University of Alberta

The Role of Place Promotion and Urban Image in the Development and
Marketing of Rapid Mass Transit Systems (RMT)

by

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Abstract

For many cities, the improvement or development of rapid mass transit (RMT) systems offers benefits to the local population and environment, and contributes to efforts to compete with other centres. This thesis considers the motivations for the contemporary development and marketing of RMT in Edmonton, Canada and Auckland, New Zealand. Data was collected through key informant interviews in each city, supplemented by document analysis and participant observation. It was found that sustainability, interurban competition, political influences and automobility were key themes in RMT development. Place promotion and urban image were found to be moderately important factors and environmental stewardship played a less than expected role. Overall, municipal decision makers are very conscious of the ability to use RMT as a place promotion tool to attract not only economic development, but also a 'creative class' of citizens that will help increase their success in regional or global scale interurban competition.

Acknowledgements

"The important thing to recognize is that it takes a team, and the team ought to get credit for the wins and the losses. Successes have many fathers, failures have none."
- Philip Caldwell

Throughout the writing of my thesis, there have been many obstacles but many paths to overcome them. This is the result of so many people who have made those paths visible and there are indeed many people to thank. I feel that each and every one of them played an integral part in the success of this project.

First and foremost I would like to thank my supervisor, Dr. Damian Collins, for providing me with remarkable guidance. I would not have been nearly as 'on track' without his incredible patience and vast knowledge throughout this process. He was very accommodating and let me 'have my cake and eat it too' during the two years I spent under his supervision, allowing me to balance my thesis with other aspects of my life. He was a source of motivation and encouragement that was very much appreciated.

Secondly, I want to say a huge thanks to my family and friends. As usual, my family was supportive to just the right amount and continually pushed me to strive toward the end goal. Most importantly, I want to thank my wife, Judy, for helping me stay focused (even for putting bells on the office door to prevent a sneaky escape from writing) and being a source of encouraging yet firm editing when required. Thanks also to my friends (in the air or on the ground) who were supportive and understanding when I spent hours writing in my office rather than being social. I hope we're still friends.

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Lastly, although they will remain anonymous, this project hinged on the willing participation of respondents who took time out of their busy lives to be interviewed. You are not anonymous to me and I hope our discussions continue down the road.

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Chapter One - Introduction

1   Introduction

Within the context of Auckland, New Zealand and Edmonton, Canada, this thesis investigates connections between rapid mass transit (RMT) development, place promotion and urban image. It also explores how environmental stewardship, health, interurban competition and the hosting of major international special events are associated with RMT development. RMT is defined here as transit systems that are open to the public, travel on separate rights-of-way from private motor vehicles (but may cross paths at controlled intersections), move large numbers of people in shared vehicles, and offer a relatively quick service. The 'rapidness' of such systems does not necessarily come from high speed travel (although this can contribute to their efficiency) but instead from grade or right-of-way separation, and prioritization over all other traffic at segments of shared rights of way (such as intersections), which allows congestion to be avoided. In this way, r*apid* mass transit is distinct from other forms of mass transit, such as regular bus service. Examples include light rail transit (LRT), subways and dedicated bus lanes (City of Edmonton, 2009; Stuart, 1985).

1.1   A Brief History of RMT
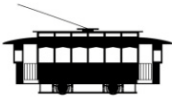
The first system to be built that could be considered RMT is London's underground railway, which opened in 1863 (Transport for London, 2011; Mayo,

Callaghan, & Dalton, 2001) This system, known as the tube, began to be electrified in 1900, bringing about the full emergence of the first modern, underground subway system (Transport for London, 2011). In 1868, New York City opened the 'el', an elevated RMT system that originally ran on cables but then converted to small steam engines in 1871.   A fully modern style of subway followed in 1904 (New York Transit Museum, 2011).

Figure 1.1 shows the types of public transit in New York City and the years they functioned, and also serves as a rough guide to the development of public transport technology more generally. Of the forms of transit listed, the elevated train and subway are the only true RMT systems (LRT is not included). Cable cars or trolleys can be considered RMT in some instances, but more typically share rights-of-way with other forms of traffic, and are not always prioritized over other road users.

The most recent development in RMT is Light Rail Transit which came into existence in the 1970's and was first implemented in North America in 1978 in Edmonton, Canada. This form of RMT is characterized by being electrically driven, running on rails, having multiple cars with high capacity and many access points (doors). Rapid acceleration and deceleration allow for more frequent stops than heavy rail and with less infrastructure requirements (Thompson, 2003).

NEW YORK TRANSIT MUSEUM

New York City Transit Timeline
Quick Reference Guide

Transport	Image	Description	In use
Omnibus		horse-drawn carriage that ran along a fixed route	1827 - 1907
Horsecar		horse-drawn streetcar that ran on tracks	1832 - 1917
Elevated train		train that ran on above-ground tracks	1869 - 1973
Cable car		streetcar operated by underground steam-driven cable conduits	1883 - 1909
Trolley		streetcar operated by overhead or underground electrical power	1887 - 1957
Subway		train that runs in underground tracks	1904 - Present
Motor bus		fuel-powered vehicle that runs along a fixed route	1905 - Present

Figure 1.1: Different forms of public transit in New York City, USA
Source: New York Transit Museum, 2011

1.2 Rationale and Key Ideas

Cities have long competed for industry, investment and people. As the world becomes more connected through the improvement of transportation and communication networks, many cities are finding themselves in competition with others that are not geographically proximate, and have never been historical counterparts. With the increasing mobility of capital at the global scale, this need to compete has led to the emergence of an entrepreneurial style of municipal government where there is less focus on managing the current city, and more focus on attracting new investment (Owen, 2002). One consequence of this new policy paradigm is a reduction in government involvement in urban improvements that takes into account the needs and desires of current residents (Walker & Carter, 2010), and a greater focus on attracting residents, employers and economic activity *from* other urban centres.

Conventionally, the success of a city's promotional efforts has been measured in purely economic terms, such as the number of corporate headquarters or banking institutions (Basolo, 2000). These measurements could also include the number of tourists visiting the city and the economic activity that this brings. However, there is growing awareness of the need for place promotion to incorporate factors outside of the traditional economic realm such as social and political ('extra-economic') factors (McCann, 2004). This is reflected in the criteria used and the attention given to rankings of livability by organizations such as *The Economist*. This is because these factors are being increasingly considered as making a place desirable or undesirable to both individuals and businesses.

One such factor is RMT, as it has a major role in shaping land use and determining how people transport themselves. It also usually involves major capital investment, therefore requiring political and community support, and is a very visible and often well-utilized public service. Moreover, RMT development is increasingly linked to debates of a non-economic nature, including urban quality-of-life, environmentalism, and the ability to host international special events (Liao & Pitts, 2006; Killingsworth & Lamming, 2001; Mackett & Edwards, 1998). It also makes a significant contribution to mobility, which exemplifies social progress (Van der Stoep & Kee, 1997) and is in itself a key factor in the quality-of-life of urbanites – particularly given the spatial diffusion of social functions in cities brought about by *auto*mobility (see Bean, Kearns, & Collins, 2008).

Automobility describes how societies have developed, currently operate and continue to grow based around the primary mode of movement being private vehicles (Goodwin, 2010). A very insightful description of this concept dates back to the first decades of the automobile's existence:

> "...automobiles have come, and they bring a greater change in our life than most of us suspect. They are here, and almost all outward things are going to be different because of what they bring...I think men's minds are going to be changed in subtle ways because of automobiles..." (Booth Tarkington, 1918 in Bertman, 2007, p. 2)

Automobile use is predominant in all parts of developed countries. One of the main ways that we feel the impact of automobility is through the effects that it has had on shaping the form of our cities. There is a strong connection between land use practices and transport practices. For example, if the only way to get to a destination is by car, that location must dedicate a large portion of its infrastructure to parking (Haywood & Hebbert, 2008). Conversely, if two locations are connected by a strong public transit system, they may focus on pedestrian facilities. Cities that emphasize automobility (arguably all cities to varying degrees), land use practices tend to cater to vehicle use and are therefore often sprawling, low density developments (Ferguson, 2009; Turcotte, 2008). However, these practices are inherently unsustainable due to multiple factors including the social, economic and environmental costs of increasing transport distances, oil use and dependency, and conversion of productive agricultural land and natural habitat to urban use (Rajan, 2007).

Sustainable development is broadly defined as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987, np). While most commonly understood in predominantly environmental ways, there are also important economic and social aspects to sustainability. While not a 'fix' for all the negative aspects of automobility, RMT as an alternate form of urban transport may bring considerable improvements to a city's economical, environmental *and* social sustainability (Kenworthy, 2007).

1.3 The Case Study Cities and Positionality

This thesis centres on two case study cities: Edmonton, Canada and Auckland, New Zealand. They have broadly comparable histories of RMT development, and are presently facing similar challenges regarding land use and transport practices. Edmonton was chosen for this research for a number of reasons. Its LRT was the first in North America and one of the earliest anywhere in the world but once built, had limited investment for expansion. Subsequently, a long period of stagnation occurred, which recently ended with the adoption of major expansion plans. It is one of the most automobile dependent cities in Canada (City of Edmonton, 2009) and has grown in a very sprawling fashion.

Auckland, New Zealand also has a history of automobile dominance and limited investment in RMT. Major freeway expansions begun in the 1950's changed the form of the city and dictated a sprawling type of land use. However, major projects are currently being designed and implemented to improve a chronically unreliable and underused urban rail system. Like Edmonton, it is beginning to *re*-invest in RMT, due in part to concern about land use practices and sustainability. More details regarding the context of these cities are provided in chapter two.

Comparative research of this kind involves documenting and analyzing similarities and differences between two or more locations in order to produce broad answers to research questions. In essence, multiple examples of the challenges cities face, and how they deal with them, provide a more general

foundation for conclusions than is possible when only one city is examined. This is important for the present research, as many cities face complex challenges around RMT development and marketing, similar in various ways to those in Auckland and Edmonton.

The comparative nature of this research also stems from personal interests. I have a long-standing concern for transportation planning and development in Edmonton, the city in which I grew up. I have followed transportation plans and seen shifts from road and freeway development to transit development in the city; as someone who has used its transit extensively my entire life, this interest seemed natural. However, given the significance and complexity of the issues around RMT development – which affect many realms of society (politics, marketing, economics, sustainability, health, etc.) and are globally widespread – it seemed appropriate that I expand my research beyond the familiar setting of Edmonton, and indeed Canadian cities more generally, in order to gain a broader perspective. By undertaking a detailed case study comparison with Auckland, a city facing similar challenges to Edmonton, I sought to gain additional perspective on RMT development and marketing.

1.4   Thesis Objectives

This research seeks to understand the relationship between RMT development, place promotion, and urban image. Urban geography has dealt with these issues separately, but rarely together, even although RMT has diverse benefits that extend well beyond increasing mobility, to include a city's reputation

and competitiveness. The link between hosting international special events and using RMT development to foster a better urban image is a particular gap in knowledge to which this thesis will contribute. While it has been observed that cities hosting major international special events tend to make RMT expansions in the lead-up period, little is known about why cities choose to do this: to what extent is it for practical transportation reasons (i.e., to cope with the anticipated influx of visitors or post-event transportation needs), and to what extent is it about boosting urban image, and improving the city's long-term competitiveness? Another significant issue that this thesis addresses is the potential tension in urban policy between prioritizing the interests of current residents and businesses, and the perceived need to attract outside residents and businesses.

Within this framework, this thesis examines information collected in two case study cities in order to:

1. Identify, describe and categorize key themes in the data associated with the development and marketing of RMT systems.
2. Evaluate the importance of place promotion and urban image in the development of RMT systems.
3. Determine the significance of environmental stewardship and health in the marketing of RMT.
4. Assess how the hosting of international special events has influenced RMT promotion and development.

In addition to addressing academic questions, this thesis aims to serve as

an aid to actors at all levels of municipal decision making (from the citizen to the elected government official) seeking to understand policy and planning vis-à-vis RMT. Moreover, by adopting an international comparative approach, the intention is that the findings of this research can be applied to the many cities that have contexts and challenges broadly equivalent to those evident in Edmonton and Auckland.

1.5   Thesis Structure

This thesis combines a thorough literature review of applicable concepts with original research in order to achieve the objectives. Chapter two describes relevant characteristics of the two subject cities. A detailed account of RMT in each is provided, including historical development, descriptions of current systems, and summaries of future projects that are at various stages of preparation. The main industries of each city are outlined and analyzed with reference to the notion of the 'creative class' (Florida, 2005; 2002). The potential contribution of RMT development to attracting creative industries, and their employees, is noted. Finally, outlines of the environmental and health characteristics of each city are given to help explain how RMT is positioned in terms of municipal planning. This chapter provides the vital context for comparative research into RMT issues in Auckland and Edmonton.

Chapter three investigates literature surrounding place promotion and urban image. Within the framework of globalization, explanations of urban hierarchy are provided, and different methods of measurement are analyzed to

explain how cities are positioned on this hierarchy, and how they may move up and down. Particular attention is given to the distinction between conventional and non-conventional factors in interurban competition, including Richard Florida's 'creative class' theories. Managerial and entrepreneurial styles of urban governance are outlined, and their implications for RMT development and urban image considered. The connection between major events, major infrastructure projects and urban image are briefly summarized and the role that RMT might play in the urban image impacts of these types of events or developments is explored.

Chapter four investigates literature addressing RMT development and its contribution to the urban environment. Sustainability is a key focus of the chapter as it is the central concept in most discussions on RMT systems. The environmental, economic and social aspects of sustainability – and the relevance of each to different aspects of RMT development and policy-making - are noted. Special attention is given to the relationship between greenhouse gas emissions, RMT and all forms of sustainability. The concept of automobility is explored in detail including the connections with land use and sustainability. As well, alternatives such as nodal development and transit oriented development are explained and evaluated. Lastly, the potential link between RMT, major events and urban image is further analyzed expanding on concepts from chapter three.

Chapter five describes the methodology underpinning this thesis. It provides further detail on how and why the two subject cities were selected, with reference to both the literature and contextual issues. Ethical considerations for

the research are described and a brief summary of the ethics approval process is given. Some previous studies, specifically those by McCann (2004, 2002) and Siemiatycki (2006), are briefly discussed in reference to concepts that guided the research structure: interurban competition, urban image and place promotion. This is done in order to highlight the foundations on which the research and interview questions were formed. An explanation of the mixed qualitative methods approach is given describing the four methods used (literature review, key informant interviews, document analysis and participant observation). The reasons for conducting a comparative study as opposed to focusing on a single city are given with reference to literature on methodology in comparative urbanism.

The analysis and discussion of the data collected is provided in chapters six & seven where links between the research objectives and the results are detailed. In chapter six, results are segregated by the objective they work to achieve and both subject cities are analyzed in a balanced way. Connections are made between the contexts of the cities (chapter two), the literature on the issues (chapters three and four) and the data obtained during the research. Quotes from respondents are used to show similarities and differences between the two subject cities and excerpts from municipal documents are used to support or contest the respondent's views where applicable. Participant observations are also offered to help give further context to the data.

Chapter seven serves as a concluding chapter that gives a comprehensive, multi-level comparison of the two subject cities and tries to explain similarities

and differences between them. Focus is put on the comparative urbanism

involved in this research and how this thesis has contributed to the field of urban

geography. As well, a number of recommendations for future research are given

with reference to the broad concepts of this thesis and the specific subject cities.

Chapter Two - Context

2   Introduction

This research focuses upon two cities, Edmonton, Canada and Auckland, New Zealand. The methodological reasons for their *selection* is explained in chapter five. This chapter gives detailed *descriptions* of each city, highlighting similarities and differences that are relevant to this study. It begins with an overview of each city, with a primary focus on RMT development. It also documents other relevant areas, including economic development, environment and health, and the hosting of major events.

2.1   Auckland

Auckland is the largest city in New Zealand and the fastest growing in Australasia, with a current metropolitan population of 1.4 million people (Auckland Council, 2011a), which is about one third of the population of New Zealand (Auckland Regional Council, 2010a). In addition, "it is the second fastest growing urban area in Australasia after Brisbane, and has become comparable in size with centres such as Perth and Adelaide" (Auckland Regional Council, 2008, p. 6). On November 1, 2010, seven separate municipalities joined to form a 'supercity' known as the new Auckland Council (Reid, 2011). Before this merger, the actual City of Auckland had just over 400 000 people and the remainder of the population was made up of people living in Manukau City, Waitakere City, North Shore City, Papakura District, Rodney District, and

Franklin District (Auckland Regional Council, 2010; New Zealand Government, 2009).

2.1.1 History of RMT

In Auckland, public rail transit was established at the beginning of the 20th century when there was an extensive electric tram system that at its peak "extended close to the limits of the current core city…[with]…patronage about 300% greater than current levels" (Dravitzki & Lester, 2006, p. 8). One of the main reasons for this was that although "motorcars and buses also started to emerge in the first decade of the 20th century, [they] were not as popular as rail, tram and ferry links, due to cost and availability" (Auckland Regional Council, 2010b, p. 11). In the 1950's, owning a car became very affordable and transportation development started to shift towards roads and away from rail. In 1955, a report by the Auckland Regional Planning Authority heralded this transition:

> "During the last 25 years, the overall effects of motor transportation has so radically changed the pattern that Auckland is one of the most dispersed cities in the world. The individual has been freed from absolute dependence on tramways and railways with their fixed inflexible routes. Local transport of goods has become fast, cheap, and flexible. A common motor transportation system has integrated outer areas and extended the radius of influence of Auckland" (cited in Auckland Regional Council, 2010b, p. 15).

The 1955 *Master Transport Plan* focused on creating and maintaining an extensive urban motorway system that grew out of American concepts of "...material progress; the unquestioned value of growth, including the perception that the 'unlimited' land of the 'new-world' is only of worth when developed; and, foremost, individuality—as exemplified by the artefacts of the personal car and 'freeway'" (Gunder, 2002, p. 130). These ideals were imported to New Zealand and Auckland and were forced, since this system, and the associated physical forms of sprawl and expansion, did not fit easily to an area that is actually quite limited in terms of available land (Harris, 2005).

Due to the prioritization of automobiles and the abandonment of rail transport and public transport in general, by the end of the 1950's, electric tram public transport in Auckland had been discontinued and tracks removed. Heavy rail corridors remained, some of which were still operating passenger services. Even bus public transport, which came to account for most public transport service with the emerging dominance of road networks, declined significantly in this period (Dravitzki & Lester, 2006). Automobile dominance and a decline in public transport is a common story of this period in many cities around the world, although perhaps none so much as Auckland:

"Auckland's population tripled, from 360,000 to 1.1 million, between 1955 and 2000. But public transport patronage plummeted…the 89% decline in per capita patronage is, as far as can be ascertained, the largest

decline in public transport patronage recorded over this period in any large city in the world" (Mees & Dodson, 2001, p. 2)

This dramatic fall in public transport usage occurred despite the city's physical geography being "…generally favourable to rapid transit development, consisting as it does of a dissected maritime setting that imposes significant transport bottlenecks" (Harris, 2005, p. 2). It speaks to the low status of RMT in Auckland during this period. This has been reinforced by conservative political decision-making: when over-reliance on private automobiles began to be recognized as a problem in the 1970's, New Zealand's National Party Government refused to provide funding to Auckland for public transport, despite a push by local politicians (Mees & Dodson, 2001).

Accordingly, a model of development based around private vehicle use and sprawling land use continued:

"This decision to base Auckland's transport system on motorways (rather than the development of a comprehensive public transport system) had a fundamental influence on the shape and the nature of the urban area. The increasing reliance on personal vehicles, along with lenient Government lending policies, allowed people to fulfil their desire of detached houses on large lots leading to rapid suburban expansion and a dispersed urban form" (Auckland Regional Council, 2010b, p. 15).

This explanation succinctly summarizes the relationship between transport development, land use and the historical events that led to the current state of public transport in Auckland. As suburban expansion continued, this created demand for more motorways, which in turn facilitated further expansion. Fortunately, during this period, the rights of way of the historical heavy rail lines did not get re-developed and some remained open. These lines ran from near the CBD to the West, East and South; only the relatively new northern suburbs remain completely unserviced by rail (although ferry services provided a form of public transport for some residents) (MAXX Auckland Transport, 2010).

The widespread projects currently being undertaken are motivated in large part by a desire to break the cycle of increasing sprawl and automobile dependence, and reverse historically low levels of investment. The modern re-emergence of Auckland's urban rail is a story of re-opening and upgrading historical rail lines rather than new development. This process began in earnest in 2003, shortly after the operation of Auckland's rail system shifted hands from the private Tranz Rail authority to the public Auckland Regional Transport Authority (ARTA) (Heatley, 2009).

In 2003, the Britomart Transport Centre opened in the CBD with an underground train station that was a terminus for all three lines, and ridership on rail transport doubled in the two years after its completion (Auckland Regional Transport Authority, 2006a). The Britomart area has a long history of being a transport hub with the land being used as a train station in the late 19th century, a bus terminal in the 1930's and a car-park in the second half of the 20th century

(Britomart Transport Centre, 2011). An underground rail station such as the one that exists now was first proposed in 1973, but cancelled in 1976 only to be re-proposed in 1987 and cancelled the same year (Britomart Transport Centre, 2011).

In 2004, the majority of the single line Western Line began to be double tracked. This was completed in 2010 and was designed to decrease the delays associated with trains having to pull over to allow those travelling in the opposite direction to pass. In 2005, NZD $600 million (CAD $448 million) was allotted by the central (national) government for rail assets which quickly led to many projects and, by 2010, twenty stations had been upgraded and ten new stations had been built (Auckland Regional Transport Authority, 2010a). These consisted of the major Britomart CBD station, as well as two new stations on the Eastern line, four on the Western Line, and three included in the Onehunga line re-opening.

One of the most significant RMT projects associated with the re-investment in public transport has been the construction of the Northern Busway connecting the former North Shore City with downtown Auckland. The busway is a two lane, 8.7km long road that runs alongside State Highway 1, and is dedicated for bus use only. There are five stations, two of which have park and ride facilities. At a cost of approximately NZD $300 million (CAD $230 million), it is "New Zealand's first purpose-built road dedicated to buses" (North Shore City Council, 2010, np) and immediately after opening in February 2008, it was far exceeding ridership expectations, and winning numerous awards for RMT development. Due to its success in moving people to the CBD about twice as fast as was possible by driving on the motorway, a northern extension to the busway is

being proposed (Auckland Council, 2011b). It is a significant improvement to the

RMT system for Auckland, a more complete list of which can be seen in Table

2.1.

Comparing Progress

The Auckland Passenger Transport Network Plan 2006-2016 predicted more progress in 10 years than in the past 50 years. The table below summarises progress from 1954 to 2004, against achievements of the past six years.				
Transport in Auckland 1954-2004 (50 years)			**Progress on Transport 2005-2010 (5 Years)**	
1955	Master Transportation Plan concludes "motorways should be constructed in priority to the underground (CBD) railway project".		2005	Northern Express bus services launched and North Shore bus services redesigned
1959	Auckland Harbour Bridge Opened		2006	ARTA launches first comprehensive plans for Auckland's public transport network
1960	Car ownership had reduced public transport patronage by 42%		2006	Central Motorway Junction completed
1966	First section of Western Line double tracked		2007	First integrated Auckland Transport Plan launched
			2007	Planning for electrification gets under way
1993	19 second-hand diesel trains purchased		2008	Northern Busway opens and Northern Express service takes 5,100 cars off morning peak-time roads
1996	Link bus introduced in CBD			
1998	First dedicated bus lanes in Sandringham and New North roads		2008	Real time passenger info (VPIDs) installed at all high-priority bus stops, and more bus lanes
2000	Suburban rail to Pukekohe was first extension of coverage in more than 70 years		2008	40% tertiary discount fares and SuperGold Card for free senior travel introduced
			2008	Free public transport integrated into sports events and concert tickets
2001	New Zealand cities had one of the lowest rates of public transport use in the world		2009	Contract for integrated ticketing system signed
			2009	Central Connector completed
			2009	SH20 extension through Mt Roskill completed
2002	Government and ARC buy back Auckland rail assets from private operator Tranz Rail, which had underinvested since taking ownership in 1993		2009	Downtown Ferry Terminal improvements completed and substantial rebuilding of piers 1-4 started
			2010	New rail stations at Newmarket, New Lynn and Grafton completed, and Onehunga Branch Line reopens
2003	Britomart Station opens, first refurbished trains in service		2010	New rail link to Manukau City Centre well under way (complete mid 2011) and Western Line fully double tracked
2004	North-western cycleway opened		2010	20 existing rail stations upgraded and 10 new stations built since 2003. VPIDs at three rail stations
2005	Use of public transport increased 15% between 2001-2005		2010	CBD Rail Loop preferred route chosen and protected
			2010	Extra Manukau Harbour Crossing completed
			2010	TravelWise programme is taking 9,619 car trips off the road each morning peak
			2010	60.6m trips taken on public transport. Use of public transport increased 13.9% from March 2005 to March 2010

Table 2.1: History of transport development in Auckland showing intense recent progress, particularly for public transport
Source: ARTA, 2010a, p. 10.

2.1.2 Current RMT System and Future Development

The current RMT system in Auckland is a heavy rail system consisting of three main trunk lines, the Western, Southern, Eastern as well as the recently re-opened Onehunga branch line. The four current lines have a total of forty stations (see Figure 2.1). There are 135 active trains, powered by diesel locomotives, although in 2006, "…over half of Auckland's train fleet [was] more than 25 years old with the oldest nearly 40 years old…" (ARTA, 2006a, p. 9). Nevertheless, rail patronage is 97% higher in 2010 than in 2005 with just under 10 million passenger trips per year, and is the fastest growing sector of public transport in Auckland (ARTA, 2010a; ARTA, 2009). Projects for Auckland's urban rail network currently in progress, include upgrading and re-positioning of stations and improvements to ticketing. With these projects nearing completion, the focus is now shifting to expansion and new initiatives. These include electrification of the rail lines, a proposed underground CBD rail loop and a new line to Manukau.

Somewhat ironically, considering the electric trams of the past, one of the most significant upgrade projects of Auckland's current urban rail system is the electrification of the lines, and a subsequent elimination/retirement of diesel powered locomotives. Electrification was first endorsed unanimously by Auckland City Council in 1969, but for political reasons did not receive approval from central (national) government (Bush, 1971 in Harris, 2005). The project was eventually approved in 2007, but has been delayed again due to a lack of funding for the NZD $496.3 million (CAD $370.3 million) project with no parts of the line currently fully electrified (ARTA, 2010a). New infrastructure is being built

and upgraded to accommodate future electrification including new signalling methods and station designs. Electrification will significantly change the characteristics of the system and perhaps, for the first time, it can actually be able to be referred to as *rapid* mass transit: "…a modern electrified rail system has significant performance advantages over the current [system] including better acceleration between stations and the ability to operate high frequency trains through tunnels" (ARTA, 2009a, p. 9). It is also being undertaken to reduce the air pollution (Heatley, 2009), noise and vibrations associated with diesel locomotives (ARTA, 2009a). In addition, it will allow the building of the second major rail project, the underground CBD rail loop (ARTA, 2010a).

Originally recommended along with electrification in a 1950 report (Mees & Dodson, 2001), the underground CBD rail loop (see Table 2.1) has been in conceptual planning since at least 1955 when it was shelved in favour of motorway projects. Currently, the Britomart Transport Centre is a terminus for all rail lines, and has a single entrance, through which all trains must enter and exit. This bottleneck drastically reduces the potential frequency of trains in and out of the CBD. With a current timeline to be completed by 2021 (ARTA, 2010a), the CBD rail loop "will remove these limitations. [It] would allow rail services to provide direct access to the heart of the CBD at between 3 and 5 minute intervals at peak periods" (ARTA, 2006a, np). In 2010, the recommended route was approved and the land required on the surface has been protected for future development of this project (ARTA, 2010a).

Auckland Rail Network

Map Key

Eastern Line

Southern Line

Western Line

Onehunga Line

Train Interchange Station

Transfer station for bus services to Auckland Airport

BRITOMART Transport Centre

Orakei

Meadowbank

Glen Innes

Panmure

Sylvia Park

NEWMARKET

Remuera

Greenlane

Ellerslie Racecourse

Ellerslie

Penrose Mt Smart Stadium

Westfield

Otahuhu

Middlemore

Papatoetoe

Puhinui

Homai

Manurewa

Te Mahia

Takanini

Papakura

Pukekohe

Waitakere

Swanson

Ranui

Sturges Road

Henderson

Waitakere Central

Sunnyvale

Glen Eden

Fruitvale Road

New Lynn

Avondale

Mt Albert

Baldwin Avenue

Morningside

Kingsland

Eden Park

Mt Eden

Grafton

Penrose Mt Smart Stadium

Te Papapa

Onehunga

Figure 2.1: Map of Current Auckland Rail System
Source: MAXX Auckland Regional Transport, 2011, np

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The branch line off the Southern Line from Puhinui to Manukau City Centre is only 2km long, but is the first entirely new extension to the rail system since the Eastern Line was built in 1930 (Auckland Transport, 2010). Manukau City is one of the municipalities that recently joined the Auckland Council, and its centre was located slightly off the trunk Southern Line. After completion in mid 2011 (ARTA, 2010a), it is expected to become one of the three busiest stations in the system, partly due to its connection to an adjacent Manukau Institute of Technology campus that will open in 2012 (Auckland Transport, 2010).

The dominance of motorway expansion in the middle of the 20th century began a cycle of automobile dependence and land use change in Auckland that forced public transport and RMT in general to decline to insignificance. Proposed improvements were continually delayed, and the once extensive tram network removed. Recognition of the unsustainability of these practices has led to a contemporary re-focusing on RMT. This is evident in the many projects underway to improve public transport, and allow RMT to once again become a significant factor in transport in Auckland.

2.1.3 Economy and Industry

Auckland is the commercial and investment capital of New Zealand, and is therefore a driving force for the country's economy, although "it does not enjoy the same status within Australasia, being comparable to Brisbane or Perth, rather than Sydney or Melbourne" (Auckland Regional Council, 2008, p. 47). There are both strong public and private sector industries, the largest being property and business services, manufacturing and retailing. A comprehensive list of industries
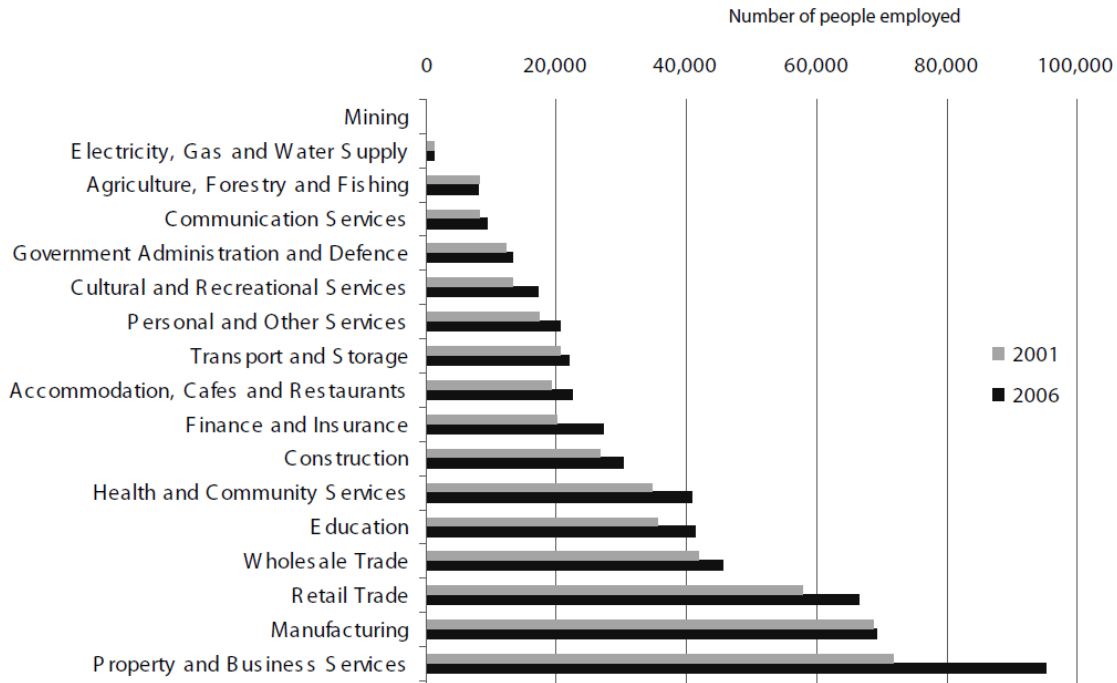
Number of people employed

Figure 2.2: Main industries in Auckland
Source: Auckland Regional Council, 2008, p. 12

that employ the most Aucklanders is found in Figure 2.2. Business services is

also the industry that contributes the most to the gross regional product (GRP) for

Auckland and the gross national product (GNP). Public sector industries such as

education, health and community services rank in the top five to ten industries in

terms of both employment and GRP/GDP contribution (Auckland Regional

Council, 2008).

There are some industries that, while not particularly large, are interesting

to analyze in the Auckland context for other reasons such as being fast growing or

innovative. These are creative industries, biotechnology and information and

communication technology (ICT) (Auckland Regional Council, 2010b; Auckland

City Council, 2008). The first of these is very closely associated with Richard

Florida's (2002, 2005) concept of the 'creative class' (see section 3.1.2) and "are

defined as those industries that have their origin in individual creativity, skill and talent, and have a potential for wealth and job creation through generating and exploiting intellectual property…" (Auckland City Council, 2009, p. 2). According to a report on Auckland's creative industries, these include:

> "…design, publishing, screen production, radio and digital media covering, performing arts, visual arts and music [and] Auckland city has the largest concentration of creative sector employment and businesses in the country, and a growth rate six times the national average in recent years" (Auckland City Council, 2009, p 2).

Creative industries accounted for 5% of employment in Auckland City (prior to the merging to the supercity) and 36% of the creative workers in New Zealand are in Auckland (Auckland City Council, 2009). There are also public sector industries that could be considered 'creative', such as education, which in 2006 employed over 40 000 people in the Auckland region.

Biotechnology and associated support industries is one of the fastest growing sectors in the Auckland area employing 3000 people with 50% of the current 47 companies starting up in three years between 2005 and 2008 (Auckland Regional Council, 2008). Biotechnology is defined as "the application of science and technology to living organisms as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services" (Auckland Regional Council, 2008, p. 33). Another fast growing

industry in New Zealand and in Auckland in particular is Information and Communications Technology (ICT). It contributed NZD $6.2 billion to the country's economy, and with 47% of ICT companies located in Auckland and 53% of ICT revenue coming out of Auckland, it is considered "…a key enabler and driver of productivity in the economy…" (Auckland Regional Council, 2008, p. 22).

2.1.4   Major Events

Auckland has hosted many international sporting events in the past. Most notable are the inaugural Rugby World Cup in 1987 (Rugby World Cup, 2011a), the 1990 Commonwealth Games, the 2000 and 2003 America's Cup yacht races, and numerous Lions rugby union tours, including most recently in 2005 (The British Lions, 2008). Auckland was very successful in hosting the America's Cup in 2000 and 2003 with NZD $450 million of value added to the New Zealand economy in 2003 along with "9,360 full time years of employment at the national level, and 8,180 full time years in the Auckland economy" (Market Economics Ltd, 2003, p. i).

New Zealand was selected as the host country for the 2011 Rugby World Cup in 2005 (Rugby World Cup, 2011b). While ten different cities will hold matches, Auckland will be the site of the majority of key contests (including two of the quarterfinals, both semi-finals, and the final) and as a result will have the greatest influx of international tourists (RWC, 2011a). This event will be the largest that New Zealand has hosted to date and it is expected that there will be NZD $1.15 billion in economic activity, including NZD $507 million added to

New Zealand's GDP and "Auckland, as host of the RWC 2011 Final, stands to gain around [NZD] $240 million in additional gross domestic product and [NZD] $262 million of total direct additional expenditure in the Auckland economy" (RWC, 2011b, np).

The matches in Auckland will be held at Eden Park, the main venue, and also at North Harbour Stadium. Eden Park, built in 1900, is undergoing significant upgrades in facility access and capacity to accommodate the size of these events. From an RMT perspective, "$5 million is being spent on Kingsland Station to widen and lengthen both platforms, and improve access to the northern platform by building a pedestrian underpass and extra stairs over the railway tracks" (ARTA, 20010a, p. 30) (see Figure 2.3, Figure 2.4 and Figure 2.5). It is expected that 75% of attendees will get to the matches by means other than private vehicles, including rail, bus and walking (ARTA, 2010a).

Figure 2.3: Construction at Kingsland Station showing pedestrian bridge over rails - May 2010.
Source: Author.

Figure 2.4: Construction at Kingsland Station - May 2010.
Source: Author.

Figure 2.5: Construction at Kingsland Station showing pedestrian underpass - May 2010.
Source: Author.

There is a corresponding emphasis on making ticketing for public

transport easier for tourists to understand. Currently, there are many different

types of tickets needed to use public transport in Auckland depending on which

operator you are using, what type of transport you are using (bus, rail, ferry, etc.)

and how far you are going (see participant observation in section 6.2). In

addition, multiple ticket purchases can be required for a single trip involving more

than one operator or mode. Some forms of integrated ticketing are being designed

into the event for tourists who would likely find it difficult to navigate Auckland's

current payment system for public transport.

2.1.5   Environment and Health

Auckland is situated in a stunning natural setting surrounded by delicate

environmental ecosystems. As the city grows, more pressure is being placed on

natural areas, most of which have already been adversely affected by

development. Jay (2005) indicated that 85% of lowland forest and wetlands in

New Zealand have been eliminated by human development. According to the

Auckland Council, only 12% of the native forests and 4% of wetlands are

remaining in the Auckland region and only 14% of land is protected indicating a

significant need to shift previous practices before these areas are lost forever

(Auckland Council, 2011c). There is a renewed focus on protecting natural

heritage sites through supporting community programs and providing funding and

grants (Auckland Council, 2011d).

Air quality is one of the most significant health and environmental

concerns in Auckland. It has been estimated that there are 399 premature deaths

per year related to air pollution with 253 being the result of motor-vehicle emissions (Fisher, et al., 2002). As well, air pollutants are contributing to very high rates of asthma, to the point that it is the 4th most common reason for hospitalization and a full 25% of children are asthmatic (Auckland Council, 2011d). To combat this problem, there are joint efforts between the Ministries of Health, Environment and Transportation to reduce congestion and automobile usage as well as improve vehicle technologies (such as the electrification of the rail system) (Auckland Regional Council, 2010d). Various government websites contain directions and tips for reducing individual contributions to poor air quality, including instructions on operating woodburners (Auckland Regional Council, 2010d).

2.2   Edmonton

2.2.1   History of RMT

Similar to Auckland, Edmonton also had a period of flourishing rail public transit in the earlier part of the 20th century. In 1908, the Edmonton Radial Railway Service operated four streetcars throughout the small city and added another forty-seven in cars in 1912 (City of Edmonton, 2011a). Service extended over the high level bridge in 1913 and ridership levels rose steadily until 1935 where they reached a peak of 13.2 million passenger trips per year when the population was only 82 624 (City of Edmonton, 2008). The first bus route began in 1932 and the decline of the streetcar system followed shortly thereafter with the last trip taking place in 1951 (City of Edmonton, 2011a). Like Auckland, and

many other cities of the world, the automobile began to dominate urban transport in the 1950's in Edmonton. This is best seen in the 1969 *Metropolitan Edmonton Transportation Study* which called for a massive network of freeways covering all parts of the city and particularly impacting the downtown (see Figure 2.6). Very little of this plan came to fruition and Edmonton experienced far less freeway development than many other cities, including Auckland. Indeed, there are striking similarities between the *proposed* freeway interchanges near downtown Edmonton that were not constructed, and the Central Motorway Junction in Auckland - commonly known as 'Spaghetti Junction' – that was.

Figure 2.6: Downtown section of Edmonton's 1969 Metropolitan Edmonton Transportation Study
Source: Alberta Roads, 2011, np

RMT in Edmonton began in 1974 with construction of an LRT system to be completed for the Commonwealth Games in 1978 (Kim & West, 1991). When

it opened, Edmonton became the first city in North America and one of the earliest anywhere in the world to build LRT (City of Edmonton, 2011a; City of Edmonton, 2008). The first LRT line extended from the Northeast part of the city, through a mostly industrial area, to downtown where it went underground in the CBD. It consisted of five stations, including one each at the then named Northlands Coliseum, used for hockey, and Commonwealth Stadium, also built for the 1978 Commonwealth Games and used mainly for Canadian football afterwards (City of Edmonton, 2011a). At a cost of $65 million (CAD) at the time ($214 million in 2011 dollars), the LRT was only 7.2km long with two stations underground (Kim & West, 1991).

During the Commonwealth Games, the LRT was frequently used by people getting to and from Commonwealth Stadium. Many users saw it not only as a practical way to travel to events, but also as a futuristic experience, since the technology was unique to Edmonton within North America. However, after the Games, ridership dropped significantly, due mainly to the fact that the line did not go through many residential areas to collect people and bring them to the CBD (Kim & West, 1991). To address this an extension at each end was undertaken in 1983, adding 3.1km at a cost of $105 million ($226 million today) (City of Edmonton, 2011a; Kim & West, 1991).

Justification for the original LRT and for LRT expansion was based on population projections associated with economic prosperity in the 1970's that proved to be a gross overestimate due to the end of the economic boom in Alberta in 1982. Ridership was lower than expected, and many saw the initial capital

costs for the LRT to be far too high for a short system that did not service key parts of the city. One of the main reasons for the high capital cost was that the five CBD stations were built underground (Kim & West, 1991).

For the next twenty years, LRT in Edmonton was mostly stagnant with a short extension to the provincial legislature in 1989 and across the North Saskatchewan River to the University of Alberta in 1992 at a cost of $143 million ($226 million today) (Kim & West, 1991. During this twenty year period, LRT in North America spread quickly and many cities that began development after Edmonton (including nearby Calgary) now had far more extensive systems and much higher levels of ridership. Between 2006 and 2010, Edmonton's LRT extended back to the surface extending 8.7km to the South of the city (City of Edmonton, 2011a). Figure 2.7 shows the 34 year history of Edmonton's LRT, including significant periods of stagnation.
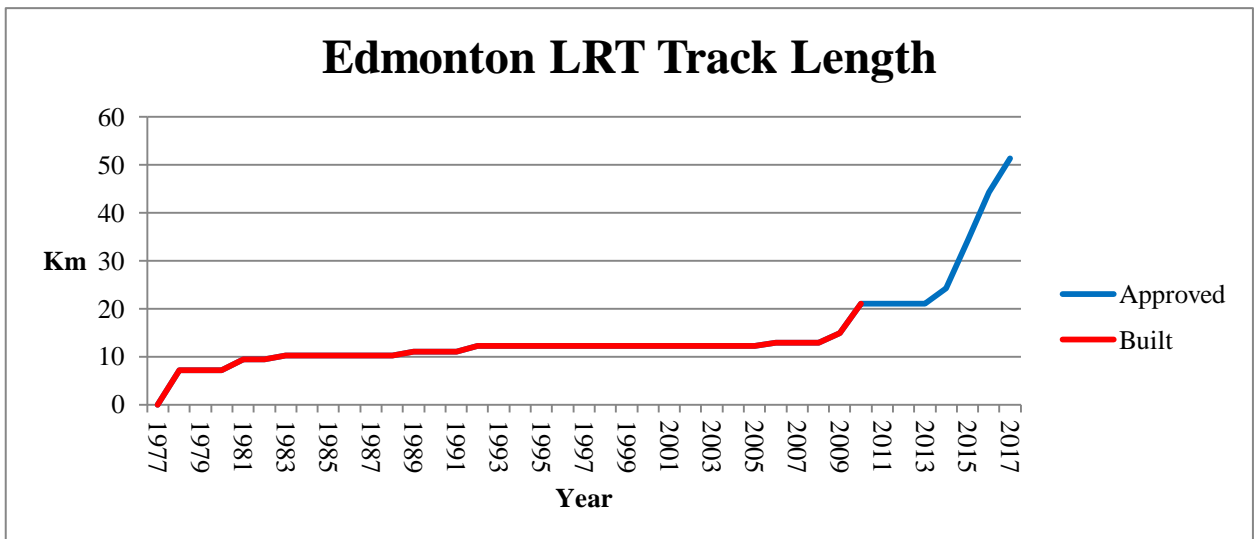
Figure 2.7: Graph showing stagnation in Edmonton's LRT expansion
Based on: City of Edmonton, 2011a; Anonymous, 2010

2.2.2 Current RMT System and Future Development

The current RMT system in Edmonton consists of LRT only, with 15 stations on a single 21 km-long line running from the Northeast of the city to the central South part of the city (see Figure 2.8). There are currently 74 vehicles of two different designs that are usually grouped in trains of three or four during peak hours and most weekdays. The trains run on electricity provided through overhead lines. The current systems attracts about 85 000 riders per weekday (Anonymous, 2010). There are currently very ambitious plans to expand the LRT system rapidly over the next decade.

Whereas Auckland's heavy rail system has long lines that reach very far in different directions, although with relatively poor and unreliable service and antiquated technology (ARTA, 2009), Edmonton has a modern, efficient and reliable LRT system that only services a very small portion of the city. As a result, most of the projects associated with Edmonton's LRT are based on expansion of service area rather than upgrades to technology or infrastructure.

Edmonton's first set of major expansion plans are to be completed by 2017, a year that was likely chosen to coincide with the potential hosting of the World Exposition, for which the city was in the bidding process during the course of this research. By 2017, the one line system is planned to expand to a four line system (see Figure 2.9) and more than double in length to 51km and 44 stations (Anonymous, 2010). Considering that the system at one point went 14 years without any expansion, this is a significant shift in priority for the city's transportation system.
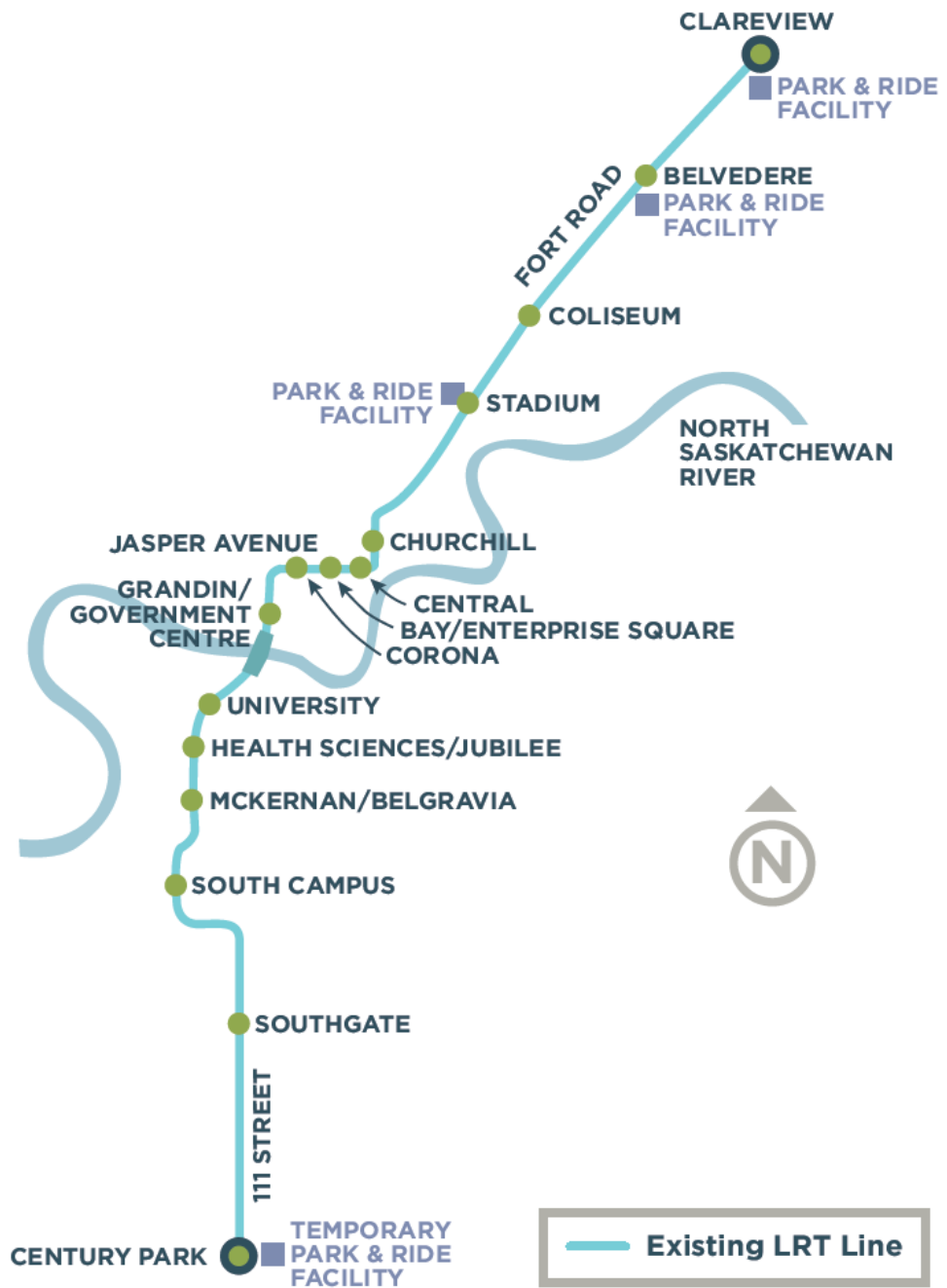
Figure 2.8: Edmonton's Current LRT System
Source: Anonymous, 2010
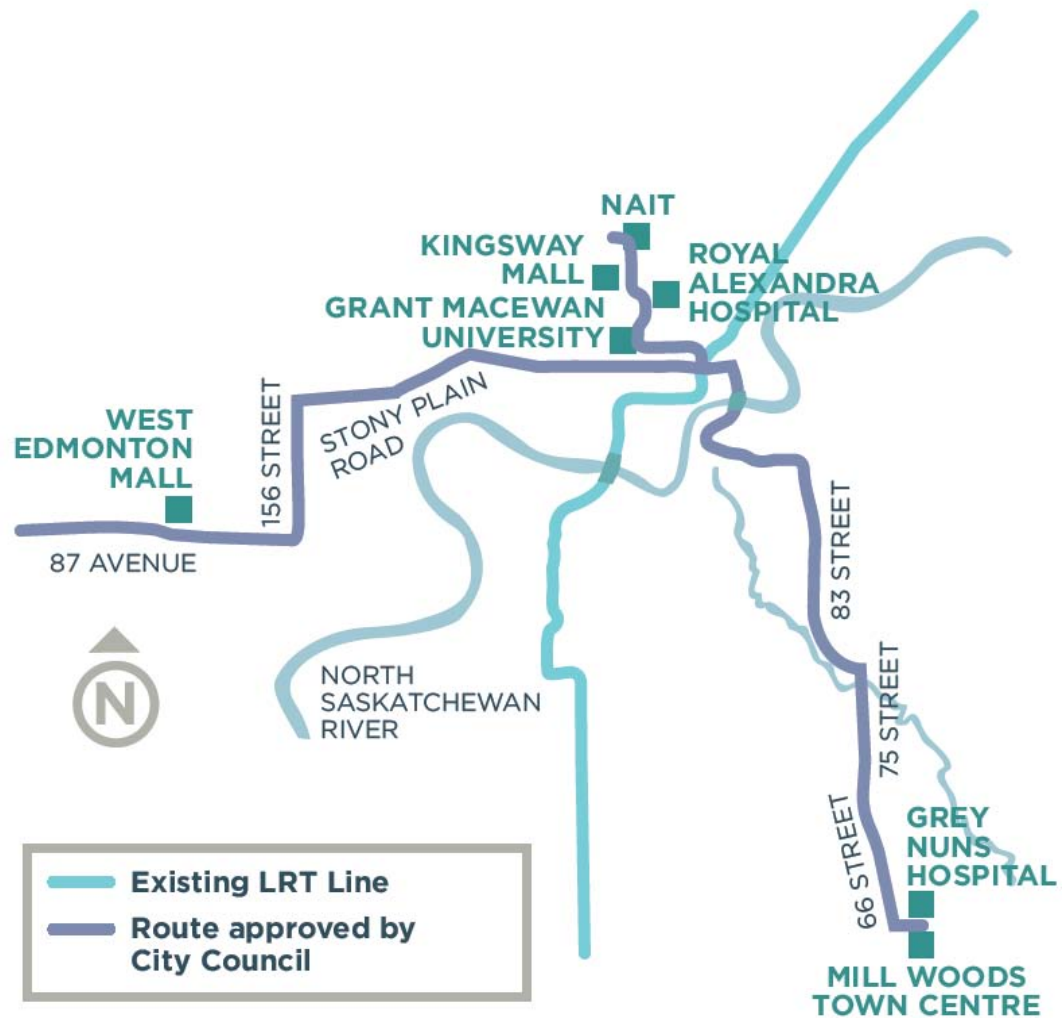
Figure 2.9: Edmonton's LRT System in 2017
Source: Anonymous, 2010

The first new line to open, which is already under construction and is

expected to be complete in 2014, is the North LRT to NAIT (City of Edmonton,

2011b). NAIT is the Northern Alberta Institute of Technology which is a campus

located north of the CBD near the City Centre Airport and The Royal Alexandra

Hospital. This 3.3km expansion will include three new stations and is predicted

to cost CAD $725 million (Anonymous, 2010). It will branch directly off the

existing system and will use the same technology and infrastructure types. This

line will serve as the beginning of the Northwest Line which is anticipated to run through the City Centre Airport to the suburban city of St. Albert.

The other two planned LRT lines will not directly connect to the existing system but will share a station in the CBD so riders can transfer easily between them. The main reason for this lack of connection is that the Southeast and West lines will be of a different design and use different train technology. The so-called "Urban Style, City Scale LRT" (City of Edmonton, 2010a, p. 10) will use low floor vehicles, which will reduce the amount of infrastructure required at stations and improve integration of stops with surrounding communities. As well, stops will also be much more frequent than is the case for the current system. This modern form is used in many parts of the world - including Bordeaux and Strasbourg, France, Melbourne, Australia and Minneapolis, USA (City of Edmonton, 2010a).

The Southeast Line will run approximately 15km from the CBD towards the community of Mill Woods. There will be eleven new stations, with the line passing through the North Saskatchewan River Valley at Louise McKinney Park, Bonnie Doon Mall and the Grey Nuns Hospital before ending at Mill Woods Town Centre (City of Edmonton, 2011c). It is expected that this line will cost CAD $1.6 billion (Anonymous, 2010). The Western Line will run approximately 12km from the CBD to the western suburban community of Lewis Estates. There will be fifteen new stations, with the line passing through the Jasper Place Transit Centre, the Misericordia Hospital and West Edmonton Mall (City of Edmonton,

2011d). It is expected that this line will cost CAD $1.1 billion (Anonymous, 2010)

2.2.3 Economy and Industry

At present, the economy of Edmonton is one of the strongest in Canada with significant annual growth in economic output: "the final value of all goods and services produced in Edmonton is up from $37 billion in 2000 to $50 billion in 2007 – an increase of $12 billion, or 34%, with almost every sector in Edmonton's economy contributing to this increase" (City of Edmonton, 2011e, np). The largest industries in terms of economic output are Finance and Real Estate (17.4%), Manufacturing (12.8%) and Construction (12.7%) (City of Edmonton, 2011e). The sector that employs the most Edmontonians is the retail trade, which employed 111 110 people in 2008 (City of Edmonton, 2011l). The public sector is also significant, with healthcare and social assistance being the second largest sector of employment in 2001. A complete list of the industries that employ the most Edmontonians is found in Figure 2.10, although it should be noted this dates from 2001.

Labour Force by Industry

Industry Group	People	% Total
Retail and Wholesale Trade	61,900	17
Healthcare and social assistance	38,525	10
Manufacturing	31,920	9
Accommodation and food services	30,035	8
Professional, scientific and technical services	27,415	7
Educational services	27,105	7
Construction	26,350	7
Public administration	23,000	6
Other services (except public administration)	20,100	5
Transportation and warehousing	18,270	5
Administrative and support, waste management	17,095	5
Finance and insurance	12,890	3
Information and cultural industries	10,010	3
Arts, entertainment and recreation	7,775	2
Real estate and rental and leasing	7,020	2
Mining and oil and gas extraction	6,640	2
Utilities	2,670	1
Agriculture, forestry, fishing and hunting	1,875	1
Total	370,595	100

Figure 2.10: Largest employers in Edmonton by sector
Source: City of Edmonton, 2001

A great deal of the prosperity currently enjoyed by Edmonton is due to the fact that it is "…strategically located between the world's second-largest oil reserves and the world's largest energy market" with many of the manufacturing and construction projects in support of the oil sands in the Athabasca region (Edmonton Economic Development Corporation, 2011a, np). The oil and gas industry in which Edmonton is deeply involved produces "…one-quarter of Alberta's gross domestic product, almost 70% of our exports and 35% of Alberta government revenues. The energy industry accounts for 275,000 direct and indirect jobs" (Government of Alberta, 2011, np). 'Creative industries' also play an important role in Edmonton, with 48 667 people being employed in educational services in 2008 (City of Edmonton, 2011l), 32 300 people employed in natural and applied sciences and 11 905 employed in art, culture, recreation and sport (Statistics Canada, 2006).

2.2.4   Major Events

Edmonton has a history of hosting mid-range international events. The most prominent have been the 1978 Commonwealth Games, the 1983 World University Games, the 1984 and 1990 World Baseball Championships, the 1996 World Figure Skating Championships, 2001 World Triathlon Championships, 2001 IAAF world Championships in Athletics (the first time these were held in North America) and the 2005 World Masters Games (Edmonton Economic Development Corporation, 2011b). It has also hosted multiple Grey Cup Championships of the Canadian Football League, Indy car races, and various international and national championships in hockey, swimming, curling, gymnastics, boxing, soccer, volleyball as well as other sports (Edmonton Economic Development Corporation, 2011b). As noted above, the 1978 Commonwealth Games brought the development of the LRT system as well as construction of Commonwealth Stadium, the location of many of the above-listed events. Indeed, this stadium has made major contributions to economic activity in Edmonton (McCloy, 2002).

Edmonton's effort to attract the 2017 World Exposition began in 2007, with a national bid being submitted in 2009. The chosen theme of "Energy and Our Planet," with an overarching emphasis on sustainability, was seen as appropriate for Alberta, given the significance of the energy sector (Government of Alberta, 2011). It was believed that "Edmonton, Alberta and Canada would be positioned on the international stage as leaders in energy and sustainability creating a knowledge legacy" (City of Edmonton, 2011f, np). The bid was

motivated in part by 2017 being the 150th anniversary of Canada, and hosting the Expo was a way to showcase this (Montreal hosted the 1967 Expo on Canada's 100th birthday) (City of Edmonton, 2011f).

The event was proposed to take place primarily on the University of Alberta South Campus, with new buildings and infrastructure that were to be used after the event by the University. It was estimated that hosting the event would cost CAD $2.3 billion with funding to come from multiple levels of government and private corporations. Total revenue was projected at only $127 million, but with an additional $100 million in corporate sponsorship and $2.6 billion of other economic impacts in the area (City of Edmonton, 2011f). The bid had support from the City of Edmonton and the Government of Alberta, but did not get support from the Government of Canada, and was therefore withdrawn in November, 2010 (City of Edmonton, 2011f).

In terms of public transport during major events, unlike Auckland, Edmonton has a very simple system of ticketing that makes it easier for visitors. There is only one type of ticket for all forms of public transport, which allows the holder to travel any distance, in any direction, for ninety minutes. In addition, there is no zoning system within the City of Edmonton. The contrast with Auckland is marked, as noted in the participant observations in sections 6.1.2 and 6.2.

2.2.5   Environment and Health

Edmonton claims a strong reputation as a leader in environmentalism (City of Edmonton, 2011g). One reason for this may be due to having the "largest

expanse of urban parkland in North America" (City of Edmonton, 2011h, np; Guenter, 1995) in the North Saskatchewan River Valley. As well, the city is home to the Edmonton Waste Management Centre, which includes noteworthy as "North America's largest collection of modern, sustainable waste processing and research facilities" (City of Edmonton, 2011i, np), and is soon to be have "the world's first industrial scale municipal waste-to-biofuels facility" (City of Edmonton, 2011j, np). This waste management centre is the culmination of a long history of recycling with Edmonton also being "one of the first North American cities to launch a curbside recycling program in 1988. The program has a voluntary participation rate of 89 per cent." (City of Edmonton, 2011g, p. 15).

As part of the City's strategic plan entitled *The Way Ahead*, there is a major environmental plan entitled *The Way We Green*, which outlines Edmonton's plan to become a leader in sustainability and resiliency in energy, water, food, air, solid waste and biodiversity (City of Edmonton, 2011g). Policies are being put in place to achieve these goals, including shifts in energy production, re-prioritizing of integrated natural areas and encouragement of water conservation through education and new technology (City of Edmonton, 2011g). For example, there are efforts to reduce greenhouse gas emissions from city operations by implementing upgrades and changes in the design of city-used buildings as well as new private developments. Other significant goals relate to land use and transportation. These include ensuring "less intrusion of automobiles" (City of Edmonton, 2011g, p. 37) into neighbourhoods, encouraging

more density through residential infill, and integrating housing development with public transit lines.

Under the same umbrella strategic plan, the document that addresses health and lifestyle issues for the people of Edmonton is called *The Way We Live*. It focuses on four areas of livability: housing, transportation, affordability and safety (City of Edmonton, 2011k). Goals include expansion of the LRT system, creating more public recreation facilities at more affordable prices, and improving the sanitation of public parks and washrooms (City of Edmonton, 2011k). Edmonton has a strong focus on livability issues as they relate to the natural environment and health.

2.3   Conclusion

Auckland and Edmonton share similar historical stories of automobile dominance at the expense of public transit. Proponents of RMT in both cities were held back by political and economic forces throughout the mid-to-late 20th century. With the exception of the Northern Busway, Auckland's current efforts at RMT development deal mostly with upgrading heavy rail lines. In addition to having no new rail lines built for 80 years, projects such as the Britomart Transport Centre, line electrification, and the underground CBD rail loop have witnessed decades of delays. Edmonton's projects focus on expanding the area served. Both of these types of development are very expensive and funding has been an ongoing issue for both cities (although it should be noted that the construction and maintenance of roads is also very expensive).

Concerns over sprawl, and a focus on sustainability, are now pushing these cities towards re-prioritizing RMT and public transit. Increasing pressures on the environment and health in Auckland are influencing policy, while in Edmonton, the vision of becoming a sustainability leader underpins support for RMT. The similarities and differences between these two cities with regards to RMT, economic foundations, and policies on environment and health set the foundation for research on the relationship between place promotion, urban image and RMT development.

Chapter Three – Place Promotion

3   Introduction

Municipal self-promotion and the creation of a positive urban image are becoming increasingly prominent in policy making (Loftman & Nevin, 1996). In addition to interurban competition for resources, it is important to recognize that urban policy is often shaped by the desire to move up in the perceived 'hierarchy' of cities (Misener, 2008; McCann, 2002). Consequently, urban image (what a city appears to be to the rest of the world) and place promotion (marketing a certain image for a city) become critically important. This chapter begins by discussing conventional and non-conventional aspects of interurban competition and its relationship with urban hierarchy. It will then establish how urban image is constructed in terms of the environment, human health and major infrastructure projects, including transportation.

3.1   The Entrepreneurial City, The World City, and Interurban Competition

The emergence of the entrepreneurial city and the concepts of urban image and place promotion have developed alongside each other and are closely related. The combination of globalization, trade liberalization and urbanization has brought about a global market in which cities are the key hubs of investment and trade and are therefore increasing their direct competition with other cities around the world (Wolfson & Frisken, 2000). This competition has led to a shift from a

managerial style of urban governance to an entrepreneurial style of urban governance. A traditional 'managerial' style of municipal governance is one with "policies focused on social welfare and the democratic concerns of public participation and accountability in planning" (Owen, 2002, p. 324). While this description is highly idealistic, managerialism has been a key aspect of municipal governance, although economic interurban competition has always been a guiding principal as well. The key point is that the managerial style is being increasingly overshadowed and there is an increasingly predominant concern with attracting new investment, businesses, consumers and residents (Young, Diep, & Drabble, 2006; Owen, 2002). This alternate form of governance is broadly defined by Jessop & Sum (2000, p. 2289):

> "An entrepreneurial city pursues innovative strategies intended to maintain or enhance its economic competitiveness *vis-à-vis* other cities and economic spaces. These strategies are real and reflexive. They are not 'as if' strategies, but are more or less explicitly formulated and pursued in an active, entrepreneurial fashion. The promoters of entrepreneurial cities adopt an entrepreneurial discourse, narrate their cities as entrepreneurial and market them as entrepreneurial".

Through this definition it becomes clear that the entrepreneurial city is intrinsically concerned with competition, envisioned in economic terms. A central contention of this chapter is that this focus manifests in two related but

separate ways: one 'conventionally' economic, and the other encompassing a much broader, less conventional focus on factors that may promote a city's image.

When interurban competition is described and defined, the focus is usually on factors that could be considered typical or conventional economic indicators. These include: the number of trans-national corporations in a particular city, the GDP of a city and the number of banking institutions (Nijman, 2007; Saito & Thornley, 2003; Yusuf & Wu, 2002). To be successful within these markers, a city will focus on attempts to convince companies that a particular city is very business friendly. Lowering corporate taxes, providing subsidies and offering assurances that there is a cheap and productive workforce may be ways in which a city can make itself more attractive to investment. Wu (2003) terms this aspect of a city's focus "the city of work".

There are also non-conventional economic aspects of interurban competition. While the ultimate benefit may be economic, the primary focus or initial impact may be non-economic in nature. For example, competition may take place between cities around aspects of arts and culture, environmental stewardship, human health or entertainment. This kind of focus could be termed "the city of play" where cities "…attempt to capitalize culture and thus attract capital from consumers and conventions" (Wu, 2003, p.56). These are not overtly economic in nature, in that there is no direct link between, for example, building a public park and securing an economic gain (unless a fee is charged to visit it). There is, however, the possibility that this park will raise real estate values in the area or make the area more attractive to live or work in. The assertion is that *it is*

the influence that non-conventional factors have on locational decisions of people and businesses that eventually brings about the economic gain. As such, it has been found that non-conventional economic factors are important in interurban competition (Nijman, 2007; Basolo, 2000).

London, Tokyo and New York are cities that are typically considered 'first tier' global cities. All three are expensive places in which to live, work and do business. For London and New York, in particular, it could be argued that their success is due in large part to aspects of the "city of play." Both have very strong reputations as culturally pivotal cities, and this is surely a large part of their appeal. Tokyo is often listed in the top tier due to the striking technological and scientific boom of the 1970's and 1980's that brought substantial economic growth, although its inclusion is now debateable, as will be discussed in section 3.2.4.

In order to understand more fully the relationship and distinction between conventional and non-conventional economic dimensions of interurban competition, an analysis of regional partnerships between cities is useful. To do this, a brief history of globalization will be followed by the explanation of a hypothetical competitive situation and an exploration of Richard Florida's theory of the 'creative class'. These three perspectives underpin the key suggestion of this chapter - that urban regional partnerships are central to success in contemporary interurban competition.

3.1.1   Globalization

Globalization is often although of as a recent phenomenon centred on advances in communication and travel technology, the end of the Cold War, and complex networks of international trade (Northrup, 2005). In reality, globalizing forces have been around for centuries, and "even in ancient times, long-distance trade networks linked surprisingly distant parts of the world" (Northrup, 2005, p. 254). However, the recent expansion of trade and advances in technology have accelerated this process and brought it to the forefront of society, while also producing "…enormous shifts in the contours of the global economic map" (Dicken, 2009, p. 563). Globalization can also be although of as a cultural convergence involving people from all parts of the world. This convergence includes aspects of human life such as religion, language, traditions, beliefs, knowledge and technology. It too has been happening for centuries through exploration, imperialism, wars and trade. Again, it was in the 20th century that this convergence accelerated rapidly, seen most obviously (and negatively) in the two World Wars, the events of which, for the first time in human history, literally involved or seriously impacted most of humanity (Northrup, 2005).

One of the most important agents of globalization is the transnational corporation, which is a company that "has the power to coordinate and control operations in more than one country" (Dicken, 2009, p. 564). Accordingly, "in many accounts of the development of globalization, the actions of firms and multinationals in particular are given central importance" (Morgan, 2001, p. 119). Again, as with the conceptualization of globalization, it is also often thought that

transnational corporations are a post World War Two phenomenon resulting from the increased connectedness of the world (Carlos & Nichols, 1988). However, the first transnational corporations existed during imperial times when companies such as the Hudson's Bay Company and the English and Dutch East India Companies ran international, connected merchant trading (Dicken, 2009). These companies "traded goods and services across national boundaries and had a geographical reach rivalling today's largest multinational firms" (Carlos & Nicholas, 1988, p. 398). While these companies did not have the advanced communication and transportation technologies of today's transnational corporations, they were able to spread as extensively due to being closely tied to imperial expansion of their home countries.

Many of today's transnational corporations work well outside the significant control of governments and as such are not constrained by formal relations between countries. In fact, they are becoming incredibly powerful within multiple countries to the point that some argue that in certain sectors, they are becoming more powerful, politically, than the official governments (Northrup, 2005). For example, it may be argued that certain nongovernmental organizations, such as these corporations, are more dependent on one another more readily than official governments do. The result, as it relates to this chapter, is that the relative power and influence of these corporations must be considered when examining the efforts of municipal governments to attract and retain them.

3.1.2 The 'Creative Class'

Richard Florida (2002, 2005) believes in the existence of a 'creative class' which consists of those who make a living through their creative labour, such as people in "science and engineering, architecture and design, education, arts, music and entertainment whose economic function is to create new ideas, new technology and/or new creative content" (Florida, 2002, p 8). These people will contribute to the economy conventionally through their work, but are not attracted to a particular place by conventional economic factors. These individuals do not identify with the number of transnational corporations a city has or the strength of the world banking sector in the city when making locational decisions. The 'creative class' is attracted to cities with a strong sense of place demonstrated by vibrant arts and culture, environmental stewardship, human health and/or entertainment factors.

Connected to this theory is the concept of the "creative economy", in which "...knowledge and creativity have replaced natural resources and the efficiency of physical labour as the sources of wealth creation and economic growth" (Florida, 2005, p. 49). Making a city attractive to business and investment has more to do with making the living urban environment attractive for the *people* who will be working in these businesses, than making the business environment attractive economically. In this way, the pathway to economic success begins with the creation of a positive sense of place and urban image.

Florida's concept is related to the alternative viewpoint of interurban competition, that nearby cities should cooperate in order to better compete with

distant cities. Santo (2007) conducted a study to determine if non-conventional economic indicators were the driving force behind municipalities spending money on new stadiums for professional baseball teams rather than conventional economic indicators. It was determined that new stadiums have little impact on the economies of cities, and "…conventional economic indicators cannot justify public investment in sports facilities" (Santo, 2007, p. 456). Rather, the 'image' benefits associated with the new stadiums are considered important to raise the cities to "big league status" which can create a greater level of "civic pride" and "community cohesion". Since these benefits are not inherently economic, in order to justify the costs, a regional cost-sharing approach is required. If this approach is used, both the monetary cost associated with the new stadium and the image benefits are shared regionally. In this example, *regional* cooperation to create *non*-conventional economic benefits was deemed to be the best course of action for cities.

3.1.3   Regional Partnerships are Key

If the concepts of the 'creative class' and subsequent 'creative economy' are accurate, then under these conditions, the regional, cooperative approach, incorporating non-conventional economic aspects, is an appropriate policy choice. It is suggested that 'creative workers' would likely visit the surrounding region of the city in which they are situated and therefore, it has to be the entire region that attracts these workers, not one compartmentalized city. If a city was an attractive choice for a 'creative worker' but that city had out-competed the surrounding area, making it an oasis surrounded by undesirable features, this could

significantly impact the locational choice of the individual. In this way, making regional planning decisions and focusing place promotion on a regional scale, is a more successful method to increase not only the region's ability to compete internationally, but also the ability of the component cities as well.

3.2   Urban Hierarchy

Urban hierarchy refers to a classification of cities generally based on the size of their sphere of influence and the degree to which they are key nodes in finance, trade, communication and transportation, among other factors (Yusef & Wu, 2002). The reality of the urban hierarchy concept is that there is no universally accepted method of classification or set of results, it is simply agreed that a hierarchy exists. While the first discussions of a hierarchical relationship between cities began with Christaller in 1933, the formal foundations of the current understanding of this hierarchy began with the work of Friedmann and Wolff (1982) who introduced and brought detail to the idea of 'world cities'. They described such cities as having "control over production and market expansion" (Friedmann & Wolff, 1982, p. 310) and recognized the emerging dominance of transnational corporations as influencing factors in the hierarchy. It can be argued that their work gave too broad a definition of what it takes to be a 'world city' and the result was a very large initial list of emerging world cities that made it easy for others to justify the addition of more cities to the list, many of which would be considered quite regional in nature. For example, the original list

from Friedmann & Wolff included cities such as Zurich and San Francisco alongside London and New York.

In Sassen (1995), this list is considerably smaller including only New York, London and Tokyo. She also focuses on methods of control, stating that these three cities "concentrate the infrastructure and the servicing that produce a capability for global control" (Sassen, 1995, p. 3). These 'big 3' have been commonly accepted as in a class of their own since this publication, although recent studies suggest that Tokyo may have been a hasty addition, and that it does not necessarily merit this status anymore (Taylor, Catalano, & Walker, 2002). In Sassen (2001), Frankfurt and Paris are added to this list, although the 'big 3' remain slightly above them. One can see the beginnings of a structured hierarchy through the initial steps of these two main works.

Because the hierarchy was not as structured initially, terms such as 'world city' or 'global city' are used in a variety of contexts. In other literature, it is stated that hosting the Olympic Games is the "hallmark symbol of world city status" (Paul, 2005, p. 2103), which would mean that some regional cities would be added to the list including Atlanta, Munich and Helsinki. Clearly, Paul (2005) is not claiming that these cities exist on the same scale as New York or London in terms of their sphere of influence, rather that the Olympic Games bring such spectacle to a city that it becomes well-known internationally (Short, 2004).

Wu (2003) references Marcuse & van Kempen (2000) for the difference between a "global city" and a "globalized city", where the former interacts on a global scale producing global forces and the latter interacts on a global scale but

primarily as a recipient of global forces. This distinction can be very helpful when determining what is really meant by the term 'global city' in the context of a particular publication or study. It must also be remembered that the hierarchy is in constant flux and cities may move up and down on it depending on who is 'winning' and 'losing' in the competition.

The fact that there is no generally accepted list or method of classification is troublesome to negotiate in defining the urban hierarchy, but one of the key factors is the concept of scale. Within the hierarchy, cities compete with other similarly situated cities. For example, it is unlikely that London and Edmonton compete very often for similar investment, resources or image recognition as they are operating at different scales. It is much more likely that Edmonton competes with Calgary, and London competes with New York. For Edmonton to move up the hierarchy, it does not have to show itself as 'better' than London, simply better than cities just above it.

The typical way in which cities are classified based on their sphere of influence deals almost exclusively with conventional economic factors. These include discussion of the global control capability of transnational corporations, world banking, world markets and multisite manufacturing (Sassen, 2001; McCann, 2002). This theme pervades debates about whether a city is a global city and, if not, where else it is located on the hierarchy.

McCann (2004) compared the situations of 3 U.S. cities with reference to their rankings on the 'best places' rankings popular in mainstream media. One (Austin, Texas) usually ranks highly on the list while two (Lexington, Kentucky

and Columbus, Ohio) do not. While these three cities have very similar contexts (size, growth rates, commercial and industrial make up and government) there is a wide discrepancy in their reputation for livability (McCann, 2004). It was found that some of the distinguishing characteristics were 'extra-economic' forces and the way the popular media portrayed these places, which was highly political and depended upon changeable criteria. The complexities of how a city ends up at a certain place on the hierarchy are important to consider. However, ultimately, this thesis is less concerned about where cities rank on the urban hierarchy than about the methods and processes they pursue in attempts to improve, or at least maintain, their ranking.

In general, if cities have an entrepreneurial motivation, they desire to move up in this hierarchy. Traditionally, conventional indicators are where cities have focused policies and resources to attract growth in the economic sector. It has been argued that in addition to these conventional economic factors, "…elements of a city's infrastructure, governance structure and culture…" are required to move up in the hierarchy and that these are achieved through actions that "…combine economic and extra-economic factors" (McCann, 2004, p. 1914). McCann's extra-economic factors are very similar to the non-conventional economic factors discussed in this chapter ,and are centred on "high levels of amenity and quality of life" (McCann, 2004, p. 1913) – aspects that "…do not enter directly into exchange relations" (Jessop and Sum, 2000, p. 2290).

One of the most recent and comprehensive attempts to define the urban hierarchy was undertaken by the Globalization and World Cities Study Group and

Network (GaWC) at the Geography Department of Loughborough University in the UK. This project recognized that while there was literature that outlined a hierarchical network of cities, no previous material had done enough to specify the means by which cities (as nodes) were connected. Without clear explanations of what the connections are, the hierarchy cannot be measured. This study argued that the nodes (cities) are connected through complicated social networks, akin to the idea of non-conventional economic indicators previously discussed. They used a complex analysis of the advanced producer services sector (finance, accounting, insurance, law, etc.) to determine the degree to which a particular city is connected to the "world city network", defined as a "complex amalgam of multifarious office networks of corporate service firms" (Taylor, et al., 2002, p. 2367). In this network, the players are conventional business offices, yet their connection to the network and the connections between nodes are not measured via conventional economic factors such as cash flow, increases in economic transactions, or contribution to the economy. Instead, they are measured in terms of the social interactions between the individuals within these service-based businesses and their clients. In this way, this method deals with and measures both conventional and non-conventional economic indicators, making it a balanced approach to measuring urban hierarchy which arguably leads to more accurate results.

The first results were for the year 2000, with updated reports following in 2004 and 2008. The results categorized cities into five main categories: Alpha, Beta, Gamma, High sufficiency and sufficiency. The term 'sufficiency' refers to

the degree to which they are not reliant on the top tier, global cities such as New York or London, for advanced producer services. These categories are structured similar to the letter grading system at most universities, an outline of which is located in Table 3.1.

Urban Hierarchy Classification (GaWC)
Alpha++
Alpha+
Alpha
Alpha-
Beta+
Beta
Beta-
Gamma+
Gamma
Gamma-
High Sufficiency
Sufficiency

Table 3.1: Classification of Cities according to the GaWC
Based On: Taylor, et al., 2002

Cities in the 'Alpha' category are what would be considered the typical 'global city' or 'world city', however, the four levels of 'Alpha' cities help distinguish further (see Figure 3.1, Figure 3.2 and Figure 3.3). Interestingly, in all

three reports, the only two Alpha++ cities in this study were London and New York, with Tokyo consistently ranking as an Alpha+.

With this well defined urban hierarchy in mind, an analysis of some cities at various levels and stages of the transformation from a regional city to a world city will further illustrate the relationship between interurban competition and urban hierarchy. While these case studies all use the term 'world city' or 'global city', as previously discussed, these terms cannot be perceived as indicating competition with London, Tokyo or New York but rather with like cities at a certain tier in the global cities hierarchy. The following analysis considers Shanghai, China and Minneapolis-St. Paul, USA, both of which show signs that they may be on the verge of moving into world city status (Yusef & Wu, 2002; Paul, 2005). It also examines claims that Miami, USA has emerged as a world city, but in a very unique way (Nijman, 2007) while Tokyo's classification as a world city is shifting (Saito & Thornley, 2005). One key factor to remember when examining these case studies is that it seems that research or focus on the urban hierarchy is very much skewed towards the upper end of the hierarchy and the methods and conduits that cities use to move up in the lower tiers may be different.
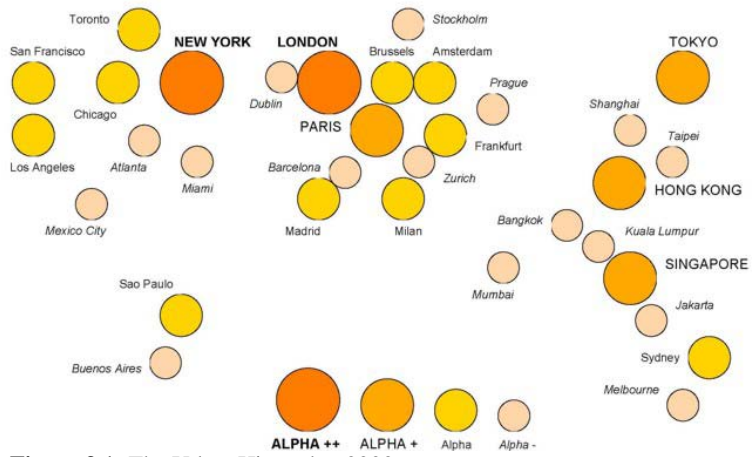
Figure 3.1: The Urban Hierarchy, 2000
Source: Globalization and World Cities Research Network,
2000
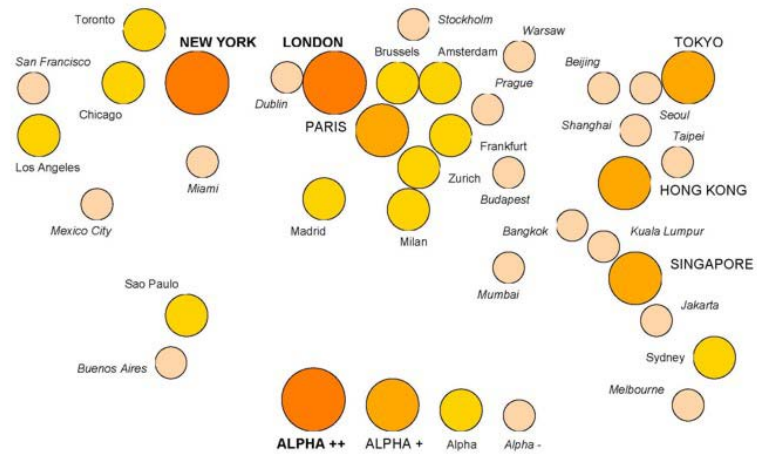
Figure 3.2: The Urban Hierarchy, 2004
Source: Globalization and World Cities Research Network, 2004
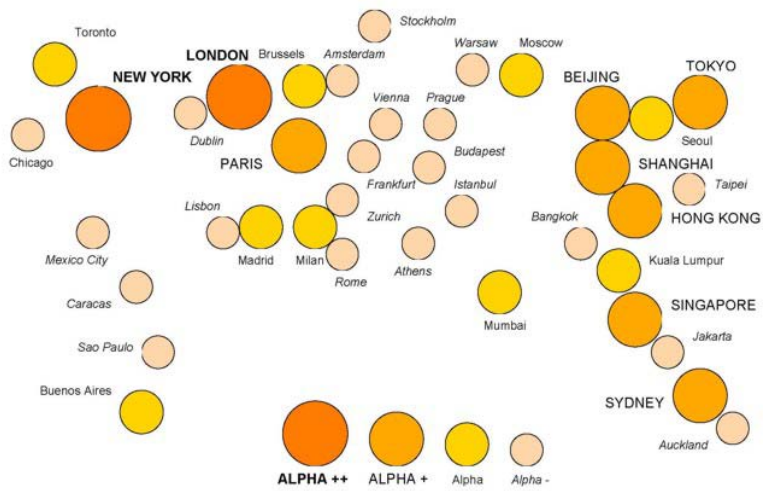
Figure 3.3: The Urban Hierarchy, 2008
Source: Globalization and World Cities Research Network, 2008

3.2.1 Shanghai, China

Yusef and Wu (2002) study the possibility of Shanghai moving up in the world city hierarchy. According to GaWC, Shanghai ranked in the Alpha- tier for 2000 and 2004, amongst cities such as Mexico City, Mumbai and Miami, but moved up to Alpha+ (two tiers higher) in 2008, situated amongst Tokyo, Beijing, Milan and Singapore. Economically, Shanghai currently has the fastest growing GDP of any city in China and has received special attention from the government in order to expand certain industries, particularly the "…mobile communications technology so essential for…integrating with the international business community" (Yusef & Wu, 2002, p. 1217-1218). In the 1990's Shanghai developed a stock exchange and a free trade zone and China became part of the World Trade Organization in 2001. These are all major steps in a country where the economy has traditionally been somewhat closed.

From a non-conventional economic standpoint, these are also indicators of changes in governance, which has traditionally limited the ability of Shanghai and other Chinese cities to reap the full benefits of foreign direct investment (Yusef & Wu, 2002, p. 1221). Shanghai has also shown improvements in infrastructure that are relatively significant. These include road networks, public open space, waste water treatment, and access to gas and water (Yusef & Wu, 2002). As well, many of these infrastructure improvements have been designed to improve environmental quality and health, and remove Shanghai from the World Health Organization's list of heavily polluted cities. It can be seen how Shanghai is satisfying both conventional and non-conventional requirements for becoming a

world city, although Yusef & Wu (2002) conclude that its ability to do so ultimately rests on whether or not the Chinese economy continues to grow relative to the U.S. economy, and also on the degree to which China continues to "open up" in terms of "…trade, legal framework, finance and culture" (Yusef & Wu, 2002, p. 1222).

3.2.2   Miami, USA

Miami's classification as a world city is a very good example of non-conventional economic factors that are considered in the GaWC classification system. While the conventional economic factors were important, Miami also became an "Oasis of Peace", relative to some of the turmoil inflicting other parts of Latin America, and an ideological and cultural refuge, pushing it up into the top level on the hierarchy (Nijman, 2007). According to GaWC, Miami ranked in the Alpha- tier for 2000 and 2004 along with Shanghai, but moved down to the Beta- tier (three tiers lower) for 2008 amongst cities such as Detroit, Calgary, St. Petersburg and Wellington.

Being situated in the Caribbean, Miami played a unique role during the second half of the 20th century during which time, "liberal democracy was a rarity" (Nijman, 2007, p. 96) in most of Latin America. While surrounding areas were engulfed in wars and revolutions, Miami was the haven for all those escaping these political instabilities, particularly from Cuba. While most immigrants to Miami from Latin American countries were poor casualties of conflicts, the refugees from Cuba were the elite class. These immigrants and refugees brought high levels of skills, education, money and connections with the

rest of Latin America and this influx of people exponentially increased the number and types of powerful connections between Miami and other countries. Economically, this resulted in Miami becoming known as the "Capital of the Americas" with more foreign airlines flying in and out of the airport than any other city in the world. In addition, 40% of all American trade with Latin America is done through Miami and it is the third largest foreign banking centre in the US (Nijman, 2007).

While these economic indicators are an important component of Miami being a world city, it must be noted that the amount of cultural capital that has been invested in the city is very high and this also contributes significantly to its ranking. Cultural capital refers to non-conventional assets that make the city a creator, modifier and displayer of culture, particularly Latin American culture. For example, the international edition of the *Miami Herald* is widely available and bought in many parts of Latin America and many elites from around Latin America send their children to study at the University of Miami. Miami is also well known, relative to the majority of the United States, for high rates of criminal activity often attributed to the conflict between a strong Latin American culture and the over-arching culture of the United States (Nijman, 2000; Aguirre, 1994). With 45% of the population being immigrants, in the paths of many poor people in Latin America, Miami is "…a central point of reference on the road to a successful future" (Nijman, 2007, p. 97). Miami has developed an urban image that is very influential in determining the locational decisions of people

throughout Latin America and this image has helped move the city up in the urban hierarchy.

3.2.3   Minneapolis-St Paul, USA

It has been previously mentioned that the increasing interurban competition sometimes occurs at the expense of current residents and businesses in a particular city. In the case of Minneapolis-St Paul, one of the main reasons it is being held back from becoming a 'world city' is because the local community and politicians have been very active in not allowing themselves to be sacrificed to allow the city to become more competitive. Paul (2005) describes how there is a "cost of going global" for a city that is on the verge of doing so. Minneapolis-St Paul is in the top fifteen cities in the world in terms of the number of transnational corporations with head offices including the largest private firm in the world, Cargill, and is eighth in total exports among U.S. cities (Paul, 2005). According to GaWC, Minneapolis-St. Paul ranked in the Gamma+ tier for 2000 and 2008 amongst cities such as Montreal, Denver, Vancouver and Cape Town with a small dip to the Gamma tier (one tier below) for 2004 along with Perth, Portland and Calcutta. The 'Twin Cities' competed to become the U.S. bid for the 1996 Olympic Games and ranked higher than San Francisco, Miami, San Diego, Honolulu and Washington, DC (Paul, 2005). Those Games were eventually held in Atlanta, USA. While Atlanta was very eager to take advantage of this chance to move up in the urban hierarchy and had politicians and citizens almost unanimously pushing for it, Minneapolis-St Paul was "ambivalent" to the idea (Paul, 2005, p. 2104). The St Paul council only voted 8-4 to spend a very small

$15000 to get the Olympic bid going and one council member referred to the plan to build a new stadium for the event as "stupid" (Paul, 2005, p. 2104).

Residents have consistently elected officials who might be considered anti-globalization, and the resistance to global competition may be a result (Paul, 2005). These elected officials have not bought into the concept of interurban competition and as such are not participating in 'prestige projects' that many other cities do. A tension between satisfying current residents and becoming competitive at the next level in the urban hierarchy has been associated with major projects or events such as the Olympics. It is stated that that "prestige developments are targeted at encouraging investment and changing perceptions of business decision makers and/or potential visitors from *outside* the locality, particularly at the national and international levels" (Loftman & Nevin, 1995, p. 300-301). If this is indeed the 'target' of major projects such as the Olympics, then it appears that this particular city is not attempting interurban competition through these methods.

The emphasis in this example is on the role that politics plays in the movement up or down in the urban hierarchy. There may be economic factors securely in place, but without the political will, interurban competition does not inherently happen and the drive to move up in the urban hierarchy is not necessarily a motivating force for every city.

3.2.4 Tokyo, Japan

The three cities that are almost always listed as first tier 'world cities' are London, New York and Tokyo. Tokyo's inclusion on this exclusive list was

largely due to its boom during the 1980's shortly before most works on the concept of 'world cities' such as *The Global City* (Sassen, 1991) were written. According to GaWC, Tokyo has ranked in the Alpha+ category (one below the top tier which includes only London and New York) since 2000 along with cities such as Paris, Shanghai (most recently), Hong Kong and Sydney. Between 1981 and 1986, Tokyo's information-processing industry expanded by 98% and then 61% between 1986 and 1991 (Saito & Thornley, 2001). This monumental growth allowed it to be ranked along with New York and London as major nodes in the global economy and it is argued that the large number of transnational corporations located there is one, if not the only, characteristic still keeping it at the top of the urban hierarchy (Waley, 2007). Similar to Shanghai, Tokyo has an economy with a strong state presence. This type of economic control is not inviting to major North American and European powers. The result is that there is relatively little input into the economy but rather a reliance on exporting manufactured goods (Saito & Thornley, 2001; Waley, 2007). In terms of air travel, Tokyo is really only a North East Asian hub, with competition from other cities including Shanghai. It is certainly not the hub for all of East Asia, with competition from Hong Kong, Kuala Lumpur, Bangkok and Singapore in the Southeast (Saito & Thornley, 2001). It can be seen why Tokyo, currently, does not quite meet the criteria to be ranked alongside London and New York. London and New York are somewhat balanced in how they influence the world (global city) and how they receive global influence (globalized city), whereas Tokyo leans much more towards the latter.

In order to hold on to its status as a 'world city', Tokyo is now focusing on some non-conventional factors. It is attempting to create "...a high-quality residential environment with creative industries such as...environmental management...and, a leisure space with a comfortable and attractive waterfront" (Saito & Thornley, 2001, p. 679). This description of Tokyo's goals is somewhat vague and also very similar to goals of many other cities, especially with regard to establishing an attractive waterfront, which is undoubtedly on the list of goals of any city near major bodies of water or rivers.

McCann (2004) explains that the shift to entrepreneurial governance may entail cities imitating approaches that have proven successful elsewhere. However, this approach cannot be considered truly entrepreneurial, because it is mimicking methods or projects that have already been done elsewhere in attempts to compete with other cities. It is known that "…the inter-city competition for private sector investment and world-class status has led to the serial replication of particular forms of developments across the western world" (Loftman & Nevin, 1995, p. 307). To be specific, there is a potential that this desire to improve the waterfront in Tokyo may be a direct imitation of work done elsewhere, such as in London's Canary Wharf (see section 3.3.2). Part of the hope is that these improvements will attract the 'creative class' and lead to economic benefits through non-conventional means.

3.3 Urban Image

While conventional economic factors have been useful ways to measure and compare cities and have been arenas for competition, a rapidly growing set of additional non-conventional economic factors is becoming increasingly important. These factors, often concerned with image portrayal, weigh heavily on the locational choices of the 'creative class', a group of people can convert "...innovations into new business ideas and commercial products" (Florida, 2005, p. 50). Florida also argues that attracting these people requires less of an emphasis on business incentives and more of a focus on the environment and natural amenities. There are a myriad of actions and policies that a city can take to portray a desired image to the rest of the world. Of these, three that are most applicable to this thesis are reviewed in detail in the following sub-sections.

3.3.1 Environment and Health

There is growing awareness of, and concern for, the maintenance of the natural environment, and the effects of a deteriorating environment on human quality of life. Factors such as environmental stewardship and health are becoming more important in the projection and assessment of urban image (Low, 2003) and the environment has become a non-conventional factor in interurban competition. In an urban area it is very hard to separate human health from the quality of the natural and built environment in which people are living and working. The environmental movement of the 1970's brought to light many of these factors and forced municipalities to put more focus on urban quality of life.

In the 1990's, there was growing recognition that urban development of the 20th century, based almost solely on conventional economic factors, was degrading both the natural environment and ignoring the quality of the built environment to the point of making cities undesirable places to be (McCann, 2002). One of the most prominent issues that contributed to urban areas being undesirable places to live is poor air quality. While the history of this issue is long and complex, the challenges associated with poor air quality can be seen in the example of the Beijing Olympics in 2008.

Mexico City and Beijing are considered the two most polluted capital cities in the world, with levels of common pollutants such as sulphur dioxide and nitrogen dioxide well above the acceptable levels outlined by the World Health Organization (Brajer & Mead, 2003). It is not surprising that prior to the Beijing Olympics, there were concerns that the poor air quality common in the summer months would have a debilitating impact on tourists and athletes taking part in the events (Streets, et al., 2007). To help alleviate these concerns, the city implemented many pollution control measures, some of which were temporary, such as the shutting down of factories during the Games. Others were considered long term improvements, such as converting 10 000 coal boilers into natural gas or heat pumps (Brajer & Mead, 2003). This situation also had a strong regional aspect since a lot of the pollution in Beijing drifts into the city from sources in the surrounding areas and is therefore out of the control of the local government (Streets, et al., 2007). As well, it is possible that the extreme cost involved in the efforts to reduce air pollution in Beijing for the Olympics may be outweighed by

economic benefits resulting from reductions in illnesses and subsequent treatment costs, or by averted morbidity and the lengthening of the time that individuals remain active in the economy (Brajer & Mead, 2003). It can be seen that there are many variables to consider for cities dealing with air quality issues and, because of the potential impacts of action or inaction on this realm, urban air quality is a large concern for many municipalities and one that receives significant attention. Cities that have high levels of air quality can use this characteristic to 'sell' their city's image and attract more investment and residents.

In another example, one of the best ways to improve the urban image of a city in a health context is through the pursuit of the "Active City" as described by Low (2003). Low argues that cities have been designed to facilitate a sedentary lifestyle that has severe negative effects on the population. This is epitomized by the reliance on the automobile that leads to inactive transport (sitting) and air pollution. Health risks associated with this sedentary lifestyle are "as much a disease of modern cities as typhoid was of ancient ones" (Low, 2003, p. 5). The alternative is transport that requires moving such as walking or cycling. Not only does this make people more active, but in order to facilitate it, natural and built environments must be shaped in ways that are desirable to walk or cycle in.

Lewis & Donald's (2010) study of Kingston, Canada that shows how environmental and health factors can be important in attracting people to a city. The study was intended to evaluate Florida's 'creative class' theory in the context of a smaller metropolitan area. It was found that smaller cities tend to have features that attract the 'creative class' more readily than larger cities, although

not in all cases. In smaller cities, it can be easier to know and understand the city as a whole and people become more connected and identified with the features they are attracted to. As well, it is easier, and sometimes required, in smaller cities, to leave the city more often and enter a different environment that is attractive. For example, smaller cities might not have a desired amenity or service and people can only access these by going to 'the big city'. Interviews were conducted with 'creative workers' about Kingston and the results indicated aspects of the natural environment and the benefits to their health were often cited. Walkability was described as a "...key asset to the city [and] biking is considered a quality-of-life advantage" (Lewis & Donald, 2010, p. 46). One respondent indicated that they turned down a job in Toronto (typically considered 'higher' in the urban hierarchy) because Kingston had a more appealing environment (Lewis & Donald, 2010). While Florida argued that larger cities are more capable of attracting the 'creative class' due to their superior resources, it can also be suggested that efforts of larger cities to improve access to natural areas, walkability and sense of place are attempts to make them more like smaller cities. This study is in indication of this new wave of interurban competition more oriented around the individual skilled worker than the company.

3.3.2   Mega-projects and Mega-events

One of the most visible ways impact urban image is through the implementation of a mega-project. Mega-projects usually take the form of an infrastructure development, such as a major building or complex of buildings, transport network or a massive residential or commercial development. One area

in which benefits to current occupants remains contentious is the hosting of 'spectacles', such as international mega-events. Cities compete to host major sporting events, for example, which can sometimes be used to justify urban renewal and large infrastructure projects, and also to express a city's personality and status (Essex & Chalkley, 1998). This is not to say that all mega-projects are built for mega-events, however, the connection between a mega-project and urban image is similar to the connection between mega-events and urban image. When mega-projects are associated with mega-events, a city has thousands or millions of international visitors and it is viewed through various media sources by millions more (Andranovich, Burbank, & Heying, 2001). There is arguably never a greater opportunity to have the world looking at your city on this scale, so mega-events are very valuable chances to "...focus economic development activities and attention for competitive gain" (Andranovich, et al., 2001, p. 114) and to promote a particular city image (Newman, 2007).

The Canary Wharf office development in the London dockyards is a good example of a mega-project associated with urban image. Being Britain's largest office project at just under 14 million square feet of development, it is well known as an example of an initially disastrous mega-project plan and implementation (Gordon, 2001). Considered a 'prestige project', it was predicted that the Canary Wharf development and others like it would be successful in "boosting civic pride and business confidence, making urban locations more attractive to private investment, and raising property values and development activity in adjoining areas" (Loftman & Nevin, 1995, p. 303). Such benefits can be attractive to both

current residents of the city (civic pride, property values) as well as external players (private investment, development activity).

There are some notable challenges associated with mega-projects, some of which can be seen in the example of the Canary Wharf. Because of the large scale of these developments in terms of money, time and/or land use, their planning, construction and completion of mega-projects are often influenced by significant economic changes and market forces. Most mega-projects begin during economically prosperous times when the capital is available to justify such a massive project. If the economic conditions change, projects can be significantly delayed, abandoned or completed with far less benefit than was originally planned. In the case of Canary Wharf, it obtained much of its financing between 1985 and 1989 when "…lending institutions loaned money without investigating the nature of the investment or the market" (Atkinson & Moon, 1994, p. 103 in Loftman & Nevin, 1995, p.305). Beginning construction in 1988, it was seriously impacted by the economic downturn of the late 1980's and early 1990's causing the developer to face financial collapse and the result was that by September 1992, 86% of the 4.6 million square foot first phase of development was empty (Loftman & Nevin, 1995). This is a good example demonstrating the way in which "prestige developments are often characterised by overambitious intentions on the part of project initiators or developers, and by high financial risk" (Loftman & Nevin, 1995, p. 307). Over time and with considerable difficulty, the Canary Wharf development has established itself as a major and successful business centre in London (Gordon, 2001).

Staying with the London context, the city will be hosting the 2012

Olympic Summer Games. Shoval (2002) highlights two different approaches to

hosting the Olympics, one where mega-projects are implemented to boost urban

image for the world to see and one where they were not. The 1976 Summer

Olympics in Montreal included a number of mega-projects such as a new stadium,

and velodrome, both architecturally impressive, but as a result, exceedingly

expensive (Kidd, 1992). Montreal was chosen over larger cities such as Moscow

and Los Angeles, for the specific purpose of demonstrating that large scale

redevelopment could be conducted for an Olympic games "on a completely self-

financed basis" (Essex & Chalkley, 1998, p. 196). The costs of these mega

projects were high and while they may have added to the urban image portrayed

to the rest of the world, they resulted in massive debts of up to CAD 600 million

for the City of Montreal and the province of Quebec (Essex & Chalkley, 1998,

Shovel, 2002). By contrast, the 1984 Summer Olympic Games in Los Angeles,

USA were organized using existing infrastructure and venues with minor

upgrades when necessary, resulting in a USD 200 million profit (Shoval, 2002).

While the city's image was not bolstered to a large degree due to mega-projects,

there were greater benefits for current residents.

In London's situation, the conventional economic benefits from hosting

the Games are expected to be relatively small. By almost all accounts, London is

already at the top of the urban hierarchy, has already hosted the Olympic games in

1908 and 1948 (as well as other major international events), and it is the most

visited city in the world (Newman, 2007). There are mega-projects associated

with the Games but there are also other mega-projects being developed concurrently and there is little additional attention given to the Olympic projects by comparison. Unlike other cities, where hosting the Olympics would be seen as a major opportunity for economic development (Andranovich, et al., 2001), in London, it is something else. Suggestions have been made that it is almost exclusively about prestige since London will become the first city in the world to have hosted three Olympic Games. While London is already in the highest level on the urban hierarchy, increasing interurban competition requires cities to work harder to maintain their status. In terms of image, London's lead up to the hosting of the 2012 Olympics began in a rough way with the 2005 subway bombings occurring one day after it was awarded the Games (Newman, 2007). These Olympics may also be associated with convincing the world that the city is a safe, peaceful place to live and work.

3.4   Conclusion

This chapter has served as a review of contemporary literature on the concepts of place promotion, interurban competition, urban hierarchy and urban image. Within this review, key ideas have been used from Richard Florida's 'creative class' argument to highlight the distinction between managerial urban governance and entrepreneurial urban governance. It is suggested that there has been a shift from the former to the latter over the course of the 20th century, and that there is a more recent shift to governance focusing on the preferences of mobile and 'creative' individuals. A case study approach was used to show where cities rank in the urban hierarchy and how they compete to maintain or improve

their ranking. Within this hierarchy, the criteria for being classified as a 'world city' or 'global city' were explained and critiqued. The concept of urban image was explored by focusing on issues related to the environment and health, as well as the use of mega-projects and mega-events to portray certain images. The complexities behind the use of mega-projects and mega-events were shown through a case study of London's Canary Wharf development as well as its plans for hosting the 2012 Summer Olympic Games.

One of the key contributions of this chapter is to introduce the distinction between what is termed conventional and non-conventional variables in urban economic decision making. Conventional economic variables are based around indicators that are directly economic in nature, such as the transnational corporation headquarters, banking facilities and international investment in a city. Non-conventional economic variables include aspects of arts and culture, environmental stewardship, human health and entertainment. These many have economic benefits, but in a more indirect way. In conventional scenarios, there is a direct link between the indicator, such as the number of banking facilities, and the result, such as more money flow in and out of city through investment banking. In the non-conventional scenarios, the indicator, such as environmental stewardship, may only be valuable if individuals take part in particular activities or lifestyle habits. Both conventional and non-conventional economic indicators are used by city governments when making decisions. However, it is argued that cities – including those case studies reviewed in this chapter – are now focusing more on non-conventional methods as there is a recognition of the importance of

these factors in the locational decisions of both individuals and businesses. These indicators are also used to measure rankings in the urban hierarchy and to analyze motivations for local urban development decisions. No longer are conventional economic factors the only way to evaluate the urban hierarchy.

The concept of place promotion and how it relates to urban image has been demonstrated in numerous ways throughout this chapter. Successful marketing of a particular place has become more important due to increased interurban competition and the subsequent consideration of non-conventional economic factors in urban image. It is argued throughout this thesis that the existence and use of public transport may be a key non-conventional indicator that makes a city more competitive and the next chapter will explore RMT development within the context of place promotion.

Chapter Four – Rapid Mass Transit

4   Introduction

There is a strong push toward the development of Rapid Mass Transit (RMT) in many mid-to-large sized cities, particularly within high-income countries. This includes diverse systems, with different strengths and weaknesses (Hodgson & Potter, 2010). Diversity is increasing as new technologies become available. For example, in various parts of Europe there are now 'guided-bus' systems, featuring buses which are magnetically guided and have varying degrees of integration with other traffic: from completely exclusive rights of way, to priority travel in the same lanes as vehicles (Hodgson & Potter, 2010). While these are not light rail transit, they are referred to as light rapid transit, and can be thought of as travelling on 'invisible' magnetic rails. Throughout this thesis, RMT is used to refer to both traditional and hybrid forms.

There are various reasons that city governments pursue RMT as a significant component of their infrastructure development. These include traffic congestion alleviation, energy use reduction (Stuart, 1985) and efficiency (Blum, Haynes, & Karlsson, 1997). This chapter explores RMT development within the context of sustainability and land use.

4.1   Sustainability

Although RMT predates the concept of sustainability by more than a century, *contemporary* support for, and development of, mass transit typically

reflects consideration of one or more (or all) of the three aspects of sustainability: economic, environmental and social (Behrends, Lindholm, & Woxenius, 2008). The concept of sustainability was made prominent by the 'Brundtland Report' - *Our Common Future: The World Commission on Environment and Development* – published in 1987. According to this report, "sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987, np). This definition provided the tripartite framework that has guided subsequent discussions on sustainability. The term 'development' is economic in nature, 'needs' refers to the social context, and 'future generations' implies environmental considerations since society will always be dependent on the environment and the resources found in it. Overall, sustainability is concerned with the "overlap among environmental stewardship, economic prosperity, and social justice" (Pearsall & Pierce, 2010, pg. 570). The various discussions about sustainability are far-reaching and multidisciplinary; this section provides an overview of the concept as it relates to RMT.

Sustainable economics is a very difficult concept to define. Baumgärtner & Quaas (2010) argue that sustainability in general is concerned with "justice in the domain of human–nature relationships ... [including] ... between humans of different generations" (p. 2057). In an ideal sense, 'justice' refers to "intrinsic rights of nature" (p. 2057) such as the right to live healthy lifestyles with access to food, education, freedom, etc. They add that economics is primarily concerned with efficient and non-wasteful use of resources. Therefore, economic

sustainability implies using resources as efficiently as possible so that current and future generations do not feel injustice when living their lives.

This concept can be applied to more than just basic economics (stock trading, investment, capital, etc.) but to human and environmental resources as well, although not without difficulty. Bartelmus (2010) critiques Baumgärtner & Quaas (2010)'s definition of economic sustainability for its implied measurement of injustice and justice. Such "welfare-oriented analyses", Bartelmus (2010) claims, can only be done on a very small scale. If one were to look at the life of one person or one family, it would be possible to measure empirically the quality of their lifestyles, how happy their interactions are with others and whether or not they are facing injustices by way of the barriers to doing the things that make them happy. However, when one expands the scale to include an entire city, country, society or humanity as a whole, the interaction of all the players makes the system too complex to measure with any certainty. Simply understanding that using resources efficiently will have a beneficial effect is what is most important. Recognition of this benefit, regardless of the scale of analysis or the ability to quantify it, can be sufficient to encourage economic sustainability.

Social sustainability is also very challenging to define and especially to measure. For some, it includes social equity, a sense of place, community stability and security (Glasson & Wood, 2009). Accordingly, a whole range of measurement tools are used in an attempt to quantify this concept. These include 'social impact assessments', 'health impact assessments' and 'equality impact assessments'. Davidson (2009) explores how social sustainability practices are

not always in line with economic or environmental sustainability practices. For example, a low-income housing project may be built so as to increase social sustainability and bring some excluded people into society. However, due to economic restraints, environmental considerations may not be prioritized highly in the selection of building site, materials or quality. Indeed, it is hard to imagine many municipalities building LEED (Leadership in Energy and Environmental Design) standard social housing projects. Expectations around fiscal stringency and basic design would likely make the increased expenditure required for such a project unpopular. This is one reason why some argue that a fourth aspect of sustainability needs to be considered: one centred on governance (Glasson & Wood, 2009). This would focus on how governments make decisions and create policies that affect sustainability practices at various scales.

Environmental sustainability is the easiest aspect to define and explain (and is subsequently the most commonly understood). The basic principle is that human interactions with the environment need to occur in such a way that the resources we use and extract from the environment are still available in the required amounts for future generations. In addition, the environment's capacity to absorb the waste that we generate must also be maintained. For example, if we want to use wood as a resource for building homes, providing heat, etc. we must make sure that the rate at which we are consuming the resource is not greater than the rate at which we can regenerate the resource for it to be considered sustainable. In cases where the resource is not renewable, such as oil, this equilibrium cannot be achieved, and the 'sustainability focus' should shift to

practices that will lengthen the time we have to access the resource, as well as to develop potential alternatives (Laband and South, 2010).

In summary, sustainability means that we must consciously manage the ways we work, play, interact, build, travel and ultimately live so as to ensure future generations can also do so. The goal, as simply put by Glasson & Wood (2009), is to protect the "sustaining ability of a system to function in the long term – an end state in which all human activities can be maintained within the existing capacity of the planet" (p. 283). Sustainability is a concept that affects many aspects of society but it should be noted that it becomes increasingly important when being applied to an urban setting where there are "magnifying effects of density and propinquity" (Pearsall & Pierce, 2010, pg. 569). This is because the negative effects of *unsustainable* practices, such as pollution from very high levels of automobile use, are amplified by density and become more problematic in urban settings.

4.1.1 Greenhouse Gas Emissions

Transport is a critical concern when discussing sustainability. The most important consideration is greenhouse gas (GHG) emissions and their effects. The effects of GHG emissions primarily relate to economic and environmental sustainability, but can also be linked to social sustainability through reference to health factors. The majority of greenhouse gas emissions resulting from transportation are from road use, primarily passenger cars (Hensher, 2008). To determine the effects of transportation on climate change, (Borken-Kleefeld, Berntsen, & Fuglestvedt, 2010) compared the impact of cars, buses, 2-wheel

vehicles, ships, planes and trains. Of the 30 trillion passenger kilometres of travel in the year 2000, 51% were by car, 98% of which was powered by greenhouse gas emitting fossil fuels (Borken-Kleefeld, et al., 2010). Using measurements of global temperature change and vehicle emissions as well as statistical models of how greenhouse gases affect these changes, a ranking of the 'transport specific climate impact' (TSCI) was developed. It was found that cars are the most commonly used mode of transportation and had the highest TSCI (Borken-Kleefeld, et al., 2010). In essence, car use is one of the greatest contributors to climate change (Sinha, 2003).

In terms of economic sustainability, GHG emissions are an important consideration because the costs associated with reducing GHG emissions are usually high (Platjouw, 2009). GHG emissions produced by transport practices can be reduced in a number of ways. Since gasoline fuelled cars are the greatest transport contributor to GHG emissions, other forms of fuel that produce less GHG emissions would help to reduce this impact. However, hybrid or entirely electric cars that would decrease GHG emissions are more expensive than gasoline fuelled cars. Another option is to transition away from car use to transport practices that have a lower TSCI such as RMT. As will be discussed in detail later, while RMT development may work to decrease GHG emissions, it requires extensive and expensive infrastructure.

4.2   Automobility & Automobile Dependence

There is growing awareness that some of the ways in which people transport themselves, especially in high income countries, is unsustainable

(Turcotte, 2008; Kenworthy, 2007). Most transport practices rely heavily on

technology powered by non-renewable and GHG-emitting resources. Since the

global population is becoming more urbanized, urban areas are an important focus

for discussions on sustainable transportation.

Automobility refers to how societies have developed, currently operate

and continue to grow based around the primary mode of movement being by

gasoline-fuelled cars (Goodwin, 2010). Essentially, it has been generally

accepted that "gasoline is necessary for making use of cars; cars are necessary for

mobility; and mobility is necessary for humans to flourish" (Goodwin, 2010, p.

61). It is caused by a "myriad [of] institutional forms that sustain driving,

including …manufacturing and marketing…the world's gargantuan highway and

gasoline delivery infrastructure, traffic rules, parking structures, licensing

procedures, and sundry regulatory authorities" (Rajan, 2007, p. 79). It includes

economic, social, cultural, environmental and political factors, and was one of the

key defining forces of the 20th century (Schiller, Bruun, & Kenworthy, 2010;

Rajan, 2007; Urry, 2004). The social and cultural forces, or "car culture"

(Schiller, et al., 2010, p. 25), that underpin automobility are of particular concern

since it is at this foundational level that changes need to be made if any

improvements are to be seen in practice.

One area in which cultural forces can be seen particularly clearly is in the

marketing of automobiles. Since the midpoint of the 20th century, people in high

income countries such as Canada and the U.S. have been inundated with

advertisements for, and associations with, cars that touch on core values of

happiness and success. In television and movies, automobiles have been "associated with numerous themes…pursuit; escape; rescue; endangerment; travel and leisure; power; social class distinction and competition; reward for work ethic adherence; power [sic]; domination; self-destruction; gender; sexuality; romance; and eroticism" (Schiller, et al., 2010, p. 36). These associations are effective at shaping consumer behaviour, and are used by car companies to make links between owning a car and living a utopian 'good life' (Gunster, 2007; Urry, 2004).

In the U.S., car advertising is a huge proportion of the overall advertising industry with 29 of the top 200 'megabrands' in advertising being car companies (Conley, 2009). These companies spent a total of $5.06 billion in just the first half of 2005 with Ford being the highest single spender at $496.9 million (Schumann, 2005). Worldwide, $24 billion is spent on car ads, more than any other advertising category (Alvord, 2000). By contrast, there are vastly fewer associations made between living exciting lives filled with new experiences and using public transit. Many public transit systems rely on government subsidies to break even on their operating costs, and have little if anything left over for advertising (Smith, Razzouk, & Richardson, 1990).

The result of this discrepancy is that organizations trying to influence people to reduce their car use and use public transit are constantly fighting against a goliath force in the form of car advertising, and usually have to resort to dramatic efforts to get even a small amount of shift. In Copenhagen, Denmark, a monthly transit pass was given to a group of automobile commuters for free in the

hopes that this would encourage more use of public transit. It was found that public transit use amongst the group doubled (from 5% to 10%) during the month and then declined to 7% after a year (Thøgersen, 2009). While the author hails this as a success of the initiative, he also notes that the very low percentages indicate the limited ability of this method to influence travel behaviour.

One of the main manifestations of automobility can be seen through the idea of people in modern societies being dependent on cars for their livelihood. Ferguson (2009: 275) succinctly states that cars "are central to the management of time, space and relationships in people's everyday lives, and to the flows and practices within entire societies and across the globe". There are a number of different indicators of automobile 'dependence', as well as alternative explanations of what has caused this phenomenon, and what its impacts are. Typically, the percentage of daily trips taken by car is a measure of a population's dependence on cars. In Canada, the percentage of people who went everywhere by car in a given day increased from 68% in 1992 to 74% in 2005 while the percentage of people who made at least one daily trip by active travel decreased from 25% to 19% in the same timeframe (Turcotte, 2008).

It is typically argued that this increase in dependence has been the result of urban sprawl and suburban growth. Density is the variable that is most often used when discussing connections between urban sprawl and transport practices. Urban sprawl is very closely linked to automobility in that the ability of a city to have low-density expansion is reliant on a continued availability of gasoline-fuelled cars. Widespread car ownership and usage makes living in low density,

detached housing in outer suburbs possible, and desirable for many (Johnson, 2006).

In Canada, the average density within major CMAs is 25.5 people per hectare, with Calgary being the least dense at 20.5, while in the U.S., for major CMAs, the average is 15.4 (Perl & Kenworthy, 2010, p. 197). Comparing major Canadian CMA's, Turcotte (2008) related the concept of automobile dependency to land use and urban form to determine the relationship between neighbourhood type and the degree to which residents used cars for daily travel. It found that one of the variables that showed a strong inverse correlation with car use was neighbourhood density. Even when factors such as age, income and family composition (children, single people, married couples without children, etc.) were controlled for, this relationship was still present. Another factor was distance from the city core. As the distance of a neighbourhood from the core increased, car use also increased. In general, cities in Canada have higher densities near the central core with less density near the periphery, indicating that these two factors are probably related.

However, Turcotte found that density became less correlated with car use as the distance from the city core increased until it became almost negligible in the distant suburbs. To summarize these findings, near the centre of a city the most significant correlation with car use is density, while in the suburbs it is distance from the city core. This seems to indicate that the local environment significantly determines people's transportation mode decisions. Therefore, the urban form of neighbourhoods can change how much or how little people use

their cars, and in typical Canadian cities with low density and sprawling suburbs, "…access to a private motor vehicle is not only very convenient but sometimes absolutely essential…the types of neighbourhoods and municipalities in which people live simply do not lend themselves to modes of travel other than the automobile" (Turcotte, 2008, pg. 20).

With respect to sustainability, "urban automobile dependence … has large implications for energy use" (Kenworthy, 2007, pg. 48). It is the amount of energy being used for this type of transport dependency that is becoming very challenging to sustain. Kenworthy (2007) argues that urban transport systems are very dependent on non-renewable energy and the viability of these systems is particularly dependent on the price of oil. He notes that in major cities in the U.S. "over 18,000 car passenger kms per capita" (Kenworthy, 2007, pg. 48) are used to move people around. In addition, only 3% of all daily trips are taken on public transit (though it should be noted that this varies between regions and cities). In Canada in 2005-2006, the distance people travel by car averages 8495 kilometres per capita, with Calgary having the highest number at 11,038. By contrast, the average distance that people travelled by public transit was only 1031 km, with Ottawa having the lowest number at 849 km. Averages for the U.S. reported in the same study were 18,703 kms by car and 571 kms by transit, respectively (Perl & Kenworthy, 2010, pp. 193-195).

These transport patterns are unsustainable. Economically, as the supply of oil decreases, the price of the resource will increase. Not only will this have huge effects on the entire oil industry, it will lead to an increased cost of every good

that needs to be transported, as well as every good that requires oil to be produced; a very long list of goods. Socially, with the increase in price, great portions of the population will become unable to afford the fuel that they need to move around by car and carry out their lives, weakening social networks and excluding more of the population that is reliant on the easy connections between distant resources. Readily available cheap gasoline is one of the key characteristics of automobility and the 'car culture' that has shaped our built environment and lives, and without it automobility cannot be sustained.

Environmentally, automobile use is a very significant contributor to greenhouse gas emissions, which contribute to global warming and the resulting negative effects (Turcotte, 2008). In addition, the massive amount of waste (oil, tires, etc.) associated with automobile dependence is becoming more difficult to manage. It is clear that when there is any consideration of sustainability, meaningful and permanent changes are required to limit our car use, and provide mobility by other means (Kenworthy, 2007).

4.3   Mass Transit & Sustainability

The following three sub-sections explore how RMT and mass transit in general can lead to improvements in traffic congestion, human health and environmental quality. It is important to remember that these three areas are inter-connected. For example, decreasing congestion can have the dual benefit of improving human health and lowering environmentally damaging emissions. Collectively, this section makes the case for how RMT promotes sustainability, and addresses the problems associated with automobile dependence.

4.3.1   Congestion Alleviation

Congestion of roadways is a major problem for many medium and large cities throughout the world. Sugiyanto, Malkhamah, Munawar, & Sutomo (2010: 94) studied the costs of congestion in Indonesia, where private motor vehicle ownership is on the rise. Data was collected on types of vehicles caught in congestion and the time spent in congestion, as well as the respondent's "sex, age, job, income, travel destination, the average visit to Malioboro, and estimation of travel speed in traffic jam condition". The 'cost' results were split into a number of different categories which were 'vehicle operating cost (VOC)', 'travel time cost (TTC)', 'pollution cost' and 'generalized cost' resulting in an overall 'congestion cost'. VOC includes "(a) consumption of fuel, (b) lubricating oil consumption, (c) tire consumption, (d) maintenance cost (spare parts and repair), (e) the cost of depreciation, (f) capital interest, and (g) the cost of insurance" (Sugiyanto, et al., 2010, p. 94). It was found that these costs increased substantially when a vehicle was operating regularly at either slow (below approximately 30km/h) or fast (above approximately 100km/h) speeds. Pollution cost was calculated through a complex series of algorithms taking into account previous data on vehicle fuel type and rate of consumption. The amount of emissions produced was converted into health costs for analysis.

TTC is a more abstract measurement that factors in how much value drivers place on their commuting time and what they feel is acceptable. This data was collected through surveys of drivers and it was found that as the average speed of their vehicles decreased, the TTC increased exponentially. This means

that as drivers experience more congestion, they put more value on their travel time and perceive greater negative impacts. Generalized cost is the combination of VOC, TTC and pollution cost measured both in ideal traffic as well as in congestion. The difference between the generalized costs under these two conditions is described as the 'congestion cost'. It was found that as congestion increased (speed decreased), the congestion cost increased exponentially. It was also noted that other 'costs' associated with congestion would include traffic accident cost, and fuel and energy wasted (Sugiyanto, et al., 2010) although these were not directly measured for this study. Iaione (2010: 891) discusses the issue of congestion as a "perfect showcase for the tragedy of the commons, a collective action problem in which a resource held in common—urban streets and roads—is subject to overuse and degradation". It is suggested that while drivers experience benefits collectively (mobility), they do not directly pay for many of the costs of their driving (pollution, environmental degradation, maintenance costs, etc.)

RMT can reduce congestion and its negative impacts, and is often promoted on this basis (Sugiyanto, et al., 2010; Turcotte, 2008). Firstly, VOC is significantly reduced when the number of vehicles used is cut drastically. If fifty people are on one train car instead of in fifty automobiles, there is less driving and therefore, the cost of fuel, maintenance, insurance, etc. is reduced significantly. With fewer vehicles on the road, TTC and pollution costs also decrease substantially resulting in lower congestion costs to those who continue commuting by automobile. In addition to getting automobiles off the road and decreasing congestion costs on roads, another important feature of RMT is that it

experiences zero congestion costs itself because it is on separate rights of way from any other vehicles that might cause it delay or congestion. It is very clear why "…the widespread use of automobiles by workers commuting to work instead of using public transit is a major factor in the traffic congestion that affects most metropolitan areas in North America" (Turcotte, 2008, p. 20) and that the costs of commuting "can be reduced by using public transportation" (Sugiyanto, et al., 2010, p. 92)

When considering RMT as a method for reducing congestion, special attention should be given to the induced-demand effect, defined as "behavioural travel response of individuals due to new road capacity" (Noland, 2007, p. 2). This phenomenon occurs when there is a perception that the congestion on a road has been alleviated in some way. Usually, this is through roadway expansion, but it could also be through a shift of commuters from a roadway to a new rapid transport line (Hymel, Small, & Van Dender, 2010). Due to the perception of increased capacity, some people previously discouraged by congestion may chose to drive. As a result, congestion may return to similar levels, despite the additional infrastructure, and environmental benefits might also not be realized (Noland, 2007). Hymel et al. (2010) conclude that, through a series of estimations and complex formulas, it is possible to factor the induced demand effect into decisions regarding the congestion alleviating benefits of transportation projects. In making decisions regarding development or expansion of RMT systems, such factoring in is important so as to avoid overstating the congestion alleviation

benefits, which would result in ill-informed planning, and lower success rates of the RMT project upon completion (Noland, 2007).

Congestion alleviation can be linked to the economic sustainability of RMT. With less congestion comes less fuel consumption, which means less financial burden on drivers. In terms of transportation costs for companies, less congestion for commercial vehicles means lower costs associated with moving goods. Both of these benefits become even more important when consideration is given to peak oil. The increased use of RMT lowers the rate of increase of transportation costs meaning future generations will be able to carry out these transport practices for a longer time.

4.3.2   Healthy Lifestyles

Another common reason why RMT is promoted is because of the benefits to human health. The amount of physical activity that a person engages in directly impacts their ability to maintain a healthy lifestyle. Over the past 30 years, physical activity levels in high income counties have declined due in large part to "reduced physical demands of work, household maintenance and travel" (Stokes, MacDonald, & Ridgeway, 2008, p. 46). This has contributed to obesity becoming a serious health concern, linked to illnesses such as high blood pressure, coronary heart disease, diabetes, insulin resistance, and certain cancers (MacDonald, Stokes, Cohen, Kofner, & Ridgeway, 2010; Samimi & Mohammadian, 2010; Stokes, et al., 2008).

As discussed in previous sections, the layout of North American cities often leads to a dependence on automobiles for travel and that "there are very

clear links between living in a peripheral neighbourhood and depending on the automobile as the primary mode of transportation for day-to-day travel" (Turcotte, 2008, pg. 22). If the automobile is the primary mode of transportation for day-to-day travel, physical activity in commuting is usually precluded. A conscious choice must then be taken to undertake physical activity for recreational, rather than utilitarian, purposes.

Smith & Cummins (2009) discuss how changes in the built environment may be a partial cause of the increases in obesity. Some of these characteristics of obesogenic environments include the "poor walkability…and connectivity of residential areas" (p.522). These tend to be characteristics associated with low-density urban sprawl, and people who live in these areas are less likely to use active travel and have higher rates of obesity (Smith & Cummins, 2009).

MacDonald, et al., (2010) sought to determine the links between LRT use, body mass index (BMI) and physical activity. Using Charlotte, North Carolina as a case study area, they surveyed residents living near a current LRT line about their use of the LRT, levels of physical activity and their BMI. Through statistical analysis, it was ultimately determined that there was a "significant association between LRT use and reductions in BMI over time" (MacDonald, et al., 2010, p. 108) as well as a decrease in the likelihood of someone becoming obese. These results are primarily attributed to the required walking to and from LRT stations (for regular working commuters). It was found that taking LRT would add an average 1.2 miles of walking per day, resulting in an extra 20,000 calories burned

per year and a loss of approximately 6lbs for an average person weighing 150lbs (MacDonald, et al., 2010).

In a different study of the same city, Stokes, et al., (2008) discuss how LRT systems can have an impact on public health costs. It was noted that Charlotte has very low density and high risk factors for obesity. Using data similar to that collected by MacDonald, et al., (2010), a statistical model was created taking into account a variety of factors including prevalence of obesity, the increase in personal medical costs of obesity and willingness to pay for medical treatment of obese people. It was found that "the total cumulative health care costs saved would be approximately $12.6 million dollars over 9 years" (Stokes, et al., 2008, p. 54). It should be emphasized that this is a savings in health care costs only and not a net savings, since the cost of building the LRT line cost $427 million (Stokes, et al., 2008).

Healthy lifestyles can be linked to the social sustainability of RMT. Most high income societies have some form of social welfare safety net to which all residents contribute in order to provide necessary services for all, and to meet the essential needs of disadvantaged sectors of the population. One of the greatest public costs to most high income countries is public healthcare, and in countries where there is a less socialized public healthcare system, medical costs are a significant portion of personal or family budgets. Any changes that decrease the cost of healthcare increase the security of this social service, and RMT development has the ability to contribute in this regard.

4.3.3   Natural Environment Considerations

One of the most commonly referenced benefits of RMT use and development is reduced impact on the natural environment. Current practices of automobile dependence have significant detrimental effects. In addition to the emissions discussed earlier, automobiles produce a number of different waste fluids from brakes and transmissions, etc. Tires are also a considerable waste product of automobiles and it is estimated that there are approximately 3 billion waste tires in storage worldwide (Wang, Xu, & Xuan, 2009). China, the world's number one rubber consumer produces 100 million waste tires per year with very low recycling rates (Wang, et al., 2009).

Expansion of RMT may result in reducing the number of vehicles on roads and the environmental benefits of this are clear. Globally, only 7% of passenger transport kilometres were by rail in 2000, yet rail has the lowest TSCI of all the transport modes, except for boats used for freight transport (Borken-Kleefeld et al., 2010). This means that the more people use rail transport *instead* of car transport, the lower the climate change impact of their mobility will be. With reference to the previous discussion on the environmental aspects of congestion costs, taking passenger vehicles off the road also leads to less congestion costs for freight vehicles on the roads.

These considerations can be linked to the environmental sustainability of RMT. Our natural ecosystems can only absorb so much waste and only supply valuable resources at specific rates. When dumping waste at a rate higher than what can be absorbed (the critical load), or by extracting resources faster than they

can be renewed (beyond the sustainable yield), the system is ultimately unsustainable. Therefore, any actions that decrease the rate of waste disposal or resource extraction increase sustainability – another reason to promote the use of RMT instead of vehicles for transportation.

4.4   Land Use

There are many challenges associated with the successful development of RMT systems. Transit policy *per se* only partially determines the success of mass transit development; it necessarily interacts with and depends upon other policies formulated at the urban scale (Tang & Lo, 2008; Siemiatycki, 2006). In past RMT development, common problems have included lower than anticipated levels of ridership and development in and around transit corridors (Tang & Lo, 2008). In these cases, transit policies were often developed without sufficient reference to land use, vehicle use and road construction policies, among other factors (Stuart, 1985; Taylor & Samples, 2002). Haywood & Hebbert (2008) identify the need for an "integrated planning approach" (p. 283), because land use and transportation planning is a "complex process of institutional design involving multiple agencies and interests…their design is a multi-disciplinary task" (p. 283).

Different policies have the potential to hinder each other, at least partially, thereby preventing cities from achieving success and meeting their goals. The success of RMT development is particularly dependent on land use policies that have goals congruent to that of the RMT development. For mass transit development to be successful, it needs to be conducted under the auspices of an

overarching policy that ensures, for example, that land use policies are designed to aid in development along transit corridors.

Many transport choices depend on density and if land is used at lower densities, transport choices and transit policies will reflect this design. In many cities, typically in the suburbs, it is common to find major low density, car-oriented retail developments, generally referred to as 'power centres'. These developments, such as South Edmonton Common in Edmonton (see Figure 4.1), have many large stores, which are very spread out and connected primarily by roads with massive amounts of parking space. This design, emphasizing car use and accessibility encourages road and vehicle connections, rather than transit links since walking around these power centres is frustrating and circuitous due to the lack of sidewalks and dangers of vehicular traffic.

Figure 4.1: Aerial view of South Edmonton Common emphasizing road connections and parking land use.
Source: Author.

4.4.1 Nodal Development

In North America in particular, an alternative to unsustainable suburban growth and reliance on automobiles is to pursue nodal development practices. These nodes "purport to transpose to the suburbs the dynamics found in successful traditional downtowns" (Grant & Filion, 2010, p. 311). In this approach, suburban town centres are developed with the intention of providing a way for local residents to meet their needs without driving long distances to the urban core. Ideally, these nodes are mixed-use, "medium to high-density, multifunctional developments, usually with planned access to public transportation networks" (Grant & Filion, 2010, p. 311). However, when public transportation infrastructure such as RMT does not connect to these nodes due to a lack of congruency between transit and land use policies, these nodes end up being destinations primarily accessed by car and their designs reflect this. When this occurs, the development may more closely resemble a retail power centre (e.g., South Edmonton Common) than the ideal of a suburban nodal development.

There is growing recognition that the types of transportation taken between destinations or nodes can have an impact on the types of destinations that exist on each end of the route as well as what surrounds the route itself in between (Haywood & Hebbert, 2008). For example, if the major transport link between two destinations is a freeway, without a public transit option, the destinations themselves will need to have a great deal of parking available and vehicle access will need to be a priority. Alternatively, in order for RMT to be sustainable, economically, it requires large numbers of passengers. This means that it must be

either located in dense areas that can provide ridership, or built with the intention

of dense areas being developed around it that can provide ridership (Li, et al.,

2010). Concern for the integrated combination of land use planning and transport

planning is central to the concept of Transit Oriented Development (TOD).

4.4.2   Transit Oriented Development (TOD)

TOD can be conceptualized as an ideal form of nodal development (Grant

& Filion, 2010). It is normally centered upon a "station-area precinct that is

compact, mixed-use, and facilitates transit connectivity through urban design"

(Renne, 2009, p. 1). In addition to a station and its immediate vicinity (usually

referred to as "the development"), TOD also entails increasing connectivity with

distant neighbourhoods and destinations, so as to facilitate the movement of

people living and working within a broad catchment.

This makes TOD a much larger-scale phenomenon than any single station
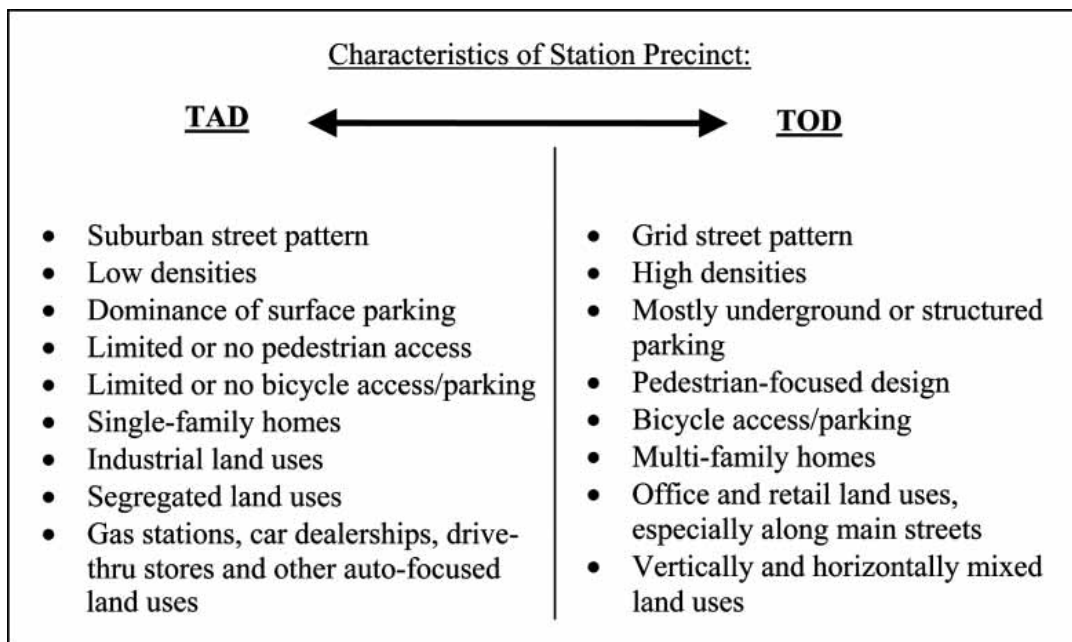
Figure 4.2: Distinctions between transit adjacent development and transit oriented development
Source: Renne, 2009, p. 3

precinct. Although relatively simple to define, it is not simple in its development and implementation, and it is not a title that can be given to any development that happens to take place around a transit hub. Indeed, development around transit hubs that fails to integrate with, and take advantage of, the transit connectivity can instead be referred to as transit adjacent development (TAD). A summary of the specific differences is seen in Figure 4.2 from Renne (2009).

When TOD was first suggested, it was conceptualized as a new method of urban design that would help to reduce urban sprawl and promote a shift from automobile use to transit use (Loukaitou-Sideris, 2010). Due to the need for collaborative work between land use and transportation, as well as political scepticism, TOD progressed slowly in most areas, especially those where 'car culture' was particularly dominant (Loukaitou-Sideris, 2010). However, over time, TOD has become "a top real estate investment" (Renne, 2009, p. 3) and is being increasingly pursued by municipal governments. According to Loukaitou-Sideris (2010, pp. 64-66), key items for achieving successful TOD include:

1. "Plan stations near people and activities – For developers, location is the most important attractor to and motivation for building at a particular site".

2. "Pre-plan for TODs – Municipalities that pre-plan for TODs in anticipation of a transit line are in a better position to attract developers and projects in their jurisdiction".

3. "Educate and involve the public – Extensive education of the public about the potential benefits of TODs is especially important…ideally, a shared

community vision can be formulated prior to the designation of a transit-oriented district as part of proactive public sector planning in anticipation of a rail line".

4. "Actively recruit pedestrian-oriented, transit-friendly uses – the public sector should play a crucial role in identifying and attracting desirable commercial tenants".

5. "Find a solution to the parking dilemma" – Cities should implement strategies that reduce the need for parking space.

6. "Make transit more appealing" – If TOD development is to shift people from car use to transit use, policies must be put in place to "incentivize ridership".

This framework for TOD development is not easily achievable and requires the commitment of government, private firms and the public. For this reason, how TOD and RMT are conceptualized and perceived by an entire community is the most important factor for TOD success and sustainable land use.

4.5   Rapid Mass Transit, Mega-Events and Urban Image

To bring together aspects of place promotion (see chapter 4) and various aspects of this chapter, an analysis of the relationship between RMT development, mega-projects and urban image will now be discussed. Cities compete to host major sporting events, for example, which are used to justify urban renewal and large infrastructure projects, and also to express a city's personality and status (Essex & Chalkley, 1998). This perception of status or image, and associated

efforts to rank cities, commonly influences the locational decisions of households and businesses (Basolo, 2000; Siemiatycki, 2006).

Siemiatycki's (2006) account of the development of an urban rail system in Delhi, India speaks to the potential role of rapid mass transit (RMT) in place promotion and preparations for hosting mega-events. Constructed for the 2010 Commonwealth Games, this mega-project involved an entire urban transit system built at once, rather than developed incrementally. In a country where the average annual income is just over USD 1000 (Siemiatycki, 2006), justifying, and convincing the public to believe in, such a massive capital project was a major challenge. Although the anticipated practical results, such as improved travel efficiency and reduced congestion, were not determined at the time the article was written, the new system was well received by the public. Whilst the negative impacts of construction were severe, upon completion people were taking 'joy rides' just to marvel at the system and be a part of it (Siemiatycki, 2006).

It was concluded that the municipal government effectively associated the mass transit system with the image of modernity and indeed that mass transit would be a "catalyst towards the development of a modern city" (Siemiatycki, 2006, p. 278). The relationship between modernity and RMT was noted as early as the late 19th century (Hazareesingh, 2001; Carlton, 2009), but was not really explored in detail until the 1970s, when it became apparent that "…rail transit was becoming symbolic of progress and municipal accomplishment" (Wachs, 1996, p. 137). When athletes from the countries of the Commonwealth descended upon Delhi for the games, it was hoped that this mega-project conveyed a positive

image that could contribute to future economic gains. Sometimes, the drive towards sustainability, especially with regards to RMT development, requires a 'push'. Major events such as this can act as catalysts for RMT development.

4.6   Conclusion

RMT development is closely related to concepts of sustainability. Automobility, with its heavy reliance on non-renewable oil-based energy, is deeply problematic in terms of economic, social and environmental sustainability. RMT provides an alternative to private motor vehicles for transport and also to current trends of urban growth (sprawl). Proper nodal developments, particularly TOD, can reduce the need for people to use their cars to move between destinations and help change land use patterns as they relate to transportation choices and development designs. It can help to decrease the stress on our economy, social networks and environment and it can encourage and be developed alongside other sustainable land use practices.

Chapter Five – Methods

5   Introduction

This thesis centres on a detailed case study comparison between Edmonton, Canada and Auckland, New Zealand. Comparative methods are an increasingly common approach in urban research (Collins, 2010; Nijman, 2007; Koenig, 2006; Mason, 2006; Kim & West, 1991). Exploring only one city might result in interpreting certain findings as normal or unremarkable, when in fact they are quite unique relative to other similar cities. Comparative research enables both the unremarkable and the unique to be identified with greater accuracy; or as Bourdreau, Hamel, Jouve, & Keil (2007, p. 48) explain, it is concerned with "capturing both general and idiosyncratic, overarching and localized" characteristics of cities. In particular, case study comparison "...factors contexts into explanation, rather than attempting to control for them or edit them out" (Mason, 2006, p. 17).

An alternative approach is to compare select cities against a recognized standard. In this approach, selected characteristics of cities are evaluated independently relative to the standard and then the results compared. For example, if having over 20km of urban rail track was a recognized threshold to achieve a widespread system, the extent of various cities' systems could be measured relative to this standard, and the results compared. What is missed is that 20km can mean very different things in different cities depending on differences in density, physical geography, socioeconomic conditions, etc.

Therefore, with respect to research into RMT development, this approach would lead to less meaningful results due to the wide variety of contexts and situations that face different cities. A comparative case study approach was used for "its ability to provide a more nuanced and diverse account" (Collins, 2010, p. 934) of the issues at hand.

This chapter explains how research for this thesis was carried out and the reasons for choosing particular methods. It first discusses the selection of the two subject cities. This is followed by an explanation of how this study builds on previous studies considered in detail in chapters three and four. It then explains the interview and document collection and analysis process in detail, and acknowledges the successes and limitations of these approaches.

5.1   City Selection

Edmonton, Canada and Auckland, New Zealand were selected for comparison following guidelines from Nijman (2007), which emphasized historical and contextual characteristics. Chapter two provided a detailed contextual overview of both cities and focussed on their respective histories and current experiences of RMT use and development. While a range of differences were identified – for example, Auckland's broad focus on service improvement is distinct from Edmonton's current emphasis on LRT line expansion, reflecting different needs – the larger picture is one of strong similarities. These similarities have remained evident over the last decade, as both cities have recognized the costs and constraints associated with automobile-dependent sprawl - albeit for

slightly different reasons - and systematically sought to improve RMT infrastructure and services.

Edmonton and Auckland are of a similar size, have similar patterns of land use relating to similar vehicle/transit ridership levels, and RMT development is a prominent issue due to current efforts to transform the transportation system through major upgrades and expansions of RMT (City of Edmonton, 2009; Auckland Regional Transport Authority, 2006; Harris, 2005; Kim & West, 1991; Bakker, 1985). Both cities are now overcoming a political unwillingness to invest in public transit in general and 'expensive' RMT in particular. After long periods of stagnation in public transport systems they are now making significant reinvestments, and both published new 10 year public transport plans in 2009. Also, at the time of research, both were in the process of either preparing to host, or bidding for, major international special events: the 2011 Rugby Union World Cup in Auckland and the 2017 World Exposition in Edmonton. Table 5.1 highlights characteristics of these cities that are pertinent to this research.

Feature	Auckland	Edmonton
Population	1.4 million[1]	1.1 million[2]
Land Area (km^2)	5600[3]	9,417.88[4]
Raw Density (People/km^2)	261.07	109.89[4]
Density of built up area (People/km^2)	2200[5]	1000[5]
Public Transit Ridership – 1990 (trips per year)	40 million[6]	30 million[7]
Public Transit Ridership – 2009 (trips per year)	55 million[6]	45 million[7]
CBD Modal share (current) – Percentage of all trips	Auto: 87% Transit: 7% Walking: 5% Cycling: 1%[8]	Auto: 77% Transit: 9% Walking: 11% Cycling: 1% Other: 2%[12]
Modal share (current) – Percentage of all PT boardings	Bus: 79.5% Rail: 12.4% Ferry: 8.1%[8]	Bus: 58.0% LRT: 42.0%[9]
Length of road network (km)	1419[10]	4500[11]

Table 5.1: Relevant characteristics of Edmonton and Auckland.
Sources:
1. Auckland Council, 2011a
2. City of Edmonton, 2011m
3. New Zealand Government, 2009b
4. Statistics Canada, 2006
5. Demographia, 2011
6. ARTA, 2010a
7. City of Edmonton, 2011n
8. Auckland Regional Transport Authority, 2009
9. City of Edmonton, 2010
10. Rambisheswar & Azawi, 2008
11. City of Edmonton, 2009
12. Banister Research & Consulting Inc., 2006

There are a great many criteria on which cities can be compared, and a large number of analytical approaches that may be taken. This thesis was guided by a review of recent urban comparative literature. One of the most influential studies was Jan Nijman's (2007) article comparing Miami to three other cities in order to explain how and why Miami developed into a world city. In addition to the topical research question, Nijman explored the validity and justification of the methodological approach and concluded that the success of a case study comparison hinges on careful selection of the cities. Specifically, Nijman (2007)

suggested that historical and contextual characteristics may be more important for selection of cities than more obvious characteristics such as size, industry or other population demographics. Thus, Miami was compared to Amsterdam partially due to similarities in being an "oasis of peace" (Nijman, 2007, p. 95) in a region of conflict. While they were completely different conflicts, the context and the similar ways in which conflict shaped the current urban form made for effective comparison. Likewise, similar histories of RMT development between Edmonton and Auckland indicate a strong case for comparison. As emphasized above, these consist of an historical period of rail development, followed by under-investment, and current re-investment (see detailed account provided in chapter two).

5.2   Ethics

This proposal for this research was reviewed for its adherence to ethical guidelines and approved by the Arts, Science, Law Research Ethics Board at the University of Alberta. The main ethical considerations centred around interviewing key informants in their professional capacity. Although the interviews were broadly similar to the types of conversations participants would normally conduct in the course of their professional duties there was the possibility that some lines of questioning could have the potential to cause mild short-term discomfort if they were perceived as critical of participants' organizations. Questions related to the development and marketing of RMT systems in the two case study cities could have caused some participants to reflect on the success (or lack thereof) of particular initiatives. Where these initiatives were not perceived as particularly successful, or as not meeting their objectives,

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there could have been elements of professional sensitivity to consider. However, these discomforts are not significantly different from those participants may encounter in their everyday work. There were no long-term risks or discomforts anticipated.

Initial contact with most participants was made by email using a template letter found at Appendix A. It briefly outlined the potential participants' rights with regards to the information they might provide. If they agreed to participate, they signed an informed consent agreement (Appendix B) that gave more detail on their rights as participants within this research. Copies of this consent were retained by both the participant and the researcher.

Confidentiality of information was maintained be ensuring personal identifying information was removed if any was provided, and participants were given pseudonyms where quoted in the results. In addition, the names of their employers/agencies were not made specific, although it is possible that some readers might deduce these from the research, given the limited number of potential employers/agencies involved. Participants were able to refuse to answer any question, were offered a transcript of the conversation, and the ability to withdraw the information they provided in full within two months of the interview. During the course of the research, no major ethical issues arose and no interviewees demonstrated any kind of discomfort or appeared to experience any harm as a result of participating.

5.3   Previous Studies

This thesis builds off of key studies around the topics of place promotion,

urban image and RMT development. While these are discussed in detail in chapters three and four, some of their key concepts are briefly summarized here, as they informed the approach used. Specifically, over-arching ideas from these works framed the *overall* direction of this thesis, as well as the *particular* themes and questions pursued via mixed qualitative methods.

The field of place promotion as a topic of academic study is relatively new, but there is a growing body of literature within which this thesis is situated. In terms of the use of place promotion on a city scale, two articles by Eugene McCann (2002; 2004) set the conceptual foundation for this thesis. McCann argued for a strong link between municipal policy and the desire of cities to ascend in the perceived hierarchy of cities. This thesis applies the idea that cities are constantly competing on this hierarchy to the example of rapid mass transit, and its contribution to particular cities' "participation" in inter-urban competition.

Conventionally, cities have been compared and ranked based on "traditional analytical categories" (McCann, 2002, p. 388). Their success has been measured according to indicators of economic development, such as an international airport and a certain number of corporate headquarters. What McCann identifies and focuses on are the non-economic forces that propel interurban competition such as urban image and a ranking of cities based on perception: these are at the core of this thesis, and formed the foundation for many of the interview questions (see Appendix C).

The Siemiatycki article discussed in section 4.5 was also very influential in framing this thesis. It brought together the subjects of place promotion and

mass transit development in a study of urban rail development in Delhi, India by exploring how the building up of the image of a mass transit development led to a unique success story (Siemiatycki, 2006). The conclusion that the municipal government associated the mass transit system with the image of modernity and believed mass transit would be a "catalyst towards the development of a modern city" (Siemiatycki, 2006, p. 278) is also a key concept of this thesis. Some interview questions (see Appendix C) dealt with the role that RMT had in portraying an attractive image and its significance as a non-conventional factor of interurban competition.

5.4   Mixed Qualitative Methods

The overarching approach to this research was to use mixed qualitative methods which is an approach also used by most of the articles discussed in section 5.3. Within this framework, there were four main methods used. The first was a thorough review of academic literature on the subjects of RMT development and marketing, associated environmental and health issues, and urban image and place promotion. The second component was a series of interviews with key informants in Edmonton and Auckland that provided the main data source for analysis. To supplement this primary data, documents and publications from each city were collected and analyzed as the third component of the research. Participant observation as a user of public transit systems in both cities was the fourth.

Mixed methods research is typically employed in areas where a single approach would not uncover certain elements of the issues (Gilbert, 2006). Most

commonly, the term is used to refer to a combination of qualitative and quantitative methods. This reflects increasing recognition among contemporary researchers of the strengths and weaknesses of the techniques on both sides of this long standing divide in research methodology (Sale, Lohfeld, & Brazil, 2002). In the present research, only qualitative methods were employed because identifying the importance of key themes (one of the main objectives) requires relative measurement based on perceptions of experts and would not be conducive to quantification. More generally, in research related to human activity and behaviour, it is argued that "...the complexity…mandates more complex research designs" (Sandelowski, 2000, p. 246). A single qualitative method could not have uncovered the complexities of this research (human behaviour, politics, economics, sustainability, etc.) and would have led to less complete and/or viable results.

The principal data source was key informant interviews. This is an established approach in the social sciences (Marshall, 1996). One of the strongest arguments for the value of this type of data collection is that it is "...preeminently suited to the gathering of the kinds of qualitative and descriptive data that are difficult or time-consuming to unearth through structured data-gathering techniques such as questionnaire surveys" (Tremblay, 1957, p. 688). One of the key advantages of key informant interviews is that participants have more in-depth knowledge of the subject than the general population, and are likely to convey relevant information in a quick and timely fashion (Marshall 1996).

Tremblay (1957) suggests that an ideal key informant should rate highly in five criteria: role in their community, knowledge, willingness, communicability and impartiality (p. 692). For this research, the majority of informants met the first four criteria by virtue of being trained professionals involved in decision making processes in their respective cities. However, they would not be considered highly impartial since most were proponents of RMT and were involved in projects related to its development, the success of which would directly impact their careers. More generally, it is not clear what it would mean to be 'impartial' with respect to a much-debated (and sometimes controversial) issue like RMT development.

There are two main related concerns to be aware of in research drawing upon key informant interviews. The first is that key informants are at risk of not representing, understanding or knowing the views of the broader community (Marshall 1996). In research dealing with determining the views of a broad community, this could be a difficulty. For example, a transportation engineer, as a key informant, may strongly believe that a certain transit project should proceed, but that does not mean that other people in the community will concur. Second, key informants may only disclose information that they deem to be "politically acceptable" (Marshall 1996, p. 93) and the researcher might therefore only get part of 'the story'.

Since this research relied heavily on key informant interviews, it was important to address these potential concerns. The first two objectives of this thesis focus on determining the perceived importance of certain themes to those

involved in municipal decision making. Because of this, informant 'impartiality' was not considered to be a disadvantage that detracted from the results. Rather, participants' viewpoints and opinions were interpreted as reflecting the position, outlook and relevant experience of each. Subsequent analysis involved identifying both minority and consensus positions among those interviewed to gain insight into how and why municipalities make the decisions they do; their comments were not interpreted as illustrative of public opinion, or of broader debates around RMT development. The thesis' central concern for decision making also explains why the key informants were almost all drawn from within public institutions. They were considered best-placed to provide detailed information on processes and discussions *within* urban governance.

Employing mixed methods - specifically, using literature reviews, analysis of municipal publications and participant observation to supplement key informant interviews – also helps to mitigate both of Marshall's (1996) concerns. For example, if discrepancies are found between informants' viewpoints and those in publications, this provides an avenue for inquiring into the 'political' nature of information provided by these sources. In addition, the ethics process described in section 5.2, which guarantees confidentiality and anonymity, may encourage key informants to disclose information that might otherwise be withheld.

5.5   Primary Data Source - Interviews

To gather primary data, semi-structured interviews were conducted in both subject cities. Eleven interviews were completed in each, involving thirteen participants in Edmonton and twelve in Auckland.

Occupation/City	Auckland	Edmonton
Planners	5	5
Engineers	1	3
Scholars	2	0
Marketing/Communication	2	1
Event Organizers	2	2
Economists	0	2
TOTAL	**12**	**13**

Table 5.2: Breakdown of respondents by city and general occupations.

Auckland. Table 5.2 shows a breakdown by city and general occupation of those interviewed.

A series of questions (see Appendix C) was prepared and used as a guideline for each interview. Most key questions were asked in each interview, with the emphasis varying depending on the particular expertise of the person or people being interviewed. All interviews were recorded, and their length ranged from 25 minutes to just over one hour depending on how much information was offered by the respondents. Follow-up questions not listed on the Appendix were also explored as conversations led to particular topics.

Selecting individuals to interview was achieved primarily by looking at who held particular positions within different organizations (e.g., which planner was 'in charge' of future LRT expansion; which person was listed as a contact person at an open house, etc.). Another technique that was employed was 'snowballing' as contact was made. It was common for an email of initial contact

to be declined, but with a suggestion that someone else would be a better person to talk to.

Once interviews were completed, the recordings were transcribed verbatim into text and pseudonyms were created for each respondent to ensure confidentiality (see section 5.2). These documents were then loaded into Nvivo 9 which is a computer program with analytical tools for qualitative research. Within this program, each transcription was broken down into small units of text and portions were 'coded' in two different ways.

First, parts of each transcript were coded by the question from Appendix C that they were addressing. These included not only specific responses to the exact question, but also other comments or discussion that *related* to that question, but which appeared elsewhere in an interview. Secondly, sections of transcripts were also coded according to which of the four objectives they addressed or related to. Overall, 91 percent of the text in the transcripts was coded according to the question being answered, while only 32 percent was assigned an objective code, because often comments did not obviously link to a specific objective. Those portions that were coded according to an objective were used as starting points for each section in the results chapter, which is organized by objective. The remaining portions, coded only according to the question they addressed, were referred to when the specific question they addressed was being discussed.

After coding, Nvivo 9 was able to produce separate documents organized by code, to enable identification of trends, similarities and differences in responses to each question. Three methods were used to determine which

excerpts were incorporated in the results. First, the code documents were read in their entirety to find quotes that were obviously very well structured and applicable. Secondly, the code documents were searched to find key words or phrases such as "interurban competition" or "urban image". Often, statements that directly referenced these terms were particularly succinct and on-topic. Lastly, when a specific topic was being discussed in the results chapter, the transcripts from those interviewees deemed experts on that topic were scanned in detail, since they likely had the most relevant perspective. For example, in writing the section of the results chapter dealing with the 2011 Rugby World Cup (section 6.4), the transcript of the representative from the organizing committee for this event was selected for careful reading in its entirety.

Once the best and most relevant quotes were obtained for each question, they were vetted to ensure that there was balance from both Auckland and Edmonton. This was done throughout the writing process as new arguments were formed or ideas discussed. For example, if someone from Edmonton commented on the density of a neighbourhood and how this affected public transport use, the Auckland transcripts were scanned for quotes addressing the same topic. Where possible, opposing viewpoints on topics were included to offer a more complete account. Lastly, balance was also ensured within each sub-section of the results by using quotes from a variety of respondents wherever possible (rather than, e.g., all quotes from one city addressing a particular topic being from the same person).

5.6 Other Data Sources - Document Analysis and Participant Observation

Two sources of data used to supplement the primary data source were municipal documents and publications, and participant observation. In both cities, major municipal planning publications - such as the *Transportation Master Plan* in Edmonton and the *Sustainable Transport Plan* in Auckland - were available online. The focus was on documents directly relevant to RMT development since the mid-1970s, and which show changes in policies and practices.

The websites for the City of Edmonton, the City of Auckland, the Auckland Regional Transport Authority, Auckland Transport and the various former councils around Auckland were searched to find relevant publications, including drafts and meeting minutes. Some of these publications were also provided by respondents at the time of interview. In addition to municipal publications, some respondents also provided private documents such as PowerPoint presentations they had given in meetings or notes they had made for meetings.

Once all of these documents and publications were obtained, they were reviewed for relevance to this thesis, and ascribed a 'grade' of A, B, C or D accordingly. Those with A or B grades were analyzed in more detail for specific quotes for use in both the results and context chapters, and were also categorized by the research objectives they addressed. For example, an environmental policy publication would address the objective on environmental considerations in RMT

development. In the results chapter, the documents and publications were primarily used to support/contest quotes from the interviewees.

The second supporting source involved participant observation. While in Auckland for two weeks to conduct interviews, I transported myself exclusively by public transport and walking in order to experience the system, and gain some sense of how Aucklanders deal with it on a daily basis. Some of these trips were simply to get to interviews, while others were to specific places, such as Eden Park, the main venue for the 2011 Rugby World Cup in Auckland. Many pictures were taken of different aspects of the system such as signs, maps and infrastructure. I also carried a notebook at all times and made notes of places I saw and things I noticed about people interacting with the public transport system. Although my experience with Edmonton's transit system spans my entire life, specific trips were also taken during the course of the research to view the system through the lens of this thesis.

5.7   Reflections on Methodology

Overall, the methods used to conduct this research were effective in collecting applicable data. The information obtained through the interviews was very relevant, with few exceptions as most respondents were able to offer direct, relevant answers to questions. This is an indication that the pre-determined list of questions (Appendix C) was well constructed and that conversations during interviews were kept mostly on topic, which is reflected in the fact that 91% of the transcribed text was assigned a question code. This created the welcome challenge of determining which answers were *most* relevant, and should be

included in the results. Nvivo 9 software assisted in this process, as it proved very efficient at organizing the information into useable clusters.

Using a snowballing technique to obtain names of potential participants was effective, as it identified people recognized by their colleagues and others working in the field as having relevant perspectives and information. Given the topic of this research, there are many different viewpoints that could potentially be involved (city planners, politicians, engineers, marketers, transit designers, urban designers, professors, event planners, etc.) I sought a small number (1-2) of interviewees from each category. This was necessary to keep the total number interviews, and subsequent amount of data, within the scope of the research.

Another challenge dealt with the nature of many of the municipal publications. While some were written with more self-critique than others, the majority were very much promoting their respective city in overwhelmingly positive, and likely unrealistic, ways. In some respects, this was useful in the sense it related to the objective of place promotion, but it also added a degree of difficulty in finding more balanced information within the publications.

5.8   Conclusion

This thesis employed literature review, interviews, publication review and participant observation to achieve the research objectives. Careful selection of the comparison cities and adherence to ethical guidelines ensured a strong framework within which the research was conducted. By building on previous studies, employing multiple techniques of gathering results, and including 'snowballing' for finding participants, the validity of the results was bolstered.

Chapter Six – Results

6   Introduction

This chapter discusses the relationship between RMT development and marketing, place promotion and urban image in Edmonton and Auckland. It draws upon interviews conducted with key informants in both cities, supplemented with data from municipal publications and by participant observation (see chapter five). The discussion is organized around the four objectives of this research, as set out in section 1.4 and concludes by drawing connections between each objective.

As a starting point for discussions, all respondents were asked what the benefits of an RMT system were, and what characteristics an ideal, successful RMT system would have. As discussed below (see section 6.1.1), while there was a wide range of responses regarding benefits, the most common related to sustainability, whether economic, environmental or social. Reducing congestion and allowing for more efficient movement of people and goods were also commonly referenced. The time benefits of taking RMT, as opposed to driving, and the associated impact this would have on the locational decisions of residential and business owners, were mentioned in a few cases.

The most commonly referenced characteristic of a successful RMT system was one that was reliable. This was especially true in Auckland where many respondents commented on the currently (rather notorious) unreliable rail system. When asked when they last experienced a significant delay on a train, one person

laughed and stated, "…our cell phones are constantly ringing with text messages about train delays and breakdowns" (Mike, Transit Planner, Auckland). After reliability, a system with frequent service and the ability to move users faster than driving were also desirable characteristics. There was also mention of a system that reached all parts of the city and was affordable to all demographics, indicating a desire for social justice. This brief introduction to the respondents' general concepts of an ideal RMT system helps set a context for the rest of their responses on the various subjects and issues.

6.1 The Development and Marketing of RMT Systems

This section examines the four main themes that emerged from discussions around RMT development and marketing: sustainability, interurban competition, political influences and automobility.

6.1.1 Sustainability

About half of those interviewed identified sustainability as a benefit of RMT systems. Even when sustainability was not directly referenced, many of the perceived benefits of RMT related to this concept. In Edmonton, this focus flows from a very optimistic goal to:

"…make Edmonton the nation's leader in setting and achieving the highest standards in environmental preservation and sustainability both from its own practices and by encouraging and enabling the practices of

citizens, businesses and institutions. So, we are looking to become one of the most sustainable cities…" (Judy - Transportation Engineer, Edmonton).

This focus on sustainability, which was also found in the RMT literature (see section 4.1), was mirrored in discussions with respondents. It was noted by one that "…you can have a hundred cars with one person in them or you can have one LRT train, one car. So definitely, it's part of becoming more, like I said, it's economic sustainability, it's environmental sustainability and it's also social sustainability" (Judy - Transportation Engineer, Edmonton). Most concepts of sustainability were either economic or environmental, although social sustainability was also discussed in a small number of cases. As mentioned in section 4.1, in many situations, social sustainability is much harder to define and measure and is therefore rarely the main focus of a project or policy.   By contrast, many projects often have easily seen impacts on both environmental sustainability and economic sustainability, and this is likely why they are referenced hand in hand, and more often than social sustainability.

6.1.1.1   Economic Sustainability

One of the main motivations behind cities' development of RMT systems concerns the economic costs associated with different modes of transportation. This works at both the urban scale (as cities are responsible for the maintenance cost of transport networks), the individual scale (in terms of the costs associated with transporting oneself), and the commercial scale (where businesses need to

transport goods and services). The two main types of transportation discussed by respondents were private motor vehicles and public transit. Both case study cities have typically prioritized roadway networks for private motor vehicles over infrastructure for public transit (see sections 2.1.1 and 2.2.1). However, it is clear that with changing economic conditions, the excessive focus on automobile infrastructure is increasingly illogical and a more balanced approach with RMT infrastructure is needed.

As road networks grow as a part of urban sprawl, the amount of maintenance required increases significantly along with the costs of utilities and sewers, etc. (Ciscel, 2001). Many cities, including Edmonton and Auckland are at the size, and have been for some time, where the cost associated with maintaining these road networks has increased substantially and is taking up very large portions of municipal budgets. In Edmonton:

> "...there was this boom in the 70's and there was a whole lot of road construction and now...there is starting to be the need to...reconstruct all that road and as we add more and more, we're realizing how can we possibly take care of this going into the future? Economically, how can we sustain this? Well, we can't..." (Karen – Transportation Engineer, Edmonton).

In Auckland, the expense of infrastructure and congestion has actually been roughly estimated: "because all of those cars actually have a cost to the economy

and it has been estimated…as one billion dollars [per year] in terms of economic loss to Auckland" (Holly – Communications, Auckland).

It was clear in both cities that those who make plans and decisions regarding the types of transportation systems that get built see RMT development as a means of increasing the economic sustainability of their urban transport systems. This type of mindset is made very clear in the comment that, "...we can't continue to sprawl, it's fiscally unsustainable for the city, we can't afford to build our way out of congestion" (Judy - Transportation Engineer, Edmonton). It was echoed almost word for word in an Auckland document:

> "Auckland had been growing rapidly in a sprawling fashion. By 2004, the city was absorbing an extra 50 people each day and hence potentially an extra 35 cars…while roads will remain important for moving freight, it had become impossible to build our way out of congestion by providing more road capacity" (ARTA, 2010a, p. 5).

Both cities are certainly committed to reducing sprawl, and recognize that alternate methods of transport are needed to fix congestion problems, not just expansion of current road systems (see concept of induced demand in section 4.3.1).

For individuals and businesses, the onset of peak oil is resulting in increases in the cost of fuel, but also in other oil based products used in vehicles (tires, lubricants, plastics, etc.), which cause purchase and maintenance costs to

increase. These changes mean that other ways to transport people and goods have an increasing cost advantage. Cities are no longer able to rely so heavily on their roadway systems:

> "…it would be impossible for Auckland to do its economic business if it didn't have a public transport system. The extent of that public transport system becomes a spectrum from merely providing for those that don't have access to other forms of transport through to...benefits to the CBD, for example, in not having to provide the level of car based infrastructure that would then restrict the economic development of the city" (James – Transport Planner, Auckland).

This comment relates to a commonly referenced benefit associated with RMT expansion: reducing congestion. In Auckland, "...the main benefit that [RMT has] been justified [on] is for reducing road congestion" (Harold – Rail Planner, Auckland). In Edmonton, when "…moving goods, [businesses will] have more efficient opportunities because there will be less congestion on the roads" (Charlotte – Economic Development, Edmonton).

The perceived need to shift to more economically sustainably transport practices is not only found in specialized discussions around transport planning, but is embedded throughout the community, and in "...all kinds of industry or those government agencies or non-government agencies that would have an interest, there was just this idea that we have to change what we're doing..."

(Karen – Transportation Engineer, Edmonton). These concerns over economic sustainability were largely centred around energy and access to energy, which also has an environmental component. In Auckland:

> "So, the last increase in oil prices a couple of years ago had fairly interesting straight-away effect on people's travel patterns. We saw the number of cars travelling over the Auckland harbour bridge dropped by about 11%, maybe because there was a significant shift in price and since that's eased off, there's been a softening in that approach. So, you can say that pricing things will have a shift" (James – Transport Planner, Auckland).

This quote very succinctly demonstrates that as the price of oil increases, people reduce their use of cars for economic reasons. Logically, this shift in practice also has environmental benefits.

6.1.1.2 *Environmental Sustainability*

In the same way that sprawling types of transportation development decrease economic sustainability, they also impact environmental sustainability. It was noted that "…the environmental sustainability of our footprint is of course a big deal as well. As we continue to grow outward is that environmentally, is that good stewardship? Probably not" (Karen – Transportation Engineer, Edmonton). As was discussed in section 4.1, there are very close connections

between economic and environmental sustainability, often centred around the effects of producing and using energy. In the Auckland context:

 "New Zealanders tend to be pretty sustainably and environmentally minded. So, in terms of the production of energy sources as a country and as a people, we're very focused on sustainability and the most environmentally efficient ways of producing those energy sources" (Holly – Communications, Auckland).

This type of thinking (or rhetoric) is also incorporated into transportation planning, as in the claim of the Auckland Regional Transport Authority that "sustainability underpins and is incorporated into all of [our] activities" (ARTA, 2006b, p. 3). However, others claimed that this environmental focus is more image than reality:

"New Zealand's an interesting place around questions of environmental choice or sustainability…you would have come across the 100% pure branding in New Zealand, which is quite fascinating, because there is plenty of evidence that in fact New Zealand isn't 100% pure…but, there is no doubt that New Zealanders in their own heads have the idea that New Zealand is a clean branded place" (James – Transport Planner, Auckland).

It is worth noting the discrepancy between this perceived 'pureness' and the apparent lack of actual 'pureness' mentioned in section 2.1.5. It is almost certain that perception, while contrary to reality, can play a key role in decision-making and policy.

In both cities, the links between energy resources, environmental sustainability and transportation were very clearly understood: "…the sustainability challenge, the likelihood that there will be scarcity of energy and you know, a need to get around our city in a different way, having a transit system is very important" (Darryl – Urban Planner, Edmonton). This is potentially a difficult argument to make in Edmonton, where the production of energy resources, primarily oil and gas, is a huge component of the economy.

However, there is more to making transport sustainable than the provision of infrastructure. It is also about changing behaviours, and "means getting the people into the habit of using public transport" (Dale – Planner, Auckland). This is where perception, marketing and education become important, because "ultimately, the city can build all this infrastructure, but in order for us to be more sustainable, we need to get people on the train and to encourage people to use it" (Judy - Transportation Engineer, Edmonton). The behavioural change required in a large number of people is not easy to incite and it was suggested that there are two ways to incite change in a population:

"One is through a fairly subtle program of changing their behaviour and being able to explain that they do have choices...behaviour change through

travel planning. Or, alternatively, you get significant behaviour change

when there's crisis. And crises come around in transport if we, if you run

out of oil or there's an oil price shock or those sort of factors..." (James –

Transport Planner, Auckland).

Changing behaviour through travel planning is obviously an option available to

planners and municipal decision makers, although the change it may effect may

be very gradual. In Edmonton's environmental initiatives document, *The Way We*

Green, the link between economics and inciting this gradual environmental

behavioural change is made very clear. It is claimed that "the key is self-

interest...members of the general public tend to focus on direct economic

consequences....it is disincentives and incentives that provide the driving force of

public behaviour more immediately than persuasion or education" (City of

Edmonton, 2011g, p. 23). Incentives and disincentives relevant to transit planning

can include parking rates, tax incentives for buying transit passes, discounts or

special pricing during events, and other economic instruments.

Once the infrastructure is built and people are using a sustainable

transportation system, there are additional benefits. As Edmonton's

Transportation Master Plan states:

"Transportation is more than moving people, goods and services on

Edmonton roads, rails, buses, sidewalks, and light rail transit. It is

essential infrastructure that shapes our urban form, impacts our economic

well being and is a primary determinant of our city's environmental, financial and social sustainability" (City of Edmonton, 2009)

It is clear that the impact of a transport system that is designed in a sustainable way, and includes RMT and other forms of public transport, plays a strong role in shaping a city. It therefore follows that the system may be relevant to urban place promotion through characteristics of environmental sustainability. In order to achieve improvements in environmental sustainability, gradual behavioural change can be incited through economic means underpinning the close link between economic and environmental sustainability.

6.1.2 RMT Development and Interurban Competition

A second major theme that emerged relates to interurban competition and a city's image and attractiveness relative to other cities. In some circles it is almost considered self-evident that the type of public transit system a city has directly relates to its status in the urban hierarchy:

"When you look at other Tier 1, World Class cities...what do they all have in common, what aspects? ...Every major city has some kind of a rail system...and if you're not in that game, if you're just a bus community...you're second tier" (Charles – Transportation Engineer, Edmonton).

Similarly, in Auckland, it was stated that "…the only way this city is ever going to become a world class city is - it needs a transit system. That's the only way." (Mark, Urban Planner, Auckland). This very clear awareness of the role of RMT in positioning a city in the urban hierarchy was apparent in both Edmonton and Auckland. RMT was seen to contribute to interurban competition in both conventional and non-conventional ways (see section 3.1), although it was not always clear how contributions should be categorized. The distinction is a fine one, with grey areas in between, and many respondents referenced both types of factor interchangeably.

Participant Observation: Types of RMT

The urban rail systems in Auckland and Edmonton are very different in a number of ways. In Auckland, the trains have diesel locomotives that are very loud and smelly and have poor performance in terms of acceleration, deceleration and speed. I was also told stories of a locomotive at times being unable to pull a train up a hill causing major delays while another was brought to assist. In Edmonton, the LRT cars run on electricity and can accelerate and decelerate relatively quickly. While the train system in Auckland has considerably longer lines and more stations than Edmonton, the notoriously low level of service quality seems to result in lower ridership. Auckland is attempting to address these issues, both with a major electrification project and also through marketing. Figure 6.1 shows a sign seen on a train advertising what are considered 'successes' in service. There are other apparent inefficiencies in how the trains

Figure 6.1: Service Statistics on Auckland Train
Source: Author

are operated in Auckland as well. While a ticket can be bought from machines, instead of any automation tracking its use, there are people who go through the cars punching tickets once the train starts moving which acts as the method of 'using' your ticket. This results in a required 'crew' on each train of upwards of 4 or 5 people. By contrast, Edmonton's LRT has one driver and works on a 'proof of payment' system where there are random patrols by transit security on trains and at stations that ask to tickets from time to time.

6.1.2.1   Conventional Competition Factors

The largest component of interurban competition is economic. The benefits of RMT as it relates to conventional economic competition are very similar to its contributions to economic sustainability. The broader, economic relationships between RMT and economics are covered in section 6.1.1.1, but there are also very specific aspects of economic competition. The first is the efficient movement of goods and people within cities. As mentioned previously, economic sustainability may be improved by less reliance on road infrastructure and greater use of RMT to move people. As economic sustainability improves, so too does conventional economic competitiveness in that:

> "...we've got really good evidence worldwide, how that translates into the competitiveness of the city and the attractiveness of the city for investment and its economic performance. And, I think there's really good research evidence that shows that those cities that have embraced a style of moving around which is non-car based, effectively, perform better over the long term." (James – Transport Planner, Auckland).

Second, the links between RMT development and economic competition can be seen in how different transport systems help or hinder the ability of businesses to be as efficient and profitable as possible. One person interviewed recounted a conversation on the subject of RMT development and real estate investment:

"I was at an event and there was a banker who's a major bank that

supports developers in the city and he was talking to me about

infrastructure and I was talking to him about real estate….and his point

was, how is the infrastructure coming along, when are you guys going to

get some of this stuff done?" (Charles – Transportation Engineer,

Edmonton).

It was clear that this banker was very interested in real estate around RMT infrastructure. This idea was also captured in a real estate ad in a local newspaper in Edmonton

Figure 6.2: Real estate advertisement highlighting RMT to sell a property
Source: local newspaper

in February 2011 in which having LRT nearby was the main selling point for the

property (see figure 6.2). This point was further enforced by a respondent who

stated, "...these businesses...are obviously seeing it as being very positive...it's

something that they want to highlight, you know, that...their development is close

to LRT. It seems like it's a good marketing tool for them and they're embracing

it" (Evan - Transportation Engineer, Edmonton). These specific examples link

RMT to land use and transport practices and show how these are desirable to the

business community in very conventional ways. This is the beginning of a key

shift in urban planning that has the potential to impact the future urban forms of

these cities in significant ways.

6.1.2.2 *Non-conventional Competition Factors*

The non-conventional factors of interurban competition are centred around

characteristics such as cultural capital and livability. These contribute to aspects

of urban image or the 'feeling' of a city, but are less tangible than standard

economic factors. It is broadly recognized that a major contributor to livability in

cities is the ease of individual mobility, and having "a better public transport

system means we get a more people friendly city which means that it might be a

more liveable city…" (Gordon – Planning Scholar, Auckland)

In this course of this research, it became clear that livability is thought of

as a resource that cities can have more or less of, and it is assumed that people are

attracted to places with more. Most respondents agreed that transport practices,

such as driving or using RMT, have impacts on livability and affect people's

locational decisions. Fewer respondents saw livability factors as being important

in locational decisions for businesses. Indeed, one flatly contradicted this notion,

stating:

> "…the whole point of business, if you can externalize costs so that
>
> someone else bears them, that's fine...the reality is, how these people get
>
> to you doesn't really concern you. They'll find a way of getting there, and
>
> it isn't a cost you have to worry about…passenger transport availability

doesn't factor into a lot of investment or locational decisions" (Joe –

Transportation Planner, Auckland)

However, another planner - who very readily highlighted the conventional

economic benefits of RMT development (see previous section) - stated that:

> "...intangible and indirect benefits from a set of lifestyle choices that come
>
> with the place and how the place is managed and run and what it actually
>
> offers and you could go around a whole spectrum of those, those sort of
>
> indirect benefits, but it is very much sort of about quality of life and it's
>
> not something that is easy to put around some sort of formula that comes
>
> down to a dollar figure. But, what seems apparent is when you look at the
>
> literature and the research around competitiveness and the competitiveness
>
> of cities on an international scale, a lot of those factors really do come into
>
> play when investors are making choices about where they will actually site
>
> their businesses and how they will run and operate..." (James – Transit
>
> Planner, Auckland).

This debate between what considerations are valuable for employers to consider

when making locational decisions relates to Richard Florida's concept of the

'creative class'.

6.1.2.2.1 Creative Class

The 'creative class', as outlined previously in section 3.1.2, is an idea that many decisions makers in both cities were aware of and accepted to varying degrees. It was particularly strongly supported in Edmonton, with people at all levels agreeing that economic competitiveness is bolstered by the presence of a 'creative class'. One person interviewed in Auckland mentioned how American Express chose to locate their Asian hub in Sydney rather than the typical business centres in the region, such as Tokyo or Hong Kong. According to him, the reason was because Sydney offered a lifestyle that gave them a workforce that they could tap into for the kind of employees they wanted: "[It] wasn't just based on, well, the rent here is cheaper than the rent there… those intangible benefits other than the straight, what's the cost of doing business" (James – Transport Planner, Auckland).

Carl (Planner, Edmonton) agreed that businesses were taking into account the 'creative class' in locational decisions citing a Canadian example and referencing Research In Motion, the company that is most prominently known for creating the BlackBerry:

"Absolutely, and that's probably becoming more and more of a determinant. Jim Balsillie and Mike Lazaridis co-owners of RIM, both guys still live in Waterloo and so RIM's headquarters is in Waterloo, its high end customer relation stuff is in Waterloo, its R&D stuff is in Waterloo, its test plants are in Waterloo, all with the high-end stuff...and,

why? Because they like living there, they like the scale of the community, they're engaged in the community, they're involved in the community and that's what it's all about"

Such employers understand that their success in attracting the employees is related to the locational decisions they make. As one person put it in reference to businesses attracting employees, "you've got to sell the location" (Steve – Urban Planner, Auckland).

A transportation engineer in Edmonton noted that he'd seen a shift in the thinking of politicians and that:

"…they're always afraid about or concerned with making sure we attract the best and brightest and typically, I think in some people's definitions, the creative class. And to do that, there's lots of studies showing that in order to create or attract those people to the city, you need to have things like the LRT and good travel options and vibrant communities" (Evan - Transportation Engineer, Edmonton).

The 'creative class' is also not just a group to be attracted to a city, but it also something that needs to be grown and retained within a city: "A lot of times people talk about attracting, but it's not just about attracting, it's about retaining our current creative class and the people that we have here…" (Judy - Transportation Engineer, Edmonton); "I think that improving the livability of our

city, a benefit in terms of economic development…[getting] people like young creative people [to] say, this is a place I could stay" (Darryl – Urban Planner, Edmonton). The goal of appealing to people to stay by making the city an attractive place to live is reflected in the city's document, *The Way Ahead*, Edmonton's urban development plan is "all about connection and sense of place. It's three or four pillars of sustainability, that's all heavily imbedded in areas around sense of place" (Carl, Planner, Edmonton).

Having a successful RMT system is considered something that can improve a city's standing in the urban hierarchy. The impacts on livability and the attraction and retention of a 'creative class' are often thought to be important factors associated with RMT systems.

6.1.3   Politics

A third key theme in the development and marketing of RMT is the role that the political environment plays in determining development. Most of those interviewed were public employees and not politicians, but had a keen awareness of the expectations of the politicians and the frameworks they were given to work within. At the end of the day, regardless of the goals, visions and ideas of the planners and other public employees, RMT development hinges on the political agendas of particular governments.

In Auckland, in the planning for the Rugby World Cup, there were a number of environmental projects that the organizing committee wanted to highlight while there was international attention on the city. However, "…whether that was political agendas or whatever…the reality is that it came

down to a fixed budget and…a lot of the stuff we were hoping would happen around sustainability and green building components, not all of it has been put through" (Colin – Rugby World Cup Representative, Auckland). A couple of people interviewed in Auckland referenced a 2008 change from the previous Labour Party Government, which was more supportive of RMT development, to the current National Party Government, who is not:

> "…the right wing National Government…have shown no great love of helping through the various funding mechanisms that are controlled at the national level of helping to modernize and uplift the capacity of Auckland's public transport system…we don't know how much they're going to continue subsidizing public transport and whether they will buy into the construction of the central city underground rail loop" (Bruce – Planning Scholar, Auckland).

In Edmonton, the shift has been in the opposite direction – from roadway development to RMT development - and some credit this to political influences at the municipal level rather than any kind of progress in planning principles:

> "I think that we have to give credit to politicians…we had politicians who couldn't care less about transit, never would have used it, never would have thought anyone should use it…I think the majority of council was minded that way… I think we've got some politicians now who say we

can't just piddle around with our transit system, we've got to actually catch up…and there were key people in the administration who were moved out because they were seen as impediments to making some progress and people…were brought in and all the attention of the transportation engineers 7 or 8 years ago was all about roadway expansion and now there's been a really big pendulum shift. So, the same people that were busy planning the Quesnell bridge expansion 7 or 8 years ago, those people are just off their feet busy doing LRT planning which is great to see. So, I think the politicians pushed the administration to start doing different things" (Darryl – Urban Planner, Edmonton).

Sometimes, political influence can be so powerful that it forces the administration to act in direct opposition to what planners and experts believe is best practice. In Auckland, one person interviewed became quite upset about a failed project that he saw as a complete waste of resources, done for purely political reasons:

"I have a firm belief, and I hope you'll quote this, that a lot of our regional political leaders were deprived of transit as kids because they're opening enough crazy branch lines that are single track, 5 level crossings across major roads that go to the bloomin' nowhere; they're miles from any bus interchanges. They had a lot of red faces because they opened up a line through Helensville which is about 45km out through the middle of nowhere outside of the city, running a few trains a day that was actually an

hour and a half slower than the equivalent bus and wondered why you only had about 4 people on the train a day and they had to sheepishly stop it and no one's ever to mention it" (Joe – Transportation Planner, Auckland).

Political influence also plays a very prominent role in RMT development as it relates to major international events, which will be discussed in section 6.4.

In Edmonton, the city administration (as found through interviews) seems very committed to RMT development and sustainable land use practices that go along with it. However, there may be conflict between these goals, and those in the community who bring in considerable investment, and are politically influential. Edmonton is potentially in this situation, where developers who strongly support the city politically and financially also prefer a more sprawling type of development. While respondents were very hesitant to make this assertion directly, at times, it came through indirectly in discussion of types of developments. For example, in referring to reducing urban sprawl, one person stated that "from an ideological point of view, we may want to but it's hard" (Carl – Planner, Edmonton). Shortly after, in referring to the development of the City Centre Airport lands, the same person added, "one exception to that is the potential airport redevelopment...the city owns it so we have some ability to influence the financial model there" (Carl – Planner, Edmonton).

Because of their loyalty to these developers and reluctance to dictate the use of land they do not own, political actors' commitment to less sprawling

development can be endangered. A city can promote progressive, sustainable styles of development, but it will not be successful at obtaining any kind of shift if it does not also find a way to stop conventional, unsustainable styles of development (sprawl).

6.1.4 Automobile Dependence and Automobility

The fourth main theme relating to RMT development and marketing centred on understandings of car dependence and automobility. Both case study cities are considered to be very automobile oriented in their land use and urban form (see chapter 2). Edmonton was described as "one of the most auto dependent cities in Canada, or the second most after Calgary, depending on what stats you look at…" (Judy - Transportation Engineer, Edmonton). Another respondent expressed it this way: "...think of it as a Western, automobile-oriented city. If I was to characterize it to somebody who has never been to Edmonton, it's a spread-out automobile-oriented city" (Darryl – Urban Planner, Edmonton).

Auckland was described quite similarly as "...very car-centered, a very, very car-centered city…" (Dale – Planner, Auckland) and "...it's no different to any other, any city in New Zealand and Australasia, really...a significant portion of people would choose to use their car if that was an option open to them and it was easy and available" (James – Transport Planner, Auckland). Another respondent reinforced this idea stating that "it has often been argued that the dispersed nature of Auckland, in particular its huge urban sprawl has meant that for many people, the only acceptable way of getting around was by private car" (Bruce – Planning Scholar, Auckland). As mentioned in section 4.2, sometimes it

is the urban form and the transportation system as a whole that influences people's ability to choose anything other than a car.

Some respondents expressed the perception that people are very committed to their cars - and certainly some are. However, what has been proven in both cities is that the general population is very willing to use RMT once it is made available. Overall increases in usage and ridership levels following expansions/improvements to public transit networks show a high willingness to use high-quality, accessible RMT: "...for decades, there's been an Aucklanders love their cars, we won't be able to get Aucklanders out of their cars, they love their cars. And we've kind of disproven that in the last 10 years" (Gordon – Planning Scholar, Auckland). In Auckland, the Northern Busway, which opened in 2008, is an example of this phenomenon. The North Shore is known as "a pretty affluent area [with] pretty high car ownership [and] people that wouldn't be your stereotypical bus rider" (Gordon – Planning Scholar, Auckland), yet the busway has been highly successful:

> "The comment was, 'North Shore people won't take the bus'. That was
> the standard belief. And it was very persuasive, invasive sort of thing that
> actually made a lot of people not want to support the busway...it just won't
> work, it just won't work. The reality is that the main service on it...people
> just flock on to it and they use it. The month we opened there were, I
> think 90,000 trips on it and we thought, bloody hell, that's fantastic! The

March just gone, there were 220,000 trips" (Steve – Urban Planner, Auckland).

The main explanation provided by Steve to explain this embrace of the busway centered around frequency. The convenience factor typically associated with private cars is often cited as a main reason for people's preference of cars over buses (Litman & Laube, 2002). In order to limit the discrepancy in convenience between a typical bus line and a car, the frequency of buses needs to be very high. It was explained that:

> "...at the morning peak, they come every 4 minutes with extra buses on call so you know, the Northern Express runs effectively every 2 minutes in the morning peak, you know, you get there, you don't worry about your time-table, there's a bus there. If you don't get that one, there's another one there and another one and another one" (Steve – Urban Planner, Auckland).

The busway has been able to make up for the potential loss of convenience for commuters of not using their cars, and it is also likely that some find it more convenient as there is zero congestion on the dedicated bus lanes.

In Edmonton, the opening of the South LRT line in April 2010 also surprised the city in terms of ridership and usage. The LRT has been incredibly full since the line opened with one person stating that:

"I take [LRT] every day, and it's jammed...so we really don't have to market...there's no-one else we can get on it...the train passed by people at Southgate this morning too so...it was full, you can't load. Quite often it passes by McKernan-Belgravia, I know it's kind of a bad news, good news story" (Judy - Transportation Engineer, Edmonton).

According to a press release, "the number of weekday boardings on the LRT increased significantly in 2010 to 93,600 from 74,400 in 2009" (City of Edmonton, 2011o, np). Bob Boutilier, General Manager of Transportation was quoted as saying:

"...we can thank the expansion of the LRT to Century Park in April 2010 for the tremendous growth in public transit...these numbers makes us confident that our focus on expansion of the LRT will truly transform the way we move" (City of Edmonton, 2011o, np).

The success of this new line in Edmonton is attributed to factors different from those behind the success of Auckland's busway. There was no increase in frequency when the new line opened up, but what was initiated was the beginnings of a system connecting a large number of points across the city:

"...you have to build a system...this amusement ride [the LRT line in its pre-1992 form] that I talk about wasn't a system. You know, it was done for a purpose, great, it worked but, no-one could really use it, it didn't really connect. And, with the extension even to South Campus last year, it was okay, but it wasn't really a big change, but when we went to Century Park, the lid came off" (Charles – Transportation Engineer, Edmonton)

The previous line linked the Northeast of Edmonton to downtown and, after a few more years, to the University area (see section 2.2.1). It worked well for that one specific trip, but other areas of the city were unconnected. The South LRT line allows a very large portion of the south side to use the LRT to get downtown as well as to the Northeast where there are major sports venues. With the use of park and ride facilities, the catchment of users expands even further. In short, the success of the LRT expansion is due to its nearly doubling the length of the track, and making use practical for a large proportion of the city.

These examples suggest that reliance on private motor vehicles is not primarily based upon people's unwillingness to travel by other means, but rather the inability for them to make fast, efficient journeys on easily-accessible RMT systems. It reflects the fact that, in both Auckland and Edmonton, infrastructural development throughout the mid-to-late 20th century allowed for only one main kind of interaction with the urban form (i.e., automobility). Once other methods of interacting with the same urban form are introduced, such as accessible and reliable RMT, many people - even those not thought of as typical users of public

transit - show a willingness to shift their practice. Nevertheless, the exaggerated perception that people do not want to use public transport, and are committed to private vehicle use and ownership, may continue to shape policies and the types of transportation projects that receive funding and come to fruition.

The type of sprawling road development that characterizes both cities is much easier to continue in Edmonton due to very few physical restraints. In Auckland, the physical geography of the area, with hills, harbours and volcanoes, has already led to a slowing down of this type of expansion. It was noted that in Auckland, "there's no more space to build more roads. We're just using our last corridors now to build the Waterview [motorway] connection and various other ones and they're very expensive because you have to tunnel them because there's no corridor" (Gordon – Planning Scholar, Auckland). By contrast, in Edmonton "...land is cheap and plentiful … [so] it's really easy to sprawl" (Carl – Planner, Edmonton). The result of these different geographical contexts means that each city must approach the problem of car-dependence and automobility differently.

In Edmonton the focus tends to be on encouraging people to change their behaviour by making public transport and other non-automobile forms of transport such as walking or cycling as more logical choices. While sometimes accused of trying to increase congestion to get this done, one planner insists:

"…that's not what I'm trying to do, I'm just saying that at some point you have to get out of your car, it may be 10 years from now, but one way or another, we either do it you know, in a nice manner and we get the LRT in

place or we do nothing and wait until the roads clog up" (Carl – Planner, Edmonton).

This quote illustrates a proactive approach in trying to encourage a modal shift through LRT expansion rather than waiting for increasing congestion to 'compel' people out of their cars. The problem with this approach, which is alluded to by the mention of accusations, is that it is often, if not always, met with resistance. As explained in section 6.1.1.2, shifting travel choices is a gradual process that can be accelerated or encouraged using incentives and disincentives.

Sustainability, interurban competition, politics and automobility are the four key themes in RMT development and marketing in Edmonton and Auckland. Environmental and economic sustainability outweigh social sustainability in both cities, although there are some indications of social justice concerns regarding access to transport. RMT was seen as playing a role in both conventional and non-conventional interurban competition, including in attracting and retaining a 'creative class' of citizens. It was recognized that political influences can shape and sometimes change the way RMT is developed and marketed, via budget priorities. Automobility is a major concern of both cities – for reasons of sustainability, fiscal responsibility, environment and health – although RMT is beginning to address this problem successfully. Place promotion and urban image are also important concerns, and are the topic of the next section.

6.2   The Importance of Place Promotion and Urban Image.

A potential tension in the development of RMT centres around motivation: is it intended as a place promotion tool to enhance the image of the city, or is it undertaken primarily to provide utilitarian benefits? In Edmonton and Auckland, RMT is certainly seen as a way of promoting the city. However, this issue was only of moderate importance in RMT development. Utilitarian benefits, such as decreasing congestion and the maintenance costs of the transport network, were found to be the primary concern and the most important factor. In Auckland, there was more focus on image through competition with other cities, while in Edmonton there was slightly more understanding of the utilitarian benefits.

Broadly speaking, respondents did not volunteer information about the linkage between RMT development and place promotion. When prompted to reflect on it, many acknowledged the possibility that RMT can play a strong part in defining the sense of place for a city:

> "So, in my mind it ranks up there, it is a distinguishing feature. You can say, you might look at a city and say, it's got a big downtown, it's got some high buildings, you might say it's got major things like a major international airport, it may have something like a prominent theatre or symphony, but in my mind a transit system is right up there" (Darryl – Urban Planner, Edmonton).

In Auckland, it was common for people to reference other nearby cities in defining how transport can contribute to a sense of place:

"I went to Sydney in Australia and that was the first time I'd been out of New Zealand and I caught trains everywhere for 2 weeks, I never ever caught a train in Auckland and…it seemed to make it a real city. The fact that you could get around on this train system and it was really good. It seemed to somehow, in a non-logical way or whatever, it seemed to make it more of a real city" (Gordon – Planning Scholar, Auckland).

These comments highlight the contribution of RMT to how a city 'feels'. If a city wants to promote or market itself as a major centre or destination for people, businesses or investment, there are certain characteristics that it should have (see chapter 3) and it is argued that a successful transport system is one of those.

As mentioned in the introduction to this chapter, all 25 respondents were asked what they thought were the main benefits of RMT systems. Of these, six cited urban image benefits without prompting, and another ten agreed that there were urban image benefits when the concept was suggested to them. One person in the former group stated that "a community or a metropolitan area that is able to offer that level of transit service can count itself in a slightly more exclusive club than a smaller town so there are image or status implications" (Darryl – Urban Planner, Edmonton).

Other respondents were somewhat undecided on the idea. Bruce, while admitting that he'd "never really thought about" it, gave voice to both viewpoints, first stating "I think the fact that the public transport system is seen to enhance a city in terms of its attractiveness rather than some kind of utilitarian operation that really does nothing for the image of the city" and later adding "…public transport is really, essentially, a facility to make the city easier and more pleasant to live in and get around and limit the undesirable effects of movement by private transport in cities, rather than I think a kind of image enhancer" (Bruce – Planning Scholar, Auckland). Others took a balanced approach recognizing that while it enhances an urban image, "…it's not all about image, these politicians are elected by people and they are trying to meet people's needs in the long term" (Darryl – Urban Planner, Edmonton). Similarly, Edmonton's *Transportation Master Plan* contends that "a transportation system that is well-maintained in all seasons promotes economic vitality and a positive city image" (City of Edmonton, 2009, p. 22).

Both Edmonton and Auckland were similar in that almost everyone interviewed agreed that the current state of the RMT systems in the respective cities does not do a great deal to enhance their urban image. When asked if Auckland's RMT system was something that the city could 'sell' itself on in terms of its urban image, one person said, "No. Probably the opposite. The system has come a long way in the last 10 years, but…for a developed world city of its size, it's still one of the worst and has one of the lowest usage in terms of per capita trips" (Gordon – Planning Scholar, Auckland). Another person adamantly said

"No, no…oh God, no! I mean…no" (Bruce – Planning Scholar, Auckland). It was generally agreed that "…it's got probably another 5 years to actually get to that point" (James – Transport Planner, Auckland). In Edmonton, most of the responses focussed on the limited nature of the LRT network: "…with a single line, I think it would be a little tough" (Evan - Transportation Engineer, Edmonton); "we're at least 7 years behind the point where we can say we've got a 'system'" (Charles – Transportation Engineer, Edmonton). Others in Edmonton thought the LRT could play a minor role in place promotion:

> "…it does attract people, or it attracts employers to Edmonton because we're able to get a swing demographic because we have a transit system here. So that you can get workers to downtown office jobs, but it's definitely not the main driver for somebody to move to Edmonton" (Judy - Transportation Engineer, Edmonton).

There was a difference between Edmonton and Auckland in terms of their recognition of the need to compete using image and RMT. While there was general acceptance that this was possible, only in Auckland were respondents very quick to point out what they wanted to see relative to other cities. It was stated that:

> "New Zealanders are people that look out in respect of the OECD countries…we see fantastic public transport systems with integrated

tickets, their good prices and move people quickly, so we want some of that too please. So, we very much, we look at similar size cities, we look at Perth and we look at Brisbane and we look at what they've done in terms of models, so we examine those as well" (Holly – Communications, Auckland)

"In Auckland we look at what cities are we kind of competing against for talented, educated young people. And you sort of look at Melbourne, Sydney, Brisbane…I know a guy who used to live in Auckland and now lives in Melbourne and one of his main reasons for not shifting back to Auckland is because he doesn't have to own a car and the system there is far superior to here" (Gordon – Planning Scholar, Auckland).

Planners in Auckland have also conducted specific research about Brisbane and Perth (as well as Portland, Vancouver and Ottawa) to determine what makes their transport systems successful. The key factors that these cities have been more successful in achieving relative to Auckland were identified as:

"1.   Strong institutional structures supporting integrated land use and transport planning.

2.   A layered arrangement of transport services with an RTN (Rapid Transit Network) forming the backbone; a high-frequency branded express

bus and a network of support/feeder services giving good geographic coverage.

3.   Targeted services to fill particular market niches.

4.   High-quality transport systems on a dedicated right of way to ensure high reliability.

5.   High frequency and reliability of transport services — the greatest patronage gains can come from transforming existing networks rather than introducing new services.

6.   Investing in transport interchange and Park-and-Ride facilities, enhancing customer information; improving comfort, safety and security; and providing integrated ticketing systems" (ARTA, 2010a, p. 7).

It is clearly demonstrated how planners in Auckland compare it to other cities with regards to their transport system. In particular, item number 5 in the quote above is very representative of the current major upgrade plans in Auckland (see section 2.1.2).

This keen awareness of what other cities have and what they want was not expressed in Edmonton, where understandings about what was wanted were much more based on planning concepts (TOD, sustainable transport, livability, etc.). There was little interest in pointing at a specific location and trying to emulate it. It is possible that this is due to the difference in the regional contexts of each city. For Auckland, the other cities of similar size that are in the same region happen to

have good urban transport systems (e.g., Melbourne, Sydney, Brisbane, Perth). For Edmonton, most other cities on the prairies do not have urban rail systems (Winnipeg, Saskatoon, Regina) so there may be less 'peer pressure' to develop RMT or at least fewer examples in the immediate vicinity to emulate. The exception is Calgary, which is probably Edmonton's biggest competitor in many aspects and has a system that is much more extensive and more widely used. One would think that this would be a major motivator for RMT development in Edmonton, and it is undetermined why this was not found to be the case in this research.

Participant Observation: Integrated Ticketing

There are a number of differences between Auckland and Edmonton in terms of the experience you have as a transit user, particularly with RMT. When I arrived in Auckland in May 2010 to conduct this research, I decided to transport myself exclusively by either walking or using public transport, since I was doing research related to public transport. My first major attempt to use the public transport system was to take a train from downtown at the Britomart station to Kingsland station which is near Eden Park, the main stadium for the Rugby World Cup. So that I wouldn't get lost, I looked online how to take this trip. There were so many different kinds of tickets, issued by different operators at a variety of prices, that it was very hard to figure out which ticket(s) I needed for my trip. I eventually settled on getting a 'discovery pass' which was essentially a day pass that could be used on most operators and types of public transport (bus, train ferry). Doing this probably cost me more than buying individual tickets, but it was so much simpler and more convenient that it was worth it. By contrast, in Edmonton, there is only one type of ticket you can buy to use any transit. One fare gives you 90 minutes of travel anywhere in the city on either bus or train as many times as you want over any distance. This style of 'integrated ticketing' is something that Auckland is striving towards as they are recognizing the complexities of the current system and its effect on discouraging people from using public transport. This is especially true in the context of the Rugby World Cup where there are tourists who are likely used to much simpler systems and may have very negative experiences on Auckland's system that will tarnish their experience as a whole.

6.3 Environmental Stewardship and Health

The environmental and health benefits associated with RMT systems can be significant motivators for cities looking to develop or expand their system (see section 3.3.1). It was found that in both Edmonton and Auckland, environmental stewardship factors were not significant in the current development of RMT, although health factors were more commonly referenced and recognized. As mentioned in section 6.1.1, there was some focus on the environment from a sustainability perspective, but this was within the framework of sustainability more generally, and was not discussed as an independent subject.

6.3.1 Environmental Stewardship

Respondents in both cities invoked environmental considerations in striving to expand RMT in a limited fashion, but more so in Edmonton than Auckland. Both cities were not thought of as having any significant environmental problems that RMT could improve. As well, environmental considerations tend to be considered as secondary to economic concerns, particularly in the current economic contexts of each city (see chapter two).

6.3.1.1 Auckland

From an international perspective, New Zealand is often thought of as a pristine, natural environment with many protected environmental features. It could be assumed to follow that if RMT was marketed to people as a way of further protecting and enhancing the natural environment, this would resound quite strongly in the population. However, most respondents did not make this

connection at all. To one person, the reason for this is a lack of recognition of any kind of well known environmental problem that needs to be addressed by RMT:

> "The grass is green, things do grow, the air is clean compared to most cities so all that stuff means that there isn't actually a crisis around environmentalism...trying to appeal to people's view about environmental benefits, I'm not sure that New Zealand or Auckland if it would really hit home in a large enough way to justify that as being the significant approach" (James – Transport Planner, Auckland).

It is also pointed out that there may be a sharp distinction between the rural, natural areas in New Zealand and the urban centres in terms of how the natural environment is considered in policies:

> "The environments that they advertise as '100% pure' really are stunningly beautiful. New Zealand is a stunningly beautiful country. The urban areas sometimes don't match that...the built form nowhere near lives up to the physical environment. The city has a stunning setting, and one of the travesties of Auckland is that kind of a lot of the built environment quality just doesn't" (Mark, Urban Planner, Auckland)

This statement implies that New Zealand's natural environment and considerations for the natural environment are thought to be external to, and

disconnected from, the urban settings. This may be why many people do not see a crisis since they can travel out of the city and quickly be in natural areas that appear pristine. Those who do recognize the connection tend to be very sceptical of using environmental considerations for RMT marketing. When asked if the '100% pure' brand would be successful if used as something to RMT development, one person replied "...the sort of 100% pure brand which is a bit of a lie in some respects, but in terms of Auckland specifically, not that much to be honest" (Gordon – Planning Scholar, Auckland). It became very clear that the potential environmental benefits of expanding RMT in Auckland was not a significant consideration, although one marketing expert did note that a shift may be taking place and that "...the green image is becoming a lot stronger in the last few years... (Melissa – Marketing Manager, Auckland).

Politics also plays a major role in terms of what aspects of RMT get marketed and why. It was contended that:

"...the political environment at the moment is very much, economic growth trumps everything else, and so, whilst its true we could push 'public transport's good for the environment' angle, in the current political situation, I tend to focus on 'public transport's good for economic growth'" (Gordon – Planning Scholar, Auckland).

Recognizing what aspects of RMT development will resonate with the community is a key to effective marketing of the RMT system. In turn, effective marketing of

RMT can have a major impact on the success of its role in place promotion. In Auckland, focusing on the economic benefits may be a more successful way of promoting RMT development and use.

6.3.1.2 *Edmonton*

As a result of Edmonton's very successful environmental programs, including recycling and protection of the river valley (see section 2.2.5), there is no sense of a local environmental crisis that can be seen to be solved by RMT. In a very car-dominated city, especially one with a major oil refining industry, one might think that air quality would be a problem and that RMT development could be marketed as a way of reducing congestion and thus improving air quality. This is not the case and it was stated that:

> "...you can see Refinery Row there...I came in for the first couple of mornings and went, holy crap, what is all that, you know, stacks going up, and then...quite a few times, I could see the haze from the North, it's pollution. Now, in Toronto...you could actually feel it, you know it's so bad...but the fact that we're an open prairie, it blows right through so quickly, it doesn't get captured, so we're still not environmentally conscious when it comes to the automobile" (Charles – Transportation Engineer, Edmonton).

The geographic location, combined with weather conditions and a relatively low level of congestion has prevented the existence of a major local air pollution issue

and as a result, promoting RMT as a way of improving air quality may not resonate strongly with the community.

It was also found that in Edmonton, as in Auckland, economic factors around development, including RMT, were more of a priority than environmental considerations. One person who had a major role in the formation of municipal documents on transportation development and environmental sustainability stated:

> "I think the environment is a factor but I don't think it has come of age in Edmonton yet...I don't think I heard it as strongly as I did in terms of how can I afford to pay for it...Alberta is just starting to think about that...the oil industry is a big [economic] driver for the province which affects how they operate and so I think that's part of the factor...I think it's going to become a bigger issue" (Karen – Transportation Engineer, Edmonton).

By reference to the oil industry being of economic importance, this quote demonstrates that there are some perceptions that there is a struggle for prioritization between environmental projects that planners want to implement and economic prosperity. What should be remembered is that these two areas are not necessarily mutually exclusive and there are often times when policies designed to protect the environment can also support economic growth, particularly in non-conventional ways (see sections 3.1, 4.1 and 4.3.3). These are two important considerations that in different economic environments, and in

different cultural environments, may be more weighted towards a certain side, although it is also pointed out that this balance can change and shift over time.

6.3.2 Health

When people use RMT, there are health benefits that are associated with the required walking and the potential social interaction which are not found in typical private motor vehicle commutes. Both cities were aware of the potential of RMT to promote healthy lifestyles, but there was more detailed analysis of this impact in Auckland than Edmonton.

6.3.2.1 Auckland

Those involved in communications and marketing in Auckland were very much aware of how they could promote RMT development as a means of living a healthier lifestyle. The two main areas that they focused on were the health benefits of public transport use in general, and how the shift from diesel-powered to electric trains will reduce emissions and increase air quality for train passengers. They are actively trying to convey these messages to the public as well as get funding for studies within the city, since they don't have any local data to support some of their plans. For example:

> "...we have a scheme called the super gold card scheme in which people over 65 can travel free between the hours of 9 and 6:30 and that has proven enormously successful. Now, in other countries where they've measured the health, both mental and physical benefits of super gold card

like scheme, what they found after 5 years is the cost on the health systems

in those specific countries have decreased significantly" (Holly –

Communications, Auckland).

Referencing a similar study, another person noted that "a study that was done in

the UK and when they introduced public transport to retirees, what they found

was their health bill actually declined significantly" (Melissa – Marketing

Manager, Auckland). In addition, if all goals of the Auckland Passenger

Transport Network Plan were met, including electrification of the rail system as

well as improvements to walking and cycling infrastructure, then there would be

"…increased health benefits and quality of life for all Auckland's citizens

through: Greenhouse gas emissions reduced by 175,000 tonnes per annum [and] a

reduction of 7 per cent per annum in fatal road crashes" (ARTA, 2006c, p. 7).

The connections between RMT development and health can be difficult to

measure and quantify but when estimations are made, often the numbers are

striking. In Auckland, these estimations are being done and significant

improvements to livability and quality of life are possible. Marketing of these

connections may be effective in encouraging Aucklanders to take RMT.

6.3.2.2 Edmonton

In Edmonton, respondents were similarly aware of the potential for health

benefits associated with RMT and it was also moderately present in literature

around RMT (see section 4.3.2). A very direct correlation was mentioned in that

"...every transit trip has got walking on both ends, so I think the more we increase

the transit system, the more walking there is and the more health there is" (Darryl – Urban Planner, Edmonton). Similarly, another interviewee noted that "there is a lot of research looking at …transportation and land use interaction, and when you can get that interaction right, [there are] major public health policy implications" (Judy - Transportation Engineer, Edmonton).

When asked how the Edmonton's urban form promoted healthy lifestyles, many respondents were quick to reference transit and the LRT, along with the extensive trail and park system and city-funded recreational opportunities. The connections between transit and health were very well framed by one respondent who stated:

> "First of all, just having a, particularly an LRT and a good bus system, gets people out of their automobile. So, that reduces the pollution from there, it reduces the cost of roadways, accidents, that's good…when we look at a bus route or a bus stop or an LRT, we look at the trail-ways and everything as well to feed in to those, so if people want to walk or bike, they can use that as a means of hooking into the transit system. We're looking at active transportation. Not as a nice to have, but it's part of our program, we talk about transit - active transportation and movements" (Charles – Transportation Engineer, Edmonton).

The same sort of connections between RMT development and health that were found in Auckland were also clearly found in Edmonton. However, Edmonton

lacked the process of quantifying these impacts in terms of deaths, healthcare costs or emission reduction. Better quantification of these impacts may be the next step if RMT use is to be marketed effectively alongside health benefits.

6.4 RMT Development and Major Events

As discussed in section 4.5, major RMT infrastructure projects are often associated with cities' hosting of major international special events. In some cases, these projects were explicitly for the particular special event, such as the development of the LRT system in Edmonton for the 1978 Commonwealth Games or the Metro system in Montreal for the 1967 World Expo. Other times, already planned projects receive extra funding or are able to meet an earlier deadline because of a major event coming to the city. This section explores these connections in the context of Auckland's hosting of the 2011 Rugby World Cup and Edmonton's bid for the 2017 World Expo.

At the time this research was conducted, Auckland was well into preparations for hosting the 2011 Rugby World Cup and Edmonton had essentially completed its bid for the 2017 Expo and was waiting for funding commitments from other levels of government. A few months after the research was completed, the federal government refused to provide any funding and the Expo bid came to an unsuccessful end. Urban image and non-conventional aspects of interurban competition were very strong themes in discussions around these events. There was a range of responses around whether RMT development for major events was simply utilitarian or if it served a larger purpose in place promotion.

In both cities, most people interviewed were very supportive of hosting the respective major event, and had many reasons why they believed it would be beneficial. Generally, it was the legacy or image benefits that were referenced before direct economic benefits. In Edmonton it was noted that "...a huge piece of Expo is actually about reputation building and sort of setting a standard in place that says, this is a city that has aspirations to be bigger" (Carl – Planner, Edmonton). Similarly, in Auckland "...the government has already said that part of what they're doing is about promoting Auckland as an international city...the intention is to basically position itself as an international city from a commerce perspective, from a tourism perspective and just a credibility perspective" (Colin – Rugby World Cup Representative, Auckland). Many highlighted major events in other cities and countries as being cornerstones in their development such as:

"If you look at Calgary prior to the '88 Olympics or Vancouver prior to the Expo in the 1980's...it has changed the game for them...And when you talk about China. Having the Summer Olympic Games and having the World Expo was absolutely about China saying, we're now relevant, we're important, we are a major player" (Carl – Planner, Edmonton).

The reference to Calgary and Vancouver in this quote aligns with the literature on interurban competition (see section 3.3.2), which suggests that major events can improve a city's standing on the urban hierarchy. In addition, this effect is not limited to the event itself, but also to the long term impacts of such infrastructure

like RMT, including urban image benefits. Calgary and Vancouver had RMT development associated with their events and these have contributed to the image and livability of each city. It is clear that Edmonton and Auckland have image benefit goals associated with their major events, and the link between these goals and RMT development is explictly made.

6.4.1 Major Events as Justification for RMT

A main goal of both these cities in hosting a major event is to bolster an international urban image and sense of place. The question about whether the event justified RMT development was met with a consistent denial of any direct connection. Those interviewed were very knowledgeable about the failures of major infrastructure projects in the past, particularly with respect to the Montreal Olympics in 1976: "Montreal had 30 year debt from the summer Olympics" (Carl – Planner, Edmonton). In Auckland, one person even referenced an Edmonton example with reference to the LRT stating that:

> "Edmonton's a good example, a lot of evil investment is done in the nature of serving games and they leave white elephants and they don't actually add permanent value beyond the actual event. And I think that's the key for a lot of those things, what is the permanent value added after this event, one, two, three years and a lot of it is very tenuous" (Joe – Transportation Planner, Auckland).

Here, Joe referenced Edmonton's LRT system being built for the 1978 Commonwealth Games, with little planning beyond this, to suggest that the focus of RMT developments linked with major events needs to be on longer-term functions.

Many others in Edmonton seem to be aware of the lack of foresight of their predecessors in the 1970's, and also noted failures of other cities such as Montreal (see section 3.3.2). In discussing the link between LRT expansion and the Expo, one respondent stated: "Is it a requirement for Expo? No. Having said that, is it a support to Expo? Yes...that's a positive benefit, but it's not part of the Expo budget, it's part of the city's commitment to expand transit" (Carl – Planner, Edmonton). Linked to this was an acknowledgement that major events can act as a catalyst for already-needed RMT development, rather than a justification in and of itself. For example, in Calgary:

> "…they had a single factor that allowed them to expand their system. They got the Olympics. I lived there at the time...you want to talk about Expo 2017? It really is, if that can bring our timeframe down to build it out, that in itself would be fantastic" (Ian – Economic Development, Edmonton).

The most common opinion was that RMT was planned, funded and developed separate from the major events, but that events served as motivation to get projects completed in time. For example:

"It increases the urgency as well to build the infrastructure to move the people around. So, if you've got an LRT and we're thinking of a 20 year plan to put it in. If we've got something to shoot for as an event of a substantial size, Expo 2017, it will shrink down the period that we actually need to build it" (Ian – Economic Development, Edmonton).

In Auckland, where the urban rail system has significant reliability problems, a major concern centered around the negative impacts if the system was to fail during the major event:

"I think its reputation...these are people from England and France who are used to excellent transport systems and if they've got problems, they're going to broadcast that to the world. But, if they have a good experience, then they'll broadcast that to the world. But, you know, if the train system breaks down on the day of the world cup final…" (Gordon – Planning Scholar, Auckland)

Another theme that became apparent throughout the research is that some people are susceptible to getting caught up in the excitement of a major international event, and become dismissive of legitimate critique. In Auckland, one person stated that:

"...there will be 267 million NZD worth of extra additional benefits for Auckland. Now, I mean, I've read something over the weekend, you know that there's a new [study that has] come out says that is all bunk and that blah blah blah, whatever. (Colin – Rugby World Cup Representative, Auckland)

This dismissal of opposing viewpoints or additional information was also found in Edmonton where one person seemed to have a complete lack of recognition that anything bad could come from hosting these event, stating "that's a good question. I've never actually heard much on negative impacts" (Ian – Economic Development, Edmonton). These two examples from each city show that prestige benefits of major events can sometimes cloud the possibility of negative outcomes, particularly economic losses.

One potentially positive outcome associated with hosting an event is a shift in transport practices, as residents who do not normally use RMT 'trial' it in the course of travelling to and from key sites:

"In terms of some sustainability measures for example around people using public transport and public recycling, major events are a catalyst for a change in attitude. And so, you know, I know from sort of conversations I've had with Auckland is that they were trying to say RWC, use the train, use the bus or whatever, and they wanted to make sure that the experience you've had as a punter that if you didn't really do it on a regular basis, was

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so good you would go home after it thinking, actually you know, that

wasn't too bad, wasn't too hard, I enjoyed it and I'll do it next time"

(Colin – Rugby World Cup Representative, Auckland)

This is a good example of the belief RMT development associated with major

events can, if done responsibly, incite practices that are more sustainable. Since

sustainability has a positive impact on livability (see section 4.1), it is clear that

major events can, via their connections to improved RMT, impact livability and

the urban environment both during and after the event.

6.5   Discussion and Conclusion

There are many aspects and ways in which place promotion plays a role in

RMT development. It is difficult to separate some of these aspects from each

other; rather, it is better to conceptualize them as a network of forces with

multiple outcomes. In both Auckland and Edmonton, place promotion and urban

image are shown to play a key role in interurban competition through

conventional and non-conventional factors which include environmental and

health considerations. The ideas of the 'creative class' contribute to interurban

competition and can also be found in discussions about urban image and place

promotion.

RMT development relates to all of these factors as it contributes to

economic, environmental and social sustainability, which in turn can be factors in

interurban competition. Automobility and the attempts to shift these

unsustainable practices using RMT have economic, environmental and health

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improvements associated with them. Political influences, which have a whole other range of input factors that were not directly a part of this study, can have drastic effects on RMT development and place promotion. They can give force to projects that are being pushed by planners or they can completely reverse the course of plans. The following is a summary of results as it relates to the objectives of this study.

The first objective of this thesis was to identify, describe and categorize key themes in the data associated with the development and marketing of RMT systems. In Edmonton and Auckland, these were sustainability, interurban competition, political influences and automobility. In terms of sustainability, environmental and economic aspects were prioritized, particularly in Edmonton. The ability of RMT to contribute to interurban competition was recognized in both cities, and was understood in both conventional (mobility and efficiency) and non-conventional (image and livability) terms. There was also some recognition of the contribution of RMT to competition for 'creative class' workers and industries. Both cities recognize an automobile dependence problem and this is a primary reason for RMT development. The associated urban image are a secondary motivation.

The second objective was to evaluate the importance of place promotion and urban image in RMT development. These were found to be moderately important factors, whereas utilitarian benefits were the primary focus of RMT projects and plans. However, it should also be noted that benefits that may

originally be considered utilitarian may have indirect image benefits as a 'side-effect'.

The third objective was to determine how environmental stewardship and health are portrayed in RMT promotion. It was found that environmental stewardship plays a less than expected role in this respect, mainly due to a lack of a perceived environmental crisis in each city. RMT development is understood as a way of promoting healthy lifestyles and decreasing healthcare costs, and this is a minor focus within RMT marketing in both cities.

The fourth objective was to assess how the hosting of international special events has influenced RMT promotion and development. It was found that the hosting of the 2011 Rugby World Cup in Auckland and the potential hosting of the 2017 World Expo in Edmonton influenced RMT development mainly by providing deadlines for completion. Representatives in both cities were very aware of not building RMT for a major event without consideration of its place after the event is finished.

There were also some topics that were not possible to address in this thesis. Social sustainability was a key area that was seldom identified in municipal documents or interviews. Identifying reasons as to why this is the case may contribute to a better understanding of RMT development, since in the literature, social sustainability is seen as an important aspect of RMT development (see section 4.1). One specific topic to research, which emerged during interviews is the possible tension between the social justice benefits of RMT improving mobility for those who cannot afford and/or cannot utilize

private vehicles, and the negative social effects of land values around RMT developments increasing, perhaps to the point that those same people cannot live near enough to access it at all.

Political motivations were not directly considered in the planning of this study yet came out quite strongly during the research. Looking at the various factors that influence political decisions around RMT would be a valuable body of knowledge in this area. Politicians may be motivated by primarily economic concerns, but they also likely have certain legacy and reputation agendas that may play a significant role in what development they support, particularly RMT development, which has an important role in place promotion and is a way to compete with other cities. Politics would be a particularly interesting layer to research in more depth in Auckland where, through the course of this study and after the majority of the research was completed, multiple city councils combined to form one large 'super-city'.

Chapter Seven – Conclusion

This research has explored the connections between place promotion, urban image and RMT development in Auckland and Edmonton. This section reviews the connections that were identified, and attempts to explain why they exist, with particular reference to the similarities and differences between the case study cities. The contexts and experiences of each city give indications as to meaning of the results reported in chapter six, and their significance for this area of urban geography. Overall, the key themes associated with the development and marketing of RMT systems in Auckland and Edmonton were found to be sustainability, interurban competition, political influences and automobility.

In both cities, sustainability was mostly discussed with reference to environmental and economic factors, with much less attention given to social sustainability. Indeed, the only unprompted reference to social sustainability came from a single respondent in Edmonton. There are two possible explanations for this separation of the concepts of sustainability. First, as was discussed in section 4.1, social sustainability is particularly difficult to quantify. While economic sustainability can often be easily expressed in monetary values, and environmental sustainability may be assessed via measurements of water or air quality or emissions, there is no simple measure of social sustainability. As such, respondents, mostly professionals in municipal organizations, could have been hesitant to make claims about social sustainability because they may not have had data or examples to give support to their claims.

Secondly, the links between environmental and economic sustainability are stronger and more readily understood than with the links between environmental and social sustainability. For example, one can easily understand and measure how less congestion on a freeway (due to shifts to RMT use) results in people spending less money on fuel, and lower vehicle emissions. It is more complicated to understand and measure how the same reduction in congestion leads to health benefits for drivers dealing with less stress, and the impact this can have on community cohesiveness or family happiness.

Sustainability as a theme was found to be more prevalent in Edmonton than Auckland, which, given the connections between RMT and sustainability (see section 4.3), is significance in terms of RMT development and urban image. This may be due to Edmonton's leadership in environmental management (see section 2.2.5). Those involved in RMT development and marketing understand that many Edmontonians are aware of, and attached to, the city's programs and developments around environmental quality. In Auckland, while there are significant environmental concerns, respondents indicated that these were seldom a significant consideration in urban development situations. Edmonton includes environmental sustainability more prominently in its urban image than Auckland, and it appears that the connections between RMT development and the environment are stronger as a result. The broader implication here is that RMT development will not necessarily be marketed on environmental grounds in every location: rather, adoption of this approach is dependent on local emphasis on

environmental policy, and knowledge of environmental issues related to urban development.

Auckland and Edmonton were similar in their prioritization of the economy when it came to both municipal policies in general and the marketing and development of RMT in particular. At the time of research, both cities were seeking to recover from the 2008 global recession. As a result, it is quite understandable that the main focus of government was economic growth. It was also indicated in both cities that appeals to the economic benefits of RMT development (see chapter four) would be more successful in garnering public and private support than appeals to environmental considerations, health benefits or social justice. However, economic challenges were framed in terms of sustainability more often in Edmonton than in Auckland.

Interurban competition shaped thinking and action around RMT in both cities. In Auckland, respondents showed a strong focus on its position in the urban hierarchy, while in Edmonton there was somewhat more concern with attracting and retaining 'creative class' workers - a non-conventional aspect of interurban competition. In Auckland, there were consistent comments around how the city's transport system compared (unfavourably) to those in other cities, especially large Australian centres, accompanied by the stated desire for Auckland to be 'more like that' (see section 6.2). In addition, references to Perth and at times very distant cities, such as Vancouver and Portland, highlights how cities compare themselves with a small number of specifically-chosen 'exemplars' that need not be geographically proximate (see discussion of globalization in section

3.1.1). Respondents in Edmonton did not seem to feel the same 'peer pressure' to develop RMT. While future projects and plans are based on general principles such sustainability or 'smart growth', similar to those found in other cities, including Auckland, direct references to other places were rare. This is likely due to the lack of RMT in other Canadian prairie cities with the exception of Calgary (see also section 7.3).

Another key concept in this research is the 'creative class' and its role in interurban competition (see section 3.1.2). It was found that this concept was more understood and accepted in Edmonton - where municipal decision makers are more likely to cite it as a reason for certain kinds of developments, including RMT – than in Auckland. Richard Florida (2002, 2005) suggests that members of this creative class are attracted to cities with a strong sense of place, demonstrated by vibrant arts and culture, environmental stewardship, and health and lifestyle factors. The exact reasons behind this finding are surely complex and are suggested as an area of future research in section 7.3 below.

In terms of political factors around RMT development, Auckland and Edmonton showed more similarities than differences. It was found that political influence in both cities was closely linked to economic concerns about growing the economy (see sections 6.1.1.1 and 6.1.3). This, again, could be attributed to the economic climate during recovery from the 2008 recession. The most striking difference between the two cities with respect to the political landscape related to the influence of 'outside' forces. In both cities, local government(s) seemed motivated and wanted to prioritize RMT development; however, in Auckland,

progress was impeded by the lack of support from national government. This was referenced often in Auckland, while in Edmonton the influence of the federal and provincial governments was never discussed (although these levels of government regularly provide funding for municipal infrastructure such as LRT). Both cities have managed to approve and begin implementing significant improvements to their RMT systems, but concerns were expressed in Auckland that the change in the national government in 2008 (see section 6.1.3) might put future RMT goals and projects at risk.

As has been mentioned, Auckland and Edmonton have very high levels of automobility, and infrastructure for automobiles completely dominates their urban form and affects their residents' transport decisions (see chapter 2, section 4.2 and section 6.1.4). Changing these behaviours is usually a gradual transition, although this can be accelerated due to crises (see section 6.1.1.2). It was found that, in both cities, when RMT service improves, patronage immediately increases, sometimes to levels much higher than anticipated. This indicates that high automobile use is in part a symptom of the urban infrastructure, and is not due solely to residents' preferences for this method of travel. While some people will continue to drive even when it is not the most apparently rational choice, there is a significant portion of the population that would prefer not to drive when given the option.

The modal shifts reported in Auckland and Edmonton should encourage other cities that have goals to reduce automobility through RMT development. It is possible that a greater proportion of the population than expected may be

driving in large part due to lack of acceptable alternatives, and that with an expansion of RMT service they will become public transit users. Re-evaluating expectations around such shifts in light of the examples reported in this thesis could be used to gain financial or political support for RMT projects.

The crux of this research deals with the importance of place promotion and urban image as related to the development of RMT systems. It was found that concern for promoting a city's image plays a moderately significant role in motivating RMT development. However, greater emphasis is placed on more utilitarian benefits, such as decreased travel times, less congestion and the money saved as a result of both of these factors. This said, utilitarian benefits can also have indirect urban image benefits. For example, there are improvements in environmental, economic and social sustainability associated with driving less, which will attract people and perhaps businesses for whom such issues influence locational decisions (see sections 3.1 and 6.1.2.2).

More broadly, McCann suggested that contemporary success in interurban competition requires a combination of "...economic and extra-economic factors" (2004, p. 1914). What this research has found is that RMT plays a role in both of these realms. Many of the utilitarian benefits described above can be considered 'economic' factors while the resulting lifestyle benefits are 'extra-economic' improvements. It is through this combined effect that RMT development contributes to place promotion and cities' efforts to move up the urban hierarchy. As well, given the strong associations between sustainability and RMT, those individuals and businesses that base locational choices on livability factors are

more likely to locate in these cities. McCann's (2002, 2004) findings that a combination of factors leads to success on the urban hierarchy is strongly evident in the context of RMT development.

Another objective of this research was to determine how environmental stewardship and healthy lifestyles were portrayed in RMT promotional material. In both cities, it was found that the environment did not factor heavily into marketing for RMT, although it was more present in Edmonton than in Auckland. The main explanation for this general lack of emphasis on the environment seemed to be that neither city is perceived to face a pressing environmental crisis that can be addressed via RMT. In general, there are plenty of green spaces and natural areas in and near to each city, and their air and water quality are not poor by comparison to many other major cities in the world.

Health benefits associated with RMT promotion were only moderately recognized in both Auckland and Edmonton, with slightly more emphasis in the latter. In Auckland, while air quality was not seen as an environmental concern, it was mentioned as a health problem with a high rate of asthma cited as proof. It was suggested that RMT may help reduce congestion, which in turn may improve air quality and reduce asthma rates. What was lacking in Auckland and apparent in Edmonton was an awareness of the effect that RMT has on healthy lifestyles by increasing physical activity through walking to and from RMT and public transport in general.

The last area of key findings in this research deals with the connections between RMT development, urban image and major international events. There

were a number of similarities in this regard between the two subject cities. Andranovich, et al., (2001) and Essex & Chalkley (1998) suggest (see section 3.3.2) that these major events portray the personality and status of a city for economic gain. Likewise, respondents in this research felt that hosting an event would be a major benefit for the city in terms of garnering international recognition, perhaps helping them move up the urban hierarchy. They were also hard pressed to identify any negative aspects of such events, insisting that if they did things properly, there would not be any.

Respondents also stated that while event-hosting did not provide direct justification for RMT expansion, having it in place was important to the success of the event (see section 6.4.1). This additional success would stem from making it easier for tourists to transport themselves around the city, and by satisfying expectations of those visiting from major cities with strong RMT systems. In essence, what these respondents were alluding to is that the RMT system would help enforce a positive urban image for visitors, and that future benefits may be associated with this (e.g., return visits, media coverage of 'happy tourists', etc.) As a result, preparation for the event may provide additional pressure to complete projects, or even act as a 'deadline' for projects that are going to happen anyway. With the unsuccessful bid for the Expo in Edmonton, it will be interesting to see whether the deadlines originally laid out for the LRT expansion will remain the same or if the process will now take much longer.

The comments of respondents indicated a resounding and powerful belief in the benefits of hosting major international events. There was only one area in

which Auckland and Edmonton were different in this regard, and that was in the belief that hosting the event would serve as a pivot on which to shift transport practices (see section 6.4.1). This was only referenced in Auckland, where it was believed that the increased service, linking of event tickets with transit tickets and predictions of massive vehicular congestion near the Rugby World Cup venues, would combine to 'force' a significant modal shift to transit for the duration of the event. It was hoped that if the experience was positive, Aucklanders would stick with it after the event was finished. A possible explanation for this emphasis emerging in Auckland only relates back to its more tangible self-comparison with other cities in regards to interurban competition. Auckland may also be more aware of the potential negative impacts on competition with regional cities if international tourists have poor experiences.

7.1   Reflection on Methods

The foundation for this research was in comparative urbanism, and the comparison between Auckland and Edmonton was a key aspect of the objectives and the analysis. The main work upon which this method was based was Nijman (2007: 104), who claimed that comparisons are effective when "...they deliver complementary and interrelated findings, different pieces of the puzzle". In the course of this research, I found this to be true. Doing case study work in just Edmonton or Auckland would not have given the same breadth or depth as using the comparative approach. Breadth of understanding stemmed from looking at two 'pieces of the puzzle' (i.e., the broader topic of RMT development and place promotion), rather than one; depth came from analysis comparing the data

obtained in each city, with a concern to identify both common and unique factors, and if possible explain the patterns observed.

Nijman (2007) compared a total of five cities and each comparison brought a different perspective to what makes Miami a 'Global City'. While adding additional cities to the comparison add layers to the understanding of the topic, there is also a risk of inaccuracy if there is not a very careful selection of cities. For this study, the selection of two cities was sufficient to remain within the scope of the research and allowed for very deep considerations of the context of each. Especially important, and different from many other possible cities for comparison, were Auckland and Edmonton's preparations for major international events.

Key informant interviews were the main source of data collection, as outlined in section 5.5. These interviews were conducted in person in both cities, which required extensive travel in the case of Auckland. Similar data could perhaps have been collected either through phone interviews or other remote types of data collection, but making the effort to conduct interviews in this way added value in a number of ways. First, due to the sometimes sensitive nature of the topic to people whose careers are deeply involved with the issues, the rapport and trust built by first person contact almost certainly facilitated more honest and detailed responses. Second, while most interviews were arranged before travel, some were arranged on location based on recommendations of people interviewed. Having the ability to discuss the details of the research both formally and informally allowed people to get a very good idea of who to

recommend I talk with. Third, it was very important for me to travel to Auckland, a city where I had never been or researched previously, to experience the city and observe aspects of the urban environment that were critical to my research. Obviously, participant observation cannot be conducted remotely; it informed the first-person reports in sections 6.1.2 and 6.2, and also influenced my ability to analyze the rest of the data, providing context to the issues being talked about in the interviews. While most informants were from within government organizations for reasons outlined in section 5.4, it could have been advantageous to include a small number of interviews with people from other groups with interests in RMT (e.g., NGO or developer representatives). However, the contribution of these individuals to the objectives of this thesis (particularly objectives one and two) may have been limited.

Document analysis was useful in supplementing the primary data obtained in the interviews, and in informing the context. More in depth analysis of documents, including the use of meeting minutes from councils or debates, could provide further insight into the issues being researched, particularly historical matters about which interviewees are less informed. In similar future research, it may be prudent to undertake more detailed document analysis, particularly if one or more objectives centre on historical themes or debates.

7.2   Contributions to the Field

There are a number of ways in which this research has contributed to the field of urban geography, particularly transport geography. First, as referenced in chapters three and four, the concepts of place promotion, urban image and RMT

development have been researched separately but their connections have rarely been analyzed. In particular, the role of RMT in non-conventional interurban competition has seldom been considered.

One of the most unique aspects of this thesis is the findings on the connections between RMT development, major international events and urban image. While previous studies have observed that major international events are often preceded by RMT development (see section 3.3.2), they do not analyze in any detail (if at all) the links between these developments and place promotion. Using the intense international attention associated with hosting an international event to highlight a city's RMT system, and certain related aspects of its image (modernity, livability, healthiness, environmental awareness, etc.) is a connection that has previously been under-examined. This study found that place promotion was used as a reason to gain additional funding, support or to accelerate timelines for RMT infrastructure developments but was not (at least in these two cases) used to justify the development itself.

The characteristics of the research itself are also original. First, comparative urbanism is a relatively new method of conducting research. Given the benefits outlined in sections 5.4 and 5.7, it is a very useful way of analysing various issues relating to the urban environment and experience. This thesis contributes an example of how comparative research can be carried out, even when the case study cities are geographically separated, and may act as a guideline to others seeking to use this method in future research. Second, there is only a small amount of academic literature on transit that references Auckland,

and an almost none that references Edmonton, despite the intriguing transit histories and current development plans in each. This research shows that these places are interesting and important in their own right, and moreover can be used to inform broad fields of urban inquiry.

7.3   Recommendations for Future Research

This thesis could serve as a foundation for future research in a number of areas. At the broadest level, there is room for additional research into how the 'creative class' is measured and defined. This was one of the most challenging concepts to grasp in this research, partially due to apparent contradictions that emerged. For example, Florida includes "science and engineering" professionals (Florida, 2002, p 8) in his 'creative class' but also says that in the creative economy, "...knowledge and creativity have replaced natural resources and the efficiency of physical labour as the sources of wealth creation and economic growth" (Florida, 2005, p. 49). In the context of Edmonton, there is a large number of jobs in science and engineering (see section 2.2.3), but many of these are centered on improving natural resource extraction (which also includes a high amount of physical labour) and making it more efficient as a means to enhance economic growth. Therefore, it is difficult to conclude that these scientists and engineers can really be considered part of the 'creative class'. Further refinement of this difficult concept would lead to better understandings of its role in the urban setting and in interurban competition.

Another broad area for future research concerns the factors that influence transportation choice for people in urban settings. While automobility was

analyzed in detail, many other factors contribute to the choices people make on how to transport themselves in cities. For example, the relationship between rising oil prices and declining car use in Auckland was briefly referenced (see section 6.1.1.1), but the potential contribution of this relationship to the expansion of RMT requires further exploration.

In addition, one of the key findings in both cities was that people seemed to 'flock' to RMT when it was made available via expansions and service improvements. This contradicted perceptions that people in Auckland and Edmonton 'love' their cars and have strongly ingrained cultures of driving. Further research into this difference between perceptions of car dependence, and empirically-observed shifts towards more a more sustainable travel mode, would contribute greatly to understanding of transport choices, and by extension, effective marketing of RMT.

More specifically, two areas for further research in Edmonton are apparent. First, when this research was carried out, the Expo 2017 bid in Edmonton was still active: now that it is not happening, there may be very different views on the links between RMT and major events. Second, Edmonton and Calgary are two cities that are geographically proximate, and have similar populations and economic conditions, yet Calgary's LRT system is roughly four times more extensive than Edmonton's, although it began a few years later. Future research could shed more light on why RMT in one city developed continuously since it began, and why the other stagnated for so long. Indeed, given that Edmonton and Calgary are rivals in many other ways, it is surprising

that RMT has never really been a factor in their interurban competition; further research could investigate why this has been the case. That research would necessarily entail using comparative urbanism as a method, and it could perhaps include additional cities from outside Canada, provided the selection process was careful (see section 0).

There are also two specific areas for future research in Auckland. First, it is hosting the 2011 RWC and there is plenty of room for post-event research on the concepts discussed in this research. For example, many people interviewed in Auckland were making specific predictions regarding RMT use, how improvements to RMT would impact the RWC, and the economic and non-economic benefits of hosting the event, etc. (see chapter 6). Determining whether these various predictions were correct or not - and how the interactions between the event, RMT and urban image played out in reality - would contribute to understandings the relationships that this research analyzed. Secondly, shortly after the field work for this thesis was completed in Auckland, the seven municipalities in the region formed one 'supercity' (see section 2). Along with the re-organization of the entire local and regional government structure, organizations that had been previously been charged with decision making on urban transport, such as the Auckland Regional Transport Authority (ARTA), were disbanded. A portion of this research referenced politics (see section 6.1.3), and given this very significant change in the political landscape, future research could analyze how the supercity merger has affected priorities or polices related to RMT development.

7.4   Everything Happens Somewhere

This thesis investigated connections between RMT development, place promotion and urban image. With a global population that is increasingly concentrating in cities, urban issues are becoming more prominent. As well, people and businesses are faced with many locational decisions, and cities increasingly have to compete with each other for these people and businesses. Transport practices in urban settings are often problematic, and many current practices and associated land uses are increasingly recognized as less and less sustainable. In light of this situation, this research sought to produce information that could provide guidance to decision makers at all levels of society with regards to transport practices. Its results could encourage an individual determining where to live consider more acutely how they will get to and from work, or it could lead a municipal planning department determining budgets to consider the value of the 'extra-economic' or 'non-conventional' benefits of investing in RMT.

Increasing consideration of transport practices is a critical factor in today's world. One of my favourite things to say about human geography is that everything we do happens *somewhere*. As social animals who move around constantly to lead fulfilling lives, and who are living in a world of limited resources, we need to be more aware of exactly *how* we get from place to place and what effects these practices have on ourselves and our world.

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<u>Appendix A – Letter of Initial Contact</u>

Dear _____,

I am a Masters student in human geography at the University of Alberta. I am researching the development of large-scale public transport systems - also known as rapid mass transit systems – such as busways, passenger rail, and tram/streetcar systems. This research is being carried out in Edmonton, Canada and Auckland, New Zealand. I am particularly interested in the role of these systems in helping to promote the image and reputation of cites.

As part of my research, I am looking to interview key individuals who have expertise in this area. I have identified you as someone who could participate in this research project by taking part in an interview. If you agree to an interview, the information you provide will be used in my MA thesis, and in conference talks and academic publications that may flow from it.

If you decide to participate, rest assured that the your identity will remain confidential, and the information you provide will not be attributed to you, or any organization you represent. In addition, you can withdraw from being a participant in this study at any time during the interview, and up to 2 months after the completion of the interview. Please note that your organization and/or supervisor(s) may require you to get approval to participate in this research. The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Arts, Science, Law Research Ethics Board at the University of Alberta.

By taking part in this research project, not only will you be helping me complete the research, you will also have the opportunity to reflect on your professional knowledge of public transportation, and may gain additional benefit from discussion of its development and marketing in other cities. Thank you for your consideration and I look forward to hearing from you.

Sincerely,

Andrew McLellan (Researcher)
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Appendix B – Consent Form

Informed Consent Letter for Participation in Research

Introduction

You are being invited to participate in a research project regarding the development of large-scale public transport systems - also known as rapid mass transit systems. These include busways, passenger rail, and tram/streetcar systems. The research has a particular focus on their role in promoting the image and reputation of cities. It will lead to better understanding of the relationship between public transport development, place promotion, and urban image. Existing research has dealt with these issues separately, but rarely linked them, even though large-scale public transportation does not simply play the role of moving people around, but also contributes to urban image. Another significant issue that this research addresses is the potential tension in urban policy between prioritizing the interests of current residents and businesses, and the perceived need to attract outside residents and businesses. In addition to these contributions, the research will also inform decision-making in local government.

This research is being conducted by Andrew McLellan in partial fulfilment of the requirements for the degree of Masters of Arts in Human Geography at the University of Alberta.

Ethics Approval and Protection of Privacy

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Arts, Science, Law Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Chair of the ASL REB c/o +1-780-492-2614. The personal information obtained in this research is collected under the authority of Section 33 (c) of the Alberta Freedom of Information and Protection of Privacy Act and will be protected under Part 2 of that Act. It will be used for the purpose of allowing contact between research and participant only. Direct any questions about this collection to the individuals identified in the contact information of this letter.

Methods

Your role in this research project is as a key informant interviewee. You are being asked to take part in a semi-structured interview lasting approximately

45 minutes to 1 hour. The interview will be audio recorded and transcribed verbatim to be used as data in the research. Once the interview has been transcribed verbatim, you will have the opportunity to review the transcript and omit or modify any statements that you made and verify that it is an accurate representation of your thoughts and ideas. The researcher will comply with the University of Alberta Standards for the Protection of Human Research Participants (http://www.uofaweb.ualberta.ca/gfcpolicymanual/policymanualsection66.cfm).

The interviews will be broadly similar to the types of conversations you would normally conduct in the course of your professional duties. This said, there is the possibility that some lines of questioning may cause mild short-term discomfort if they are perceived as critical of your organization (e.g., if RMT development is seen as insufficient). These discomforts will not be significantly different from those you may encounter in your everyday work. You will be given pseudonyms where quoted in the research and the name of your employer/agency/organization will not be made specific, although it is possible that some readers could deduce this from the research, given the limited number of potential employers/agencies/organizations involved. In taking part in this research, you will have the opportunity to reflect on your professional responsibilities, and may gain additional benefit from the researcher's knowledge of RMT in other cities.

Rights

In participating in this research project, you have the right:

- Not to participate;
- Within two months of the interview:
- To withdraw without prejudice to pre-existing entitlements, and to continuing and meaningful opportunities for deciding whether or not to continue to participate
- To opt out without penalty and to have any collected data withdrawn from the data base and not included in the study.
- To privacy and confidentiality;
- To safeguards for security of data (data are to be kept in a secure place for a minimum of 5 years following completion of research project) and when appropriate destroyed in a way that ensures privacy and confidentiality;
- To disclosure of the presence of any apparent or actual conflict of interest on the part of the researcher(s);
- To a copy of a report of the research findings.

<u>Contact information</u>

      If you have any concerns, questions or complaints, please feel free to contact either of the following individuals:

Andrew McLellan (Researcher)
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Informed Consent

I _____declare that I have read and understand all of the above information in regards to my participation in this research project. I understand my role in this research project and my rights in relation to my participation in this research project. If required, I have received approval from my organization and/or supervisor(s) to take part in this research. I consent to being interviewed as described in this document and understand that my involvement in the interview is entirely optional.

_____   _____

Participant Name (Printed)   Researcher Name (Printed)

_____   _____

Participant Signature   Researcher Signature

There will be two copies of this consent form. One copy is to be signed and returned to the researcher and one will be given to the participant for their own records.

Appendix C – Interview Questions

Note: The interviews will be semi-structured, so while the below questions may be asked, there may be other questions asked or discussions that occur depending on interviewee responses.

1) In your opinion, how does Edmonton/Auckland benefit by building a rapid mass transit system?

2) What characteristics does a successful rapid mass transit system have?

3) What sort of people use mass transit?

4) How important is the expansion of the rapid mass transit system for the success of the World Expo 2017 bid/2011 Rugby World Cup? Why?

5) How will the hosting of the World Expo 2017 bid/2011 Rugby World Cup benefit Edmonton/Auckland?

   a) How will the hosting of the World Expo 2017 bid/2011 Rugby World Cup contribute to a positive image for the City of Edmonton/Auckland?

   b) How will/has the hosting of the World Expo 2017 bid/2011 Rugby World Cup provide(d) justification for the expansion of RMT?

6) What might be some negative impacts on Edmonton/Auckland of hosting the World Expo 2017 bid/2011 Rugby World Cup?

   a) What might be some negative impacts on how Edmonton/Auckland is viewed internationally of hosting the World Expo 2017 bid/2011 Rugby World Cup?

   b) What might be some negative impacts on the RMT system of hosting the World Expo 2017 bid/2011 Rugby World Cup?

7) How important is a successful mass transit system in helping 'sell' Edmonton/Auckland to the world?

8) What are important factors for making Edmonton/Auckland an attractive city for people to live in?

9) What are important factors for making Edmonton/Auckland an attractive city for families to move to?

10) What are important factors for making Edmonton/Auckland an attractive city for commercial investment?

11) How does Edmonton/Auckland portray itself as an 'environmentally friendly' city?

12) How does Edmonton's/Auckland's urban form incite healthy lifestyle behaviours in citizens?