the monitoring and evaluation process, including intensification, housing, aggregate resources, and sustainability. In the Regional Municipality of Peel, which has the most comprehensive plan monitoring and evaluation strategy, introduced a Regional Official Plan Performance Measurement Program (ROPPMP) to identify trends and issues in the community, analyze the effectiveness of official plan policies, and make subsequent adjustments to the plan as required. The Peel official plan included 21 indicator categories for measuring plan progress. It is important to note that since this research did not focus on whether municipalities carried out their monitoring and evaluation function, it is difficult to make a determination into the extent to which municipalities are monitoring the progress of their plans.

In many regards, the absence of clear monitoring and evaluation provisions is not surprising, given the lack of direction from the provincial level of government. For example, the PPS (2005 and 2014) provides very little direction on monitoring and evaluation, particularly from an indicator development perspective. The implementation section of the PPS (2005 and 2014) states that, “municipalities are encouraged to establish indicators to monitor the implementation of the policies in their official plan” (p. 25 in 2005 version and p. 35 in 2014

version), but provides no further direction to municipalities. It was not until 2014 that the provincial government released indicators for the PPS (2005). Similarly, the Growth Plan (2006) provides very little direction to municipalities regarding monitoring and evaluation. Specifically, the plan states that the province will develop a set of indicators to measure the implementation of the policies in the plan, and that municipalities will monitor and report on the implementation of these policies within their municipality (MMAH, 2013). It was only until 2015, some eight years after the introduction of the Growth Plan, that a set of preliminary indicators was released.

Public participation is perhaps the weakest plan quality principle across all municipalities in the GGH region. This principle recognizes the formal and informal actors involved in the plan making and plan implementation processes. Evaluating this principle involved identifying the stakeholders – staff from different agencies and departments, citizen groups, businesses, and politicians – involved in the plan making process, discussing the purpose, and techniques, of public participation, and the effects of the official plan on citizens. Almost all municipalities failed to address these sub-categories. Notable municipalities that included a public participation component were the Regional Municipality of Niagara and the City of Brantford. Both of these municipalities provided a discussion into the importance of public participation and the role of various stakeholders in developing their respective official plans.

This finding does not imply that municipalities have not engaged stakeholders during the plan making process, but rather indicates that municipalities have chosen not to describe the public participation process in their plans. There are many reasons for this, such as discussing public participation in background documents. In fact, many municipalities included a discussion of public participation in the background reports to their Council during the plan making process.

*Implementation and Inter-Organizational Coordination were Somewhat Weak Plan Quality Principles*

Across all jurisdictions, the implementation and inter-organizational coordination principles were found to be somewhat weak. Implementation had a mean score of 6.06 and standard deviation of 1.31, while inter-organizational coordination had a score of 6.11 and standard deviation of 1.95. The standard deviation value for both principles suggested that implementation and inter-organizational coordination varied considerably among official plans.

Implementation represents a commitment to translate the policies of a plan into actions. This included having an implementation section in the official plan that describes the departments and organizations responsible for implementation, the priorities of the plan, timelines for implementation, and sources of funding. Almost all official plans had an implementation section and some priority for implementation. However, the timelines and sources of funding were poorly described. Many municipalities tended to reference their capital works program as the primary decision tool for determining how policies, particularly in relation to infrastructure, were going to be implemented and their sources of funding. Responsibility for implementation varied depending on the level of local government. Upper-tier official plans tended to identify the lower-tier municipalities as the primary implementers of their policies. Single- and lower-tier municipalities tended to focus on the use of zoning by-laws as the primary means of plan implementation. However, much of the discussion was generalized and involved describing a number of zoning by-laws, such as temporary use, property standards, development charges, holding provisions, and site plan control.

Inter-organizational coordination was another relatively weak plan quality principle. This principle acknowledges the multiple actors involved in the plan creation and implementation

processes. Two variables were assessed as part of inter-organizational coordination – horizontal coordination and vertical coordination. Horizontal coordination focused on the connections with other local plans and programs, including other local governments and public and private bodies (e.g., conservation authorities). Vertical coordination included connections to provincial plans and regional plans, where applicable. Almost all municipalities had some general statement regarding the importance of horizontal and vertical coordination, but failed to provide specific details regarding how coordination would occur. Much of the discussion was generic and focused on explaining how official plans conformed to a variety of provincial policies and programs.

*Plan Organization and Presentation and Legislative Requirements were Reasonably Strong Plan Quality Principles*

Plan organization and presentation and legislative requirements were reasonably strong across all jurisdictions. Plan organization and presentation had a mean score of 7.37 and a standard deviation of 1.25, while legislative requirements had a score of 7.94 and a standard deviation of 3.81. The legislative requirement principle seemed to vary substantially across official plans, partly because of dated official plans at the lower-tier level.

The organization and presentation principle centres on creating a usable and attractive plan that encourages its use. A clearly organized and presented official plan is one which includes an overview of the plan (e.g., executive summary), cross-referencing (i.e., alerting readers to other sections of the plan that are relevant to the section being read), a table of contents, a glossary of terms, illustrations (e.g., diagrams and graphs), and maps (i.e., communicating spatial information) (Berke et al., 2006b). Almost all official plans contained

these components. Official plans were particularly strong in terms of mapping key information, such as land uses, the natural environment, and roadways. However, official plans rarely included an accompanying discussion regarding their mapping. As such, the onus was on the reader to interpret mapping provided in plans. The weakest component was illustrations, such as images, charts and other graphics to help engage readers. Municipalities rarely included illustrations to help convey, at least conceptually, how the policies in their official plan translated on the ground, such as density and massing.

Interestingly, not all official plans met legislative requirements, including the Growth Plan (2006) density and intensification targets and the population and employment projections. This was an interesting finding considering that municipalities are required to include these targets in their official plan. One reason for this is the currency of official plans. Although the mean official plan adoption year was 2014, there were several municipalities that had not yet confirmed to the Growth Plan (2006) or received provincial approval. Some official plans were also awaiting approval at the provincial level at the time of this research.

#### *Plan Quality Analysis – Cross-Jurisdictional Comparisons*

Table 6-5 provides a cross-jurisdictional comparison of the plan quality analysis for single- (n=10), upper- (n=11), and lower-tier (n=42) municipalities. The mean for each plan quality principle is highlighted. Generally speaking, plan quality for the various levels of local government was comparable. However, the upper tier municipalities performed better in a number of areas, including fact base, monitoring and evaluation, public participation, plan organization and presentation, and legislative requirements. Refer to Appendix C for detailed tables regarding the plan quality analysis for each level of local government.

**Table 6-5: Plan Quality Scores - Jurisdictional Comparison**

Plan Quality Variables	Single Tier Jurisdictions (Mean)	Upper Tier Jurisdictions (Mean)	Lower Tier Jurisdictions (Mean)
Fact Base	4.08	4.11	3.83
Goals	8.00	10.00	7.91
Policies	9.69	10.00	9.67
Implementation	6.90	5.09	6.12
Monitoring and Evaluation	4.40	4.45	3.71
Inter-organizational Coordination	6.00	7.73	5.71
Public Participation	3.25	3.75	1.76
Organization and Presentation	7.58	7.80	7.20
Legislative Requirements	9.33	10.00	7.06
2011 Population	374,907	482,358	103,745
Plan Adoption	2013	2015	2013

Regarding the fact base, upper-tier municipalities had a mean score of 4.11 and a standard deviation of 0.77. Single-tier municipalities had a score of 4.08 and a standard deviation of 0.79, while lower-tier municipalities had a score of 3.83 and a standard deviation of 0.96. These findings suggested that there was greater variation regarding the fact base for lower-tier municipalities when compared to single- and upper-tier municipalities.

Upper-tier municipalities had a mean score of 10.00 for goals (standard deviation=0.00), while single- and lower-tier municipalities had a score of 8.00 (standard deviation=1.96) and 7.91 (standard deviation=1.81), respectively. Regarding policies, upper-tier municipalities had a mean score of 10.00 (standard deviation=0.00), while single- and lower-tier municipalities had a score of 9.69 (standard deviation=0.40) and 9.67 (standard deviation=0.59), respectively. These findings suggested that almost all upper-tier municipalities included goals and policies, while there was greater variation for single- and lower-tier municipalities.

Single-tier municipalities performed slightly better when it came to implementation with a mean score of 6.90 (standard deviation=0.99). Lower-tier municipalities had a score of 6.12 (standard deviation=0.97), while upper-tier municipalities had a score of 5.09 (standard deviation=2.02). This finding suggested that the variation in implementation for upper-tier municipalities was almost double that of single- and lower-tier municipalities. This variation is due to some upper-tier municipalities emphasizing the role of the lower-tier municipalities as implementers of their official plan policies.

Both single- and upper-tier municipalities performed equally in terms of monitoring and evaluation. Single-tier municipalities had a mean score of 4.40 (standard deviation=2.07), while upper-tier municipalities had a score of 4.45 (standard deviation=2.02). Lower-tier municipalities had a score of 3.71 and a standard deviation of 1.25. This indicated that there was greater variation in monitoring and evaluation provisions at the single- and upper-tier municipal level of government. One explanation for the low score at the lower-tier level is because of a reliance on the upper-tier municipalities in terms of setting up the monitoring and evaluation framework. For example, the Regional Municipality of Peel developed and implemented an official plan monitoring program that also supports planning at the lower-tier level.

Upper-tier municipalities were strongest when it came to inter-organizational coordination with a mean score of 7.73 (standard deviation=2.08). Single- and lower-tier municipalities had a score of 6.00 (standard deviation=2.11) and 5.71 (standard deviation=1.68), respectively. This result was somewhat expected as upper-tier municipalities are required to engage in greater coordination in planning (e.g., working with the lower-tier municipalities) when compared to single- and lower-tier municipalities.

Lower-tier municipalities performed very poorly in terms of public participation with a mean score of 1.76 and standard deviation 1.73. Single- and upper-tier municipalities were reasonably equal with a score of 3.25 (standard deviation=2.96) and 3.75 (standard deviation=3.21), respectively. However, there seems to be greater variation in public participation among single- and upper-tier municipalities.

Plans across the various levels of local government performed equally when it came to plan organization and presentation. Single-tier municipalities had a mean score of 7.58 (standard deviation=1.27), while upper- and lower-tier municipalities had a score of 7.80 (standard deviation=1.07) and 7.20 (standard deviation=1.29), respectively. Regarding legislative requirements, both single- and upper-tier municipalities were relatively equal with a mean score of 9.33 (standard deviation=2.11) and 10.00 (standard deviation=0.00), respectively. However, almost all upper-tier official plans met legislative requirements, while there was some variation across single-tier municipalities. In comparison, lower-tier municipalities performed poorly with a score of 7.06 (standard deviation=4.31). The variation in legislative requirement was greater for lower-tier municipalities, partly owing to the age of their official plans. The lower tier municipalities had dated official plans when compared to upper- and single-tier municipalities.

### *Plan Quality and the Local Planning Context*

Table 6-6 highlights the results of the correlational analysis between the plan quality principles and two variables representing the local planning context: the year of official plan adoption and municipal population. Similar to Stevens (2013), I focused on correlations that are at least moderately strong at value of 0.30 or greater.

**Table 6-6: Plan Quality and Local Planning Context (n=63)**

Plan Quality Variable	2011 Population	Plan Adoption
Fact Base	0.44 <sup>c</sup>	0.22 <sup>a</sup>
Goals	0.04	0.01
Policies	0.03	0.14
Implementation	0.29 <sup>b</sup>	0.02
Monitoring and Evaluation	0.32 <sup>c</sup>	0.13
Inter-organizational Coordination	0.47 <sup>c</sup>	0.2 <sup>a</sup>
Public Participation	0.24 <sup>b</sup>	0.14
Organization and Presentation	0.52 <sup>c</sup>	0.29 <sup>b</sup>
Legislative Requirements	0.21 <sup>a</sup>	0.7 <sup>c</sup>
<sup>a</sup> $p < 0.1$ , <sup>b</sup> $p < 0.05$ , <sup>c</sup> $p < 0.01$		

My findings seemed to generally support Stevens (2013) claim that the local planning context does not appear to have a strong influence on plan quality, at least when it comes to plan adoption. The scores are quite small and not statistically significant. However, it does appear that the organization and presentation of plans improve with the year of plan adoption (correlation=0.29). This finding suggested that the overall presentation of plans improve as plans are updated.

Regarding municipal population, the findings seemed to suggest that more populated municipalities have better quality plans. The strongest relationship was organization and presentation with a correlational score of 0.52. This was followed by inter-organizational coordination with a score of 0.47. This was an interesting finding as it suggested that highly populated municipalities engage in greater horizontal and vertical coordination when it comes to the development of official plans.

Further, highly populated areas seemed to be correlated with a stronger fact base (correlational score=0.44). This is somewhat expected, and hoped for, as heavily populated

municipalities need to ensure that the empirical foundation for their official plan takes into consideration of the impacts and needs of the municipal population. Monitoring and evaluation and implementation also seemed to be correlated with municipal population, with a correlational score of 0.32 and 0.29, respectively. That is, highly populated areas are more likely to consider monitoring and evaluation. One reason for this is that highly populated municipalities are more inclined to assess the impacts of their official plans as the plan plays a much greater role in terms of managing growth and development.

### **The Provincial Government has a Strong Influence on the Quality of Official Plans**

The goal of this research was to evaluate the quality of official plans in the GGH region, one of the fastest growing areas in Ontario and Canada. This research contributes to the limited Canadian-based research on plan quality and more importantly builds on, and extends, the current literature on plan quality evaluations. I utilized the methodology commonly cited in the literature and relied upon established plan quality principles to assess 63 official plans. The findings from this research are important because it suggested that many official plans were not of a high quality and the provincial government has a strong influence on the quality of official plans.

Researchers have argued that evaluating plan quality is an important form of evaluation, because it can help identify the strengths of a plan and the specific weaknesses that could undermine the achievement of plan goals (Berke et al., 2012; Berke & Godschalk, 2009). In this research, it was noted that official plans across the GGH region were generally organized and presented in a user-friendly manner, contained goals and policies which focused on a number of issues, and met legislative requirements for plan content. The findings also revealed

that many official plans did not discuss the empirical foundation used to inform plans, lacked adequate monitoring and evaluation provisions (e.g., identifying who would be responsible for monitoring and evaluation and in developing indicators for monitoring plan progress), and were silent on how the public participation process helped to inform plans. It was further noted that official plans were somewhat weak in terms of outlining the process of plan implementation and inter-organizational coordination. Rather, many official plans tended to discuss, at a high level, the role of zoning as the primary mechanism for plan implementation. In the case of inter-organizational coordination, many official plans simply stated that they conformed to a number of policies and programs both horizontally (e.g., provincial policies) and vertically (e.g., conservation authority policies). These deficiencies in plan quality are very serious as the GGH region will continue to grow and develop at a rapid pace. Failing to develop high quality official plans will make it challenging to adequately plan for this region. As Stevens (2013) argued, poor implementation and monitoring and evaluation provisions will make it difficult, if not impossible, for municipalities to discern whether their plans are having a desirable impact on development and the well-being of its inhabitants.

Perhaps the most important takeaway from this research is the importance of the provincial government in helping the local levels of government to develop high quality plans. This research revealed that almost all official plans were strong in areas that had clear direction from the provincial level. In the case of goals and policies, municipalities obtained direction from the PPS (2005 and 2014) and Growth Plan (2006), both of which clearly indicated that municipalities must conform to these policies to the extent that they remain applicable to the local context. However, beyond this, municipalities were deficient in many areas where provincial guidance was silent. For example, the lack of provincial direction regarding

monitoring and evaluation manifested itself into poor provisions across official plans. In fact, very few municipalities developed indicators to assess plan progress and did not identify targets beyond those prescribed by the Growth Plan (i.e., intensification and density targets). On the other hand, municipalities were strongest in terms of identifying the timeline for plan updates, that is every five years, mainly because of a provincial requirement under the Planning Act.

In order for municipalities within Ontario and GGH region to have high quality plans, there needs to be greater guidance from the provincial level, particularly when it comes to setting up a framework for evaluating the outcomes of official plans. However, this is premised on the provincial government having the capacity to actually guide the development of official plans, and, more importantly, avoiding the inclination to develop unimaginative plans due to greater provincial involvement. The province should extend its focus to providing guidance on implementation and monitoring and evaluation. However, this might be challenging because the province has been slow to provide direction on how they intend to assess the outcomes of their plans, let alone municipal official plans. For both the PPS (2005 and 2014) and the Growth Plan (2006), the province was slow to develop appropriate monitoring and evaluation provisions. In fact, strategies for evaluating these plans were not introduced until many years after implementation. This suggested that monitoring and evaluation might be after thoughts in the plan making process. One reason for this relates to the lack of generally accepted plan outcome evaluation methodologies, which has resulted in limited guidance about how to gauge the success of plans, both from an implementation and outcomes perspective (Brody et al., 2006; Guyadeen & Seasons, 2016; Laurian et al., 2010; Oliveira & Pinho, 2011 & 2010a).

Further, greater provincial involvement can lead to an inclination to develop unimaginative and poorly developed plans. The research on the influence of mandated planning

on plan quality has found that mandated planning tends to result in unimaginative and weak plans (Bunnell & Jepson, 2011; Norton, 2005). Bunnell and Jepson (2011) designed a protocol to measure the communicative and persuasive qualities of 20 comprehensive plans. Among their findings, the authors argued that state-mandated requirements contributed to the production of unimaginative plans that were less creative and engaging than those prepared by municipalities where planning is not mandated (Bunnell & Jepson, 2011). Norton's (2005) evaluation of 20 county and 72 municipal comprehensive plans found that state-mandated planning led to procedurally strong but analytically weak plans. Findings from this research seem to support these researchers' claim in that GGH municipalities were very good in terms of following direction from the province (i.e., procedurally) but were unable to demonstrate, through a fact base, why certain goals and policies were included in their plans. It would seem that many municipalities included policies and targets from the PPS (2005 and 2015) and Growth Plan (2006) as a rite of passage to obtaining provincial approval. In this regard, the provincial government would need to ensure sufficient direction regarding how municipalities can improve the quality of their plans while giving them sufficient flexibility to ensure that their plans are analytically strong and imaginative.

Several areas for further research are identified as a result of this research. First, this research focused only on official plans. I did not assess the background studies that might have informed official plans or other municipal plans, such as secondary plans and zoning by-laws. The omission of background studies makes it difficult to make a determination as to whether certain principles were actually followed. For example, there might be studies that focus on the fact base and public participation. In the case of other municipal plans, their omission in my analysis makes it challenging to assess the extent to which official plans are being properly

implemented. Future studies should extend their analysis to include these documents (i.e., background reports and other plans) as a means of extending the scope of plan quality evaluations.

Second, this research did not examine whether high quality plans lead to better outcomes. This is an area of research that is lacking in the plan quality literature (Lyles & Stevens, 2014). The majority of studies focus on examining the quality of plans as opposed to the relationship between high quality plans, their implementation, and outcomes. The lack of research presents a major gap in our knowledge regarding the value of plans (Lyles & Stevens, 2014). We need to further bridge this gap by assessing whether high quality plans lead to better outcomes. This would greatly increase the credibility of plan quality evaluations.

## **CHAPTER SEVEN: CONCLUSIONS AND SYNTHESIS**

This chapter synthesizes the findings from the four manuscripts. The chapter also offers strategies to enhance the quality of plans and discusses the implications of this research in terms of its contribution to planning theory, education and practice. Areas requiring further research are also identified.

### **Research Questions Revisited**

The aim of this dissertation was to contribute to the literature on evaluation in planning, particularly in relation to plan quality. This research resulted in four manuscripts which informed the research questions identified in Chapter 1. The literature review manuscripts (Manuscripts 1 and 2) situated the concept of plan evaluation within the larger program evaluation literature. These manuscripts also discussed the challenges to conducting evaluation in planning. The survey research manuscript (Manuscript 3) explored practicing planners opinions on plan quality principles discussed in the literature. The plan content analysis manuscript (Manuscript 4) evaluated the quality of official plans in the Greater Golden Horseshoe (GGH) region. Table 7-1 revisits the research questions guiding this dissertation and provides an overview of the findings. Each question is discussed comprehensively in the proceeding sections. Specifically, the first and second research questions are discussed in the section titled “Research Synthesis: Evaluation and Plan Quality are Important in Planning”, while the third question is discussed in the section titled “Strategies to Enhance the Quality of Official Plans”.

**Table 7-1: Research Questions Revisited**

Research Questions	Research Findings
<p>1. What are the characteristics and attributes of high quality plans?</p>	<p>The characteristics and attributes of high quality plans include:</p> <p><b>Fact Base:</b> Analysis of current and desired future conditions of a community.</p> <p><b>Goals:</b> Broad statements of the desired future conditions that reflect community values.</p> <p><b>Policies:</b> Principles to be followed in order to guide public and private decisions to achieve goals.</p> <p><b>Implementation:</b> Commitments to carry out the plan once adopted.</p> <p><b>Monitoring and Evaluation:</b> Provisions for tracking changes in the community in relation to plan goals.</p> <p><b>Inter-organizational Coordination:</b> Recognition of the interdependent nature of plan making and implementation.</p> <p><b>Public Participation:</b> Recognition of formal and informal actors involved in the plan making process.</p> <p><b>Organization and Presentation:</b> A usable and attractive plan.</p> <p><b>Legislative Requirements:</b> Required elements included in a plan as required by planning legislations.</p> <p>Other important characteristics include:</p> <p><b>Internal Consistency:</b> Plan contents, including goals, policies, implementation, and monitoring and evaluation provisions, should mutually reinforce each other.</p> <p><b>Plan Flexibility - Wording:</b> Having wording that affords implementers some leeway as to how policies are interpreted and enforced.</p> <p><b>Plan Flexibility – Changing Circumstances:</b> Ability to respond to unpredictable changes, for example economic, social or political, that can have a negative impact on a municipality.</p>

Research Questions	Research Findings
<p>2. What is the state of official plans in the Greater Golden Horseshoe (GGH) region of Ontario?</p>	<p>Official plans in the GGH region seemed to lack key plan quality principles. Specifically findings from this research indicated that:</p> <ul style="list-style-type: none"> <li>• Goals and policies were the strongest principles;</li> <li>• Fact base, monitoring and evaluation, and public participation were the weakest principles;</li> <li>• Implementation and inter-organizational coordination were somewhat weak; and</li> <li>• Plan organization and presentation and legislative requirements were reasonably strong.</li> </ul>
<p>3. What strategies do we need to enhance the quality of plans?</p>	<p>Based on the findings from this research, the following are proposed:</p> <ul style="list-style-type: none"> <li>• Strengthen the importance of the provincial government’s role in planning as a means of improving the quality of local official plans.</li> <li>• Enhance the implementation and monitoring and evaluation provisions in planning initiatives.</li> <li>• Describe the empirical foundation and participation process used to inform plan development.</li> <li>• Extend plan quality evaluations to planning practice.</li> </ul>

**Research Synthesis: Evaluation and Plan Quality are Important in Planning**

The findings from the various manuscripts reinforced several strong common themes, including:

1. Evaluation is an important component in planning yet remains underutilized;
2. Planning practitioners value plan quality and generally agree with the plan quality principles identified in the literature (addresses Research Question 1);

3. Official plans in the GGH region seemed to lack key plan quality principles (addresses Research Question 2); and
4. Plan quality evaluation is an emerging field of investigation that can benefit both researchers and practitioners.

*Evaluation is an important component in planning yet remains underutilized*

Evaluation plays an important role in planning. At a macro level, evaluation can help increase the legitimacy of planning and improve decision-making. At a micro level, evaluation can enhance the quality, implementation, and outcomes of plans. Despite the apparent benefits, evaluation is underutilized in planning. There are a number of reasons for this, including a lack of generally accepted outcome evaluation methodologies, difficulties in establishing attribution, and a planning culture that does not place a strong emphasis on evaluation.

Evaluation can help to legitimize the planning profession by informing the public, politicians, and other stakeholders about the effectiveness of planning initiatives. Evaluation promotes greater accountability and transparency on both the process and outcome of planning. It does so by helping planners to demonstrate the outcomes and impacts associated with the many initiatives planners create (Laurian et al., 2004; Stevens, 2013). Evaluation can also be used to foster a more pragmatic, evidence-based approach to decision-making by basing planning initiatives on sound, established reasoning (Krizek et al., 2009). Evaluation can produce information and knowledge by enabling planners to examine prior strategies, obtain a clear sense of how existing or historical initiatives performed, and determine the applicability to their situation (Faludi, 2000; Roberts, 2006).

Another benefit of evaluation is that it can be used to provide an objective and systematic approach to study plans, improve the plan preparation process, and assess whether plans

achieved their stated goals. Evaluations allow planners to empirically document the deficiencies, and strengths in plans and identify specific weaknesses that undermine implementation and plan effectiveness (Berke et al., 2012).

Evaluation also helps to improve the planning process, particularly in regards to public participation. It is widely accepted that meaningful public participation can result in enduring plans and can be one of the strongest contributors to plan quality (Brody, 2003a; Brody et al., 2003). For example, Brody et al.'s (2003) study of stakeholder engagement in Florida and Washington (US) found that when planners involved a broader array of stakeholders, they tended to produce stronger plans and policies that were much more likely to be implemented. Public participation helps promote accountability and transparency during decision-making. This can generate trust, credibility, and commitment to implementing plans. Evaluation helps to improve the public participation process by enabling planners to determine which methods work best, to identify barriers to meaningful participation, and to provide ways to improve the engagement process (Laurian & Shaw, 2008).

Despite the benefits, there are several challenges to the theoretical and methodological development and use of evaluation in planning, including a lack of generally accepted outcome evaluation methodologies, issues of attribution, and institutional hurdles. Many researchers argue that there is limited guidance about how to gauge the success of plans, whether in terms of implementation or outcomes (Berke et al., 2006; Brody et al., 2006). This has largely been a result of disagreements on how to assess the outcomes of plans (Brody & Highfield, 2005; Oliveira & Pinho, 2011).

Laurian et al. (2010) were among the first to develop a comprehensive approach to evaluating plan outcomes, formally known as the Plan-Outcome Evaluation (POE) methodology.

The authors applied their methodology in the New Zealand planning context and found that: the lack of robust monitoring data made it impossible to evaluate the outcomes of policies related to water quality and ecological protection, and planners tended to focus on administrative efficiency (i.e., processing permits) rather than assess the quality of development (Laurian et al., 2010). Oliveira and Pinho (2010b & 2009) developed a Plan-Process-Results (PPR) approach to evaluate the implementation and outcomes of plans by using a checklist procedure. The authors evaluated plans in the cities of Lisbon and Oporto (Portugal) and found that the built environment, specifically road networks, conformed to plan policies. They also noted that both Lisbon and Oporto's plans had strong internal coherence (Oliveira & Pinho, 2009).

Chapin et al. (2008) used a parcel-based geographic information system (PBGIS) methodology to assess conformance between residential development patterns at the parcel level and hurricane zones identified in community comprehensive plans. Their findings indicated that substantial new development occurred in areas deemed hazard zones by comprehensive plans (Chapin et al., 2008). Loh (2011) presented a conformance-based framework for evaluating plan implementation premised on a GIS-based comparison of planned versus actual land use to assess the issue of nonconformity between plan goals and outcomes. Loh's (2011) findings indicated that there was widespread nonconformance between future land-use and existing land-use maps depending on the location being analyzed, such as areas with encroaching residential development.

Another challenge to evaluation involves establishing causal links between plan goals and plan outcomes. Causal linkages allow planners and other stakeholders to identify the specific role played by plans in relation to the range of other intervening factors that might have a bearing on observed outcomes. This is also referred to as an issue of multi-causality wherein planners

attempt to determine the degree of impact of plans while taking into consideration all other aspects such as engineering and legal constraints (Talen, 1996b). For example, Wong et al. (2006) argued that although plans provide a framework to achieve the objectives of sustainability, plan delivery is heavily reliant upon the actions of different actors, agencies, and other plans from across different sectors. As a result, the cause-effect relationship between plans and materialized outcomes can be difficult to identify and assess (Carmona & Sieh, 2008; Mascarenhas et al., 2015).

Indicators and effective monitoring strategies can help establish causal linkages. In order for an evaluation to be successful and effective, extensive empirical evidence is required; this includes the selection of indicators of success that link plan goals to outcomes (Laurian et al., 2010). However, there are several challenges to identifying indicators, including ambiguous rationale for selecting indicators, difficulties in measuring planning goals, and access to appropriate data.

In order for monitoring to be successful, planners must have a clear understanding of the relationship between the choice of indicators and their ultimate purpose. If the function of indicators is to measure procedural or administrative efficiencies (e.g., speed of processing planning applications), then its theoretical framework (i.e., the purpose of the indicators) matters less (Carmona & Sieh, 2005 & 2008). However, if the intent of indicators is to measure the effectiveness of plans to improve future plans and guide decision-making, then the conceptual development and interpretation of indicators matters a great deal (Baker & Wong, 2006; Wong et al., 2006). Planners who do not understand the intent of monitoring will haphazardly collect data that fails to assess the outcomes of plans (Laurian et al., 2010). For example, Baker and Wong's (2006) analysis of the development of regional monitoring systems in England (UK) found that

planning agencies did not fully grasp the purpose of indicators, as they tended to consider this exercise as “bean counting.” However, once a clear intent was established, planning agencies began to develop better-focused indicator frameworks which supported meaningful analysis of planning activities.

Another challenge concerns the complexity of measuring plan goals. Morrison and Pearce (2000) argued that plan goals and policies are difficult to describe in measurable terms. They are often vaguely written with no mention of either the degree of change sought by goals and policies or the timing for achieving targets (Carmona & Sieh, 2008; Gennaio et al., 2009; Morrison & Pearce, 2000). This makes it challenging to isolate the information needed to develop indicators. For example, Agol et al. (2014) argued that it is methodologically difficult to measure policies related to sustainability because its multifaceted nature includes environmental, economic, social, and institutional dimensions. As a result, there is a tendency to rely on highly simplified or proxy indicators which might be too removed from the planning context to tell us much about the outcomes of plans (Laurian et al., 2010).

Indicator selection and monitoring requires readily accessible data that covers key economic, social, and environmental factors (Carmona & Sieh, 2005; Seasons, 2003). This is a resource-intensive task that requires planners to locate and reconcile multiple data sources which feed into the development and monitoring of key indicators. The lack of accessible data can hinder the successful evaluation of plans. Laurian et al. (2010) found that the lack of monitoring data made it impossible to assess the outcomes of water quality and ecological protection policies in local plans. In Ontario (Canada), for example, the absence of consistent and accurate data has undermined efforts by senior government planners to develop an appropriate monitoring framework for the Growth Plan (2006). Planners have been forced to rely on a narrow set of

quantitative indicators with some indicators measuring plan outcomes more directly than others (Burchfield, 2014). Talen (1996a) expressed a similar sentiment twenty years ago when attempting to demonstrate how a variety of quantitative methods could be used to gauge the implementation success of plans. Talen (1996a) concluded that developing systematic evaluation approaches in planning is both time consuming and resource intensive and, ideally, might be better conducted by research planning centers.

Finally, there are institutional challenges which can inhibit the use of evaluation in planning agencies, including organizational culture and political constraints. Organizational culture refers to the dominant ways of doing things in an organization (Kernaghan et al., 2005; Mills et al., 2007). In order for evaluation to be recognized as an important function in planning agencies, the organizational culture must recognize and value the benefits of evaluating plans and their outcomes. Organizations must be willing to dedicate sufficient resources (e.g., time, money and staff) to conduct plan evaluations. Based on Seasons' (2003) study of evaluation practices in planning departments across Ontario (Canada), it was noted that evaluation was often considered discretionary rather than necessary mainly due to the change averse nature of public sector organizations. This could also be fueled by a professional planning culture that is inherently biased towards generating plans given its future-oriented nature (Waldner, 2004), and by the tendency to direct resources to planning activities that generate revenue (e.g. plan review and development applications) rather than policy planning and associated research activities.

Political constraints also present a hurdle to evaluation. The creation of plans is inherently a political process because politicians use plans to garner public support and, more importantly, elected officials are usually the decision makers in planning. There can be a genuine fear among politicians that an evaluation could reveal failures or inadequacies that reflect

political decisions (Laurian et al., 2010). Similarly, planners can be concerned about their individual and collective accountability – real or perceived – for factors beyond their control that could affect the performance of a planning process, policies, plan outcomes or impacts.

*Planning practitioners value plan quality and generally agree with the plan quality principles identified in the literature*

The literature on plan quality has increased in volume and sophistication since the 1990s. Lyles and Stevens (2014) identified some forty-five empirical publications on plan quality over the past two decades, with the number of studies steadily increasing. This growth can be attributed in part to greater conceptual consensus among researchers on the principles that contribute to a high quality plan. These principles include fact base; goals; policies; implementation; monitoring and evaluation; inter-organizational coordination; public participation; plan organization and presentation; and meeting legal requirements (Berke & Godschalk, 2009; Lyles & Stevens, 2014; Stevens, 2013).

This research sought the opinions of 290 practicing planners across the province of Ontario regarding the principles identified in the literature. Planners were asked to identify the principles they believe contribute to a high quality plan, reflect on those principles that enhance plan implementation and decision-making, and discuss why plan quality is important. Generally, practicing planners consider meeting minimum legal requirements and policies as important plan quality principles. Many respondents also reported that these principles help to enhance plan implementation and decision-making. The least valued principles included describing the public participation process and inter-organizational coordination; these principles were also considered poor contributors to plan implementation and decision-making. Implementation and monitoring

and evaluation provisions were undervalued as important contributors to plan quality and in terms of enhancing plan implementation and decision-making. This finding is, in many ways, not surprising given that the planning literature has consistently identified implementation and monitoring and evaluation as being poorly executed both from the theoretical and practical perspectives. A key takeaway from this survey was the notion that researchers and practitioners should not treat plan quality principles equally. Rather, the weight assigned to each principle would depend on the function of the plan and the local context within which the plan operates.

The majority of planning practitioners surveyed agreed that plan quality should be an important consideration in the plan making process. Specifically, the quality of an official plan matters because: it can facilitate better implementation; it helps communicate the intentions of decision makers and the community; and it ensures that the most accurate and relevant information is used to develop plans which reflect community values.

Many planners agreed that a high quality plan – one that generally meets the principles identified in the literature – aids in better implementation and is more likely to achieve its full potential. Better implementation is facilitated by having a clearly described and easy-to-navigate plan that can be understood by planning staff, the development community, the public, and other stakeholders involved in its implementation. This includes having clearly described goals, policies, and implementation tools. Planners also indicated that the quality of an official plan matters because it helps to better communicate the intentions of decision makers and the community. An official plan is the primary document used to guide municipal decision-making – from identifying strategic priorities to financial planning – while also articulating the future vision of the community. Given the importance placed on an official plan, it is imperative that it be of a high quality. More importantly, the quality of the plan is a reflection of the quality of the

plan making process. If care is taken to research and develop the plan, then it is likely to gain support from politicians and the community. This includes relying on accurate data to assess the current and future challenges facing a community, and ensuring that community members contribute to developing plan goals and policies. Such an approach ensures that the document is relevant to the community it serves, thereby increasing its chances of being used by decision makers.

Planning practitioners identified several challenges to creating a high quality official plan. These included political will; an inexperienced staff; reliance on links to other documents; dated plans; and a mismatch regarding the role of official plans. A majority of planners agreed that their Council did not place a strong value on producing a high quality official plan. This resulted in limited resources (time and staff) being directed towards creating or updating official plans. The lack of political will often resulted in planners following the previous plan and making only minor changes to their updated plans. As such, if a plan was of a poor quality before an update, then these principles were carried forward into the new plan. Other respondents indicated that updating official plans was more about getting the minimum completed in a timely manner rather than having a quality document. Political will was also a commonly referenced challenge in the literature regarding the monitoring and evaluating of many planning initiatives.

Another issue cited by planners and identified in the literature was inexperienced staff. It was mentioned that planning staff did not appear to be fully engaged in the plan making process, did not have an understanding of the principles regarding high quality plans, and were inexperienced plan writers. For example, planners often lacked an understanding regarding the importance of monitoring, which led to the omission of appropriate monitoring and evaluation provisions.

Many planners also indicated that certain principles were not included because they were discussed in other external documents. For example, a description of the public participation process was not included in official plans because it was discussed extensively in background reports. Planners did not see the need or benefit of having certain principles included in official plans, especially those principles that extended beyond shaping how the community would be developed.

The currency of official plans was another reason for omitting certain principles. Planners mentioned that inter-organizational coordination was never included because their plan was created during a time when this principle was not thoroughly considered. Others mentioned that plans were created during a time when participation was thought of as something to do before the plan was written and not described in their official plan.

On a final note, several planners mentioned that certain plan quality principles were excluded because of the purpose being given to the plan. For example, a plan might be viewed as a more technical document rather than a document to help guide decision-making. A technical document would contain more details than a guiding document. This is an interesting finding in that it highlights the notion that the role of a plan will influence how it is created, implemented, and evaluated. This sentiment was echoed by Baer (1997) some two decades ago where he argued that the criteria for evaluating plans would depend on the plan's function. For example, there are visionary plans that are broad and general, land use plans which offer direction on development decisions, and plans that focus on specific issues such as economic development (Baer, 1997). Depending on the function of the plan, the criteria for evaluation and success would vary considerably.

*Official plans in the GGH region lacked key plan quality principles*

Another goal of this research was to extend the Canadian-based research on plan quality. Plan quality evaluations were completed for 63 official plans across the GGH region in Ontario. The findings from this research revealed that goals and policies were the strongest principles, while fact base, monitoring and evaluation and public participation were the weakest principles. It was also noted that the provincial government plays an important role in helping the local levels of government to develop high quality plans. That is, almost all official plans were strong in areas that had clear direction from the provincial level. These findings largely corroborate the results from the survey on plan quality and literature review.

Across all jurisdictions – single-, upper-, and lower-tiers – there was a strong presence of goals and policies in official plans. This finding can be attributed to the Ontario planning framework, which provides explicit direction regarding official plan goals and policies. Under the Planning Act, all official plans must include goals and policies to manage and direct physical change and the effects on the social, economic and natural environment of a municipality (Ontario Planning Act, 2016). This is one of few explicit directions regarding the contents of an official plan. Further, all municipalities must adhere to the Provincial Policy Statement (PPS) (2005 and 2014), which sets the foundation for official plan goals and policies. The PPS (2005 and 2014) highlights the core policy areas that must be discussed in an official plan. Failing these requirements make it challenging, if not possible, to gain provincial approval for an official plan. Practicing planners also ranked policies and meeting legal requirements (as stipulated by the Planning Act) as important plan quality principles, particularly when it comes to enhancing plan implementation and decision.

Fact base, monitoring and evaluation, and public participation were among the weakest plan quality principles. The fact base provides a foundation for selecting and prioritizing appropriate goals and policies for a plan; a limited fact base can result in misinformed plan goals and policies (Horney et al., 2016; Stevens, 2013). Almost all municipalities included a statement of the current and future population and economy in their plan. This is almost expected as the Growth Plan (2006) identifies the projected population and employment for single- and upper-tier municipalities. In the case of a lower-tier municipality, the upper-tier municipality provides the allocation of future population and employment. However, beyond a statement of population, municipalities did not provide a clear discussion of where the future population should be directed. Further, almost all municipalities did not include a discussion of the population composition, such as age and gender distribution, either current or in the future. This brings into question whether municipalities are appropriately planning for the needs of their inhabitants.

Municipalities also did not include a discussion into the existing and future need for infrastructure, particularly with respect to water and wastewater and future community facilities (e.g., community centres). Regarding the existing and future road infrastructure, almost all municipalities included a map which outlined existing and proposed roadways, but no accompanying discussion into the rationale for proposed roadways. It is important to note that this finding does not imply that a municipality did not conduct an empirical assessment before developing its plan as this analysis was only focused on official plans. However, the absence of this information in official plans makes it challenging to be certain that a comprehensive empirical analysis was actually completed before the selection of plan goals and policies.

Monitoring and evaluation was another weak plan quality principle in many official plans. This included having a monitoring and evaluation section within official plans, a

description of the various departments and organizations responsible for conducting monitoring and evaluation, timelines for updating the official plan, indicators for measuring plan performance, and having quantifiable goal and policies. Municipalities were strongest in following the direction prescribed by provincial legislations. For example, almost all municipalities had a monitoring and evaluation section which identified the timelines for official plan updates. This was not surprising given that the Planning Act dictates that municipal official plans must be updated every five years. Further, municipalities generally had quantifiable goals and policies, however, these were often related to the intensification and density targets identified by the Growth Plan (2006).

Furthermore, many municipalities did not identify the process for monitoring plan progress, including identifying departments responsible for monitoring and the inclusion of indicators. Very few municipalities developed indicators needed to measure the progress of plan implementation and plan outcomes. For example, the Regional Municipality of Halton identified a number of indicators (and reports) to be used as part of the monitoring and evaluation process, including intensification, housing, aggregate resources, and sustainability. In the Regional Municipality of Peel, which has the most comprehensive plan monitoring and evaluation strategy, introduced a Regional Official Plan Performance Measurement Program (ROPPMP) to identify trends and issues in the community, analyze the effectiveness of official plan policies, and make subsequent adjustments to the plan as required. The Peel official plan also included 21 indicator categories for measuring plan progress. It is important to note that since this research did not focus on whether municipalities actually carried out their monitoring and evaluation function, it is difficult to make an assessment into the extent to which municipalities monitored their plans.

In many regards, the absence of clear monitoring and evaluation provisions is not surprising given the lack of direction from the provincial level of government and the limited value placed on this principle by practicing planners. For example, although the PPS (2005 and 2014), gives direction on goals and policies, it provides very little direction monitoring and evaluation, particularly from an indicator development perspective. The implementation section of the PPS (2005 and 2014) states that, “municipalities are encouraged to establish indicators to monitor the implementation of the policies in their official plan (p. 25 in 2005 version and p. 35 in 2014 version)”, but provides no further direction to municipalities. It was not until 2014 that the provincial government released indicators for the PPS (2005). Similarly, the Growth Plan (2006) provides very little direction to municipalities regarding monitoring and evaluation. Specifically, the Plan states that the province will develop a set of indicators to measure the implementation of the policies in the plan, and that municipalities will monitor and report on the implementation of these policies within their municipality (MMAH, 2013). It was not until 2015, some eight years after the introduction of the Growth Plan, that a set of preliminary indicators was released.

Public participation was the weakest plan quality principle across all municipalities in the GGH region. This is not surprising given the low value given to this principle by planning practitioners. This principle recognizes the formal and informal actors involved in the plan making and plan implementation processes. Evaluating this principle involved identifying the stakeholders involved in the plan making process, discussing the purpose of public participation and techniques, and the effects of the official plan on citizens. Almost all municipalities failed to address these sub-categories. Notable municipalities that included a public participation component included the Regional Municipality of Niagara and the City of Brantford. Both of

these municipalities provided a discussion into the importance of public participation and the role of various stakeholders in developing their respective official plans.

This finding does not imply that municipalities have not engaged stakeholders during the plan making process, but rather indicates that municipalities have chosen not to describe the public participation process in their plans. There are many reasons for this, such as discussing public participation in background documents. In fact, many municipalities included a discussion of public participation in the background reports to their Council during the plan making process.

*Plan quality evaluation is an emerging field of investigation that can benefit both researchers and practitioners*

Researchers have argued that the evaluation of plan quality is an important form of evaluation because it can help identify the strengths of a plan and the specific weaknesses that could undermine the achievement of plan goals (Berke et al., 2012; Berke & Godschalk, 2009). In this research, I found that official plans across the GGH region were generally organized and presented in a user-friendly manner, contained comprehensive goals and policies that focused on a number of issues, and met legislative requirements for plan content. The findings also revealed that many official plans did not discuss the empirical foundation used to inform their plans, lacked adequate monitoring and evaluation provisions (e.g., identifying who would be responsible for monitoring and evaluation and in developing indicators for monitoring plan progress), and were silent on how the public participation process helped to inform the plan. It was further noted that official plans were somewhat weak in terms of outlining the process of plan implementation and inter-organizational coordination. Rather, many official plans tended to discuss, at a high level, the role of zoning as the primary mechanism for plan implementation. In

the case of inter-organizational coordination, many official plans simply stated that they conformed to a number of policies and programs both horizontally (e.g., provincial policies) and vertically (e.g., conservation authority policies). These deficiencies in plan quality are very serious as the GGH region will continue to grow and develop at a rapid pace. Failing to develop high quality official plans will make it challenging to adequately plan for this region. As Stevens (2013) argued, poor implementation and monitoring and evaluation provisions will make it difficult, if not impossible, for municipalities to discern whether their plans are having a desirable impact on development and the well-being of its inhabitants.

### **Strategies to Enhance the Quality of Official Plans**

The third research question was aimed at identifying strategies to enhance the quality of plans. Based on the findings from the literature review, survey research and content analysis, the following approaches are proposed to enhance the quality of official plans, particularly within the Ontario context:

- 1. Strengthen the importance of the provincial government's role in planning as a means of improving the quality of local official plans*

In order for municipalities within the GGH region to have high quality plans, there must be greater guidance from the provincial government, particularly when it comes to setting up a framework for implementing official plans and evaluating their outcomes. As noted in the content analysis, plans were strongest in areas where the provincial government provided explicit direction regarding the contents of an official plan. Alternatively, plans were weakest in areas where the provincial government was silent. This finding supports the claim for

greater provincial involvement in planning, specifically in providing clear guidance on implementation and monitoring and evaluation provisions. Provincial policies and plans such as the Growth Plan (2006) should include sufficient details regarding monitoring and evaluation. Although such an approach could lead to an inclination to develop unimaginative and poorly developed plans, the potential for creating higher quality plans is appealing.

Similar conclusions were also drawn from authors including Berke and French (1994) and Baynham and Stevens (2014) both of whom argued that provincial and state mandates are critical to developing high quality plans. In the case of Berke and French (1994), they found that the degree of state mandate matters greatly in terms of developing appropriate policies, targets, and implementation frameworks. Baynham and Stevens (2014) argued that provincial mandates should provide specific requirements and quantifiable measures to help reduce the variation in plan quality and improve plan implementation.

2. *Enhance implementation and monitoring and evaluation provisions in planning initiatives*

Findings from the literature review, survey research, and content analysis indicated that planners generally undervalue implementation and monitoring and evaluation. In fact, planners tend to invest a significant amount of resources into creating plans with little discussion into how plans will be implemented and evaluated. Waldner (2004) considers this the “front-loading” of resources whereby substantial resources are dedicated towards the development of the plan while limited resources are directed towards the evaluation of plans once implemented. This includes developing appropriate monitoring and indicator frameworks, and allocating sufficient resources to carry out these tasks. In order to enhance the quality of official plans, we need to better promote the importance of implementation and

monitoring and evaluation provisions in plans. These provisions can help municipal planners remain accountable to decision makers and the public by demonstrating the benefits that have resulted from the plans they created. In order to do this, planners need to provide clear guidelines regarding how official plans will be implemented, including prioritizing actions for implementation and their timelines, identifying departments and/or organizations responsible for plan implementation, and allocating adequate funding sources for implementation. Plans should also include sufficient details regarding evaluation, such as identifying departments responsible for monitoring and evaluation, including a timetable for updating the plan based, in part, on results of monitoring, and developing measurable policies (e.g., targets) that aid in identifying indicators to assess plan progress and outcomes. An approach to enhancing monitoring and evaluation involves better training of planners concerning the importance of developing indicators for measuring plan progress during the plan making phase instead of after plan creation.

3. *Describe the empirical foundation and participation process used to inform plan development*

The findings from the survey and content analysis revealed that a description of the empirical foundation (i.e., fact base) and participation process used to inform plan development are overlooked as critical components of an official plan. It is important that municipalities provide clear and informed justifications into how and why goals and policies were selected. These are important principles because they provide the rationale for official plan goals and help to ensure that the plan is context specific. Including these principles helps to foster greater buy-in from stakeholders, such as politicians and the public, as they are able

to better understand the rationale for why certain goals and policies were included in plans. More importantly, a limited or inaccurate fact base can lead to misguided goals and policies that do not respond to local community conditions, such as changing demographics and environmental conditions (Stevens 2013).

Planners should also include a description of the public participation process. Public participation plans an important role in plan development and can lead to stronger plans and successful implementation (Berke et al., 2006; Stevens, 2013). Official plans should identify the stakeholders involved in the plan making process (e.g., developers, politicians, and citizens), an explanation as to why these groups of individuals were involved, and the techniques used to engage them (e.g., public information meetings, online engagement approaches, and discussion forums).

#### *4. Extend plan quality evaluations to planning practice*

Another strategy to enhancing the quality of plans is to extend the use of plan quality evaluations to planning practice. Plan quality evaluations can help practicing planners to identify gaps in plan making that could undermine the effectiveness of plans. For example, many official plans across the GGH region seem to lack appropriate implementation and monitoring and evaluation considerations. Plan quality evaluations can help address such deficiencies. The challenge, however, is that plan quality has largely remained an academic exercise with limited connections to planning practice (Lyles & Stevens, 2014). We need to better educate and train planners on the importance of plan quality and its use as a means of identifying the strengths and deficiencies in plans (discussed further in proceeding section).

## **Importance of Research for Planning Theory and Education**

The findings from this research are important to planning theory, education, and practice, because:

### *1. It contributes to the limited Canadian-based research regarding plan quality evaluation*

The majority of plan quality research focuses on the US context. Research focusing on the Canadian landscape is sparse, with the existing research concentrating only on the province of British Columbia (BC). This research contributes to the limited Canadian-based studies by evaluating the quality of 63 official plans in Ontario. The findings highlighted the strengths and deficiencies of official plans in Ontario, such as having clear goals and policies, and poor monitoring and evaluation provisions. This research represents a first step in assessing plan quality in Ontario and can help inform future studies, as well as contributing to greater meta-analysis (discussed further in proceeding section).

The findings from this research support previous plan quality studies which found poor implementation and evaluation mechanisms in plans. For example, Stevens' (2013) plan quality evaluation of 40 community official plans in BC found that although plans were well crafted in laying out a vision for the future and specifying goals and policies to achieve the vision, they lacked appropriate implementation and monitoring provisions (Stevens, 2013). The plan quality principles used in Stevens (2013) analysis included fact base, goals, policies, implementation, monitoring and evaluation, inter-organizational coordination, public participation, organization and presentation, and legislative requirements.

Baynham and Stevens (2014) arrived at a similar conclusion when evaluating the quality of 39 official community plans in terms of addressing climate change in BC. The authors

focused on four plan quality principles: fact base, goals, policies, and implementation. Their findings indicated that while twenty-five community official plans explicitly addressed climate change and included strong goals and policies, their fact base and implementation provisions were relatively weak in comparison (Baynham & Stevens, 2014). For example, there was a general lack of knowledge regarding the drivers and impacts of climate change (i.e., fact base); climate action goals were poorly defined and targets were inconsistent; and there was a lack of connection between policies and expected emission reductions (Baynham & Stevens, 2014).

More recently, Stevens and Shoubridge (2015) examined the extent to which 20 municipalities in the Greater Vancouver Region of BC included provisions in their official community plans related to reducing natural hazard risk and vulnerability. The authors found that plans generally lacked in hazard related factual information (i.e., fact base), goals and policies, and mechanisms needed to promote plan implementation (Stevens & Shoubridge, 2015).

In the case of Tang et al. (2011), who assessed coastal zone management plans in 53 Pacific coastal counties in California (US), found that plans were strongest in stating goals and objectives; somewhat weak in presenting the fact base; weak in addressing coordination mechanisms; very weak in describing tools, policies, and strategies; and weakest in addressing implementation issues (Tang et al., 2011). The authors used six plan quality principles in their assessment: fact base, goals and objectives, policies, inter-organizational coordination, implementation, and monitoring.

The results from the various plan quality studies, including this research, suggest that there is a gap in our understanding regarding plan implementation and monitoring and

evaluation. This makes it challenging to discern whether plans are being implemented as intended and having a desired impact on communities (Stevens, 2013). Implementation should signify a commitment to implement the plan once adopted. This includes identifying steps needed to translate a plan's policies, tools and strategies into specific tasks, and a clear schedule for performing these tasks including appropriate resource commitment (e.g., human and financial) (Berke & Godschalk, 2009; Brody, 2003a; Millard-Ball, 2012; Tang et al., 2011). Monitoring and evaluation represents the framework within which we can assess how well plan goals are being implemented and the degree to which changes in development is consistent with the plan (Berke et al., 2006).

2. *It builds on, and extends, the current literature on plan quality*

This research advances our understanding of the characteristics and attributes that comprise high quality plans and builds on the current methodology used to assess plan quality. While researchers have developed a conceptual consensus around the core principles contributing to a high quality plan, an important missing element in this discourse is the views of planning professionals about the importance of these plan quality principles. The findings from this research indicated that planning professionals generally agree with the principles identified in the literature, and regard plan quality as important because plan quality facilitates more effective implementation, better communicates the intentions of decision makers, and ensures that plans include accurate information and reflect community values.

This research also extends the current literature by highlighting additional principles that can help improve the quality of plans, including having an internally consistent and flexible

plan. Internal consistency means plan contents, including goals, policies, implementation, and monitoring and evaluation provisions, should mutually reinforce each other. Flexibility means having wording that affords implementers some leeway as to how policies are interpreted and enforced. Flexibility also means being able to respond to changing circumstances, such as economic, social or political changes.

The research also advanced the notion that researchers and practitioners should not treat plan quality principles equally. Rather, the weight we assign to each principle would depend on the function of the plan and the local context within which the plan operates. Deciding whether to weight each principle equally or assign varying weights based on value judgments has been a common challenge in the plan quality literature (Brody, 2003a; Lyles & Stevens, 2014). According to Lyles and Stevens (2014), there is an overwhelming lack of acknowledgement in the literature of the implicit equal weighting used by researchers when assessing plan quality. This is partly due to the absence of a strong theoretical or empirical justification for assigning weights to each principle (Lyles & Stevens, 2014). This research provides an empirical justification for assigning weights to plan quality principles.

From a methodological standpoint, this research advances and strengthens the approach to evaluating plan quality by building on previously developed and tested protocols, and clearly documents the coding protocols (Berke & Godschalk, 2009; Lyles & Stevens, 2014). The lack of universally accepted standards for analyzing plans has made it difficult to meet the basic requirement of producing data that is reliable and replicable (Berke & Godschalk, 2009; Lyles & Stevens, 2014; Tang et al., 2011). Lyles & Steven's (2014) cross-sectional study of plan quality methods noted that researchers are failing to provide clear descriptions regarding coding procedures and protocols. This makes it challenging for plan quality

researchers to establish the credibility and trustworthiness of their findings. This research included a comprehensive discussion of my method so that other researchers can understand and apply my evaluation protocol and coding scheme. More importantly, this study conformed to the content analysis methodology employed in past plan quality evaluation studies as a means of increasing reliability and replicability. For example, the 0-10 coding scheme allows for further meta-analyses with other plan quality studies.

This research also helps contribute to greater meta-analysis regarding plan quality. A challenge in the plan quality literature relates to using meta-analysis to systematically analyze previous plan quality research to determine the consistency of empirical findings (Berke & Godschalk, 2009). This is often challenging since the use of plan quality principles varies substantially across different studies and contexts. For example, although Berke et al. (2012), Brody (2003), and Horney et al. (2012) focus generally on natural hazards, their choice of plan quality principles and findings vary. Berke et al.'s (2012) study examined thirty state hazard mitigation plans from across the US using seven principles: fact base, goals, policies, implementation, monitoring and indicators, inter-organizational coordination, and public participation. Their findings indicated that most states had moderate to low quality plans for all plan quality principles (Berke et al., 2012). On the other hand, Brody (2003) examined local municipal hazard mitigation plans in Florida and Washington (US) using three principles: fact base, goals, and policies. The author concluded that the quality of local comprehensive plans associated with natural hazards mitigation between 1991 and 1998 improved. Horney et al. (2012) examined rural and urban county hazard mitigation plans in three southeast states in the US based on the same seven principles identified by Berke et al. (2012). The authors concluded that the quality of hazard mitigation plans differed

substantially between urban and rural counties (Horney et al., 2012). These findings indicate that despite focusing on a similar issue, the results vary according to the context and purpose of the study. This research utilizes the most commonly referenced principles and methods so as to help contribute to developing greater meta-analysis regarding plan quality. The findings from this research can be used to help assess plan quality for other Canadian jurisdictions, thereby advancing future meta-analysis of Canadian plans and cross-jurisdictional analysis with US studies.

3. *It highlights the need for better training of future planners*

The planning profession must continually build the capacity of planners to create high quality plans. The majority of planners surveyed indicated that a high quality plan fosters better implementation. For example, creating plans that are visually appealing and easy to navigate and read can encourage stakeholders to consult the plan more frequently.

Unfortunately, based on the survey results and content analysis, many planners did not include key plan quality principles owing to inexperience and a lack of understanding regarding plan quality. In this regard, training and education about the principles, methods and applications of plan quality are needed. This includes a need to acknowledge and integrate plan quality and plan quality evaluation as important components of policy development and decision-making in planning. According to Balsas (2012), such education and training can occur in planning studio courses which aim to inform future planners about the process of plan preparation, including conducting fact base studies, developing corresponding goals and policies, and making implementable and evaluable plans. Such courses should be mandatory components of the curriculum in planning programs. In

addition, training in evaluation should be offered to practitioners by the professional institutes and associations that oversee planning practice, such as the Canadian Institute of Planners and American Planning Association.

### **Future Research**

Several areas for future research were identified in this research. First, this research was focused only on official plans. I did not assess the background studies that might have informed official plans or other municipal plans, such as secondary plans and zoning by-laws. The omission of background studies makes it difficult to make a determination as to whether certain principles were actually followed. For example, there might be studies that focus on the fact base and public participation. In the case of other municipal plans, their omission in my analysis makes it challenging to assess the extent to which official plans are being properly implemented. Future studies should extend their analysis to include these documents (i.e., background reports and other plans) as a means of extending the scope of plan quality evaluations.

Second, this research did not examine whether high quality plans lead to better outcomes. This is an area of research that is lacking in the plan quality literature (Lyles and Stevens 2014). The majority of studies focus on examining the quality of plans as opposed to the relationship between high quality plans, their implementation, and outcomes. The lack of research presents a major gap in our knowledge regarding the value of plans (Lyles and Stevens, 2014). We need to further bridge this gap by assessing whether high quality plans lead to better outcomes. This would greatly increase the credibility of plan quality evaluations.

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## APPENDICES

### Appendix A: Survey – Evaluating The Quality Of Official Plans

**Question 1:** At what level of government are you employed?

- Regional (Upper Tier)  
 County (Upper Tier)  
 Single Tier  
 Local (Lower Tier)  
 Other (please specify) \_\_\_\_\_

**Question 2:** What is your position/role?  
 \_\_\_\_\_

**Question 3:** In this study, plan quality is a measure of the presence or absence of key components within an official plan. On a scale of 1 (not important) to 5 (very important), please rate the importance of each of the following characteristics as contributors to plan quality.

	1 – Not Important	2 – Slightly Important	3 - Moderately Important	4 - Important	5 - Very Important
<i>Fact Base</i> (i.e., a description of the current and desired future state of the jurisdiction, including population and economic trends, demography, land uses and land needs, and state of the natural environment).					
<i>Goals</i> (i.e., detailed descriptions of the desired future conditions of the jurisdiction).					
<i>Policies</i> (i.e., established principles used to achieve goals of a plan; they are sufficiently specific and tied to definite actions).					
<i>Implementation</i> (i.e., a description of how the plan will be implemented once adopted, including timelines for actions and assignment of organizational responsibilities).					
<i>Monitoring and Evaluation</i> (i.e., a description of how to track the progress of the plan towards achieving its goals and policies such as including measurable targets, identifying monitoring responsibilities and a timetable for updating the plan).					
<i>Inter-organizational Coordination</i> (i.e., a description of how departments and organizations external to the planning department can help implement the plan, such as coordination with the provincial government, conservation authorities, BIAs and other private and public sector bodies).					
<i>Participation</i> (i.e., a description of how the public and other stakeholders were involved in the plan making process, including identifying the stakeholders involved and how their input affected the development of the plan).					
<i>Readability and Usability</i> (i.e., a visually attractive format and layout including having an executive summary, table of contents, glossary of terms and illustrations).					

	1 – Not Important	2 – Slightly Important	3 - Moderately Important	4 - Important	5 - Very Important
<i>Meeting the minimal legal requirements for plan content</i> (e.g., meeting the minimum requirements set out by the Planning Act, and provincial policies).					

**Question 4:** Are there other characteristics that should be considered when trying to assess plan quality? Please comment below.

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**Question 5:** Overall, on a scale of 1 (not important) to 5 (very important), how important is it to consider plan quality when introducing a new official plan or updating an existing official plan?

1 - Not Important	2 – Slightly Important	3 - Moderately Important	4 - Important	5 - Very Important

**Question 6:** In your opinion, why is plan quality important?

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**Question 7:** Please indicate the level of detail of the plan characteristics indicated below in your jurisdiction’s official plan.

	Clearly Described	Included but not Clearly Described	Not Included
<i>Fact Base</i> (i.e., a description of the current and desired future state of the jurisdiction, including population and economic trends, demography, land uses and land needs, and state of the natural environment).			
<i>Goals</i> (i.e., detailed descriptions of the desired future conditions of the jurisdiction).			
<i>Policies</i> (i.e., established principles used to achieve goals of a plan; they are sufficiently specific and tied to definite actions).			
<i>Implementation</i> (i.e., a description of how the plan will be implemented once adopted, including timelines for actions and assignment of organizational responsibilities).			
<i>Monitoring and Evaluation</i> (i.e., a description of how to track the progress of the plan towards achieving its goals and policies such as including measurable targets, identifying monitoring responsibilities and a timetable for updating the plan).			
<i>Inter-organizational Coordination</i> (i.e., a description of how departments and organizations external to the planning department can help implement the plan, such as coordination with the provincial government, conservation authorities, BIAs and other private and public sector bodies).			
<i>Participation</i> (i.e., a description of how the public and other stakeholders were involved in the plan making process, including identifying the stakeholders involved and how their input affected the development of the plan).			
<i>Readability and Usability</i> (i.e., a visually attractive format and			

	Clearly Described	Included but not Clearly Described	Not Included
layout including having an executive summary, table of contents, glossary of terms and illustrations).			
<i>Meeting the minimal legal requirements for plan content (e.g., meeting the minimum requirements set out by the Planning Act, and provincial policies).</i>			

**Question 8:** In your opinion, why were certain plan quality characteristics excluded in your jurisdiction’s official plan? Go to Question 9 if not applicable.

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**Question 9:** On a scale of 1 (not influential) to 5 (very influential), how influential are the following characteristics in terms of enhancing plan implementation and decision-making.

	1 – Not Influential	2 – Slightly influential	3 – Moderately influential	4 – influential	5 – Very influential
<i>Fact Base</i> (i.e., a description of the current and desired future state of the jurisdiction, including population and economic trends, demography, land uses and land needs, and state of the natural environment).					
<i>Goals</i> (i.e., detailed descriptions of the desired future conditions of the jurisdiction).					
<i>Policies</i> (i.e., established principles used to achieve goals of a plan; they are sufficiently specific and tied to definite actions).					
<i>Implementation</i> (i.e., a description of how the plan will be implemented once adopted, including timelines for actions and assignment of organizational responsibilities).					
<i>Monitoring and Evaluation</i> (i.e., a description of how to track the progress of the plan towards achieving its goals and policies such as including measurable targets, identifying monitoring responsibilities and a timetable for updating the plan).					
<i>Inter-organizational Coordination</i> (i.e., a description of how departments and organizations external to the planning department can help implement the plan, such as coordination with the provincial government, conservation authorities, BIAs and other private and public sector bodies).					
<i>Participation</i> (i.e., a description of how the public and other stakeholders were involved in the plan making process, including identifying the stakeholders involved and how their input affected the development of the plan).					
<i>Readability and Usability</i> (i.e., a visually attractive format and layout including having an executive summary, table of contents, glossary of terms and					

	1 – Not Influential	2 – Slightly influential	3 – Moderately influential	4 – influential	5 – Very influential
illustrations).					
<i>Meeting the minimal legal requirements for plan content</i> (e.g., meeting the minimum requirements set out by the Planning Act, and provincial policies).					

## Appendix B: Plan Quality Evaluation Protocol

Plan Quality Principle	Indicator	Description
Fact Base	Current Population	Descriptive statement(s) regarding the size of the current population (e.g., number of people and where located)
	Future Population	Descriptive statement(s) regarding the size of the future population (e.g., number of people and where located) <i>(Also a legislative requirement under the Growth Plan (2006))</i>
	Current Population Composition	Descriptive statement(s) regarding the composition of the current population (e.g., age breakdown and gender)
	Future Population Composition	Descriptive statement(s) regarding the composition of the future population (e.g., age breakdown and gender)
	Current Economy	Descriptive statement(s) regarding the current economy of the jurisdiction (e.g., main economic activities)
	Future Economy	Descriptive statement(s) regarding the future economy (e.g., continued support for existing economic activities)
	Existing Land Uses (in relation to land use map)	Descriptive statement(s) regarding existing land uses with accompanying land use map (e.g., residential, commercial, institutional, and parks and open space)
	Current Land Supply For Future	Descriptive statement(s) regarding the current land supply for the future (e.g., amount of developable land)
	Existing Community Facilities	Descriptive statement(s) regarding existing community facilities (e.g., community centres, parks, trails, open spaces)
	Future Need For Community Facilities	Descriptive statement(s) regarding future need for community facilities (e.g., community centres, parks, open spaces)
	Existing Road Infrastructure	Descriptive statement(s) regarding the state of existing roads and other transportation infrastructure (e.g., roads, bike lanes, and trails)
	Future Need for Road Infrastructure	Descriptive statement(s) regarding the future need for roads and other transportation infrastructure (e.g., roads, bike lanes, and trails)
	Existing Sewer and Water Infrastructure	Descriptive statement(s) regarding existing sewer and water infrastructure in the jurisdiction
	Future Need For Sewer and Water Infrastructure	Descriptive statement(s) regarding future need for sewer and water infrastructure in the jurisdiction
	Air Quality	Descriptive statement(s) about air quality <i>(Mentioned in PPS, 2005)</i>
	Natural Heritage	Descriptive statement(s) about natural heritage <i>(Mentioned in PPS, 2005)</i>
	Water Bodies	Descriptive statement(s) about water bodies <i>(Mentioned in PPS, 2005)</i>
	Constraints to Development	Descriptive statement(s) about constraints to development
	Tables & Data Sources	Does the plan include at least one table and/or one figure to describe the fact base? Does every table and/or figure have a title and a data source?

Plan Quality Principle	Indicator	Description
Goals/Objectives (Used Interchangeably)	Land Use and Growth Management	At least one land use goal (or objective) included – focus on settlement (urban) areas, rural areas and rural land; can also include discussion about growth management
	Housing	At least one housing goal (or objective) included – focus on range and mix of housing types and densities
	Transportation	At least one transportation goal (or objective) included – focus on facilities, corridors and rights-of-way for the movement of people and goods, and associated transportation facilities including transit stops and stations, sidewalks, cycle lanes, bus lanes, high occupancy vehicle lanes, rail facilities, parking facilities, park'n'ride lots, service centres, rest stops, vehicle inspection stations, inter-modal facilities, harbours, airports, marine facilities, ferries, canals and associated facilities such as storage and maintenance (see PPS, 2005)
	Waste Management	At least one waste management goal (or objective) included – i.e., sites and facilities to accommodate solid waste from one or more municipalities and includes recycling facilities, transfer stations, processing sites and disposal sites (see PPS, 2005)
	Sewer and Wastewater	At least one sewer and wastewater goal (or objective) included – includes municipal sewage services and municipal water services, private communal sewage services and private communal water services, individual on-site sewage services and individual on-site water services, and partial services (see PPS, 2005)
	Energy Supply	At least one energy supply goal (or objective) included – provides opportunities for the development of energy supply including electricity generation facilities and transmission and distribution systems, to accommodate current and projected needs (see PPS, 2005)
	Natural Heritage, Parks & Open Space	At least one natural heritage and/or parks & open space goal (or objective) included – protection of natural features and areas
	Water (Drinking, Groundwater, Source Water)	At least one water goal (or objective) included – protect, improve or restore the quality and quantity of water; can also focus on source water, and groundwater (see PPS, 2005)
	Agriculture & Food	At least one agriculture and food goal (or objective) included – protects agricultural areas and specialty crop areas and support local food
	Cultural Heritage	At least one cultural heritage goal (or objective) included – built heritage and cultural heritage landscape. These include resources that have been determined to have cultural heritage value or interest for the important contribution they make to our understanding of the history of a place, an event, or a people (see PPS, 2005)
	Mineral Aggregates	At least one mineral aggregate and resource extraction goal (or objective) included
	Natural & Human-Made Hazards	At least one natural and/or human-made hazard goal (or objective) included – examples include hazardous lands and flood lines, former mineral mining operations, mineral aggregate operations or petroleum resource operations may be permitted only if rehabilitation or other measures to address and mitigate known or suspected hazards are under way or have been completed (see PPS, 2005)
	Economic Development (includes Employment Lands)	At least one economic development goal (or objective) included – promotes opportunities for economic development, tourism, support for local economy; can include goal/objective related to employment lands (area) (e.g., focus on range and mix of employment and employment areas) (see PPS, 2005)

Plan Quality Principle	Indicator	Description
Policies	Land Use and Growth Management	At least one land use policy included – focus on settlement (urban) areas, rural areas and rural land; can also include discussion about growth management
	Housing	At least one housing policy included – focus on range and mix of housing types and densities
	Transportation	At least one transportation policy included – focus on facilities, corridors and rights-of-way for the movement of people and goods, and associated transportation facilities including transit stops and stations, sidewalks, cycle lanes, bus lanes, high occupancy vehicle lanes, rail facilities, parking facilities, park'n'ride lots, service centres, rest stops, vehicle inspection stations, inter-modal facilities, harbours, airports, marine facilities, ferries, canals and associated facilities such as storage and maintenance (see PPS, 2005)
	Waste Management	At least one waste management policy included – i.e., sites and facilities to accommodate solid waste from one or more municipalities and includes recycling facilities, transfer stations, processing sites and disposal sites (see PPS, 2005)
	Sewer and Wastewater	At least one sewer and wastewater policy included – includes municipal sewage services and municipal water services, private communal sewage services and private communal water services, individual on-site sewage services and individual on-site water services, and partial services (see PPS, 2005)
	Energy Supply	At least one energy supply policy included – provides opportunities for the development of energy supply including electricity generation facilities and transmission and distribution systems, to accommodate current and projected needs (see PPS, 2005)
	Natural Heritage, Parks & Open Space	At least one natural heritage and/or parks & open space policy included – protection of natural features and areas
	Water (Drinking, Groundwater, Source Water)	At least one water policy included –protect, improve or restore the quality and quantity of water; can also focus on source water, and groundwater (see PPS, 2005)
	Agriculture & Food	At least one agriculture and food policy included – protects agricultural areas and specialty crop areas and support local food
	Cultural Heritage	At least one cultural heritage policy included – built heritage and cultural heritage landscape. These include resources that have been determined to have cultural heritage value or interest for the important contribution they make to our understanding of the history of a place, an event, or a people (see PPS, 2005)
	Mineral Aggregates	At least one mineral aggregate and resource extraction policy included
	Natural & Human-Made Hazards	At least one natural and/or human-made hazard policy included – examples include hazardous lands and flood lines, former mineral mining operations, mineral aggregate operations or petroleum resource operations may be permitted only if rehabilitation or other measures to address and mitigate known or suspected hazards are under way or have been completed (see PPS, 2005)
	Economic Development (includes Employment Lands)	At least one economic development policy included – promotes opportunities for economic development, tourism, support for local economy; can include goal/objective related to employment lands (area) (e.g., focus on range and mix of employment and employment areas) (see PPS, 2005)

Plan Quality Principle	Indicator	Description
Implementation	Implementation Section	Does the plan include a separate section that addresses what needs to be done to implement the plan?
	Plan Priority	Does the plan prioritize actions for implementation?
	Organization Responsibility	Does the plan generally identify specific organizations with responsibility for implementation?
	Timelines	Does the plan identify timelines for implementation?
	Funding Sources	Does the plan identify sources of funding to implement the plan?
Monitoring and Evaluation	Monitoring and Evaluation Section	Does the plan include a separate section that addresses what needs to be done to monitor and evaluate the plan?
	Organization Responsibility	Does the plan identify departments responsible for monitoring the plan?
	Timeline for Plan Update	Does the plan identify a timetable for updating the plan based, in part, on results of monitoring changing conditions?
	Indicators	Does the plan identify indicators for each objective?
	Quantifiable Goals and Policies	Does the plan include goals and policies that are quantifiable and based on measurable objectives and/or targets?
Inter-organizational Coordination	Horizontal Coordination	Does the plan include at least one horizontal connection with other local plans/programs? This includes discussion of local governments and other public/private bodies (e.g., conservation authorities), where applicable.
	Vertical Coordination	Does the plan include at least one vertical connection to provincial plans and regional plans, where applicable?
Public Participation	Stakeholders	Does the plan identify the organizations and stakeholders involved in the plan making process (e.g., staff from different agencies or departments, citizen groups, politicians)?
	Purpose of Participation	Does the plan include an explanation of why organizations and stakeholders were involved?
	Public Participation Techniques	Does the plan describe the techniques used to engage stakeholders (e.g., discussion groups, public meetings)?
	Effects on Citizens	Does the plan include a description of its evolution (can include effects on citizens and other stakeholder groups)?
Organization and Presentation	Executive Summary	Does the plan contain an executive summary or similar section that provides an overview/summary of the plan?
	Cross-Referencing	Does the plan allow for cross-referencing that alerts readers to other sections of the plan that are relevant to the section being read?
	Table of Contents	Does the plan include a table of contents detailing plan chapters and subheadings?
	Glossary of Terms	Does the plan include a glossary or definition of terms?
	Illustrations	Does the plan use clear illustrations (e.g., diagrams and graphs)?
	Maps	Does the plan communicate spatial information using maps?
Legislative Requirements	Intensification Target	Does the plan include an intensification target as required under the Growth Plan (2006)
	Schedule 3 and 7 Population and Employment Projections	Does the plan include Schedule 3 and 7 Population and Employment projections as required under the Growth Plan (2006)
	Density Target	Does the plan include a density target as required under the Growth Plan (2006)

## Appendix C: Single-, Upper-, And Lower-Tier Plan Quality Scores

**Table C-1: Plan Quality Scores for Single Tier Jurisdictions (n=10)**

Plan Quality Variables	Mean	Standard Deviation	Minimum	Maximum
Fact Base	4.08	0.79	2.37	5.26
Goals	8.00	1.96	3.85	10.00
Policies	9.69	0.40	9.23	10.00
Implementation	6.90	0.99	5.00	9.00
Monitoring and Evaluation	4.40	2.07	1.00	7.00
Inter-organizational Coordination	6.00	2.11	5.00	10.00
Public Participation	3.25	2.96	0.00	10.00
Organization and Presentation	7.58	1.27	5.00	10.00
Legislative Requirements	9.33	2.11	3.33	10.00
2011 Population	374,907	800,077	30,586	2,615,060
Plan Adoption	2013	2.04	2009	2016

**Table C-2: Plan Quality Scores for Upper Tier Jurisdictions (n=11)**

Plan Quality Variables	Mean	Standard Deviation	Minimum	Maximum
Fact Base	4.11	0.77	3.42	5.53
Goals	10.00	0.00	10.00	10.00
Policies	10.00	0.00	10.00	10.00
Implementation	5.09	2.02	3.00	8.00
Monitoring and Evaluation	4.45	2.02	1.00	7.00
Inter-organizational Coordination	7.73	2.08	5.00	10.00
Public Participation	3.75	3.21	0.00	8.75
Organization and Presentation	7.80	1.07	6.67	10.00
Legislative Requirements	10.00	0.00	10.00	10.00
2011 Population	482,358	390,351	56,881	1,296,814
Plan Adoption	2015	0.75	2014	2016

**Table C-3: Plan Quality Scores for Lower Tier Jurisdictions (n=42)**

<b>Plan Quality Variables</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Fact Base	3.83	0.96	2.63	7.63
Goals	7.91	1.81	0.00	10.00
Policies	9.67	0.59	7.69	10.00
Implementation	6.12	0.97	4.00	10.00
Monitoring and Evaluation	3.71	1.25	2.00	7.00
Inter-organizational Coordination	5.71	1.68	5.00	10.00
Public Participation	1.76	1.73	0.00	6.25
Organization and Presentation	7.20	1.29	5.00	10.00
Legislative Requirements	7.06	4.31	0.00	10.00
2011 Population	103,745	139,847	6,356	713,443
Plan Adoption	2013	2.63	2006	2016