NATIONAL STRATEGIES ON PUBLIC TRANSIT POLICY FRAMEWORK

Final Report

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Stantec Consulting Ltd.
1100 - 111 Dunsmuir Street, Vancouver, BC, V6B 6A3
Tel: (604) 696-8000, Fax: (604) 696-8100

Victoria Transport Policy Institute
1250 Rudlin Street, Victoria, BC, V8V 3R7
Tel & Fax: 250-360-1560

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EXECUTIVE SUMMARY

This paper identifies elements of national transit policy frameworks in the G8 nations of Canada, Italy, the United Kingdom, the United States of America, France, Germany, Russia and Japan, as well as New Zealand, Australia, and the Republic of Korea that could be applied to the Canadian context. It is the result of an extensive literature review and interviews with key academic and transit industry representatives in each country. Based on the findings, a comparative analysis of key trends, themes, and lessons learned was conducted and recommendations were made as to how similar policies and strategies could be effectively adopted in Canada.

A consensus has been building around the need for a national public transit policy framework for Canada that integrates long-term objectives and activities among different orders of government. The framework would also define roles, responsibilities, and priorities for each level of government and identify sustainable sources of funding to meet operating and capital requirements.

Funding for public transit in Canada from all levels of government has increased substantially in the past decade. However, with federal funding provided only on an intermittent basis (and rarely reserved for transportation needs), local and regional governments are limited in their ability to implement long-term transit plans that capitalize on the synergies of transit investments with development, environmental protection, and other areas of urban and national interest. Long-term, stable financing, with a supportive public transit policy framework that assists the development and implementation of long-range transit and transportation plans, is still lacking at the federal level.

Country Profiles

Major elements of each country's national transit policy have been identified and summarized in a table listing the basic components of their national transit policy frameworks. The eleven countries were profiled under the following twelve elements:

- Financing
- Fare subsidies/Tax exemptions
- Capital Funding
- Operating Funding
- Ability to Generate Local Revenue
- Private Sector Involvement
- Social Inclusion
- Administrative Support
- Level of Policy Integration
- Autonomous Regions
- Land Use Planning
- Planning Requirements

Comparative Analysis

The eleven countries were also compared against each other on the following eight themes. Overall, it was found that the national government roles in the funding and regulation of public transit varied widely by country due to political, financial, and historical considerations.

- **Government Investment Subsidies -** Most national governments have been reluctant to subsidize the operating costs of transit systems, preferring to invest in capital projects, research and technology, and planning studies. This may be because long-term national operating funding of transit has the potential to be politically damaging if the funding is not sustained. New Zealand and Germany are two countries that provide significant operating funding - up to half of operating funds for all transit systems in the country. Other national governments, such as those of the UK and the US, also provide operating funding, but at lower levels and in a more selective manner.

- **Ability to Generate Local Revenue -** France and the US are among the countries that provide a degree of taxation powers to local authorities in order to fund local services such as public transit. In the US, regions and municipalities use a variety of local taxes such as payroll, gas, and sales taxes to fund transit. For example, Portland, Oregon, has used parking taxes and tax increment financing to raise funds for its streetcar system. In France, the Employers' Tax is used extensively to raise proceeds for transit operating funding.

  While the ability to raise local taxes clearly benefits public transit systems, it does not automatically produce higher ridership levels, as Germany and Korea both enjoy high levels of transit ridership while not granting this revenue generating ability to local municipalities. In these cases, funding from other government sources proves necessary. In Germany, the federal government provides over 90% of total funding for transit.

- **Transit Business Models and Private Sector Involvement -** In most of the countries examined, government authorities regulate and set certain controls over public transit services and may choose to operate their own transit services or contract to private operators. The latter approach can help reduce spending on capital assets and human resources, lower costs as a result of competitive bidding, lower potential for labour unrest, and allow the use of existing operators' knowledge of market demand, routing, and scheduling.

  As a result of deregulation, some private operators in the UK and New Zealand can provide commercial services that are unregulated (i.e., the companies meet basic safety standards but local authorities have little control over service quality or patterns). However, this type of arrangement often results in less service in some areas, decreased coordination of fares, and a lower level of service quality because there are fewer mechanisms for oversight and fewer incentives for collaboration and long-term investments. Thus, it is important that government authorities define the services to be offered in their jurisdiction so that service standards and service integration are maintained.

- **Competition with Road Investments -** In the study countries with greater land area, lower overall population density, and less concentrated urban centres such as the US, Canada, New Zealand, and Australia, road investments have tended to be a higher national priority than public transit, resulting in less federal funding for transit. In the other study countries with greater overall population density and denser urban cores, public transit receives more attention and greater investment as part of a basic transportation service.

- **Level of Policy Integration -** Many obstacles exist in coordinating federal public transit policies with other federal policies, but some successful examples have been demonstrated in the study countries. In the US, transportation policy integration has been successful in the areas of planning, research, the environment, and to some extent, affordable housing. The US has also introduced a liveability strategy that requires the integration of polices from the Federal Transit Administration (FTA), the Department of Housing and Urban Development (HUD), the Environmental Protection Agency (EPA), and the Department of Agriculture.

  A general move towards reforms that allow a better integration of land use and transportation planning has been observed in the study countries. Germany, France and Korea now require public transit to be tied to land use planning. In both France and Germany, these requirements are linked to capital investments, as the national government's role in public transit is one of funding and high-level regulation. As well, these countries also require integration between transportation projects and land use plans as a condition of national funding.

  Complete integration is difficult, however, as regional transit authorities generally do not have power over land use regulations, which are usually in the hands of municipalities. A greater integration between land use and transport policies is achievable if the same entities have power over both of these fields. In France, local authorities must collaborate to create regional authorities responsible for transportation and regional land use planning. In Canada, municipalities that receive federal gas tax transfers are required to complete an Integrated Community Sustainability Plan (ICSP), but integration between land use and transport policies is still imperfect mostly due to a high level of administrative fragmentation amongst governing bodies responsible for land use and transportation.

- **Presence of Urban Policy Development Unit -** An urban policy development unit advocates for consistent, beneficial policies for urban areas in terms of funding, land use, social housing, transportation, and taxation. In the US, the FTA distributes funds to urbanized areas through regional offices and urban offices to further improve coordination of programs with transit providers. In the UK, the Cities Policy Branch in the Department of Transportation coordinates with the metropolitan areas outside of London. As well, the Australian Government has recently indicated a renewed interest in urban policy by establishing a Major Cities Unit that provides advice on policy, planning and infrastructure issues that impact major cities. Canada has the Policy Group in Transport Canada, which recommends and coordinates modal and multi-modal policies.

- **Level of Federal Interest in Public Transit -** National governments of the study countries vary in terms of how involved and interested they are in public transit. An example of high involvement in public transit is the Korean national government, which has been very active in establishing funding programs for public transit and land use integration, transportation demand management (TDM) measures, smart technology, and for helping the mobility-disadvantaged. In France, the *Grenelle Environnement* policy-making process has defined key government policies for ecological and sustainable development, with public transit playing a key role. In Germany, the federal government continues to transfer stable, recurring, and flexible funding to local jurisdictions for public transit. In the US, federal interest and funding in transit has continued to be strong given the job-making potential of public transit investments and the ability of public transit to appeal to both conservative and liberal politicians.

  The Australian government has also become more involved in public transit with the creation of its Major Cities Unit and the national public transit policy that is currently being developed by Infrastructure Australia. Even in Japan, where the federal government has historically played a very limited role in funding public transit, the government has become more active in the past decade as a response to service cuts resulting from depopulation and deregulation in rural areas. In New Zealand, the National Land Transport Fund was introduced to provide relatively predictable and stable operating and capital funding for regional land transport priorities such as public transit.

  In comparison, national governments in Italy, Russia, and Canada have been less active in creating national policies on public transit. While Russia has high transit usage as a legacy of past investments and low funding of roads, only limited funding is made available for capital investments in transit and there has been no national transit policy put in place. In Canada, the federal government has greatly increased the capital funding of transit projects, as the awareness of the need for greater funding for public transit has been building at the local level and promoted by national organizations such as the Federation of Canadian Municipalities (FCM) and Canadian Urban Transit Association (CUTA). Funding has jumped from zero to nearly $1 billion in annual federal investment in less than 10 years. However, a permanent and predictable funding policy has not yet been implemented and there are no plans at present to develop a national public transit policy framework.

- **Planning Requirements -** Transportation planning is required by national governments in all study countries except Australia, Russia and Japan. The most common requirement is that local authorities must adopt strategic, long-term transport plans. Germany, France and Korea have gone a step further, requiring modal integration and service standards. Japan and Korea also have service standard requirements, which seem to indicate a higher level of federal interest in public transit management. As in other policy fields, tying policy requirements to funding seems to be a more efficient and easier way of getting local authorities to comply with these duties, as opposed to a punitive approach for those choosing not to comply.

Recommendations

The comparative analysis described above was used as the basis for making recommendations for Canada's national transit policy framework, which are outlined in the table below (within each category the recommendations are listed in order of priority). Also highlighted are countries that have implemented similar policies that could be considered by Canada. More details about these policies can be found in the main body of this report.

FUNDING-RELATED TRANSIT POLICIES	COUNTRIES IN WHICH SIMILAR POLICIES HAVE BEEN IMPLEMENTED OR ARE BEING DEVELOPED
1) The federal government should create several **long-term revenue generating mechanisms** (e.g. increasing and making the federal excise fuel tax permanent) to diversify transit funding and to increase overall stability.	France
2) Using the long-term revenue generating mechanisms, the federal government should create a **national public transit fund** to provide long-term, predictable **capital funding**. As well, **provincial governments** should be strongly encouraged to provide **capital *and* operating funding** to transit systems.	New Zealand, Germany, US
3) To receive federal transit funding, local governments should be required to: 1. **Integrate land use and transportation planning;** 2. Develop **longer-term, five- or ten-year transportation plans;** 3. Demonstrate **value for money** (e.g. provide cost-benefit ratios); 4. Include **multi-modal planning** in transportation plans; 5. Meet **environmental and health objectives**; 6. **Monitor** the success of their services; and 7. Have some federal funds rescinded if **performance objectives** or required plans attached to funding are not achieved.	France, Germany, US
4) **Provincial governments** should give **local authorities the ability to raise revenue for transit services via taxes and other types of local charges**. The federal government should also require **provinces to**	Italy, Korea

match or exceed the required municipal/regional funding contributions for public transit, if federal government funding is received. All of these steps will help diversify transit funding and again increase overall stability.	
5) The federal and provincial governments should provide funding for **transportation demand management (TDM) programs** to complement public transit investments and to have a greater influence on travel demand.	US, Australia, UK
6) The federal government should allot additional funding for **research and technology** projects that facilitate the use of public transit.	US , Korea
NON-FUNDING-RELATED POLICIES	**COUNTRIES IN WHICH SIMILAR POLICIES HAVE BEEN IMPLEMENTED OR ARE BEING DEVELOPED**
1) The **Policy Group within Transport Canada should be expanded** (or a new policy unit should be established) and be given the **responsibility of developing national public transit policies, administering the national public transit fund, and coordinating unit for the federal government.**	Australia, New Zealand, US
2) **Public transit policies should be embedded within other broader policies/strategies** (e.g. multi-modal transportation policies, environmental protection policies, strategies to improve mobility and accessibility for all citizens, and national urban policies).	Australia, France, US
3) The **levels of government or organizations responsible for providing the transit services should be given access to significant amounts of funding, the ability to generate their own funding, and the responsibility for planning the services**. This has been shown to successfully help retain transit ridership and quality of service.	Italy, US, Russia, Korea, Australia, France, Germany
4) The federal government **should promote the greater use of competitive bidding for contracted services** (as these arrangements reduce labour costs, improve efficiencies, and help distribute the operating risks) by offering funding bonuses if transit authorities make a commitment to competitive tendering. As well, contracting authorities should be required to include **performance and service standards** in their contract terms to receive the funding bonuses.	France, Germany, Japan, New Zealand, Korea, US, UK, Italy

OTHER RECOMMENDED ACTIONS/INITIATIVES	COUNTRIES IN WHICH SIMILAR POLICIES HAVE BEEN IMPLEMENTED OR ARE BEING DEVELOPED
1) A **national transport policy or strategy** should be developed, and public transit should be an important component of this policy.	New Zealand
2) The national government should c**ommunicate the many benefits of transit** to gain support for transit programs from a wide range of stakeholders.	US
3) Both **public and private stakeholders need to be involved in the development of national transit policies** to increase the chances of success and compliance.	New Zealand, France, UK
4) **Tax incentives** such as a tax exemption for employer-provided transit benefits (e.g. discounted transit passes) should be implemented to further promote the use of transit.	US, UK

Next Steps for CUTA

There are several roles that CUTA can play as we move forward. Firstly, it is recognized that public transit can be the catalyst to help solve many of the issues that governments face (e.g. traffic congestion, environmental protection, economic development, social equity, and health). Policies on public transit, therefore, need to be embedded within other broader strategies at all levels of government, rather than falling under the responsibility of one government department. Hence, one of CUTA's roles is to continue emphasizing the contribution of public transit to Canada's health, mobility, economic development, environment, and overall quality of life, and to work with the various orders of government and aid in the development of integrated public transit policies.

Another role for CUTA is to help develop innovative strategies for sustainable funding for public transit. The examples from the eleven study countries described in this report should be taken as a starting point to open the discussion as to the best ways to provide this funding within Canada. Finally, sustained collaboration with other key stakeholders such as the Federation of Canadian Municipalities and the Canadian Chamber of Commerce will be essential to building consensus on the recommendations and their implementation, and CUTA can play a pivotal role in fostering this collaboration.

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INTRODUCTION

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1. INTRODUCTION

In the last decade, funding from Canadian federal, provincial, and local/regional governments has increased substantially to expand and rehabilitate our public transit systems. However, there is concern that this funding may have a limited impact on the long-range success of public transit in our urban areas. This is because the federal funding programs that have been introduced for infrastructure and public transit initiatives have tended to be for a short, specified time period. One-time funding programs, while still beneficial, do not provide the long-term, stable financing that supports the development and implementation of long-range transit and transportation plans or coordination with other federal investments. As well, much of this funding, especially from the federal government, has focused only on capital transit investments prioritized by the federal government. In many cases, this has left local and regional governments shouldering the cost of operating and maintaining the transit systems and funding key pieces of infrastructure, mainly through property taxes and farebox revenues.

Furthermore, there is a significant need to renew existing transit capital infrastructure, add additional service and enhance existing service, and also develop new transit systems in areas and for trips not presently served. As concerns grow over traffic congestion, increasing commute times, climate change, worsening air quality, rising gas prices, providing mobility for an aging population, and health issues such as increasing rates of obesity, more Canadians are looking to public transit as a viable alternative to the private automobile. But as transit becomes more successful, overcrowding has become an issue on public transit systems, especially in large urban centres. This problem will only intensify with the continued concentration of population in Canadian urban centres.

Global competitiveness, economic development, and environmental protection are also reasons to place more emphasis on public transit. Cities are the powerhouses for Canada's economic growth, so adequate transportation is required for these economic centres to compete against other world metropolitan centres. There are also direct benefits to increasing the amount of federal spending on public transit, as Canadian transit vehicle manufacturing industry has a strong presence in Canada. In addition, public transit improves access to employment and education for lower-income individuals, those without a car, the young, the elderly, and those with mobility impairments. Shifting automobile users to public transit and other alternative modes of travel such as walking and cycling also reduces the use of a limited resource (petroleum) and the negative impacts of transportation activities, such as the release of greenhouse gases (GHGs), air pollutants, and contaminated road run-off.

These drivers have together created a consensus, not only at the provincial and federal levels of government but also among business leaders, around the need for a national public transit policy framework. By identifying those areas in which the federal government can and should focus its energies, public transit can become a higher priority for the federal government while moving to a policy of having secure, long-term public transit funding.[1]

[1] In 2009, the Canadian Chamber of Commerce passed a resolution that expressed support for a transit policy framework.

What is a national transit policy framework?

This paper adopts and expands on the definition of a national public transit policy framework developed by the Canadian Urban Transit Association (CUTA) in its 37th Issue Paper, *Canada's Transit Policy Framework: A Consensus Emerges.* A national transit policy framework is:

> A set of transit policies that integrate long-term objectives and activities among different orders of government (i.e., municipal, provincial, and federal) as well as within each jurisdiction. It sets goals for Canada's transit systems and defines the roles, responsibilities and priorities for each level of government. It acts as a guide to governments on how to commit sufficient financial and human resources to public transport, and it defines what the private sector's role is in achieving the government's stated long-term objectives. In addition, it identifies a diverse set of potential sustainable sources of funding to make the required operating and capital transit investments.

As pointed out by CUTA, such a framework would serve to achieve several important goals:

- Better long-range infrastructure planning, facilitated by more predictable and secure long-term funding for public transit.
- More strategic allocation of municipal, provincial and federal funds to better meet the governments' stated objectives.
- Enhanced integration between transportation and land use planning and patterns.
- Appropriate use of transportation demand management (TDM) strategies to maximize the effectiveness of supply-side measures.
- More effective coordination and collaboration between different orders government and other stakeholders in the transit industry.
- The adoption of a more systematic performance monitoring system to increase accountability and ensure value for money, and to improve future planning activities.

Purpose of this Paper and Study Methodology

The purpose of this paper is to identify the elements that other countries have included in their national transit policy framework and to determine which of these elements could be applied to the context of Canada. The countries examined in this study include the G8 nations of Italy, United Kingdom, the United States of America, France, Germany, Russia, and Japan, as well as New Zealand, Australia, and the Republic of Korea. These countries have been selected as they are recognized to be of similar economic stature to Canada.

To accomplish the purpose of this paper, a comprehensive literature review has been conducted to gather basic demographic, economic, governance, transportation and public transit data. In addition, interviews with key representatives of each country's transit industry and stakeholder groups have also

been conducted to supplement the literature review findings and to develop a more thorough understanding of the country's public transit policies and the driving factors that led to their adoption. Based on this information, a comparative analysis has been performed, and key trends, themes, and lessons learned have been identified. Recommendations on how these lessons can be applied to Canada and how similar effective policies and strategies can be adopted in Canada have then been developed.

Study Challenges

There are a range of challenges in carrying out a study such as this. Each of the study countries has their own unique history and system of government that impact how federal governments relate to cities and regions and how private and public entities interact. Many of the countries use different vocabularies, not just in the sense of language (i.e., English versus Korean), but in the sense of the terminology that is used to describe their national transit frameworks. For example, the term *public transit* may refer to passenger transport, urban transportation, mass transit, and passenger service, depending on the context. The regulation, economics, and governance of transit are complex, even to those immersed in these specialties in their respective countries, and are heavily interwoven with other transportation and land use policies. As well, some countries have not been as systematic in their record-keeping practices; as a result, for some countries, it been difficult to obtain accurate national figures. As a result, for some of the variables that were examined (e.g. transit mode share), information for only some of the countries have been found and included in this report. Also, the use of interviews as an information source has allowed for a wide range of ideas and viewpoints to be incorporated into this study, but the downside is that the subjective nature of some of our questions means that the viewpoints do sometimes conflict with one another.

Like many studies that aim to address a complicated topic, many questions were raised in the process of answering the guiding study questions. For example, while eleven countries were studied (including Canada), there are likely lessons to be learned from other countries. The interviews and literature review suggest that Spain and the Netherlands may be countries with public transit policies worth examining for lessons learned for Canada. Also, the study's focus was on the role of the national government in public transit policy, and additional examination would allow for a more in-depth study of state/provincial, regional, and local roles and responsibilities.

2. COUNTRY PROFILES

The following table summarizes the basic characteristics of the national transit policy frameworks for the study countries. Individual country profiles follow the summary table, while additional details about the economy, demographics, government system, transportation system, and travel statistics of each country can be found in Appendix A.

The chart below was developed on an iterative basis. As each country's national transit policy was reviewed, major elements were identified and included in a list. After all policies had been reviewed, the list was refined to remove any elements or sub-elements that were overlapping with other elements or sub-elements and organized around themes that were considered to be of greatest interest in the Canadian context based on initial discussions with CUTA. The funding and financial items were considered important enough to divide into five different elements: financing, fare subsidies/tax exemptions, capital funding, operating funding, and the ability to generate local revenues for transit. The role of the private sector was included, since it was a key theme in the policies of European and Asian countries, as was social inclusion, a key value for many countries that has been incorporated into many public transit policies. Administrative support and the level of policy integration are of high interest from a governance perspective, as is the existence of autonomous regions, which was an element of several national transit policies. The importance of planning is also reflected in two planning related elements: one specifically for land use planning and another for general transportation planning requirements.

It should be noted that the chart is only meant to be a starting point for developing a comprehensive national transit policy framework for Canada. It also has some limitations. The first is that we cannot ensure that our review of national transit policies has been exhaustive, and so we may have missed the presence of certain elements. The second is that the chart does not reflect the subtleties of how each of these elements is exercised in each of the countries. For example, a competitive project selection process might exist in all of the countries checked off in the chart, but the proportion of funds that are distributed in this manner may range from a minor portion of all of the funding that is provided to a major portion.

The country profiles follow the themes of the following chart. The country profiles are presented in this manner to provide a clear comparison between national transit policies.

	Canada	USA	Australia	New Zealand	UK	Italy	France	Germany	Russia	Japan	Korea
Financing											
Farebox policy (e.g., minimum fare recovery rates)				✓		✓					
Fare Subsidies / Tax Exemptions											
Free/subsidized fares for elderly				✓	✓						
Free/subsidized fares for disabled				✓	✓			✓			
Free/subsidized fares for youth / students											
Tax-deductible fare cards	✓	✓								✓	
Tax-free transit benefits provided by employers (e.g. transit passes, work buses)		✓			✓						
Capital Funding											
Predictable capital funding		✓		✓	✓	✓	✓	✓			
Capital funding for emissions reductions		✓					✓				
Capital funding for physical accessibility improvements		✓		✓	✓					✓	✓
New transit technology funding										✓	✓
Transit-related R&D funding		✓		✓				✓		✓	✓
Competitive project selection process		✓			✓		✓	✓			
Cost-sharing requirements		✓				✓	✓				
Operating Funding											
Predictable operating funding		✓		✓	✓			✓		✓	✓
Clear means of operating funding allocation		✓		✓	✓			✓			
Ability to Generate Local Revenue											
Devolution of power and responsibility to local/regional governments to implement taxes for transit systems		✓				✓	✓				
Devolution of power and responsibility to local/regional governments to implement congestion/road pricing					✓	✓	✓	✓			
Private Sector Involvement											
Allowance for transit service to be defined by local/regional government	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Social Inclusion											
Accessible services for customers with mobility impairments must be provided in the same service area as regular transit services		✓					✓	✓			

	Canada	USA	Australia	New Zealand	UK	Italy	France	Germany	Russia	Japan	Korea
Administrative Support											
Federal body for urban policy development (could be a group within a larger federal department)	✓	✓	✓		✓		✓	✓			
Level of Policy Integration											
Public transit policy imbedded within a broader national policy (e.g. environmental policy, urban strategy, policy to support domestic industries, or health and safety policy) in place or in development			✓	✓	✓		✓	✓			✓
Stand-alone transit policy in place or in development		✓		✓			✓	✓			
Supports supranational regulations (e.g. EU regulations, Kyoto Protocol)	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Autonomous Regions											
Major cities subject to different policies than the rest of the country					✓		✓	✓			
Certain provinces/states subject to different policies than the rest of the country					✓			✓			
Land Use Planning											
Requirement to have land use integration						✓	✓	✓			✓
Federal investment tied to land use commitments											
Planning Requirements											
Requirement to have mode integration							✓	✓			✓
Requirement to have long-term regional transportation plans		✓		✓	✓	✓	✓	✓			✓
Requirement to have service standards (e.g. performance, fares, equipment, service levels and types, etc.)							✓	✓		✓	✓

✓= evidence found

Table 1: Elements of National Transit Policy Frameworks Observed in the Studied Countries

Canada

Introduction

In 2008, Canada's population was approximately 33.3 million people,[2] 81% of whom lived in urban areas. With a land area of approximately 9,984,700 km^2,[3] the national average density is approximately 3 persons/km^2. However, the population density is much higher in the southern part of the country, as 75% of the population of Canada lives within 160 km of the American border.[4]

In Canada, the Constitution governs the division of federal and provincial powers. Transportation falls within both the federal and provincial jurisdictions. Provinces have power over "local work and undertakings," while the federal government has jurisdiction over ships and ship lines, railways, canals, and works and undertakings that are in the interest of two or more provinces. As such, the federal government is responsible for railways, ports, and airports, as well as maintaining transportation safety and security, and setting vehicle emission standards. Meanwhile, provinces and municipalities are responsible for most highways and roads (decisions about highway and freeway construction are entirely under the jurisdiction of the individual provinces) and public transit. In turn, most provinces have delegated the responsibility of providing transit service to municipalities. Exceptions include Metrolinx in Toronto, AMT in Montreal and BC Transit in British Columbia, which are provincial crown corporations, as well as TransLink, which is the metropolitan transportation authority in Metro Vancouver.

That said, only the federal and provincial governments have the power to raise money "by any Mode or System of Taxation."[5] Municipalities have limited revenue options, since they can only raise money by levying fees such as property taxes, development permit fees, and parking sales taxes. This makes it difficult for municipalities to properly fund their transit systems.

One of Canada's main industries is the manufacture of transportation equipment, which includes public transit vehicles, bus shelters, electronic signs, customer information systems, and technology for fleet management and operations such as transit priority, vehicle location, and security surveillance systems. In fact, Canada is one of the world leaders in transit vehicle manufacturing. Vehicles manufactured by Bombardier, New Flyer, Nova Bus, and Orion are exported across North America and the world.

Photo 1: GO Transit (CUTA)

[2] International Road Federation. (2010). *World Road Statistics Database, 2003-2008*.
[3] Ibid.
[4] National Geographic. (2004). "Canada Facts." http://travel.nationalgeographic.com/travel/countries/canada-facts/ (Retrieved May 3, 2011)
[5] Constitution Act. (1867). Subsection 91(3)

Bombardier is the largest global supplier of rail cars, while the latter three companies supply 70% of the entire North American market for transit buses.[6] As well, there is a strong set of transit suppliers who manufacture vehicle parts such as bumpers, frames, flooring, seats, multiplex wiring systems, mirrors and other components, and several companies provide leading bus refurbishment services.

Public Transit and Transportation Trends in Canada

Many Canadian urban areas that developed prior to World War II (WWII) have well-integrated public transit systems, connecting inner suburbs to an urban core. In contrast, many post-war urban areas created more automobile-oriented transport systems, resulting in a lower density form of development spread out over a large area around the central city. As a result, each year Canadians drive about 9,800 vehicle-kilometres per capita and the vehicle ownership rate in 2008 was 605 per 1000 people.[2] In 2006, the national commute mode share was 11% transit, 80% passenger vehicles, 7% walking, 1% cycling, and 1% other modes, the same as in 2001, indicating an increase in transit ridership for commute trips in absolute terms, but not in relation to population growth. The transit mode share for all trips is likely even lower, as people often walk or use their private automobiles for discretionary trips (e.g. shopping trips and trips to restaurants).[7]

National Public Transit Policy Framework

As stated at the beginning of this paper, Canada does not have a formal public transit policy framework. However, there are some elements of a policy framework currently in place and these are further described below.

Fare Subsidies

On July 1, 2006, the Government of Canada began offering Canadians a non-refundable tax credit for weekly or longer transit passes to help reduce the cost of public transit. As it is a non-refundable tax credit, applicants do not receive a direct refund. Instead, the amount claimed by an individual is multiplied by the lowest personal income tax rate for the year and then deducted from the amount of tax owed for that year.[8]

Capital and Operating Funding

Prior to 1998, public transit received minimal attention from the Canadian federal government. However, with the establishment of advocacy groups pushing for a tax exemption for employer-provided transit benefits and the Transportation Climate Change Table (whose purpose was to provide advice to the federal government on how the Kyoto Protocol commitment could be met), the importance of public transit was finally recognized.[9]

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[6] CUTA. (2009). *Canada's Transit Suppliers: Celebrating Success at Home and Abroad.* Issue Paper 31.
[7] Statistics Canada. (2006). *Census 2006 and 2001*.
[8] Government of Canada. (2008). *Tax credit for public transit pass*. http://www.transitpass.ca/ (Retrieved April 5, 2011)
[9] Roschlau, M. (2008). "Public transport policy in Canada and the United States: Developing political commitment from the federal government". *Research in Transportation Economics.* 22: 91-97.

In 2002, CUTA also began a major public awareness campaign to increase the profile and build public support for public transit.[9] The program funded research initiatives and grassroots advocacy, thereby playing a major role in fostering federal interest in public transit investment within Canada.

As a result, since 1998 there have been a number of federal funding programs introduced that include public transit as an eligible project category. These have included the following:

- **Canadian Strategic Infrastructure Fund** – introduced in 2001 and provided $4 billion towards projects of national or regional significance, including public transit expansion and the removal of railway level crossings.[10]
- **Urban Transportation Showcase Program** - started in 2001 and ended in 2009, supporting eight showcase projects across Canada that demonstrated and evaluated integrated approaches to reducing GHG emissions in the urban transportation sector.[11]
- **New Deal for Cities and Communities** – involved a transfer of half of the federal excise tax on motor vehicle fuel ($0.05/litre) to local governments to be used for sustainable municipal capital infrastructure initiatives.[9]
- **Municipal Rural Infrastructure Fund** – a $1.2 billion fund used from 2003 to 2008 that supported smaller scale municipal infrastructure projects, such as water and wastewater treatment, and cultural and recreation projects, for smaller and First Nation communities.[12]
- **Gas Tax Fund** – involved a transfer of $13 billion from the federal government to local governments over the nine-year period from 2005 to 2014, and can be used for any type of environmentally sustainable municipal infrastructure. In 2009 this fund was extended beyond 2014 on a permanent basis to provide $2 billion of sustainable infrastructure funding per year.[9]
- **Building Canada Fund** – an $8.8 billion fund that can be used during the seven-year period from 2007 to 2014 on infrastructure initiatives (including public transit) that are considered to be a priority for a province or territory.[13] The funding is allocated among provinces and territories on a per capita basis.
- **ecoMobility Program** – a program that began in 2008 and funds TDM initiatives.[14]
- **Public-Private Partnership (P3) Fund** – a $1.25 billion fund that supports innovative projects (including public transit) that employ an alternative infrastructure procurement model.[13] A

[10] Public Transport Users Association. (2007). *Moving Australians Sustainably: Transport Policy in the National Interest.*
[11] Transport Canada. (2010). "Urban Transportation Showcase Program: Results from Program and Showcases". http://www.infc.gc.ca/ip-pi/mrif-fimr/mrif-fimr-eng.html (retrieved April 20, 2011)
[12] Infrastructure Canada. (2010). "Municipal Rural Infrastructure Fund". http://www.infc.gc.ca/ip-pi/mrif-fimr/mrif-fimr-eng.html (retrieved April 20, 2011)
[13] CUTA. (2011). *Federal, Provincial & Territorial Public Transit Funding Programs in Canada.* Note: Figure 2 shows all operating revenues and contributions, of which 49% are Regular Service Passenger Revenues. This does not represent the cost-recovery ratio, which is the total operating revenues divided by the total direct operating expenses. In 2009, CUTA reported the national cost-recovery ratio to be 54%.
[14] Transport Canada. (2010). "ecoMobility About Us". http://www.tc.gc.ca/eng/programs/environment-ecomobility-menu-eng-1934.htm (retrieved April 20, 2011)

Crown Corporation has also been established to support the development of public-private partnerships and facilitate the development of the Canadian P3 market.[15]

- **Infrastructure Stimulus Fund** – a $4 billion fund that requires projects to be completed by October 31, 2011. It is expected that public transit's share of this fund will only be 7%, which is less than one-fifth of the amount allocated to highways, roads, and bridges.[16]
- **Federation of Canadian Municipalities' Green Municipal Fund** – a fund that supports municipal initiatives that benefit the environment, local economies, and quality of life. The federal government provided $550 million to establish this fund.[17]

Photo 2: OC Transpo (CUTA)

As indicated, however, none of these funds are dedicated to public transit. The first public transit dedicated funds were only introduced in 2005. The Public Transit Fund allocated $400 million specifically to public transit in 2005-2006 and the Public Transit Capital Trust allocated a further $900 million over the three years from 2006-2009.[9]

Then, in 2006, public transit became a part of the official platforms of every federal political party for the first time. In 2007, the $80 million Transit-Secure Contribution Program was announced. Between 2007 and 2009, this program provided financial assistance to commuter rail and public transit operators in designated major metropolitan areas to accelerate the implementation of new and enhanced security measures.[18]

As a part of the 2008 federal budget, the government introduced a second Public Transit Capital Trust, which provided an additional $500 million over 2 years from 2008-2010.[9]

The graph below shows the capital investments that the different levels of government have contributed over the past ten years. It shows that federal public transit capital investments significantly increased in 2005 and 2006, after which they remained at relatively the same level.

[15] PPP Canada. (2010). http://www.p3canada.ca/home.php (retrieved March 20, 2011)
[16] CUTA. (2011). *Building Sustainable Mobility: Federal Transit Investments across Canada.* Issue Paper 39.
[17] Federation of Canadian Municipalities. (2011). "FCM's Green Municipal Fund". http://www.google.ca/search?q=FCM%E2%80%99s+Green+Municipal+Fund&ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-US:official&client=firefox-a&safe=active (retrieved April 20, 2011)
[18] Transport Canada. (2008). "Transit-Secure Contribution Program". http://www.tc.gc.ca/eng/railsecurity/tscp-menu.htm (retrieved April 20, 2011)

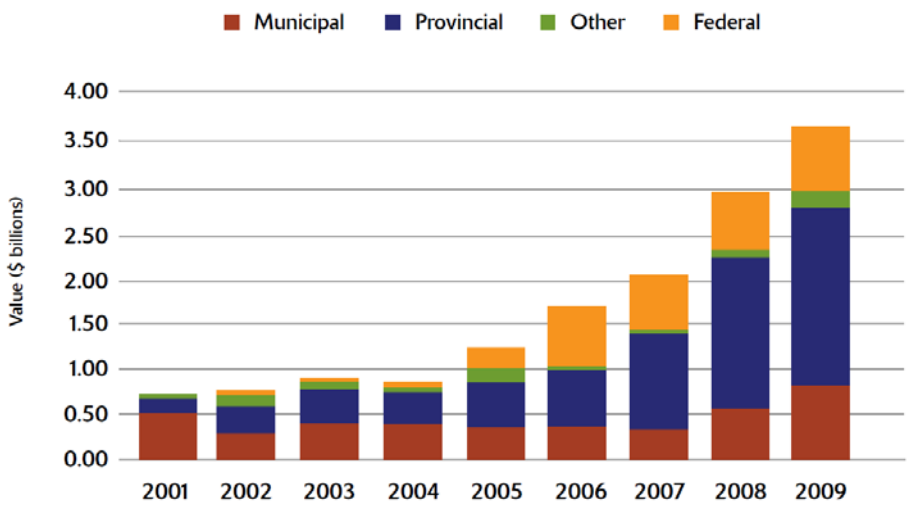

Figure 1: Sources of transit capital investment in 2001-2009

Source: CUTA (2011)[16]

These federal transit investments, however, have not been "permanent, predictable, and comprehensive."[9] Instead, these investments have largely focused on single projects that help achieve federal goals, such as: growing/supporting the economy (e.g. the provision of rapid transit service to the Vancouver International Airport to attract tourists and businesses to the region); protecting the environment (e.g. the purchase of hybrid vehicles to reduce greenhouse gas emissions); and improving security (e.g. the deployment of transit security initiatives to improve safety). While these initiatives may help fund public transit services in places where a strong case can be made for federal funding, these projects are not strategically coordinated in such a way that public transit is widely and conveniently available to all Canadian residents.

> The federal investments that have been provided have not been "permanent, predictable, and comprehensive."

In addition, the funding that has been available for public transit only covers capital expenditures. Consequently, in many jurisdictions, the responsibility of financing the net operating and maintenance costs of transit systems mainly lies with the municipalities. As shown in Table 2, which summarizes the jurisdictions in which provincial/territorial governments provide direct transit funding, only five of the eight provinces/territories provide capital *and* operating funding for transit systems. This indicates

> Only 5 of the 8 provinces/ territories provide capital and operating funding for transit systems. In 2009 Canadian municipalities contributed approximately 30% of the total operating revenues collected, while provincial governments only contributed 7%.

that financial support for transit by provincial/territorial governments is rather uneven within the country and many transit systems are under-supported.

Table 2: Direct transit investments by federal, provincial, and territorial governments[19]

	Conventional		Specialized	
	Operating	Capital	Operating	Capital
Government of Canada		✓		✓
Alberta		✓		✓
British Columbia – Metro Vancouver		✓		✓
British Columbia – Other municipalities	✓	✓	✓	✓
Manitoba	✓	✓	✓	✓
New Brunswick				
Newfoundland & Labrador				
Northwest Territories				
Nova Scotia	✓	✓	✓	✓
Nunavut				
Ontario	✓	✓	✓	✓
Prince Edward Island				
Québec – urban	✓	✓	✓	✓
Québec – rural	✓	✓	✓	✓
Saskatchewan			✓	✓
Yukon			✓	

Source: CUTA (2011)[13]

To further demonstrate the financial burden that municipalities carry, Figure 2 shows that in 2009 Canadian municipalities contributed approximately 30% of the total operating revenues collected, while provincial governments only contributed 7%.

[19] Indirect investments by federal and provincial governments include unconditional (or unallocated) grants and dedicated local taxes or user fees. Unconditional grants are transferred from province to municipality, and are usually distributed according to population size or ridership levels. These become part of the general revenue of the recipient municipality and the municipality decides how much of it should be allocated to transit. Dedicated local taxes or user fees are created through provincial legislation to provide a municipality or region an additional revenue source to fund public transit. Examples include allocating a portion of property taxes to public transit as in Victoria and Metro Vancouver in British Columbia, and a proportion of gas, hydro, and parking taxes as in Metro Vancouver.

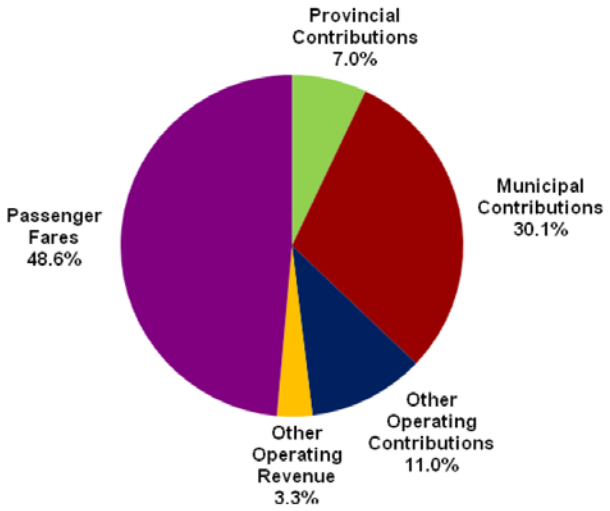

Figure 2: Sources of transit operating revenues (2009)[13]

Source: CUTA (2011) [13]

Research and Development

Funding for transportation-related research and development is provided through Transport Canada`s Transportation Development Centre (TDC). The Centre is comprised of a team of engineers, ergonomists and planners that works in partnership with industry, other levels of government, research centres, and the private sector (some projects are co-funded by these partners).[20] The TDC differs from other research organizations such as the US Transportation Research Board (TRB) in that it is a government body instead of an independent, non-profit organization that is co-funded by government and other organizations. It is also different from the US Transit Cooperative Research Program (TCRP), as it does not focus only on transit-related research. Funding is provided to projects focused on intelligent transportation system (ITS), road projects (e.g. bus technology), and transportation accessibility; however, transit projects also have to compete with non-transit projects for funding.

TDC's research staff plan and manage the projects, while the actual research work is contracted out to a variety of organizations across Canada, including manufacturers, operators, research groups, universities, and consultants. The research program is developed on the basis of priorities established by the departmental research and development (R&D) management board, and it addresses policy issues, regulation and safety, technology development, operations, and technology transfer. All modes of

Approximately half of Canadian transit systems contract out operations and/or maintenance services to private companies.

[20] Transport Canada. "Transportation Development Centre". http://www.tc.gc.ca/eng/innovation/tdc-menu.htm (retrieved March 17, 2011)

transport are examined in this program.

Private Sector

In Canada, the private sector provides commercial, for-profit operations, such as Greyhound Canada, First Student Canada, and Pacific Western Transportation. As well, approximately half of Canadian transit systems contract out operations and/or maintenance services to private companies. These are usually specialized transportation or paratransit services for people with mobility impairments. As mentioned before, the private sector is also involved in research and development projects, some of which are focused on public transit technology. As well, there are some transit projects such as the Canada Line in Metro Vancouver that have been built through public-private partnerships (P3s).

In terms of control and influence over privately operated transit services, municipal governments typically determine the degree to which transit services can be defined (i.e., regulate service quality and patterns) by the local government. There are, however, some exceptions to this. For example, in British Columbia, BC Transit (a provincial crown corporation), in collaboration with the local municipalities, defines the transit services that are offered for all areas of the province except for Metro Vancouver, which is under the responsibility of the regional transportation authority, TransLink.

Administrative Support

Within Transport Canada, the Policy Group is responsible for developing, recommending and coordinating modal and multi-modal policies.[21] The group offers advice, analysis and data on transportation issues, system performance and stakeholder positions. Typically the advice on policy options is focused on efficiency, competitiveness, safety and security, environmental sustainability, and inter-modal integration.

Within Transport Canada, the Policy Group is responsible for developing, recommending and coordinating modal and multi-modal policies.

Level of Policy Integration

As explained earlier, Canada does not have a formalized stand-alone policy for public transit. Neither has it adopted transit policies as part of other national strategies or policies (e.g. a climate change policy or urban strategy). However, the Council of the Federation, which works to promote inter-provincial-territorial cooperation and provide leadership on issues of importance to Canadians, did adopt a National Transportation Strategy in 2005 that includes public transit.

[21] Transport Canada. (2010). "Policy Group". http://www.tc.gc.ca/eng/policy/menu.htm (retrieved March 17, 2011)

As well, municipalities that receive federal gas tax transfers are required to complete an Integrated Community Sustainability Plan (ICSP), a forward-looking plan that integrates environmental, social, cultural, and economic development objectives and actions to achieve a long-term vision for the community, municipality, or region. The goal of an ICSP is to encourage municipalities to address their present and future needs by integrating their infrastructure requirements within broader strategies that encourage collaboration amongst community members and other partners, and the implementation of actions that can be monitored and evaluated.[22,23]

Municipalities that receive federal gas tax transfers are required to complete an Integrated Community Sustainability Plan (ICSP), a forward-looking plan that integrates environmental, social, cultural, and economic development objectives and actions to achieve a long-term vision for the community, municipality, or region.

Autonomous Regions

All provinces and regions are treated more or less the same.

Land Use Planning and Planning Requirements

When providing funding for transportation projects, the federal government does not require land use commitments or land use integration. Similarly, the federal government has not made it a requirement for local/regional governments to conduct multi-modal planning. In addition, while many regions and municipalities do have transportation plans, these plans have not been made mandatory by the federal government.

Collaboration

As alluded to throughout this section, there is little collaboration between the federal government and the provincial and municipal governments with regard to public transit services. The federal government's role has been limited to making investments in transit infrastructure, developing and enforcing policies to maintain transportation safety and security, and setting vehicle emission standards. As such, there has been some cooperation between different federal agencies on these matters. However, the federal government has yet to promote collaboration between its departments or with the provinces and municipalities to develop transit-specific policies or legislation.

[22] Government of Nova Scotia. *Integrated Community Sustainability Plan: Municipal Funding Agreement for Nova Scotia.* http://www.gov.ns.ca/snsmr/muns/infr/pdf/ICSP_2007.pdf (retrieved April 20, 2011)
[23] Government of British Columbia. *The Integrated Community Sustainability Planning (ICSP) Initiative*. http://www.cscd.gov.bc.ca/lgd/intergov_relations/library/ICSP_Backgrounder.pdf (retrieved April 20, 2011)

Competition with Road Investments

Although the Canadian federal government does not provide a long-term consistent source of funding for road investments, the federal government is involved in funding roadway projects. One example is the Gateway Program in British Columbia, which consists of a set of road and bridge improvements and expansions and aims to improve goods and people movement throughout the Metro Vancouver region. As well, many of the projects that have been funded under the $4 billion Infrastructure Stimulus Fund (as part of the Economic Action Plan) have been roadway projects, as these have been typically shovel-ready undertakings. For example, in Alberta, there are 33 infrastructure projects that are being funded through this program, and it will mainly focused on improving local roads, highways and bridges.[24] In addition, the Building Canada Plan includes the Gateways and Border Crossings Fund (used to enhance infrastructure at key locations such as major border crossings between Canada and the US) and one of the Building Canada Fund's focus areas is the core National Highway System, in terms of improving safety and efficiency, improving the state-of-good-repair, and reducing traffic congestion.[25]

Thus, in Canada, roadway developments do pose a considerable level of competition for public transit in terms of funding support.

Level of Federal Interest

As mentioned earlier, the Canadian government has significantly increased their funding for public transit systems over the last decade. However, at this time, interest in public transit at the federal level seems to have tapered off. For example, in the latest federal budget tabled on March 22, 2011, no new funding was allocated for public transit. There were only commitments to develop a longer term infrastructure plan beyond the Building Canada Plan and to enshrine the gas tax into permanent legislation. That said, before the dissolution of the 40th Parliament, the Canadian government did indicate that they were not opposed to having an overarching national transit policy framework. However, it was made clear that the federal government would not be leading this initiative. Instead, it would be the provinces' responsibility to make this a priority. Finally, some interest was expressed in exempting from taxation transit benefits that employers provide to their employees.

The Canadian government has significantly increased their attention and level of funding support for public transit systems over the last decade. However, at this time, interest in public transit at the federal level seems to have tapered off. In the latest federal budget that was proposed, there was no new funding allocated for public transit.

[24] Government of Alberta. (2010). "Canada and Alberta announce 33 new infrastructure projects: Stimulus funding will create jobs, stimulate regional economy". http://alberta.ca/home/NewsFrame.cfm?ReleaseID=/acn/201001/277207585EC9A-F7F3-B4AF-93127606297F1455.html (retrieved March 19, 2011)

[25] Infrastructure Canada. (2010). "Building Canada Funding Programs". http://www.buildingcanada-chantierscanada.gc.ca/funprog-progfin/index-eng.html (retrieved March 17, 2011)

Lessons Learned

Canada has already taken several significant steps toward developing a national transit policy framework. Within Transport Canada, the Policy Group is charged with developing, recommending and coordinating modal and multi–modal policies. This group's responsibilities could be further expanded to include developing a detailed national transit policy framework and to managing the federal transit capital funds. It could also help integrate transit policies into other broader national urban policies/strategies.

As well, over the last decade, the federal government has introduced several public transit funds. These funds, however, have usually been available for a short time period and have not provided the stability or predictability that is required for the long-term success of our public transit systems. Thus, one of the lessons learned is that increased and long-term capital funding should be provided by the federal government. In addition, it is evident that operating funding from provincial/territorial governments is relatively uneven within the country and that more operating funds need to be provided by these governments, especially given that under the Canadian constitution, provinces have responsibility over public transit.

Finally, although many transit systems in Canada are already contracted out to private operators, from the experience of the other countries examined in this study, this type of partnership could be further extended to more systems across the country to reduce labour costs, improve efficiencies, and help distribute the operating risks.

United States of America

Introduction

The United States covers an area slightly smaller than Canada, but has about nine times the number of people, with a population of 308.8 million.[26] The population density of the US is 33.7 persons/km,^{2} roughly 10 times Canada's population density of 3 persons/km^2. Like the other countries in this study, the majority of the population lives in urban areas.

The US has the lowest fuel prices of any of the study countries and the most roads, as measured by both the total length of roads and length of roads per capita, so it should be no surprise that the average person in the US drives more than in the other study countries. Transit usage in the US is not very high compared to Asian, European, or even Canadian standards, but ridership has increased modestly in the last 20 years. The US Department of Transportation (DOT) set a goal of a 2% annual increase in transit ridership in its Strategic Plan 2006-2011.[27] The next DOT strategic plan is currently being developed.

The national government's participation in transit is considered to have started in the 1960s. Its new role was brought about by several factors, the most obvious being the impending termination of commuter rail service in major cities as a result of the 1958 *Transportation Act* which gave railroad companies the right to divest themselves of passenger service.[28] Furthermore, transit companies throughout the country, which were almost exclusively private companies at that time, were on the brink of going out of business as a result of lower ridership (as more people bought automobiles and moved to the suburbs), low transit fares (which were mandated by local governments), and an inability to raise funds to replace aging infrastructure. Local governments suddenly realized that they might be forced to take ownership of these operations. In addition, by the 1960s, some of the negative effects of the federal highway building program were being felt in urban areas, notably traffic congestion and urban blight.

The national transit policy began with minimal capital funding, but it has expanded to encompass large and varied funding programs that help fund transit systems in urban, suburban and rural communities, including paratransit services for the elderly and disabled. Popular and political support for public transit has tended to increase during the last half-century, resulting in a relatively stable source of transit funding in federal and state budgets, and dedicated funding at regional and local levels.

[26] United States Census Bureau. (2010). "2010 Residential Population." http://www.census.gov/ (retrieved March 23, 2011)
[27] United States Department of Transportation. (2006). Strategic Plan 2006-2011: New Ideas for a Nation on the Move
[28] Smerk, George. (1991). The Federal Role in Urban Mass Transportation. Bloomington: Indiana University Press

The current transit policy is largely captured in *SAFETEA-LU* (*Safe, Accountable, Flexible, Efficient, Transportation Equity Act – Legacy for Users*), which was a five-year transportation funding bill passed in 2005. *SAFETEA-LU* included authorization for the highest levels of national government spending on public transit to date. It was originally enacted to cover spending through the end of 2009, but it has been extended several times because a new transportation bill has not been finalized. The future of transportation funding in the US is unknown at this time, but the proposed 2012 budget suggests that the US President has placed a priority on investments in public transit that, if supported by the US Congress, will reach unprecedented levels. There will likely be a strong emphasis on streamlining some of the competitive grant programs, consolidating some of the smaller formula funding programs, and adding significant new funding streams aimed at bringing older transit infrastructure to a state-of-good-repair.[29] This last item will address a DOT-wide concern that the national transportation infrastructure is falling into disrepair and requires significantly higher levels of investment to avoid economic losses resulting from congestion and to minimize safety hazards resulting from infrastructure failure. The future of the Federal Transit Administration (FTA) will also likely include a new regulatory structure for the safety oversight of rail transit systems.

SAFETEA-LU included authorization for the highest levels of national government spending on public transit to date.

Financing

The Housing Act of 1961 set aside funds for low-interest loans to fund transit infrastructure. Such loans were also included in the *Urban Mass Transportation Act* of 1964. However, these were not particularly well used funds because most cities chose to wait for grants that did not need to be repaid.[30] As part of the 1982 *Federal Public Transportation Act*, dedicated funding was set aside for transit needs through the creation of the Mass Transit Account (MTA) linked to the existing Highway Trust Fund. This earmarked one cent per gallon to public transit. There was initially hesitation from members of Congress to implement a trust fund for transit because it would limit their flexibility in using funds in the future. However, there was strong support for a trust fund from the transit community. The earmarked level is now 2.86 cents per gallon (with 15.44 cents dedicated to the Highway Fund).

In 2008, 82% of federal spending on transit came from the MTA, while 18% came from General Revenues. Dedicated funding for transit has allowed for the long-term planning of transit projects. However, this source of funding has been degraded in recent years due to improved fuel efficiencies in vehicles. A set fee per gallon is problematic because the amount does not rise with the increase in the cost of gasoline or inflation. There have been suggestions that a funding source based on vehicle miles travelled should be used in the future.[31] It should also be noted that funding is reserved for transit

[29] FTA. (2011). Personal Communications
[30] Smerk, George. (1991).The Federal Role in Urban Mass Transportation. Bloomington: Indiana University Press
[31] Heminger, Steve. (2011). Presentation to Monk School of Global Affairs

purposes through a multi-year authorization (the latest one being *SAFETEA-LU*), but only actually distributed by Congress on an annual basis through the budget appropriation process. Therefore, actual spending levels do not coincide exactly with authorized levels of funding. The FTA has contract authority, which means that it can promise funding even if it has not actually received the funds in question.

Fare Subsidies

Through Section 132 of the *Internal Revenue Code* (Title 26 of the *US Code*), employees can deduct up to USD$230 per month (through payroll) from their taxable income to pay for transit service, and employers can provide their employees with up to USD$230 per month in transit benefits that will not be used in the calculation for payroll taxes.[32] This program is not managed by the FTA (it is managed by the Internal Revenue Service), but it has a significant impact on the promotion of transit in the workplace.

Besides this program, there are no direct demand-side subsidies at the national level in the US.

Capital Funding

Historically and up to the present day, a major focus of US national transit policy has been capital funding. Funding is used mainly to assist with the regular recapitalization of transit assets (e.g. purchasing of buses), to achieve or maintain a state-of-good-repair in transit infrastructure, and to expand transit infrastructure.

Grants for Capital Projects

The *Urban Mass Transportation Act* of 1964 provided the first federal funds for transit. Prior to the Act, transit had been considered both a private and local matter and not the responsibility of the federal, state, or local governments.[33] This landmark legislation included long-term funding for reinvestments in infrastructure, as well as short-term funding that helped prevent transit services from disappearing in urban areas. In order to prevent states like New York from receiving too high a percentage of funding, limits were placed on the percentage of grant funding any one state could receive. The long-term funding provided two-thirds of project costs while the short-term funding provided one-half to two-thirds of project costs.

There are currently several types of formula grants distributed to states and local transit providers based on population, population density, and transit usage inputs. The largest of these is the Urbanized Area Formula Grant, for which USD$4.5 billion (CAD$5.448 billion) was authorized in 2009. Competitive grants, which are funds distributed to local transit authorities for specific projects, are also available. This funding comes with requirements, such as local funding matches (generally 20%, though higher levels of local match contributions are not unusual for the New Starts Program) and extensive planning

[32] APTA. (2009). It Pays To Ride Public Transportation. (Pamphlet)
[33] Smerk, George. (1991). The Federal Role in Urban Mass Transportation. Bloomington: Indiana University Press

and review. In 2009 USD$1.8 billion (CAD$2.2 billion) was authorized for the New Starts Program, the largest discretionary grant program.

There is some debate as to whether the next authorization should include more or less in discretionary funding. When states and local authorities have to compete for funding under a discretionary program such as New Starts, this presumably leads to the Federal government determining which are the best projects to receive program funding. On the other hand, having more formula funds puts more money into the hands of the local authorities, who are in the best position to identify the best projects in their jurisdiction. Funds may be spread out around the country and among cities anyway to maintain political support for the national transit program, limiting competition for funds.

In 2008, operating assistance made up about 28% of government spending on transit.

Research and Development

From the beginning of the federal government's involvement in public transit, research and development were a component of the program. In the 1964 *Urban Mass Transportation Act*, $30 million of the $375 million was set aside for research, development, and demonstrations. In recent years, the transit programs have shied away from focusing research and development activities focused solely on technology development, as there was a realization that transportation problems often do not require a technology fix, but rather are more economic and social in nature.

Through *SAFETEA-LU*, about USD$9.2 million (CAD$11.1 million) has been authorized per year for the Transit Cooperative Research Program (TCRP), USD$3.6 million (CAD$ 4.4 million) per year for the National Transit Institute (NTI), and USD$6.8 million (CAD$8.2 million) per year for the transit activities of the University Transportation Centers (UTCs). TCRP carries out practical research and makes it available to the public transit industry,[34] while the mission of the NTI is "to develop, promote, and deliver training and education programs for the public transit industry."[35] UTCs are research centres embedded in universities that carry out graduate level research to advance knowledge in the field of transportation. Some of these centres bid for access to national government funding, and each centre carries out research related to a given theme.[36]

Operating Funding

In the early years of the federal transit program, there was a worry that the provision of operating funding would degrade the efficiency of transit service and would simply increase transit employee wages rather than increase service.[37] The first operating funds came from the national government as a

[34] Transportation Cooperative Research Program. (2011). "Transit Solutions You Can Use" . http://www.tcrponline.org/whatistcrp_about.shtml (retrieved April 16, 2011)
[35] National Transit Institute. (2011). "NTI Goals". http://www.ntionline.com/about.asp (retrieved April 16, 2011)
[36] Washington State Department of Transportation. (2011) "University Transportation Centers" http://www.wsdot.wa.gov/Research/Partnerships/UTC.html (retrieved April 16, 2011)
[37] Smerk, George. (1991). Federal Role in Urban Mass Transportation. Bloomington: Indiana University Press

result of the *National Mass Transportation Assistance Act* of 1974. At the time, inflation was putting pressure on transit authorities to shut down or severely cut their services.

By 2008, operating assistance made up about 28% of national government spending on transit.[38] FTA funds are available for operating costs in communities with less than 200,000 people. Federal funds may also be used for operating assistance under the following programs: Urban Formula (for metropolitan areas with populations of 50,000 to 200,000), Job Access and Reverse Commute (JARC), New Freedom, and Tribal Transit (see Social Inclusion section for more information). In addition, the proposed 2012 budget proposed by the US president discusses "temporary and targeted" operating assistance for transit agencies in large urbanized areas during times of economic distress.[39]

Ability to Generate Local Revenue

States, regions, and local authorities also have a variety of other transit funding options, including gas taxes, sales taxes, and payroll taxes. One of the goals of the US DOT has been to give states more authority to enter into public-private partnerships.[40] In the most recent authorization bill, states were given an additional means to fund public transit projects: State Infrastructure Banks (SIB). To set up a State Infrastructure Bank, states enter into cooperative agreements with the US Secretary of Transportation to establish a foundation for raising non-grant financial assistance. Through these banks, states can receive below-market rate subordinate loans, bond insurance, and guarantees and other forms of credit enhancements.[41]

The FTA is one of the few federal departments that works closely with metropolitan areas and states; most departments work primarily with states.

Private Sector Involvement

In the US, school bus services are generally reserved for the private sector unless there is no company willing to provide those services.

The private sector also provides various services through contract, such as commuter rail and paratransit, but not directly through the FTA. The only area in which the FTA works directly with the private sector is in the area of research.

Social Inclusion

There are a number of federal transit funding programs to promote social inclusion. For example, the New Freedom Funding program (USD$93 million or CAD$112.6 million authorized for 2009) provides

[38] APTA. (2010).2010 APTA Factbook
[39] FTA. (2011). Personal Communications
[40] United States Department of Transportation. (2006). Strategic Plan 2006-2011: New Ideas for a Nation on the Move
[41] FTA. (2005). FTA Authorization Fact Sheet – State Infrastructure Bank Programs – Transit.

funding to create benefits beyond the *American Disability Act (ADA)* requirements for people with disabilities. Formula funding for the Elderly Persons and People with Disabilities Program (USD$133 million or CAD$161 million authorized for 2009) also provides funding for increasing the mobility of older adults and people with disabilities. As well, the Job Access and Reverse Commute Program (USD$165 million or CAD$200 million authorized in 2009) is for low-income individuals who live in the central area of a city but have jobs on the urban periphery. In addition, the Public Transportation on Indian Reservations Program ($15 million or CAD$18 million authorized in 2009) is funding set aside for Indian reservations.

Administrative Support

The FTA is the public body responsible for developing policy, carrying out transit policy and distributing funding for the federal government. The FTA has approximately 500 employees in 10 regional offices and five metropolitan offices.[42] It is one of the few federal departments that works closely with metropolitan areas and states; most departments work primarily with states. The FTA is a department within the US DOT along with the Federal Aviation Administration (FAA), Federal Railroad Administration (FRA), and the Federal Highway Administration (FHWA). The Department of Housing and Urban Development (HUD), a federal department just like the US DOT, is responsible for setting housing policy, and to some extent, urban policy.

A top priority of the FTA currently is the integration of rail transit safety oversight.

Level of Policy Integration

In terms of policy integration, the FTA works with HUD, the Environmental Protection Agency (EPA) and the Department of Agriculture on its liveability agenda. One core theme for this agenda has been affordable housing near transit, which has required the cooperation of the FTA and HUD. Cooperation among these groups has also allowed policy makers to recognize any overlaps in their programs. A goal of integrating their programs is to make the respective programs more efficient and to streamline national government policy for the states and other recipients of funding.

A current top priority of the FTA is the integration of rail transit safety oversight. The regulation of rail safety is currently the responsibility of the FRA (for railroads and commuter rail) and the states (for light rail and heavy rail). Recent accidents have highlighted the lack of accountability and coherent policy among states, compounded by a lack of regulatory authority in the FTA pertaining to rail transit safety standards for heavy (metros/subways) and light rail systems. With the approval of Congress, the FTA's authority would be strengthened to enforce state safety oversight (for states choosing to retain oversight of rail transit safety) and it would have new legal and financial mechanisms to ensure enforcement. The FTA would only assume safety responsibility for those states choosing not to retain

[42] Federal Transit Administration. (2011). "Welcome to the Federal Transit Administration". www.fta.dot.gov/about_FTA.html (retrieved April 16, 2011)

oversight of the safety of rail transit systems within their borders. This will be a significant change, as until now the FTA has strictly been a grant agency and not a regulatory agency.

State and metropolitan area plans are also required to incorporate roadway and transit planning, as well as land use considerations. In this way, they are intended to maximize the integration of FHWA and FTA activities, as well as those of state and transit agencies. In addition, long-term plans are integrated with short-term investment plans in the sense that the short-term plans are required to support the long-term plans.

The FTA has also fully incorporated other national policies related to civil rights and environmental protection into their activities.

Autonomous Regions

All states and regions are treated more or less the same.

Planning Requirements

The *Housing Act* of 1961 set aside funds for transportation planning. The *Highway Act* of 1962 required that regional planning take into consideration alternatives to highway construction. In the current funding authorization, USD$114 million (CAD$138 million) was authorized in 2009 to support statewide and regional planning efforts. State Departments of Transportation and Metropolitan Organizations (MPOs) carry out these planning efforts.

To receive funding, local authorities must have completed two major planning documents: a 20-Year Transportation Plan and a 4-Year Transportation Improvement Program. The Transportation Plan outlines long-term transportation and environmental goals and has to be updated every four years. The Transportation Improvement Program outlines specific projects over a four-year time period and also has to be updated regularly.

In addition, there are specific requirements for applying for federal funds from the New Starts Program. These include an alternative analysis, meeting project justification criteria, and ensuring local financial contributions.

Collaboration / Accountability

Collaboration and accountability are provided in a number of ways. States and transit agencies work with the DOT to distribute funding. Recipients of funding are required to report on how those funds have been used. Collaboration is also encouraged through planning: MPOs and State DOTS are required to review each other's plans for consistency.

Competition with Road Investments

The federal highway program began earlier than the federal transit program, and funding is much higher for highways than for transit. When highway funds became eligible for transit use in the 1970s, not very much was diverted to transit; this was in large part because there were already many highway projects

in the pipeline. The ability to use highway funding for transit investments is now called flex funding, as noted in the *1991 ISTEA (Intermodal Surface Transportation Efficiency Act*. Over the last eight years, a total of $4.9 billion was transferred from the FHWA to the FTA. Funds transferred from the FHWA accounted for 12.2% of FTA obligations in 1992-1999. Funds can also be transferred from the FTA to the FHWA, but the amounts are relatively insignificant; only $19.7 million was transferred from the FTA to the FHWA during the same period. Several highway funding streams have been used for transit purposes, such as the Congestion Management and Air Quality Improvement (CMAQ) Program and the Surface Transportation Program (STP).

Level of Federal Interest in Transit

Funding levels increased significantly in the 1990s and the 2000s, which suggests strong interest in transit by the national government.[43] Today, transit generally receives bipartisan support, in part because it is recognized as a critical strategy for helping to increase employment and reduce welfare dependency. Transit also creates construction projects in local economies and assists middle class suburb-based commuters who vote for both Democrats and Republicans and who benefit the most from transit capital investments and operating subsidies. Transportation, and transit specifically, are small but increasingly visible national policy issues in the Obama administration.

Lessons Learned

The US has been very successful in establishing an integrated, long-term and stable funding program by gaining broad support for transit and working closely with funding recipients to incrementally improve the program over time. Without federal support, it is likely that transit service would have ended completely in many cities by the 1960s and 1970s and that transit ridership levels would be lower than they are today. There are several areas in which lessons learned from the US might be applied to Canada:

- The FTA has worked hard to establish good working relationships with states, metropolitan areas, and transit authorities. A similar organization could be set up in Transport Canada to develop these types of relationships for the purpose of developing transit policy and funding transit agencies throughout Canada.

- The FTA distributes a relatively small amount of operating funding, generally reserving it for places and services that have predominantly operating needs, as is typically the case in rural areas and with paratransit services. In smaller transit agencies, fares cover less than 20% of operating costs. Canada could take a similar approach and develop a funding program that is mostly capital, but flexible enough that it provides assistance in situations in which operating funding needs are more pressing than capital funding needs.

- The FTA provides a balance of formula and discretionary funding, but makes greater use of formula funds to allow local authorities to make best use of federal funding. A funding program

[43] FTA. (2011). Personal Communications

established in Canada should also give local authorities the power to make choices about how the funding is spent.

Despite the many strengths of the national transit policy in the US, transit still does not enjoy a very high mode share. This can be attributed to a wide range of factors. Federal mortgage programs contributed to extensive housing construction in suburban areas that are difficult to serve by transit, and the federal highway program further contributed to the decentralization of cities.[44] Local decisions, such as the provision of plentiful and cheap parking in urban areas, have also degraded transit mode share. Without complementary programs at the local, state, and national levels, public transit remains largely a means of transportation for those who have no choice, except in those urban areas with the highest quality of public transit. The US, like Canada, is also suffering from a fuel tax that is a fixed amount per volume, rather than one that increases with inflation and fuel prices. Both countries need to address their funding issues and policies related to roadway building, parking, and land use before transit mode share can increase significantly.

[44] Smerk, George. (1991). Federal Role in Urban Mass Transportation. Bloomington: Indiana University Press

Australia

Introduction

Australia's population was approximately 21.4 million in 2008, of which about 19 million (or 89%) lived in urban areas.[45] The total land area for the country is 7,741,220 km^2,[2] which equates to a population density of approximately 3 persons/km^2, which is the same as Canada`s average. However, as in Canada, most of the population is concentrated in urban areas. Therefore, the density of most municipalities is actually much higher, especially in major cities such as Sydney, Melbourne, Brisbane, Perth, and Adelaide.

Like Canada, Australia has a parliamentary government system. The national Australian (Commonwealth) Parliament has legislative power over areas such as interstate trade and commerce, trade with other countries and external affairs, while state parliaments have legislative powers over schools, state police, the state judiciary, roads, public transit, and local government. The country's main industries are in the services sector, mining, industrial and transportation equipment, agriculture and food processing, chemicals, and steel.[46]

Public Transit and Transportation Trends in Australia

Most public transit services are bus services, with some tram services in Melbourne, and heavy rail in Sydney, Melbourne, Brisbane, Adelaide, and Perth.

Until recently, the Australian national government had a minimal role in public transit services (see below for more details about recent developments). Apart from farebox revenues, finances for urban public transit services are from state governments, with some local councils such as Brisbane providing additional contributions for operating expenditures, which come mainly from property tax revenues. Instead, the focus of the national government has been on roads. In the three decades leading up to 2004, the national government spent AUD$58 billion (CAD$56.7 billion) on roads, AUD$2.2 billion (CAD$2.15 billion) on rail, and AUD$1.5 billion (CAD$1.46 billion) on public transit.[47]

As large parts of some of the major cities such as Sydney and Melbourne were built before World War II, they were originally shaped by public transit systems and these systems are continuing to provide relatively good service today. Nationally, 14% of commuting trips in 2009 made by persons aged 18 years and older were on public transit and 19% of all other daily (non-commuting) trips were at least partially by transit.[48,49]

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[45] International Road Federation. (2010). *World Road Statistics Database, 2003-2008.*
[46] Central Intelligence Agency. (2010). *The World Factbook.*
[47] Rural and Regional Affairs and Transport References Committee. (2009). *Senate Inquiry: Investment of Commonwealth and State funds in public passenger transport infrastructure and services*
[48] Bassett, D.R., Pucher, J. Buehler, R., Thompson, D.L., and Crouter, S.E. (2008). "Walking, Cycling, and Obesity Rates in Europe, North America, and Australia". *Journal of Physical Activity and Health.* 5. 795-814.

That said, Australian cities are still heavily dependent on the automobile. Newly developed areas in particular have been built around the passenger vehicle, and today their transit systems have difficulty attracting choice riders. This is due to a number of reasons: transit service is often seen as a social service, as opposed to a service that achieves other goals such as reducing congestion and helping achieve environmental and health objectives. As of 2008, the total road network in Australia was about 818,400 km in length and Australians drove a total of nearly 225 billion vehicle-kilometres (or about 10,500 vehicle-km per capita) per year. In 2009, 80% of commuting trips were made by passenger vehicles and 90% of non-commuting trips involved the use of a passenger vehicle somewhere along the trip.[49] Furthermore, while route coverage in Australian cities is adequate, transit service frequency, operating hours, and speed are often poor.[47]

Rural and regional transit service levels are also much lower than metropolitan services, and local governments are taking on increasing responsibility to provide transport for people with special needs and to make up for the lack of regular public transit. In addition, traffic congestion in inner urban areas often makes buses and trams unreliable, while services in suburban areas often have indirect, circuitous routes. [47]

National Public Transit Policy Framework

At present, Australia does not have a formal national public transit policy framework. However, there is some national interest in public transit. In the recent *Moving People Report* produced by three leading groups in the Australian public transit industry (the Australasian Railway Association, the Bus Industry Confederation, and the International Association of Public Transport), there was a seven-point national land transport plan proposed, which included increased capital investment in public transit from the national government that would be accompanied by performance benchmarking, a comprehensive planning approach, and a performance monitoring system. As well, the plan proposed a larger national government role in influencing "the development direction of [public transit] systems in ways that contribute to better outcomes". In the report *Our Cities: The Challenge of Change, Background and Research Paper* (2010) published by the Australian Government, it was also recognized that the federal government "has a role, working with State and Territories, in investing in major mass transit systems, identifying and protecting new transport corridors and supporting means to shift from private vehicles to public trans[it]." Some of the areas where there has been some national interest or involvement in public transit are described below.

Capital and Operating Funding

As described earlier, the national government has not historically played a large role in directly funding public transit services. Moreover, federal capital funding has only been provided from time to time. For example, the Urban Public Transport Program (1990-93) focused on improving public transit systems in the outer metropolitan areas. Projects were mostly measures such as interchanges, rail station

[49] Australia Bureau of Statistics. (2009). *Environmental Issues: Waste Management and Transport Use.* http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1090C7E66ADE806BCA2576730012D21A?opendocument

upgrading, and bus priority measures. Meanwhile, the federal Better Cities Program (1991-96) provided funding to improvements to rail systems and transport exchanges. The national government has also recently contributed to 'Travelsmart' behavioural change programs. However, the amount of funding has been small and rather unpredictable.

Recently, however, the Australian Government has indicated a renewed interest in urban policy by establishing a Major Cities Unit within the Department of Infrastructure and Transport. This unit provides advice to the Australian Government on policy, planning and infrastructure issues that impact major cities. This renewed interest is likely due to a combination of several factors. First, partly due to rising oil prices, public transit ridership has been growing and due to a lack of major improvements to transit systems, overcrowding has become a significant problem. [47,50] Also, urban traffic congestion has received increased attention due to its related economic, social, health (e.g. air quality and obesity), and environmental costs. In fact, it is predicted that the economic cost of congestion will rise to over CAD$21 billion per year by 2020.[50] As well, there is recognition of the need for greater social inclusion and increased transportation choices for lower-income individuals so that they can have equal access to employment and education.

The Major Cities Unit provides advice to the Australian Government on policy, planning and infrastructure issues that impact major cities, and it resides within the federal Department of Infrastructure and Transport.

Since 2008, CAD$7.3 billion has been committed to metro rail improvements.[53] These funds will be used for a number of major projects, including Regional Rail Express (Tarneit link) in Melbourne, Gold Coast light rail in Queensland; Gawler Rail line modernization in Adelaide; and Seaford to Noarlunga rail extension in Adelaide. However, the funding can only be used for capital infrastructure. The operating costs of these rail systems and funding for bus-based systems are still left largely on the shoulders of state governments.

Urban traffic congestion has received increased attention due to the related economic, social, health, and environmental costs. In fact, it is predicted that the economic cost of congestion in Australia will rise to over CAD$21 billion per year by 2020.

Administrative Support

As mentioned, the Major Cities Unit provides advice to the national government on policy, planning, and infrastructure issues in major cities. As well, in 2008 the national government established Infrastructure Australia to help advise governments, investors and owners of infrastructure in the following areas:

[50] Commonwealth of Australia. (2010). *Our Cities: The Challenge of Change, Background and Research Paper.* http://www.infrastructure.gov.au/infrastructure/mcu/files/NUPBP_Complete.pdf.

- Nationally significant infrastructure priorities;
- Policy and regulatory reforms desirable to improve the efficient utilization of national infrastructure networks;
- Options to address impediments to the development and provision of efficient national infrastructure;
- The needs of users; and
- Possible financing mechanisms.

Infrastructure Australia has eleven members, along with a Chair, and consists of five representatives from the private sector, one local government representative, three representatives of the national government, and three representatives of the states and territories. The members are also supported by the Infrastructure Coordinator, who is the statutory office holder and leads a small specialized team in the Office of the Infrastructure Coordinator.

Autonomous Regions

All states and regions are treated more or less the same.

Private Sector Involvement

Transit operators in Australia may be state-owned corporations (e.g. Queensland Rail in Brisbane) or private providers contracted to a state government (e.g. Busways in Sydney).

The latter arrangement is now common for bus services where the general practice is for the state government to award a franchise for an area or routes to an operator under a regulated contract. For example, New South Wales (NSW) has about 700 contract areas. Contracts are also used for rail services but these are far fewer in number (the transit railway networks are state government-owned[51]). Melbourne also has a metropolitan train contract and several tram contracts with private operators, but the land and assets are still owned by the Victorian state government.

Level of Policy Integration

Although at the present time Australia does not have a

A national public transit strategy is being developed by Infrastructure Australia. The strategy will examine issues such as service standards, types of transit services to be provided, construction issues, and vehicle and equipment standardization. Funding, financing, land use, land development will also be examined.

As well, the Major Cities Unit is currently working on a national urban policy to enhance the productivity, sustainability, and liveability of Australian cities, and public transit is one component of this policy.

Both of these policies are being developed together in an integrated fashion.

[51] Department of Infrastructure and Transport. (2010). "Background - Organisation of Australia's Railways". *Railways.* http://www.infrastructure.gov.au/rail/trains/background/index.aspx

formal national public transit policy, a national public transit strategy is being developed by Infrastructure Australia. The strategy will be based on a 50-year outlook, and will look at what needs to be achieved during this time period. It is anticipated that the strategy will examine issues such as service standards, types of transit services to be provided, construction issues, and vehicle and equipment standardization. Funding, financing, land use, and land development will also be examined. [52]

As well, the Major Cities Unit is currently working on a national urban policy. The focus of this policy is to enhance the productivity, sustainability, and liveability of Australian cities, and public transit is one component of this policy. To date, a discussion paper has been developed and released for public comment.[53]

Both of these policies are being developed together in an integrated fashion. In fact, one of the individuals working on the national urban policy is also involved in the development of the public transit policy. As well, efforts are being made to ensure other strategic work is aligned with these policies.

Collaboration

In the area of public transit, it appears that collaboration between different levels of government, as well as between different federal agencies has been limited and could be improved. However, the development of the public transit strategy and the national urban policy offers the opportunity for these different agencies to work together in a more coordinated manner in the future.

These actions are further supported by reforms adopted by the Council of Australian Governments (COAG), an intergovernmental forum that includes the Prime Minister, State Premiers, Territory Chief Ministers and the President of the Australian Local Government Association (ALGA) and whose role is to "initiate, develop and monitor the implementation of policy reforms that are of national significance and which require cooperative action by Australian governments".[54] In 2009, COAG agreed to reform the urban strategic planning process so that infrastructure and service planning is integrated across different sectors and levels of government. This will be accomplished by requiring future strategic plans of capital cities to be integrated "across functions, including land-use and transport planning, economic and infrastructure development, environmental assessment and urban development, and across government agencies".[55] By January 1, 2012, all states are expected to have plans that meet this criterion, as well as others that will enable Australian cities to manage population and economic growth successfully. If implemented successfully, this reform has the potential to significantly strengthen the

[52] Deegan, M. (February 7, 2011). Personal communication.
[53] Commonwealth of Australia. (2010). *Our Cities: Building a Productive, Sustainable, and Liveable Future.* http://www.infrastructure.gov.au/infrastructure/mcu/files/OurCities-Discussion_Paper-Complete.pdf
[54] COAG. (2010). *Council of Australian Government.* http://www.coag.gov.au/about_coag/index.cfm (retrieved May 3, 2011).
[55] COAG. (2009). "Council of Australian Governments' Meeting 7 December 2009". *Council of Australian Governments.* http://www.coag.gov.au/coag_meeting_outcomes/2009-12-07/index.cfm#cap_city_strat (retrieved May 3, 2011).

role of public transit within Australia and increase collaboration between different orders of government in the area of public transit.

Lessons Learned

Australia has demonstrated that when the national focus is on funding roadway development, issues such as traffic congestion will arise. However, Australia is now also demonstrating that the development of a national public transit policy is possible even in countries where the federal government is not responsible for public transit services under its constitution. While local, regional, state or provincial governments may be responsible for planning transit services, a federal government can still play a key role setting the public transit objectives for the country, as well as standards for items such as vehicle equipment and service levels. Furthermore, Australia is demonstrating that incorporating public transit policies into a broader national urban strategy is both possible and essential. This approach recognizes that our cities are made up of many complex and overlapping issues, one of which is public transit. For cities to be productive, livable, and sustainable, these issues need to be strategically examined together.

Development of a national public transit policy is possible even when a federal government is not responsible for public transit services under its constitution. While local/regional/state/ provincial governments may be responsible for planning transit services, a federal government can still play a key role setting the public transit objectives for the country, as well as standards for vehicle equipment, services levels, etc. Furthermore, Australia is demonstrating that incorporating public transit policies into a broader national urban strategy is both possible and essential.

New Zealand

Introduction

In 2008, New Zealand's population was approximately 4.3 million people, 86% of whom lived in urban areas.[56] With a land area of approximately 267,700 km^2.[2] this yields an average population density of approximately 16 persons/km^2, which is more than five times the population density of Canada.

Similar to Canada, the country has a parliamentary government system, although its constitution is not codified, but is instead largely unwritten and consists of a mixture of statutes and constitutional convention. The local government system is a two-tiered structure, consisting of regional councils and territorial authorities. Regional councils are responsible for the administration of regional environmental and transport matters, primarily planning and public transit (as legislated in the *Land Transport Management Act* of 2003) and territorial authorities are responsible for administering road, sewerage, local-level land use management, and other local matters. Five of the territorial authorities, including the Auckland Council, are unitary authorities and also act as a regional council.

Public Transit and Transportation Trends in New Zealand

Historically, New Zealand's cities have not grown up with transit service, with the result that most cities have been built around the automobile and the national transit mode share for all trips was only 2.6%, compared to 78% for passenger vehicles. The road network as of 2008 was 93,900 km in length, and that year New Zealanders drove more than 40 billion vehicle-kilometers (or 9,375 vehicle-km per capita). In the same year, the vehicle ownership rate per 1,000 people was 733, which is significantly higher than Canada (605 per 1000 people).

Most public transit service in New Zealand is bus-based. Only Auckland and Wellington have urban rail systems, both of which are now being upgraded and expanded. The rail infrastructure is owned and maintained by the federal crown corporation, the New Zealand Railways Corporation (NZRC), trading as KiwiRail, and passenger rail services are operated by the private sector (e.g. Veolia in Auckland) and the public sector (e.g. suburban services in Wellington).

National Public Transit Policy Framework

Financing

New Zealand's public transit policy framework is made up of several policies and programs. In the area of financing, the national government's funding body, New Zealand Transport Agency, has recently passed the *National Farebox Policy*. This policy, which was adopted in 2010, requires all regional councils to set their own farebox recovery policies and ratios by January 1, 2012 as part of their Regional Public Transport Plans (regional councils are required to have a Regional Public Transport Plan).[57] The regional

[56] International Road Federation (2010). World Road Statistics Database, 2003-2008.
[57] New Zealand Transport Agency. (2010). "New farebox policy aims to improve efficiency of public transport". http://www.nzta.govt.nz/about/media/releases/678/news.html

councils' farebox policies are expected to identify a target ratio or range, and provide a justification for why it was chosen and how it will be achieved. With this policy, the national government aims to achieve a minimum national farebox recovery ratio of 50% by 2018. The main driver of this policy is that cost-recovery ratios have declined nationally from 58% in 2001/2002 to 46% in 2008/2009. As a result, government subsidies have risen. This is a concern for the national government, as all operational costs are divided almost evenly between the national government and the regional governments.

Fare Subsidies

There are two types of fare subsidies that are provided nationally to transit users. The first is the SuperGold Card, which is provided to seniors aged 65 years and older and veterans, and enables free rides on transit during non-peak hours.[58] Currently, the federal government is reimbursing regional councils and operators 65% of the average adult fare and regional councils have to cover the administrative costs. However, this program is currently being reviewed to evaluate how it can be sustained in the long term.

Discounted taxi services are also available for people with disabilities. Taxi vouchers provide a 50% discount off normal taxi fares.[59] As well, the national government, in partnership with regional councils, provides funding for the purchase and installation of wheelchair lifts in taxi vans. This program is operated and managed by the regional councils.

Capital and Operating Funding

Around 2003, the national government of New Zealand concluded that more guidance was needed on national priorities to ensure better value for money. It was thought that decision making was too 'bottom up' and that there needed to be a higher level of certainty for land transport investment. Consequently, a formal federal mechanism known as National Land Transport Programme was established to determine which regional transport priorities should be funded.

In 2003, the New Zealand national government recognized that there needed to be a higher level of certainty for land transport investment. Consequently, a formal federal mechanism known as National Land Transport Programme was established to determine which regional transport priorities should be funded.

The *Land Transport Management Act (LMTA)*, which was first adopted in 2003 and later amended in 2008, made it a requirement for regional authorities to develop Regional Land Transport Strategies to set the strategic direction for land transport within each region over a 10 year period, identifying the region's transport needs and the roles of all land transport modes. The *LMTA* also established the New Zealand Transport Agency (NZTA) and designated it to be

[58] Ministry of Transport. (2010). "SuperGold Card transport review". http://www.transport.govt.nz/ourwork/Land/SuperGoldCardreview/

[59] New Zealand Transport Agency. (2010). "By bus, train or ferry". http://www.nzta.govt.nz/traffic/ways/bus-train-ferry/index.html).

responsible for land transport and for developing the National Land Transport Programme.[60] The Programme is developed every three years and guides the allocation of the New Zealand Transport Fund (NLTF). The NLTF, which relies on dedicated funding, is used to fund:

- Local transport networks and services delivered and co-funded by local government;
- Activities the NZTA is responsible for, including the management and delivery of the state highway network and transport services;
- The Road Policing Programme; and
- Sector training and research.

About CAD$3 billion is collected for land transport each year through this fund, primarily through a vehicle registration tax, fuel excise tax, and a tax on diesel road vehicles.

The NLTF provides federal capital and operating funding and subsidies for public transit systems, as well as for transit-related research and development. A total of about CAD$6 million is provided for transportation R&D each year and the research topics are selected by the regions. To bid for funding from the NLTF, regional authorities are required to submit Regional Land Transport Programmes to the NZTA. As well, capital grants are provided outside of this fund for public transit systems.[61] As mentioned, operating costs for transit systems are usually divided approximately 50/50 between the national and regional governments, with regional governments covering their share through property taxes. Typically, capital costs are also divided in a similar manner. Given this fact, national government funding for public transit could be considered as being relatively predictable. As well, funding has increased over the last decade (from about $66 million CAD in 2002/2003 to $260 million CAD in 2009/2010).[62,63] In the near future, although the National Land Transport Programme is reviewed once every three years, funding for transit is not expected to change greatly. As mentioned earlier, however, the national government would like to ensure that they are getting value for money and has therefore adopted the *National Fare Policy* to increase fare recovery ratios.

A portion of the New Zealand Transport Fund is used to provide federal capital and operating funding and subsidies for public transit systems, as well as for transit-related research and development.

It should be noted that the NZTA is situated at arm's length from the national government and has statutory independence on how it spends the NLTF. That said, the federal Minister of Transport does develop a Government Policy Statement every three years, which sets national priorities and essentially

[60] Parliamentary Counsel Office/Te Tari Tohutohu Pāremata. (2010). *Land Transport Management Act 2003.*
[61] Ministry of Transport. (2011). Personal communication.
[62] Ministry of Transport. (2011). Personal communication.
[63] Ministry of Transport. (2010). *Annual Report 2009/10.*
http://www.transport.govt.nz/about/publications/Documents/MoT-Annual-Report-2009-10-FINAL.pdf

determines how much funding will be spent on highways, public transit, and local roads. In this way, it provides some guidance to the NZTA without specifying exactly which projects will be funded through the NLTF.

It is for this reason that road development has continued to hold a somewhat higher priority than public transit in New Zealand and receives more funding from the national government. For example, although public transit is a high priority regionally and there has been increased funding for public transit over the last several years, the current focus of the national government has been to complete Roads of National Significance.[64] Therefore, while having a land transport management policy can help provide predictable and stable funding for public transit, funding for road development can still receive higher priority than public transit, which would support a more car-oriented culture.

This leads us to the current debates regarding rail transport infrastructure funding. Auckland and Wellington recently made the decision to purchase a significant amount of new rolling stock to replace their older stock. While the national government recognizes capital funding for rail transit will need to increase over the next few years, they would prefer to limit the funding required from the national government.[61] The preference is to have higher fare recovery ratios and for regional governments to take on the bulk of the required government subsidies. While the current rolling stock is owned by the government, although unlikely, there is also a possibility that the national government may push to have the stock to be owned by the private operators. The impact of this potential change in ownership is unknown at this time.

Private Sector

In New Zealand, the private sector has a significant role in public transit. Private transit operators can set up their own commercial for-profit services, and/or deliver transit services on behalf of regional authorities. Until recently, New Zealand's regional authorities have been unable to regulate commercial transit services. As a result of the deregulation of public transit services starting in the early-1990s, any eligible person or company could start a bus service, at any time of day, with zero subsidy (except for compensation for providing concessionary fares), provided that basic safety and quality standards were met and that they gave 21 days' notice to register or deregister a service.[65] This meant that while regional councils retained much of the planning function and could indicate which routes and levels of service were desirable, they did not have any control over the quality or pattern of service that was provided by commercial operators. The regional authorities could only refuse these services if they negatively affected existing contracted transit services.

As for the rest of the network that was not covered by commercial services, regional authorities were able to competitively tender services. Typically, the contracts would be net service contracts (i.e. the

[64] Ministry of Transport. (2009). "Roads of National Significance". *Ministry of Transport* http://www.transport.govt.nz/ourwork/Land/Pages/RoadsofNationalSignificance.aspx

[65] Ashmore, D. and Mellor, A. (2010). "The 2008 New Zealand public transport management act: Rationale, key provisions, and parallels with the United Kingdom". *Research in Transportation Economics.* 29: 164-182.

regional authority subsidy equals the net operating cost) in hopes that operators wil be incentivized to increase ridership.

The initial purpose of deregulating services was to increase competition, thereby reduce operating costs and government subsidies. However, in reality it has resulted in a lack of network and fare integration, as well as diminished competition. For example, in Auckland, a few larger operators have acquired the smaller companies and have become the dominant players in the market. As well, many commercial operators have abandoned marginal commercial services with lower patronage, and have instead been providing more contracted services. The latter ensures continued profitability even when ridership is decreasing or costs are increasing. Furthermore, regional councils have been forced to pay higher prices for contracted services, as the average number of bids per tender has been low (e.g. the average number of tenders per bid received in Auckland and Wellington in 2004/2005 was 1.33 and 1.12).[65]

Due to these issues, a technical working group made up of representatives from the Ministry of Transport, Auckland Regional Transport Agency (ARTA), the Auckland Regional Council, North Shore City, Land Transport New Zealand, and Auckland bus and ferry operators was formed in 2006.[65] They assessed four options for moving forward, finding that the best option was to allow regional authorities to choose the procurement model that would best suit their needs.

As a result, the *Public Transport Management Act (PTMA)* was passed in 2008. Under the act, regional authorities are able to choose the level of influence they wish to have over the public transit system in their region.[65] This may include setting quality and performance standards or other controls for commercial services, or even replacing commercial services altogether with contracted transit services (competitively bid or negotiated contracts), which is the approach that the Auckland region is planning to adopt. The act also specifies that a regional council must adopt an RPTP (Regional Public Transport Plan), which describes the public transit services the regional council proposes to be provided in its region, and any related policies. A regional council is only exempt from having an RPTP if it does not intend to contract out public transit services, impose controls on commercial public transit services, or provide financial assistance to the taxi or shuttle operators or users. The procurement procedures developed by the regional authorities also need to be approved by NZTA.

At the time of writing, however, the *PTMA* has yet to be fully implemented, as there has been strong opposition from existing private transit operators especially in Auckland, who feel that it is an unfair policy. As a result, a working committee that includes private operators, the regional and federal governments, and industry associations has been formed to develop a new policy for managing public transport. This new, more collaborative approach has yielded some positive results. It is anticipated that the current system of commercial registrations and contracting of non-commercial services will be replaced with a fully contracted public transit system. As well, each region will likely be divided into commercial units and operators will be bidding for packaged contracts (i.e., they will have to operate high and low patronage routes) for these units. Some units may be fully commercial and not require subsidy, and the new system is expected to create incentives for the operators of units to reduce their reliance on subsidy. The amended act will likely be adopted towards the end of 2011.

Autonomous Regions

All regions are treated more or less the same.

Level of Policy Integration

As indicated above, New Zealand has several transit-related policies. The *PTMA* and *National Farebox Policy* are stand-alone transit documents, while the *Land Transport Management Act* includes all land transport modes. In addition, New Zealand has a national transport strategy (the most recent update was in 2008), which is a high-level document that provides some general directions for all segments of the transportation industry.[66]

Land Use Planning and Planning Requirements

In New Zealand, regional authorities must develop three transport plans – Regional Land Transport Strategies, Regional Land Transport Programmes, and Regional Public Transport Plans. As well, they also develop long-term plans mandated under the *Local Government Act,* 2002. Many of these documents have links to land use planning documents. Thus, there is some integration between land use and transportation planning, and the national government has expressed an interest in seeing even more integration in the future. At this point, however, local governments do not need to make any land use commitments to receive federal funding for land transport.

Collaboration

In the development of New Zealand's national procurement legislation, there has been considerable collaboration between the national government and the Auckland Regional Council. The national agency NZTA also works very closely with local governments on public transit issues. Discussions between the national government and the Auckland and Wellington local governments, in particular, have been ongoing and extensive.

Lessons Learned

New Zealand's history shows us that deregulation can have significant negative impacts on transit service quality. Over time, service integration and quality can deteriorate, transit infrastructure may not be kept in a state-of-good-repair, and competition may not actually be promoted, especially when there are only a few companies that are bidding on tenders.

As well, New Zealand's experience shows that establishing a group that manages and distributes federal transit funds can be effective. That said, New Zealand has also demonstrated that simply having the federal government provide long-term public transit funding for capital and operating costs is not sufficient if it continues to prioritize roadway development over public transit. In New Zealand's case (and likely in Canada's case), one of the factors that has led to this pattern of investment is that national

[66] Ministry of Transport. (2008). *New Zealand Transport Strategy 2008.* http://www.transport.govt.nz/ourwork/Documents/NZTS2008.pdf. Note: This strategy was developed by the previous government and is expected to be replaced in the near future with a new strategy.

lobby groups tend to support roadway developments instead of public transit. This is despite the fact that regionally or locally, public transit is often a high priority. Given this reality, at least in the cases of New Zealand and Canada, local governments would likely benefit if they were given more authority to generate new sources of revenue to fund their transit systems so that they do not have to rely as heavily on federal funding.

Finally, New Zealand's more recent experience regarding the *Public Transport Management Act* shows that involving stakeholder groups in the development of policies greatly increases the chances of compliance. This is an important lesson for Canada when developing a national public transit policy framework.

Japan

Introduction

Japan is the 10th-most populous country in the world, with 128.1 million people living in a country that is about 40% of the size of British Columbia. Japan's overall population density is 339 persons/km^2, over 100 times Canada's density of 3 persons/km^2. However, if only habitable land is included in the calculation, Japan's population density jumps to about 1,000 persons/km^2. One trend is of note is that population has been decreasing in three-quarters of Japan's municipalities, while Tokyo Metropolitan area and other urban regions are still gaining in population.[67] This concentration of population has been favourable to public transit in large urban areas. Another continuing trend is the growing number of elderly, which has now reached 23% of the population. Overall population growth slowed to only 0.2% per year in 2010, and the population is expected to decline by 10 million people over the next 20 years.

Public Transit and Transportation Trends in Japan

While rail mode share (as measured in passenger-km) has dropped from 82% in 1955 to around 27% today,[68] it is still higher than almost all North American or European countries. In urban centres such as Tokyo and Osaka, the percentage of people commuting by rail is much higher.

Compared to North America, Japan had a delayed start in building paved roads and freeways, which helped public transit to stay viable. The first freeway was built only in 1964, at a time when just 4% of the country's roads were paved. Even today, Japan has fewer vehicles per capita (593 per 1,000 people) than either Canada (605 per 1,000 people) or the US (809 per 1,000). The high cost of purchasing, licensing, fuelling, and parking a private vehicle in Japan, along with ever-present traffic congestion, also discourage private vehicle ownership while encouraging public transit use. Vehicle ownership reached a peak in 2006 and has declined in every year since. It is expected that this decline will accelerate in the coming years due to Japan's low birth rate and large percentage of seniors.

The high cost of purchasing, licensing, fuelling, and parking a private vehicle in Japan, along with ever-present traffic congestion, discourages private vehicle ownership while encouraging public transit use.

More grassroots organizations are pushing for new thinking on public transit as well. An organization called the National Surface Rail Network was founded in 2003 to promote the new construction and expansion of light rail and streetcar networks in Japan. It is thought to have encouraged the enactment of the Law on Promoting LRT Improvement.

[67] Japan Today. (2011). "Japan's population shows slowest increase to 128,056,026". http://www.japantoday.com/category/national/view/japan-population-shows-slowest-increase-to-128056026 (Retrieved February 8, 2011)

[68] Enoch, M. and Nakamura, H. (2007). "Transport Policy and Organisation in Japan". https://dspace.lboro.ac.uk/dspace-jspui/retrieve/7582/license.txt (Retrieved January 15, 2011)

National Public Transit Policy Framework

The Ministry of Land, Infrastructure, and Transport (MLIT) is the government agency responsible for the transportation sector as wells as public transit regulation. It was created in 2001 through the merger of the Ministry of Transportation (surface, marine, and air transportation), the Ministry of Construction (roads and expressways), the National Land Agency, and the Hokkaido Development Agency. This expanded ministry now controls about 80% of the entire public works budget. Some cost savings were realized with the merger, but the agencies apparently still make their plans separately, with different objectives and no overarching strategic direction. For example, an Environmentally Sustainable Transport Program has been launched by MLIT, but support from other departments has been lacking.

Government power in Japan is concentrated at the national level, with local policy and budgets needing national approval. National government projects do need local support, however, as local councils have some veto power. Some devolution of power has also begun, although about 60% of local government revenues still come from the national government. There are eight administrative districts that are responsible for developing regional development policies, which are then implemented as five-year public works plans for sectors such as transportation. Under these districts are the 47 prefectures, including three cities and Hokkaido as one region. All prefectures except Tokyo are divided into cities, towns, or villages.

The prefectures control transportation and other infrastructure planning at the regional scale, while cities are focused at the local level. Since transportation plans are not normally made at the local level, most local governments do not get involved with public transit planning because they don't have formal control over the process. Local governments can, however, collect local taxes to pay for road improvements.

Land readjustment, by which private property owners pool their land to create larger developments, is used to finance new roads, railways, and public uses.

Road traffic regulations are handled by the National Police Agency, who is seen as blocking more progressive transportation plans. There are currently no extensive separated bike lanes or bus rapid transit (BRT) lanes due to the reluctance of the police to approve these plans. More progressive policy changes are also hampered by the fact that road safety researchers are not allowed access to police data.

In contrast to many developed countries, local authorities cannot use charging mechanisms to mitigate the impact of new developments on existing infrastructure. The law states that a plan cannot be accepted if there is not enough capacity to support the additional traffic. Land readjustment has instead been used to allow new roads, railways, and public uses to be developed. By pooling their land, private property owners can create larger, more valuable, and better serviced developments. This system also allows local governments to avoid paying the cost of this new infrastructure.

In general, national government support for integrating land use and transportation is extremely limited. One report quotes a local planner that noted "controlling land use is seen as restricting people's choice"[69] in Japan.

Financing

The Japanese government has traditionally viewed public transit in urban areas as a user-pay system like any other private sector industry, with little need for government funding.

The vast majority of new rail projects have been funded by bonds that are paid back through fare revenues earned from passengers. This model may change, however, as the high cost of land has increased construction costs to the point that new revenue sources may be necessary.

Fare Subsidies

Seniors do not generally receive a discount when riding public transit in Japan. Special packages for seniors are offered by Japan Rail, but these are normally for long-distance trips and a number of trips must be taken before discounts can be used.

Community taxis are available in many communities to fill the gap between bus service and private automobiles, operating on a fixed schedule or partially demand-responsive.[70] Drivers older than 70 must take mandatory driver training classes and those over 75 go through a mandatory screening for cognitive impairment, which serves to reduce automobile use in this age group.

Private railways in Japan have diversified profitably into a wide range of related businesses, including transportation, hotels, retail, construction, leisure, and sports.

Capital and Operating Funding

Subsidies for public transit in Japan are limited compared with the other study countries. Until very recently, special subsidy programs had been primarily to support construction projects by government-run transit agencies. For example, the Subway Construction Cost Subsidization Program subsidized 70% of construction costs of eligible infrastructure for publicly-run subways as well as the Tokyo Metro. However, more funding is now being provided. In the 2010 federal budget, public transit received 22.9 billion yen (CAD$278.1 million). About 30% of this amount went to the preservation of local bus routes, 18% for the revitalization and rehabilitation of local public transit, and 17% for barrier-free enhancements to transportation facilities. The remainder went towards upgrading railway track, low-floor buses, and station improvements. The recently announced 2011 federal budget increases the amount dedicated to public transit by 42% over 2010.

[69] Enoch, M. and Nakamura, H., Ibid.

[70] Machek, E. (2010). Transportation Strategies for an Aging Population: Approaches in the United States and Japan. http://www.mansfieldfdn.org/programs/program_pdfs/ppt_machek.pdf (Retrieved January 27, 2011)

While the 15 major private railways cover almost 100% of their operating costs with fares, transit service providers in rural areas have seen gradual increases in the amount of subsidy they receive. Subsidies have increased from 918 million yen in 1985 (CAD$4.9 million), to 3 billion yen in 1995 (CAD$41 million), and 6.8 billion yen (CAD$83 million) in 2010. Still, this represents less than 2% of the revenue brought in by private railways. There has been a greater need for subsidies in areas of lower population density, especially rural areas, since the Japanese government adopted a policy of free competition within the transportation business.

Subsidies and grants that do exist are based on the transport mode. Rail subsidies in urban areas have been mainly for public subway systems to improve and extend existing lines. Bus services in rural areas receive funding to maintain service. In addition, ferries and air routes to Japan's remote islands are funded so that connections with the main island of Honshu are not lost.

Private Sector Involvement

A total of 88 private railway companies operate passenger service in Japan, with the 15 largest systems located in Tokyo, Yokohama, and Osaka. These companies started out originally as strictly railway operators, but soon diversified into a wide range of businesses that depend on the accessibility created by the railway. Property development has traditionally been the most profitable business for private railway companies, as they can benefit from the land value increases that result from improving the accessibility of properties near train stations. Urban bus routes are also run by these private companies with monopolies given by the government in certain areas. Other important businesses include taxis, ferries, trucking, hotels, retail, travel agencies, construction, engineering, leisure, and sports.

The unwritten rule in Japan has traditionally been that urban railways and public transit systems should pay for their own costs, with exceptions only in special cases such as the construction of new rail lines by public and semi-governmental bodies. Private railways, though they carry the vast majority of passengers in urban areas and are generally the most efficient operators, have been ineligible for subsidies. In order to receive funding, local communities have had to employ a public or semi-public operator. This has taken the form of joint ventures between the public and private sectors.

Between 1975 and 2003, ridership on private railways increased by 124%, even in the face of the rapid increase in automobile (232%) and aircraft (368%) passengers.

However, a major shift in thinking has begun to take place, due to the difficulty that private operators have had in maintaining service in rural areas in the face of declining populations and increased private vehicle use. The environmental impacts of automobile use and Japan's need for greater energy independence have also played a role. The 2007 *Act on the Revitalization and Rehabilitation of Local Public Transit* was the first to address these issues.

The large share of the market represented by private operators in Japan means that subsidies for public transit are far lower than most of the study countries. Japan has always had a large number of private

companies supplying mass transit. Most of these companies have operated continuously since they were originally founded. Between 1975 and 2003, ridership on private railways increased by 124%, even in the face of the rapid increase in automobile (232%) and aircraft (368%) passengers.

Japan abolished restrictions on passenger transportation supply and demand between 2000 and 2002 in order to develop a more efficient system and lower fares. Furthermore, Tokyo Metro (formerly Teito Rapid Transit Authority, the operator of nine subway lines and 168 stations in Tokyo) was privatized in 2004. However, one result has been cutbacks in service and elimination of routes in areas where ridership is not as high. The government has stepped in where ridership is not high enough to pay operating costs and local residents have taken measures to improve and maintain public transit services.

Level of Policy Integration

The *Act on the Revitalization and Rehabilitation of Local Public Transit* was enacted in 2007, and included both urban and rural areas. Under this three-year program, the national government funds and supports the creation of plans by local governments to revitalize local public transit systems as well as to implement these plans, which include both operating funding (for increased service frequency) and capital funding (for the purchase of new railcars or buses). The annual budget in 2010 was 40.2 million yen (CAD$506,000). Under the program, a total of 435 projects were selected to receive funding for the creation of comprehensive local public transit plans. While the budget has been small, the results have been significant. Many of the plans have been created in order to win grants for community buses in small towns and villages, while others were to fund railways and ferry routes. The funds from the 2007 Act have now been apportioned, but it is anticipated that the *Act for Preserving and Maintaining Local Public Transit*[71] will be passed in 2011, with an estimated budget of 30.53 billion yen (CAD$384 million).

As well, a new law called the *Basic Law for Transportation*[72] is currently in the legislative process. The law stipulates the right to transportation and other basic concepts related to transportation.

Land Use Planning and Planning Requirements

The Barrier-Free Transportation Law came into effect in the year 2000 and provided funding to major transportation providers, in particular railway operators. The funding has been used to add elevators and escalators to stations. The law has been very successful in that most major railway stations have now installed elevators.

Collaboration

In the process of making applications for funding under the *Act on Revitalization of Local Public Transit Systems*, stakeholder committees are formed, consisting of local government representatives, local

[71] General Federation of Private Railway and Bus Workers Union. (2011). "Act for Preserving and Maintaining Local Public Transit." http://www.pru.or.jp/document/download.php?id=3144 (Retrieved February 10, 2011).
[72] MLIT. (2010). "Enhancement of Measures to Enact a Basic Law for Transportation – Interim Report." http://www.mlit.go.jp/common/000111071.pdf (Retrieved February 10, 2011)

transit operators, locally-based companies, schools, hospitals, and non-profit organizations. The committee begins by discussing the project, then the local government drafts the project proposal based on the findings of the committee.

More power and responsibility still needs to be devolved from the national government to local government, as most decision-making responsibility still rests at the national level in Japan. As well, there is a need for greater integration in public transit policy, as national subsidy programs are rather fragmented and could be better aligned with larger objectives. And while the *Revitalization and Rehabilitation Act* encompasses all areas of rural transportation, Japan still lacks a fully integrated public transit policy.

Lessons Learned

Due to the success of the private sector in the area of mass transit in Japan, the national government has not needed to provide significant subsidies for public transit. This success can be partially attributed to the regulatory environment created by the government that incentivizes public transit while making automobile use expensive, especially compared to North America. The private sector has benefited from the high population densities of Japanese cities and a relatively low degree of urban sprawl, at least until recently. Private transportation companies have also innovated by diversifying into real estate, retail, transportation (bus, ferry, rail, and taxi), construction, and other industries.

However, in the past decade the national government has become more active due to the worsening financial situation of transportation companies, declining populations in rural areas, higher vehicle use, and the increasing share of the population made up by the elderly. Deregulation has also allowed the closure of unprofitable rail and bus routes outside of major urban areas, so the national government has needed to step in to fund transit service in smaller towns.

Republic of Korea

Introduction

The Republic of Korea (hereafter referred to as "Korea") occupies the southern half of the Korean peninsula, with a population of 49 million in an area of 99,538 km^2, roughly the size of New Brunswick and Nova Scotia combined. This gives Korea the 23rd highest population density in the world, at 491 persons/km^2, which is about 160 times Canada's density of 3 persons/km^2. As arable land only makes up about 30% of the country, with the remainder mountainous, the population density on inhabitable land is closer to 1,600 persons/km^2.

Korea is a democratic republic, with an executive branch consisting of an elected President and a Prime Minister appointed by the President. The State Council determines the major policies of the country, and consists of the ministers of the 15 cabinet-level ministries, the President, and the Prime Minister. The Ministry of Land, Transport, and Maritime Affairs plans transportation policies for the country, including roads, rail, bus, and other urban transportation systems. Until 1995, local governments had little autonomy, as they were run directly by provincial governments. However, after 1995, some degree of local autonomy was restored, with local assemblies now elected in each district, city, metropolitan region, and province. In spite of this, most policies are still determined at the national level and then implemented at the provincial and local levels.

Public Transit and Transportation Trends in Korea

Korea's high population density in a limited amount of land has helped to maintain high public transit ridership. As in most industrialized countries, urbanization has been increasing, with about 90% of Koreans living in cities, up from only 40% in 1960. As incomes have risen, however, so has the growth in vehicle ownership, at a rate of about 5% annually over the past 10 years. Still, per capita vehicle ownership (346 per 1,000 people) is lower than Canada and almost any European country, and about half the rate of Japan.

Demand for public transit increased rapidly in the 1970s and 1980s with Korea's population boom and economic growth. Personal vehicle use did not really take off until the 1990s, but it has resulted in a decreasing mode share for public transportation, increasing congestion in urban areas, and air pollution problems. Small- and medium-sized towns are more auto dependent than major centres, with automobile mode share in towns like Chunan and Ahnyang at 30% compared to only 20% in Seoul.[73] Despite continuing road and highway construction since the 1960s, railways are still Korea's primary means of transportation. Two types of buses, coach and city buses, generally serve urban centres using the same routes. Coach buses charge higher fares, offer more comfortable seating, and generally have fewer stops, while city buses offer frequent stops like most bus systems.

[73] Kim, Kwang Sik & Hwang, Keeyeon. (2003). "Critical issues in the transformation of transportation policy in Korean metropolitan areas". http://www.easts.info/2003journal/papers/3142.pdf (Retrieved February 15, 2011)

The majority of railways in Korea are now privately operated, with the exception of rapid transit lines run by local governments and those operated by Korail (Korea Railroad Corporation). Korail is a government-controlled organization that operates intercity passenger and freight service in the country, with the Korea Rail Network Authority constructing and maintaining the tracks. Korail operates the country's high speed railway, known as Korea Train Express (KTX), operates on two lines connecting Seoul, Busan, and Gwangju. Korail also operates four commuter lines in Seoul that connect with the Seoul Metropolitan Subway. Korea's seven largest cities have subway lines, although most are in Seoul (14 lines) and Busan (3 lines).

Per capita vehicle ownership in Korea, at 346 per 1,000 people, is lower than Canada and almost any European country.

National Public Transit Policy Framework

Financing

Transportation funding at the national level in Korea consists of the General Budget as well as a specific budget for SOC (Social Overhead Capital) investment. As seen in Table 3 below, the total amount for the urban railway sector in 2010 was about 11,500 billion won (CAD $10 billion), representing 7.7% of the total transportation budget. While urban transit services are provided by private companies, construction costs for subways are supported by the central government. Funding for the operation of city buses is provided through matching funding, shared between local governments and the national government. This latter funding is not reflected in the transportation budget as it comes through federal transfer payments to local governments, therefore the total amount of national funding for public transit is actually higher than 11,500 billion won.

Table 3: Korea`s 2010 Transportation Budget

Transportation Investments	Total (Billion Won)	Amount in CAN $ (billions)	%	Transit
Road	77,281	67.3	51.4	
Regional Rail	42,020	36.6	28.0	
Urban Rail	11,492	10.0	7.7	
Seaport	18,565	16.2	12.4	11,492
Airport	666	0.6	0.4	
Other Transport	186	0.2	0.1	140
Total	150,210	130.9	100.0	11,632

Fare Subsidies

Discounted fares are available for youth under the age of 19, but not generally for the elderly. Riders with disabilities are divided into two groups: those with 1st to 3rd grade disabilities and those with 4th to 6th grade disabilities, and the discount varies between 20% and 50% on all major transportation modes.

Capital and Operating Funding

The Transportation Improvement Charge is levied on owners of large facilities in urban centres for attracting trips to their facilities.

As mentioned previously, the *Act Promoting the Support and Use of Public Transportation* enacted in 2005 details the major elements of the national transit strategy for transit-oriented transportation systems in urban areas. It sets guidelines and directions for public transit policy at the local level. Under this law, local governments are mandated to create public transit master plans every five years. In addition to planning requirements, the government also sponsors initiatives under the 4S Strategy. The S's stand for *sustainable*, *smart, safe*, and *silver*:

1) **Sustainable – Focus on promoting sustainable transportation modes**
   a. Promotion of Public Transit: Public transit facilities must be considered when creating large-scale developments. Subsidies are provided for public transit improvements such as the implementation of BRT lines and the purchase of low-floor buses. Seoul Metropolitan Area, for example, has plans to build a total of 540 km of BRT lines by 2012.

      Transportation services are also assessed and incentives given to transit service providers depending on their quality of service. Funding is available for transit priority measures, such as bus lanes, transit service improvements, research into public transportation technology, and the use of electronic fare cards. Some elements of this policy were initiated as early as the 1990s, for example in Seoul, where bus-only lanes were added to the Kyung-Bu expressway.

Under the 2005 Act Promoting the Support and Use of Public Transportation, local governments must create transit master plans every five years.

The Ministry of Land, Transport, and Maritime Affairs has established the *Transport System Efficiency Act* in order to build an integrated transportation network and develop multi-modal stations. It would also ease connections between main and local lines. The Korean high-speed rail system (KTX) has also worked to develop multi-modal centres, shopping malls, and commercial areas.

   b. Transportation Demand Management: The first congestion charging plan was rolled out in 1996 on Namsan tunnels 1 and 2 and was effective in improving traffic speeds. Since then

there have been some other major efforts at charging road users or taking away road space altogether. The most dramatic example has been the removal of 5.8 km of the Cheonggye elevated highway, a major connector between downtown Seoul and the suburbs.

Another initiative is the TIC (Transportation Improvement Charge), whereby facility owners are charged a fee for attracting trips to their facilities. This fee is charged to buildings in cities with a minimum population of 100,000 and a total floor area greater than 1,000 square feet. Facilities can be exempted or have their fees reduced if they implement traffic mitigation measures, such as pay parking lots, carpooling, operating a commuter bus, or introducing non-driving days.

National government funding has helped create a national standard for the adoption of smart cards that can be used on all transportation modes in Korea.

In addition, central business districts have upper limit guidelines for the amount of parking space that is permitted in commercial areas. In Seoul for example, these areas total 2.1% of the city's land area.

c. Car-free Transportation: Each local government is expected to have a minimum of one car-free street, adding to the 27 that already exist in 9 Korean cities. As well, the *Bicycle-Use Facilitation Act* of 1995 has helped increase the number of bike lanes to over 10,000 km and the number of bike racks to over 1,000,000. In addition, funds were made available to convert diesel buses to compressed natural gas (CNG) operation. The goal is to have at least 65% of urban buses running on CNG.

2) Smart – Technology to facilitate the use of public transit

a. Transportation Smart Cards: Funding has supported the creation of a national standard for the adoption of smart cards that can be used on all transportation modes. A contactless electronic charge card called T-money is now used to make over 30 million transactions per day on public transit. The Hi-Pass ETC system, currently used by about 30% of all vehicles, now covers about 50% of highways and will be expanded to 70% by 2013.

b. Intelligent Transportation Systems (ITS): Between 2008 and 2020, Korea will invest about CAD$230 million annually as part of its ITS Master Plan.[74] Beginning with four ITS Model Cities that added adaptive signal controls and real-time traffic information, more than 30 Korean cities have initiated ITS systems.

[74] Ezell, Stephen. (2010). "Explaining International IT Application Leadership: Intelligent Transportation Systems." http://www.itif.org/files/2010-1-27-ITS_Leadership.pdf (Retrieved February 23, 2011)

c. Wide Area Bus Information System: A bus information system (BIS) collects real-time information on the location of buses, processes it and supplies the information to users.

d. Real-Time Information: Making use of the BIS, about 9,300 buses and 300 bus stops now have real-time bus location and status notification systems.

3) Safe – Enforcement of safety belt use and drunk driving prevention measures

4) Silver Urban Transport – Promoting mobility for the transportation vulnerable

a. The *Mobility Convenience Act* for the 'mobility disadvantaged': The Act is aimed at increasing mobility related convenience equipment and installations on transportation and roads to ensure convenience and safe transportation of the mobility disadvantaged, who are defined as the disabled, elderly, small children, those with babies, and pregnant women.
b. Expanding technologies that increase convenience: This includes low-floor buses (50% of city buses by 2013) as well as escalators and elevators in station buildings.

Private Sector Involvement

In Korea, the private sector has traditionally operated the bus lines while public entities have run the rail and subway systems. Public-private partnerships had been available only for developing ports and highways rather than public transit infrastructure. However, in 2004 a BTO (Build-Transfer-Operate) concession was granted to Bombardier and a number of Korean engineering firms to complete an LRT line connecting Everland, a large amusement park, to the Seoul Metropolitan Subway.[75] Since then, with a new approach to public-private partnerships under the 2005 *PPI (Private Participation in Infrastructure) Act*, a large number of concessions have been granted. BTO concessions have included LRT projects in Busan and Uijeoungbu, the Incheon International Airport Railway, and two subway lines in Seoul – Line 9 and the New Bundang Line.

Under the BTO model, the Government grants a concession for an agreed time period to a private company to build, operate, and manage the project, during which time it will recoup its investment and make a profit. The Government guarantees a percentage, generally between 60% and 90%, of the estimated revenue. Under the BTL (Build-Transfer-Lease) model, the ownership of the facility is transferred to the government upon completion, at which time the private operator is given the right to operate and maintain the project facility.

Private companies operate and maintain the vehicles on bus lines, while the government regulates the setting of fares, routing, and integration with other lines. In Seoul alone there are 68 private companies managing the bus lines. Prior to an agreement in the early 2000s, private bus companies competed against one another for passengers, with each route representing a local monopoly. Transfers were also

[75] Cho, D., Huh, I., & Kim, S. (2006). "Private Sector Participation in Railway Projects in Korea." http://www.kimchang.com/UserFiles/files/Transportation.pdf (Retrieved January 24, 2011)

problematic between different companies and routes were not well coordinated. The solution was to provide a guaranteed subsidy to service operators, and in return bus routes were overhauled and companies had to allow free transfers.[76]

Level of Policy Integration

Since the creation of the Ministry of Land, Transport, and Maritime Affairs in 2006, the construction, management, and operation of transportation systems in Korea have become more integrated. However, there are still issues to be resolved, such as the division of different transportation functions among local authorities, a strong national government presence in local traffic operations, and planning at the local level that is heavily influenced by the national government, since it controls funding and subsidies. The division of authority of different functions makes coordination difficult at the local level. For example, the National Policy Agency is responsible for major urban roads, signposts, and signals while the local boroughs are responsible for the areas beyond the roadways. The Police also have influence in the areas of traffic control, safety, and parking regulation and have the power to revise road traffic laws.

One result of the creation of a larger ministry is a further centralization of power and greater control over the transportation policies of local governments. There has been continued difficulty in creating synergy between transportation policy and areas such as the environment, logistics, land use, and city planning, although it has improved under the new ministry.

Land Use Planning and Planning Requirements

As mentioned previously, the *Act Promoting the Support and Use of Public Transportation* enacted in 2005 details the major elements of the national transit strategy for transit-oriented transportation systems in urban areas. It sets guidelines and directions for public transportation policy at the local level. Under this law, national and local governments are mandated to create public transportation master plans every five years.

Since 1972, 10-year Comprehensive National Plans have been created to be used as guidelines in national territorial development and management, in order to efficiently use Korea's limited land area. As well, the Restricted Development Zone (RDZ) System was first introduced in 1971 to curtail urban encroachment and preserve the natural environment. 14 RDZs were designated throughout the country between 1971 and 1977, covering an area of 5,388 km^2, or 5.4% of Korea's total land area (Ministry of Construction and Transportation, 2001). In 1999 a draft improvement plan was created that rescinded the RDZ designation for some small- and medium-sized cities with a low possibility of urban expansion, while designating areas worth preserving as preservation/productive green space or parks.

The *Special Act on the Management of Wide Area Traffic in Metropolitan Areas* (1997), implemented by the Ministry of Construction and Transportation, created the first five-year Metropolitan Wide area

[76] Kim, S. (2010). "Seoul Subway World's 3rd Largest in Ridership." http://www.koreatimes.co.kr/www/news/biz/2010/06/291_65888.html (Retrieved March 5, 2011)

Transportation Plan in 1999. It aimed to find a comprehensive solution to traffic problems in the Seoul capital region.

The *Mobility Convenience Act* of 2005 is aimed at improving the convenience and safety of transportation for the mobility disadvantaged, which make up about 25% of the Korean population. The Act divides the transportation disadvantaged into five categories: the disabled, the elderly, pregnant women, small children, and those with babies. The strategies that make up the Act include creating barrier-free pedestrian environments; developing regional mobility hubs at key stations; increasing the accessibility of mass transit; social recognition of the mobility disadvantaged; and funding research projects on mobility improvement. The *Act* lays out the responsibilities of the transit industry as well as government transit agencies for installing and maintaining this infrastructure and equipment.

Another act, the *Basic Act on Low Carbon Green Growth*, was established by the Presidential Committee on Green Growth and passed in January 2010.[77] The Act mandates the development of a national strategy with a five-year implementation plan; the setting of concrete targets for reducing GHG emissions; cutting back on energy use; and increasing the renewable energy supply. It provides funding for research into green technology and mandates the government to support the green economy, green industry, and to make conventional industry more sustainable. It also requires mandatory reporting of GHG emissions for businesses and introduces a legal framework for a cap and trade system. Korea is aiming to reduce GHG emissions by 30% from the business as usual scenario by 2020. While only recently introduced, it will undoubtedly have a major impact on the provision of public transit in Korea in the coming years.

The Restricted Development Zone (RDZ) System, covering 5.4% of Korea's total land area, was introduced in 1971 to curtail urban encroachment and preserve the natural environment.

Collaboration

The 2005 *Act Promoting the Support and Use of Public Transportation* was a collaboration between the national government, research institutes, and universities. Most of the ideas came from the research institutes and universities, which were then turned into detailed policy documents by the national government. The Act was a major step in creating a more comprehensive, integrated, and long-term plan for supporting mass transit. Prior to this, efforts had been fragmented and short term in nature. The Act required local governments to create transit plans for their jurisdictions, with many eventually implementing BRT services.

[77] Ministry of Government Legislation. (2010). "Framework Act on Low Carbon, Green Growth." http://www.uncsd2012.org/rio20/content/documents/South%20Korea%20Framework%20Act%20on%20Low%20Carbon%20Green%20Growth%202010.pdf (Retrieved March 6, 2011)

Lessons Learned

Korea's public transit providers have been the beneficiaries of the country's limited land area, high population density, and growth in urban populations. As road congestion has increased in recent years with the growing number of private vehicles, the national government introduced measures to boost public transit use and make driving more costly. In addition, the Restricted Development Zone (RDZ) System has reduced urban sprawl and preserved farmland and green space, while also enhancing the viability of transit due to increased density in developable areas.

National and local governments are mandated to create public transportation master plans every five years, which focuses long-term attention on public transit. Bus priority lanes are now used extensively around the country, as is the use of smart passes across transportation modes. Investment in research and technology in the public transit field has also built momentum for the rollout of these technologies domestically. Many of Korea's public transit policies are relatively new, so there has not yet been a comprehensive evaluation completed on their effects. The *Basic Act on Low Carbon Green Growth* in particular should have a dampening effect on automobile use, as it aims for a 30% reduction in GHG emissions by 2020.

United Kingdom

Introduction

The national transit policy sits within a national transportation policy, which is generally in favor of reducing automobile travel.

The UK has a population of approximately 61.8 million,[78] which is about twice that of Canada's. However, with far less land area, its population density of 451 persons/km^2 is about 75 times greater. It enjoys a moderate level of public transit ridership, with about 15% of business and commuting trips in Great Britain made by public transit,[79] as compared to Canada, where 11% of work trips are made by public transit, or the United States, where only about 5% of work trips are made by public transit.[80] However, as is the case in North America, most users of public transit (particularly bus-based transit) have no other transportation option (i.e., live in a household with no automobile),[81] and public transit struggles to provide an attractive alternative for many trips. London, however, is an exception; despite rising incomes which would typically correspond to a reduction in public transit use, ridership on bus and rail services has actually increased significantly in the last two decades.[82]

A challenge to discussing the UK national transit policy is that the UK is made up of four nations (England, Northern Ireland, Scotland, and Wales) and transportation is a devolved matter, except perhaps in the area of transportation security. Greater London also has a high degree of autonomy compared to other parts of England. It dominates the economy of the country and has a disproportionate share of the nation's transit riders. There is a long history of public transit service in London, which has one of the world's first underground rail networks.

The current national transit policy is largely defined by the 1985 *Transport Act*, which deregulated bus services outside of London, and the 1993 *Railway Act*, which privatized much of the rail network. In the area of bus-based public transit, the *1985 Transport Act* has been updated through the *Local Transport Act 2000* and the *Local Transport Act 2008*, which have addressed topics such as coordination of services and other means of improving local bus services. It has also been influenced in recent years by the *localism* movement, which puts greater responsibility for local services into the hands of local governments. Excluding London, bus ridership levels have dropped significantly throughout England.

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[78] Office for National Statistics. (2009). "Population Estimates – UK Population grows to 61.8 million". http://www.statistics.gov.uk/cci/nugget.asp?id=6 (Retrieved April 28, 2011)

[79] Department for Transport. (2009). "National Travel Survey web table NTS0409 – Average number of trips and main mode: Great Britain, 2009." http://www.dft.gov.uk/pgr/statistics/datatablespublications/nts/why-mode/nts0409.xls (Retrieved January 18, 2011)

[80] U.S. Census Bureau. (2009*). "*2005-2009 American Community Survey*". http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=ACS&_submenuId=&_lang=en&_ds_name=ACS_2009_5YR_G00_&ts= (Retrieved January 23, 2011)*

[81] Department for Transport. (2009). "National Travel Survey web table NTS0409– Average number of trips and main mode: Great Britain, 2009." http://www.dft.gov.uk/pgr/statistics/datatablespublications/nts/why-mode/nts0409.xls (Retrieved January 18, 2011)

[82] Transport for London. (2010). Service Performance Data

This has been due to privatization, which brought about fare increases and service reductions, coupled with increased bus congestion.[83] Ridership will likely continue to drop in the near term in response to central government budget cuts that will affect the amount of subsidy provided to bus operators and grants transferred to local governments to pay for social services such as public transit.

With respect to rail-based public transit, services are generally provided by privately owned Train Operating Companies (TOCs) and rolling stock is privately owned and provided through lease arrangements. In response to a major rail accident and private infrastructure companies going out of business, major rail infrastructure is now largely in the hands of the public sector.

The national transit policy sits within a national transportation policy, which is generally in favor of reducing automobile travel. It is recognized that automobile travel has significant negative impacts on the environment and personal health, and that continuing growth will lead to more congestion and lost productivity. In recent years there has also been recognition that a greater shift to more sustainable forms of transportation could also have significant economic benefits for the country, as well as for achieving environmental goals related to climate change mitigation.

Financing

Financing for central government outlays for transportation mainly come from general revenues.

There are some tax benefits for employers who provide a work bus or subsidies to a bus service for their employees.[84]

The central government has spent approximately £1 billion (CAD$1.76 billion) per year on concessionary fares in recent years and has committed to continuing this level of support despite pressures to reduce the national budget.

Fare Subsidies

Concessionary fares are an important component of the UK's national transit policy. The law requires that free local bus travel on weekends and after 9:30am on weekdays be provided to individuals who have reached their 60th birthday and to individuals who have some form of disability. To obtain a transit card for free travel, individuals apply to their local council. Local councils are given funds to provide this benefit by the central government. The central government has spent approximately £1 billion (CAD$1.76 billion) per year on concessionary fares in recent years and has committed to continuing this level of support despite pressures to reduce the national budget. Local governments can choose to provide further subsidies in addition to those required by the central government, such as reduced fares for youth or low-income individuals or discounts on National Rail services through their own budgets.

[83] Knowles, D. and Abrantes, P. (2008). *Buses and Light Rail: Stalled en route?* in Docherty, I. and Shaw, J. (eds) Traffic Jam: Ten Years of Sustainable Transport in the UK, Policy Press, Bristol, UK.
[84] HM Revenues & Customs. (2011). Section 242 of 480 (2011): A Tax Guide http://www.hmrc.gov.uk/guidance/480.pdf (Retrieved March 25, 2011)

Capital Funding

Local governments and transportation authorities in England outside of London receive funding from the Department for Transport (DFT) for capital investments. In 2011, the number of funding programs aimed at local authorities was decreased considerably, from 26 to 4,[85] to give them more flexibility in how they use funds. Funding streams that can be used for capital projects include:

- Integrated Transportation Block, which will provide £1.3 billion (CAD$2.0 billion) over four years to recipients through a needs-based formula (based on inputs such as ridership, congestion, and demographics) for a range of transportation projects
- Major Schemes Programme, which will provide £1.5 billion (CAD$2.3 billion) over four years to fund transportation projects over £5 million (CAD$7.8 million) which have been selected through a competitive process
- Local Sustainable Transport Fund (capital component), which will provide £210 million (CAD$327 million) over four years for small but high-impact capital projects on a competitive basis
- Local Highways Maintenance, over £3 billion (CAD$4.6 billion) over four years to recipients through a formula allocation process based on inputs such as bridges and traffic volumes

In addition, other capital funding streams from the Department for Transport include the Rail Grant, which will provide £18.199 billion over four years to fund enhancements to the rail network throughout Great Britain.[86]

Additionally, other funds such as the Regional Growth Fund, which will provide £1.4 billion (CAD$2.2 billion) over three years for projects that encourage job growth and economic development can be used to fund transportation components of wider projects.

Operating Funding

There are also various sources of operating funding that come directly from the central government for public transit services. They include:

- Bus Service Operators Grant, which was £436 million (CAD$679 million) in 2009 to compensate bus operators in Great Britain in part for the duties they pay on fuel; this funding is expected to continue, but at lower level and possibly distributed in a different manner
- Local Sustainable Transport Fund (operating component), which will provide £350 million (CAD$553 million) over four years for local initiatives in England and be distributed on a competitive basis

Operating funds are also provided for rail services, although these are offset by income generated from franchise agreements. Local governments can use the block grants they receive from the central government to pay for public transit services, as well.

[85] Department for Transport. (2011). Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen (Policy White Paper)
[86] 2010 Spending Review

Ability to Generate Local Revenue

Local governments in England have limited means of generating revenue; unlike in Canada, they do not collect property taxes. However, road charging is now allowed in all regions per the *Local Transport Act 2000*, although few local governments outside of London have chosen to make use of this ability. Local governments generate revenues through parking and other fees.

Private Sector Involvement

The private sector is heavily involved in transit service in the UK. Some companies originate from the dismantled public bus and rail companies. Their involvement is largely dictated by EU regulations, which aim to lower barriers to competition throughout the EU market and improve the transparency of existing financial arrangements. As a result, many international companies also operate in England providing both bus and rail transit services.

Most bus services are operated on a commercial basis by the private operators, which means that the private companies can determine the schedules and bus types they operate along a route and keep any profit.

Most bus services are operated on a commercial basis by the private operators, which means that the private companies can determine the schedules and bus types they operate along a route and keep any profit, and the remaining 20% (as measured in vehicle-km) of services are provided on a contractual basis between private operators and local governments or transport authorities. These generally complement the commercially provided services and may include trips later in the evening when bus services may not be commercially viable for a private company.

There are five large bus companies that provide the bulk of passenger bus service in England. In some areas, it is difficult for smaller companies to compete, and this has put some local governments and transportation authorities at a disadvantage in terms of benefiting from competition.

Social Inclusion

The National Concessionary Fare program is aimed at promoting social inclusion through free travel.

Administrative Support

In DfT, the Cities Policy Branch works with the Passenger Transport Executives, the transportation authorities in the six major metropolitan areas outside of London. In addition, there are divisions that are mode specific, such as for rail, LRT, and bus which work specifically on policies related to these modes.

Due to the structure of transit service provision in England, a lot of administrative effort is needed to manage the rail franchises and oversee the safety and quality of services provided, and this may reduce

the cost-effectiveness of the system. Furthermore, even more administrative assistance will be needed if the issues of service integration and service quality are to be addressed.

Level of Policy Integration

While there is evidence of the central government promoting the integration of public transit services, such as through the consolidation of transportation funding streams, the expansion of the national transit passenger watchdog group's mandate to oversee bus services as well as rail services, the promotion of integrated ticketing, and the integration of bus services plans into the Local Transport Plans, there is not very much evidence of integration of public transit policy with other national policies. Transit policies may recognize climate change and energy policies, and vice versa, but the links are not very strong.

Autonomous Regions

London, Wales, Scotland, and Northern Ireland are operated independently from the central government except in some retained areas, such as national defense. London is treated differently due to its large size and its importance to the economy of the UK.

Public transit in London is regulated through Transport for London. This is a multi-modal agency which oversees ticketing, the underground, bus franchises, congestion pricing, and roadway maintenance. Bus services are defined by Transport for London and bid on by private companies on a route-by-route basis. While London is unusual in England, this is actually how most transit service is provided in most of continental Europe. Transport for London receives about £700 million (CAD$1,106 million) per year from the central government for bus operations and much more for its other activities. This level of funding allows for a large level of transit service to be provided, and bus ridership has increased considerably in London in recent years.

Planning Requirements

There has been a statutory requirement for local transportation plans since 2001. The current requirements are that there be two planning pieces – one that offers strategies and policy, and the other that addresses implementation.[87] Local governments are given flexibility in terms of the duration of their plans. There is a requirement for consultation and for environmental policies to be included in the planning work. The deadline of April 2011 for the most recent plans was set to give local governments time to respond to changes resulting from the *Local Transport Act 2008* and new powers they have with respect to bus service agreements and road charging.

Competition with Road Investments

More funding is given for road investments, and the fact that more people drive than take transit is the justification for this state of affairs. However, there is generally agreement that the national policy is to

[87] Department for Transport. (2011). Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen (Policy White Paper)

reduce the amount people drive and replace driving trips with transit trips or other more sustainable modes, especially for shorter trips. While automobile associations are powerful lobbying forces, there is an understanding that the era of "predict-and-provide" highway construction is over.

Level of Federal Interest in Transit

There is interest in transit, although rail is probably of greater interest than bus. This may be because rail is considered part of the public infrastructure, while bus service is viewed as something that can be reduced without as large a consequence and as more of a local responsibility. Transportation is officially a devolved activity, and it is not typically a national election topic, although it is often an election topic at the more local level, such as in the campaigns for the Mayor of London.

Transit is something that is generally supported, the debate is more about the degree of subsidy it should receive.

Lessons Learned

London is considered a success story in the area of public transit in the UK, and this is attributed in part to the retention of the ability to regulate the bus network when the rest of the country privatized bus services, but also to the implementation of congestion charging and high levels of investment in the transit system. Both of the later items are likely the outcomes of a strong local political will. This model could be successful in some of Canada's major cities; namely Toronto, Montreal, Vancouver, or Ottawa. In fact, other English metropolitan areas are taking steps toward the London model given the successes it has achieved. It may require giving more autonomy and powers to metropolitan areas than they currently have, as well a means for generating more revenue to pay for transit investments, as more funds as spent on a per capita basis in London compared to other English metropolitan areas. Experience in the UK suggests that local governments prioritize transportation investment more than the central government. Transit may be even more vital to a country like UK, which has few natural resources compared to Canada, as its cities are truly its main engines of growth.

Experience in the UK suggests that local governments prioritize transportation investment more than the central government.

Another strategy Canada might consider is something like the UK's new Local Sustainable Transport Fund. This program funds local projects intended to change people's behavior and reduce demand for automobile trips. There have been some successes in small investments at the local level contributing to significant change in what are known as sustainable travel towns.

Italy

Introduction

Italy's population is roughly twice that of Canada's, but with a population its population density is about 86 times greater, at 200.2/km^2 compared with 3 persons/km^2 in Canada. It has a high proportion of the population over 60 years of age and the highest vehicle ownership rate among the European study countries. The largest city in the country is Rome, and other major cities include Milan, Naples, Torino, Palermo, and Genoa.

Italy has successful transit systems in its larger cities, where the transit mode share for motorized trips is about 29.3%, but an overall nationwide transit share for motorized trips that is only about 12 or 13%.[88] It struggles in other measures of performances, as well, such as the cost recovery of local bus services, cost per kilometre of bus services offered, and the average age of the local bus fleet. The local transportation sector has been shaped by law *422/97*, implemented in 1997, which devolved local transportation responsibilities to regional and local governments.[89] This law also required the separation of the regulatory and operational bodies of public transportation companies, liberalization of the sector (i.e., allowing for tendering of services), and contract rules that are in compliance with European Commission regulations. The role of the federal government is largely limited to capital funding (about €500 million per year[90]), and while there is no single policy document, public transit is impacted by various other pieces of national legislation. Having signed the Kyoto Protocol, Italy has obligations with respect to reducing greenhouse gas emissions, and the public transit sector is expected to play a part in attaining this goal. As in other European countries, there is a general policy of trying to reduce automobile trips as a means for bringing about a more sustainable transportation system.

Financing

The financing mechanism for public transit is affected by the national movement towards enabling the financial self-sufficiency of local and regional governments. There were major issues with overspending in the past, requiring the central government to pay for overruns in the local transit systems on a regular basis. To address this issue, Italy set up a national transport fund in 1982.[91] However, this proved to be equally ineffective as the previous system and was phased out as part comprehensive government reforms.

> The goal of the financing mechanism for public transit is to allow local authorities to be financially self-sufficient.

[88] AASTRA. (2010). Un Futuro da Construire
[89] UITP. (2010). Organisation of major players of short-distance public transport
[90] AASTRA. (2011). Personal Communication
[91] Piancenza, Massimiliano. (2000). The Public Transit Systems in Italy: A Critical Analysis of the Regulatory Framework

As a means to maintain a minimum level of financial performance, 35% of costs related to public transit operations are required to be recovered through fare revenues.[92]

Fare Subsidies

No evidence was found of fare subsidies provided by the national government.

Capital Funding

The central government also pays for 75% of the costs of vehicles used for public transit, with the rest of the funding provided through regional government budgets and corporate self-financing.

Law 211/92 was developed to provide capital funding for transit system improvements. These funds can be used to pay for up to 60% of project costs, and they have been used to expand or introduce subway, tramway, and local railway services. [93] The central government also pays for 75% of the costs of vehicles used for public transit, with the rest of the funding provided through regional government budgets and corporate self-financing.[94]

Operating Funding

No evidence was found of operating funding provided by the national government. The responsibility for funding transit operations is largely split between regional governments, which are obligated to pay a set amount for basic services (as defined as those required by students, workers, individuals traveling to social services, protection of the environment, etc), while the local government can pay for any supplemental services.[95]

Ability to Generate Local Revenue

The local and regional governments have been given various means to raise their own revenue for operations, not just for public transit, but for a wide range of social services. Regional governments have access to a personal income surtax, electricity surtax, motor vehicle registration tax, motor vehicle insurance tax, and a share of landfill taxes.[96] Local governments have access to a personal income tax (within a range dictated by the national government), electricity surtax, municipal advertising tax, waste disposal tax, and other transportation-related users fees such as road charging (which have only been

[92] UITP. (2010). Organisation of major players of short-distance public transport
[93] Fraquelli, et al. (2001). Costs and Technology of Public Transit Systems in Italy: Some Insights to Face Ineffeciency
[94] UITP. (2010). Organisation of major players of short-distance public transport
[95] Ibid.
[96] Frosini, Tommaso. (2010). The Gamble of Fiscal Federalism in Italy

implemented in Milan) and parking fees.[97] Despite the ability to raise revenues, local governments have often faced shortfalls and have had to sell municipal lands to pay for government services.[98]

Private Sector Involvement

Compared to other parts of Europe, the role of private companies in the provision of public transit is relatively low. In the large cities, public companies continue to own and operate the transit systems. Only about 32% of transit services (as measured in vehicle-kilometres) in the country are provided by the private sector, based on 2002/2003 data.[99]

Social Inclusion

There is a minimum service obligation, which is the responsibility of the regions, and fares are kept low to make public transportation a viable option for lower income people.[100]

Level of Policy Integration

There are various mechanisms for land use planning, energy planning, and controlling pollution that involve local transportation. There is a national law related to spatial planning[101] that requires the regions to develop land use plans that the municipalities must use as a foundation for their own town plans. There is also a requirement for regional transportation network plans, construction plans, and local traffic plans that can include public transit components. In practice, however, the plans often do not relate to one another and compliance with laws in Italy is not as high as it is in other European countries (e.g. Germany).[102]

There is a national requirement that any employer with more than 300 employees have a mobility manager.

Autonomous Regions

There is no evidence of any autonomous regions in Italy; all are subject to the national laws pertaining to public transit.

Planning Requirements

Local transportation plans are required to connect economic development, land use, financing, and transportation.[103] A standard multi-modal transportation plan, known as Piano Urbano del Traffico (PUT)

[97] Percoco, Marco. (2009). Urban Transport Policies and the Environment: Evidence from Italy
[98] EU Fifth Framework Programme. (2002). Reubranisation on the condition of demographic change
[99] Bank of Italy. (2008). Regulation and Disparities of Local Public Transport: Regional Disparities
[100] Fraquelli, et al. (2001). Costs and Technology of Public Transit Systems in Italy: Some Insights to Face Inefficiency
[101] EU Fifth Framework Programme. (2002). Reubranisation on the condition of demographic change
[102] Ibid.
[103] Piancenza, Massimiliano. (2000). The Public Transit Systems in Italy: A Critical Analysis of the Regulatory Framework

is required of all urban areas with populations over 30,000. However, there is not full compliance with this requirement, as many local governments do not have one. Nonetheless, some urban areas can take further action by developing a Piano Urbana della Mobilita (PUM), which is essentially a sustainable transportation plan aimed at reducing car travel.[104]

Level of National Government Interest in Transit

With the devolution of the responsibility for local transport to the regional and local levels in the 1990s and the lack of operating funding for transit, interest in transit at the national level is presumably low.

Lessons Learned

There is a national requirement that any employer with more than 300 employees have a mobility manager.[105] This is likely a good policy because it uses existing institutions and involves business in issues of mobility, but there is evidence that there is not full compliance with this policy.

A standard multi-modal transportation plan, known as Piano Urbano del Traffico (PUT) is required of all urban areas with populations over 30,000.

While there has been more political power transferred to the local level and fiscal reforms suggest that a greater share of tax revenues will be spent where they are raised, this has not yet translated into better public transit in most parts of Italy. This may be a function of insufficient revenue generation capability, stagnant levels of investment, and a low level of compliance with planning rules. There have been many measures to reduce automobile use, such as higher parking charges, but the lack of suitable public transit alternatives has meant that there has not been a visible mode shift in the country. Thus, a lesson for Canada is that provincial governments may need to provide guidance to local municipalities on how to develop local revenue generation mechanisms and integrative plans. As well, quality public transit services must be provided with the local revenues generated in order to attract new transit riders.

Another issue with public transit policy in Italy appears to be the separation of responsibility for "basic services" from "supplemental services." Due to the nature of transit services, the distinction is subjective, and an individual passenger does not distinguish services in this way. A similar issue occurs in the UK, with private companies providing some services and the local governments providing other services. The lesson learned for Canada is that a local transit authorities should be given latitude in how funds are used (i.e., the earmarking of funds for specific uses should be minimized) and services should be provided in an integrated manner.

[104] Percoco, Marco. (2009). Urban Transport Policies and the Environment: Evidence from Italy
[105] UITP. (2005). Bringing quality to life

France

General context

France covers 549,190 km^2 and was home to 62.3 million[106] people in 2008, 85% of whom lived in urban areas.[107] The average population density is 113 persons/km^2, which is significantly higher than Canada's national average population density of 3 persons/km^2. As in other European countries, French cities date back to pre-automobile times, and many of them retained medieval city core structures characterized by narrow streets and mid-rise buildings. This urban environment, denser than most Canadian cities, is also more supportive of rail-based transportation and higher capacity transportation modes.

As with Canada, France's population is aging. In 2011, 29.5% of the French population is 55 years of age or older.[108] France's economy has suffered from recent economic hardship. In 2008, France's GDP practically stagnated, and in 2009, it decreased by 2.6%. Unemployment, economic growth and public debt continue to be President Sarkozy's priorities.[109]

Public transit and transportation trends in France

Oversight for transportation in France is divided between the greater Paris region, or also known as Île-de-France, and the rest of the country. The authority responsible for public transit in l'Île-de-France is STIF. It ensures coordination between three main groups of transit operators: RATP, the fifth largest transit venture in the world, SNCF and the OPTILE association.[110] Typically, important metropolitan areas all have public bodies acting as transportation authorities responsible for organizing public transit services for their respective territory. These authorities are known as AOT (Autorités Organisatrices de Transports).

Since 2003, total passenger-kilometres travelled by all transport modes remained constant. It increased for public transit and decreased for private automobiles.

Since 2003, the overall passenger-kilometres travelled annually on all transportation modes has been relatively stable. Over the same period, public transit passenger-km in France has been steadily increasing. Rail transit (including regional and long distance rail travel) increased by approximately 20% and bus transit travel has experienced a 15% increase. Private automobile use shows a slight decrease.[111]

[106] Note: As of January 1st, 2011, France's population (including overseas territories), has reached 65 million people. Source: INSEE. 2011. http://www.insee.fr/fr/themes/document.asp?reg_id=0&ref_id=IP1332
[107] United Nations, Department of Economic and Social Affairs, Population Division, World Urbanization Prospects: The 2009 Revision, 2010 figures.
[108] Institut national des statistiques et des études économiques (INSEE). 2011. http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATnon02150
[109] Note: 23.7% unemployment rate for 15-24 years in 2009 (Source: INSEE)
[110] RATP website. http://www.ratp.fr/fr/ratp/c_5008/l-essentiel/
[111] INSEE, http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATTEF13627&page=graph

These trends are encouraging from a policy perspective as public transit services have been increased in most French cities. Light rail and streetcar networks are seen as urban development tools and are an improvement over regular bus services operating in mixed traffic. The *Grenelle Environnement*, a major policy undertaking focused on climate and environmental challenges, has identified public transit as an important part of the solution to these issues. It has also estimated the needs through 2020 of new urban transit infrastructure operating in dedicated right-of-ways at approximately €36 billion.[112] This sum was presented in the updated impact study of the *Grennelle*[113] policy implications it represents how much it would cost to meet the goals identified and policies proposed for LRT, BRT and tramways, not the actual sum promised by the government for transit projects at this time.

> Investment in light rail and streetcar networks is seen as a development tool rather than mere transport investments.

Every citizen makes an average of 3.15 trips per day, a stable result across the country. Car use varies greatly between dense cities like Paris where car use represents 1/8 of all trips and peripheral areas where it accounts for 9/10 of all trips. Car use remains predominant but stabilized between 1994 and 2008 in major provincial cities and decreased in Paris. After decades of decrease, active modes (walk and bike) use stabilized. Walking is used in 20% of all week trips and bicycles a meager 3%. While cycling has increased in cities, its use has decreased in rural settings.

Overall, motorization is increasing: between 1994 and 2008 the share of the car-free population decreased from 23% to 19%. Thus, although each household has been driving less, the total vehicle-kilometres travelled in private vehicles has increasing.

National Public Transit Policy Framework

Public Transit in l'Île-de-France

As previously mentioned, transport in France is geographically divided between the capital region, l'Île-de-France, and the rest of France's territory (including overseas territories). Public transit in the region of l'Île-de-France is based on two laws, the decree of 1949 and the ordinance of 1959 on the organization of passenger transportation. The 1982 *LOTI (Loi sur l'orientation des transports intérieurs) law,* which states the principles under which passenger transport is organized and financed in France, and is applicable to the rest of the country, does not apply to this area.[114] Under the law of 2004 on local freedoms and responsibilities, the responsible transport authority or AOT for the region is STIF (Syndicat de l'Île-de-France).

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[112] CITC. Club Innovations Transports des Collectivités. http://www.innovations-transports.fr/La-captation-de-la-plus-value?lang=fr#origine

[113] Grenelle Environnemet website, http://www.legrenelle-environnement.fr/grenelle-environnement/spip.php?article1018

[114] The *LOTI* law is now codified in the *Transport Code*, and it entrusts local authorities with the responsibility of organizing public transit by forming AOTs.

STIF represents the interests of local communities and delivers transit services through agreements with the various transport operators. STIF delegates services to operators, the main ones being RATP (Régie Autonome des Transports Parisiens or Autonomous Operator of Parisian Transports), SNCF (Société Nationale des Chemins de Fers français), and 90 other private companies grouped under the *Optile*[115] association. RATP operates subways, buses, trams and about one-third of the RER (suburban rail system) in the Île-de-France region and has 44,000 employees, while SNCF receives 35% of STIF transit budget and operates about two-thirds of the RER and France's national railway network. Three-year transit service contracts are signed with RATP and SNCF (2004-2007, 2008-2011) and 11-year contracts (2007-2016) are signed with other private operators. In 2009, operation costs for the region amounted to €7.86 billion (CAD$13.28 billion, Jan 2, 2009), shared between operators[116] (RATP receives 1/2 of total budget, SNCF 1/3 of total budget). STIF is responsible for managing public transit budgets and finances, which include co-financing improvements with the region.

In 2008, competitive tendering was used in 90% of transit service delegation.

As part of the European context of regulation harmonization and market integration, STIF is preparing for a complete transition from a monopolistic market (where the RATP and the SNCF had a transit operational monopoly) to an open market one, as required by the European ruling n°1370/2007 of October 23, 2007. Contracts drafted under this new legislative framework are similar to competitive tendering, under which public transit operations are contracted to operators who have responsibility for producing service, maintaining service quality, and balancing financial aspects of their operations.

Public transit outside l'Île-de-France

Outside l'Île-de-France, the national law governing public transit is the 1982 *LOTI law*. The law was updated in 1999 to strengthen and simplify intermunicipal cooperation and in 2000 with the *SRU* (Solidarity and Urban Renewal) law. These texts simplified the implementation of intermunicipal transport agencies and services. One of the requirements of the *LOTI* law is that metropolitan areas of more than 100,000 have to establish urban mobility plans.

The *LOTI* law was recently complemented by the *Grenelle Environnement* policy.[117]

Service Delegation Options

The *LOTI* law delegates public transit responsibilities to local authorities, which then form AOT, whose mission includes establishing the minimum requirements of the service contracts (i.e., schedules, performance standards, selection of transit operators and definition of management modes, financing and fare policies).

[115] OPTILE stands for Organisation Professionnelle des Transports d'Ile-de-France.
[116] STIF. (2011). http://www.stif.info/organisation-missions/volet-economique/financement-transports-publics/131.html
[117] Loi Grenelle website, 2011. Grenelle 1 was adopted on August 3, 2009

Municipalities (outside Île-de-France) have two options when it comes to choosing public transport operators: award public service contract after tendering or choose an internal (public) transit operator.[118] The most common contractual agreement remains public tendering through service concession, which implies drafting contracts of a given duration and ensuring that part of the operational risk is transferred to operators, who have an incentive to maintain high efficiency and ridership as these are tightly linked to revenue. The Concessionaire reports annually to the competent AOT. This scheme is used in 78% of transit service delegations. Between 2005 and 2009, approximately 40% of contracts that have been tendered chose a different operating agency, a sign of an active and competitive market. As is the case in Canada, some French cities use their own public agency to operate transit services. The 1993 *"Sapin"* law compels tendering, but does not prohibit transit service provision by public agencies. In 2008, 10% of AOTs used public agencies to provide public transit.

To implement the Grenelle, French national government has committed to investing €2.5 billion in transit systems operating in dedicated right-of-ways.

Capital and Operating Funding

Unlike Germany, where there is some degree of overlap between funding schemes for operating and capital, France's funding streams are straightforward and clearly separated between operating and capital funding. If we include operating and capital funding, France's national government provided only 2.55% of the €19.2 billion (CAD$28.1 billion, Jan 2, 2008) spent on public transit for 2008,[119] or €7.85 per capita (CAD$11.48 per capita, Jan 2, 2008). For the same year, total national funding represented 0.03% of France's 2008 GDP, and local government transit funding 0.23%. In total, public transit funding in France amounted to just over a quarter of 1% of its GDP[120]. As explained below, the remaining sources of revenue come in the form of dedicated taxes and farebox revenues.

Capital Investments

In 2008, the national government provided approximately 6% (€110 million or CAD$146 million, Jan 2, 2008) of all public transport investments outside l'Île-de-France, and only 4% in l'Île-de-France (€71 million or CAD$103.7 million, Jan 2, 2008).

However, the *Grenelle Environnement* policy has changed the usual order of things, as massive transit investment needs were identified to improve public transit and reduce GHG emissions. It was also the

[118] Public tendering can take the shape of a service concession *(délégation de service public*) or public procurement (*marché public)*. The latter case falls under different law (*Code des marchés publics)* and remains a contractual agreement between the AOT and transport operator, it has the major drawback of not transferring commercial risk to operating agencies. This management mode remains somewhat marginal, as it is used by 12% of AOT, the remaining 78% is done by service concession.

[119] GART. 2009. L'année 2008 des transports urbains, http://www.gart.org/S-informer/Publications-du-GART/L-annee-2008-des-transports-urbains

[120] OECD. http://stats.oecd.org/Index.aspx?DatasetCode=SNA_TABLE1

first time that civil society was inclusively consulted and sat with all public service providers to define key points of government policy on environmental and sustainable development issues for the years to come. As a result of this policy, the national government has committed to investing €2.5 billion (CAD$3.32 billion) in transit systems that operate along dedicated rights-of-way[121] until 2020. As a result, trams, which were already coming back in strength in the French urban landscape, are becoming increasingly popular and tens of projects are being implemented across the country; this is also true for BRT service, but to a lesser extent.

Operating Funding

Overall, France's national government plays a limited role in terms of operating funding. There are no national transfers to local authorities to help them cover operating costs *per se*. Outside l'Île-de-France, national government funding accounted for only 2% of all operating costs; 40% is covered by the Employer's Tax, and 30% by local authorities. Figures are similar for the Île-de-France region, although farebox revenues cover a greater share of operating expenses (26% vs. 17%).

An important feature of the French financing scheme is the Employer's Tax. In 2008, €2.9 billion (CAD$3.85 billion) was collected through the Employer's Tax outside l'Île-de-France.

In comparison to other sources of funding, the Employer's tax remains a pillar of the French transport policy providing roughly a third of operating funding needs. This payroll tax must be paid by companies of 9 or more employees, based on a yearly aggregate of their salaries. The tax rate varies between 0.55% for cities between 10,000 and 100,000 inhabitants to 2.6% in the Île-de-France region. Cities with more than 100,000 people can charge 1%, but interestingly enough, they can benefit from a 0.75% extra if they plan to build transit lines operating in dedicated rights-of-way (BRT, LRT, trams), which encourages French municipalities to pursue these modes of transportation. The biggest cities that have a rapid transit, LRT, or BRT system raise and get 60% of the total funding required.

In 2008, €2.9 billion (CAD$3.85 billion) was collected through the Employer's Tax outside l'Île-de-France, providing a third of operating funding.

Land Value Capture

In France, only a few operators have started to capitalize in capturing a part of the land value increase resulting from new transport investments. The RATP does manage land related to its infrastructures since the 1990s but in general, France's public authorities cannot actually capture land value increases. However, the possibility to grant them the right to do so is being studied.[122]

[121] Loi du Grenelle. 2009. http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000020949548
[122] CERTU- CITC: La captation de la plus-value foncière et immobilière: une nouvelle source de financement des infrastructures de transport collectif?

Private Sector Involvement

France has a long history of contracting transit services out to private and public enterprises.

In terms of infrastructure property, outside l'Ile-de-France, public transit agencies (AOT) own 82% of the rolling stock, while the remaining 18% is owned by operators. This might seem a fairly low share of private ownership, but if we look at the numbers in terms of number of networks, not number of total vehicles, private operators actually own vehicles in 40% of France's networks.[123] In terms of public transit operation, 78% of the responsible transit agencies have chosen to delegate to private enterprises.

Level of Policy Integration

As shown in this section, France's public transit is fairly straightforward. The national government does not regulate day-to-day operations but does play a role in how public transit is organized by allocating powers and outlining responsibilities. Municipalities and local authorities organize at a metropolitan or regional level to form AOTs, which then delegate transit services to private operators.

At a regional level, land-use policies and land-use plans integrate transportation considerations and vice-versa. Land-use regulation remains mostly between the hands of municipalities, which together form AOTs and manage public transit. In this sense, there is a relatively high level of policy integration.

Land Use Planning and Planning Requirements

The relationship between land use and transportation is well understood in France. In general, in both transportation and land use policies, there has been an effort to limit road construction and car use to encourage modal shifts towards public transit and active transportation modes. Here again, the national government provides the legal foundations by requiring land use and transportation plans from local authorities. The 2000 SRU law reformed land use laws and strengthened the relationship between transportation and land use policies and authorities.[124] Municipalities must develop local land use plans that respect regional land use plans, and transportation plans and projects cannot contradict local or regional land use plans.[125]

Collaboration

Unlike Canada, France is a unitary State. As such, no collaboration between states is possible. However, as explained in this section, horizontal collaboration between local authorities is very well developed and mandated by the federal state in order to access national funding.

In addition to the national government, France is divided in geographical sub-areas: Regions, Departments, Arrondissements, Cantons. These different structures cooperate and associate for

[123] GART. L'année 2008 des transports urbains, p.10.
[124] Note: The SRU law (*n° 2000-1208), Loi relative à la solidarité et au renouvellement urbain.*
[125] Schémas de cohérence territoriale

different purposes, including managing transportation. This *intercommunalité* can take the shape of: 1) Syndicate of communes, 2) Urban communities, 3) Agglomeration communities, 4) Commune communities. These administrative associations are given a variety of fiscal powers (Commune Communities have the least amount of fiscal powers). Public transit is organized by these governmental bodies that use local tax revenues to cover approximately a third of public transit operation costs.

The municipal level is the main level of government responsible for organizing and operating transit services. Over 80% of transit services are transferred to intermunicipal cooperation agencies (*Communauté urbaines or Communauté d'agglomération)*. These intermunicipal agencies can have public transit as their sole purpose or can have a larger governance mandate including other services. When they form AOT, for the sake of efficiency and convenience and not because it is mandated by law, they usually have a monopoly over public transit for a given area.

Rolling stock is usually owned by municipalities, with shared or complete ownership structures. Services extend to the urban transport perimeters for which public transit is provided. Interurban transport is provided by *Départements***,** linked together by a road and rail network under the responsibility of regions.

Lessons Learned

The lessons that have been learned from France's experiences that are relevant to Canada include the following:

- The Employers' Tax is an important revenue source for French transit agencies, providing approximately a third of their total revenue, and could be considered here in Canada at the national level or at the provincial or municipal level as a national, provincial, or local policy. As it is based on the total salary paid by companies, the Employers' Tax fluctuates with the economy, as does transit demand to a certain extent. Therefore there is a correlation between the revenue collected from the tax and demand for transit. Furthermore, it differs from a gas tax, which is dependent on gas retail quantity or prices.
- In France, inter-municipal cooperation is facilitated by national laws, and similar policies could be adopted by Canada.
- French transit services are provided mainly by private operators through a competitive tendering process. This allows operating risks to be shared between AOTs and transit operators, which likely increases the overall economic efficiency of transit systems. Canadians would most likely benefit if more transit service were provided under a competitive tendering process.

Germany

Introduction

Like Canada, Germany is a federal state. The national government, the *Bund*, is comprised of 16 *Länder* or states, which are further divided into communities (or *Gemeinde).* The powers of the national government are defined in the German constitution. All other powers fall under the responsibility of lower levels of governments.

Germany's territory covers 357,120 km^2 and is home to 82.1 million people,[126] with a population density of 230 persons/km^2, which is 77 times Canada's density of 3 persons/km^2. Three-quarters of the German population live in urban areas, a ratio similar to other study countries.[127]

Germany faces two demographic challenges: an aging population and on the long decreasing population. Between 2000 and 2008, the proportion of people who were 60 years or older grew by almost 13%, reaching 25.6% of the total population.[128] By 2060, it is expected that the size of the German population will be reduced to 78% of the 2010 level. This population decrease will impact the German government's ability to fund high quality transit, thereby affecting the users of public transit.

Public transit and transportation trends in Germany

As a result of rising gas prices and other factors, ridership on urban public transit has been consistently increasing since the turn of the millennium, at an average annual rate of approximately 1%. Overall, amongst the different public transit modes, tram systems have experienced the sharpest increase in total ridership (22% between 2000 and 2008), although heavy rail has seen greater relative increases (25%). Meanwhile, bus ridership has shown a 4% decrease in ridership.[129] In 2008, private transport enterprises active in the field of urban and metropolitan public transit, passenger and freight railways saw both VKT and ridership increases, by 2.5% and 1.3% respectively. In total, 9.6 billion public transit trips and 90.6 billion person-km were recorded in 2008.

Amongst the different public transit modes, tram systems have experienced the sharpest increase in total ridership: 22% between 2000 and 2008.

[126] Note: Population for 2008. Source: International Road Federation's World Road Statistic's Database 2003-2008. Rail passenger-km includes inter-urban and intra-urban rail. Car ownership data is for 2008, except for Russia, whose data is for 2007.

[127] United Nations, Department of Economic and Social Affairs, Population Division, World Urbanization Prospects: The 2009 Revision, 2010 figures. Urban population is defined as: De facto population living in areas classified as urban according to the criteria used by each area or country. Data refer to 1 July of the year indicated and are presented in thousands.

[128] Note: (population ≥ 50 years old was 22.7% in 2000). Source: DV. (2009). *VDV Statistik 2009.* Verband Deutcher Verkehrsunternehmen.

[129] VDV. (2009). *VDV Statistik 2009.* Verband Deutcher Verkehrsunternehmen. p.10.

Considering the economic recession (2009 saw the most important GDP contraction since WWII), public transit has performed relatively strongly and maintained its figures compared to goods transportation. High quality public transit has been a prominent feature of Germany since reunification, if not longer. The extensive inter-urban railways and the relative proximity of population centres contribute to higher levels of accessibility. As in France, but perhaps to a lesser extent, Germany has embraced light-rail with a renewed enthusiasm in the past years. Innovative concepts such as the CarGo Tram,[131] tram-train[132] and even magnetic high-speed train (Maglev) were all born in Germany, proving Germany's interest towards public transit even though it is also has a very strong car-culture (e.g. BMW, Mercedes, Porsche, Volkswagen, Opel and Audi are all German car manufacturers).

> Through the Entflechtungsgesetz, the German State provides approximately €1.6 billion (CAD$2.1 billion in 2011 dollars) of funding each year for capital investments in urban transportation.

National Public Transit Policy Framework

In Germany, the 2007 federalism reform devolved certain powers to the state governments, including full responsibility, decision-making powers and budget management powers over public transit. As a result, the national government does not deal with transit-related issues, other than transferring dedicated funding to the states annually and crafting regulations. The states allocate the funds between the various cities and communities.

> The national government does not deal with transit-related issues, other than transferring dedicated funding to the states annually and crafting regulations.

In addition to the constitution, the main national laws regulating public transit and allocation of transit funding redistribution are described below.

Capital and Operating Funding

Federal funds

Capital Investments

The *GVFG (Gesetz über Finanzhilfen des Bundes zur Verbesserung der Verkehrsverhältnisse der*

[131] CarGo-Tram refers to streetcars carrying freight on urban tramways networks, implemented by the city of Dresden and Volkswagen.

[132] Tram-train refers to the Karlsruhe model, the first city to use trams on city tracks AND mainline electrified DB tracks. The concept allows for the same tramway vehicle to provide local services, then switch electrical power systems to run on Mainline tracks (with higher voltage) to reach the neighbouring city to provide local transit again, eliminating a mode transfer and increasing practicality.

Gemeinden or Act on federal financial support for the improvement of transport conditions in communities) outlines the amount of funding assistance that is to be provided by the national government for capital transit investments. These federal funds can be used by the state governments at their discretion, and can be used for any type of road work (e.g. road development or improvements, bus lanes, street connections close to railway lines, and freight transfer centres) and transit projects (e.g. tramways and bus rapid transit). However, improvements related to transit are typically given higher priority.

In 2008, through the Act on Public Transportation Regionalization, the German State transferred of €6.7 billion to Länder, mostly to cover operational costs.

Funding coming from the *GVFG* is divided according to the provisions of the *Entflechtungsgesetz (EntflechtG),*[133] under which 75.8% of the GVFG funds are directed to West Germany and 24.2% is provided to East Germany. This stream of funding, which is distributed via two programs – the state program and federal program - provides approximately €1.6 billion (CAD$2.1 billion in 2011 dollars) of funding each year for capital investments in urban transportation.[134,135] These two programs are as follows:

The State Program:

- 80% of funds go into this state program, and are allocated to the states as per the following scheme: of the funds available for investments, 75.8% go to the West Germany, and 24.2% to East Germany.
- This financing scheme will expire at the end of 2013, and a new one will be negotiated for 2014-2019, focusing exclusively on investments.

Federal program:

- 20% of funds are allocated to the Ministry of Transport, which has programs for which states can present projects and receive funding.
- This program includes investments directed at the heavy rail passenger network, managed by Deutsche Bahn AG and it provides €336 million (CAD$447.5 million in 2011 dollars) of funding annually. Urban and regional rail projects (S-Bahn, inter-city services) can benefit from this fund (over €50 million or CAD$66 million in 2011 dollars), and the program can cover up to 60% of the project costs.
- There is also a research program on urban transport, which receives approximately €4.2 million (CAD$5.6 million in 2011 dollars) annually, the only one of its kind in Germany.

Federal funding is not provided to railways operators (Deutsche Bahn, the national railway company, and its subsidiaries), as they are expected to be economically viable.

[133] EntflechtungsgesetzEntflechtungsgesezt.
[134] BMVBS. 2010. Website. http://www.bmvbs.de/SharedDocs/EN/Artikel/IR/federal-financial-aid-to-improve-transport-at-the-local-authority-level.html
[135] Verband Deutscher Verkehrsunternehmen. 2011. VDV Statistik 2009., http://www.vdv.de/module/layout_upload/jb2009.pdf

Although not all the above funds are directed at urban transit, they were included in the table in Appendix A, as a further breakdown of the funding allocation could not be found.

Operational Funding

The second stream of federal funding is mandated by the *Act on Public Transportation Regionalization* (*RegG*).[136] In 2008, through the *RegG*, a total of €6.7 billion (CAD$9.8 billion) was transferred from the national government to the state governments for public transit services. These funds, raised by a tax on petroleum oil, are divided between the states according to a specific formula. The *RegG* covers the operational costs and part of the capital investment in transit and road initiatives.

Together, the *RegG* and *GVFG/ EntflechtG* amounted to €8.3 billion (CAD$12.1 billion) of funding in 2008. These are recurring and stable funding sources available to the states for the funding of public transit operations and infrastructure investments. The flexibility attached to this funding allows for road works to be funded, although most of it is used for public transit services.

Funds transferred through the *RegG* and *GVFG/ EntflechtG* amounted to €8.3 billion of funding in 2008.

Contributions from State Governments

The state governments also contribute to public transit funding under the *PbefG* (Passenger Transport Act), which is the main legislation governing the delivery of public transit services and outlines the powers, duties and responsibilities of each player (state government, local government, private enterprises) and the financial responsibilities of the state governments.[137] In 2008, contributions from the state governments amounted to €907.2 million (CAD$1.3 billion), or a little less than 10% of total governmental contributions.

Hence, in 2008 a total of approximately €9.2 billion (CAD$13.5 billion, Jan 2, 2008) was spent by the national and state governments on local public transit (assuming most of the funding allocated via the *RegG* and *GVFG* is used for transit), of which approximately 90% came from federal funding sources (under the German constitution, cities are not allowed to raise taxes to fund public transit). This total amount represents approximately 3% of the entire federal budget of €283.2 billion (CAD$414.3 billion, Jan 2, 2008) in 2008.[138]

[136] Bundesministerium der Justiz. 2011. RegG, Gesetz zur Regionalisierung des öffentlichen Personennahverkehrs. http://www.gesetze-im-internet.de/regg/index.html

[137] Bundesministerium der Justiz. 2011. PBefG Personenbeförderungsgesetz, http://www.gesetze-im-internet.de/bundesrecht/pbefg/gesamt.pdf

[138] German Ministry of Finance, 2008 Federal Budget Overview (Übersichten zum Bundeshaushaltsplan 2008) , http://www.bundesfinanzministerium.de/bundeshaushalt2008/pdf/vorsp/vsp_j.pdf

Federal Policy Division

At the national level, the Ministry for Transportation is also in charge of housing and urban development. The integration of these three functions under the same Ministry is an example of Germany's recognition that there is a close relationship between land use and transportation (however it is unclear exactly how this has improved planning, project development, etc). There are also departments focused specifically on policy integration at the European, national and state level, as well as others on new technologies, including public transit technologies.

Level of Policy Integration

In Germany, all laws and policies, including transportation plans and projects, must respect the laws of all higher orders of government (Federal → State → Regional → Municipal → Neighbourhood). Therefore, there is a high level of integration between transportation plans and projects between different levels of government.

Land Use Planning and Planning Requirements

With respect to the integration of transportation and land use planning, projects that receive federal funding must follow existing land use and transportation plans, and these plans must be integrated. As for transportation, land use is organized by municipalities and overseen by state governments, which provides funding but does not manage land use policies.

The national government is responsible for the elaboration of the federal transport master plan, voted upon by the federal parliament and the legislative chamber akin to what would be the Canadian Senate based on provincial representation. Lower level governance bodies can propose projects for which they provide data for their evaluation process.

The state and local governments influence the process insofar as they have control over the legal procedures of the implementation phase. More precisely, state governments have to confirm that projects do not contradict and can be integrated with their "Law on spatial development" (*Raumordnungsgesetz*). Local communities are involved in the final design stages of a project's alignment, as stated in the "law of local specification and final definition of a plan" (*Planfeststellung*).

Private Sector Involvement

The public transit sector in Germany has been open to input by private sector for several decades. The private sector plays an important role in transit service delivery, as public transit agencies often use subsidiary companies to provide services, maintain equipment, and construct projects. As well, commercial operators also provide transportation services.

One of the turning points in this matter was the 1994 "privatization" of Deustche Bahn (DB), formerly the national railway company, which was reformed under a private holding model. Currently regulated

by a national law, DB's sole stakeholder is the German State .[139] The DB group is comprised of 500 subsidiaries, and is the largest railway operator and infrastructure owner in Europe.

As with all European countries, Germany must abide by EU laws, which, in the field of public transit, implies opening up interior markets to foreign companies. This situation represents an opportunity to improve economic efficiency in transit service delivery by increasing competition and opening up local market to more potential transport operators. However, it is likely that not everyone appreciates the benefits of opening up transit markets to foreign transport operators, as some might perceive this as a lost opportunity for local firms.

Collaboration

As seen in this section, the vast majority of the funding in Germany for transit comes from federal funding sources, which are divided amongst the states. In turn, these states further allocate these funds to the local communities, who will usually contract out service delivery and most of the related work. Thus, there is significant collaboration between communities and organizations to coordinate interurban transport at the state level, and between private companies and public transport agencies, and between the national and state governments regarding the prioritization of projects and their related funding.

Lessons Learned

In summary, important lessons learned by Germany that could be applied to Canada are described below.

Firstly, federal transfers for operating and capital costs in Germany remains the highest of the countries we surveyed in this report. While it would be difficult to apply Germany's funding scheme to Canada, as our tax system is completely different and the German national government has had a long history of providing transit, the provision of stable and predictable funding are practices that Canada should strive to implement.

Another lesson that can be learned from the German experience relates to the semi-privatization of Deutsche Bahn. Although this model reduced operating expenses, it also had unexpected negative consequences, including the reduction in maintenance work performed on rolling stocks and infrastructure, which led to a deterioration in service quality and eventually service reduction.[140] These challenges should be considered by Canadian authorities if any form of privatization of services is being considered.

A third lesson learned is that the German national government does not provide any financial support to DB for their operations. This ensures that services offered have a net positive cost recovery ratio, and

[139] Bundesministerium der justiz. 2011. DBGrG, Gesetz über die Gründung einer Deutsche Bahn Aktiengesellschaft. http://bundesrecht.juris.de/dbgrg/index.html#BJNR238600993BJNE000500303
[140] La lettre ferroviaire, http://lcda.fr/lalettreferroviaire/pdf/train-05.pdf

proves that good performance can be achieved when there is sufficient population density and adequate rail infrastructure.

Finally, Germany's practice of integrating transportation, housing and urban development within one Ministry is perhaps something that Canada could consider. Doing so could significantly improve the chances of achieving greater cohesiveness between these inter-related areas.

Russia

Note: This section cannot be completed without input from the Russian Ministry of Transport, which Stantec has attempted to contact with the assistance of the Canadian Embassy in Moscow. Attempts to contact individuals from this ministry directly through email were not successful, even though several individuals and their contact information had been identified through the help of local sources and research.

This information will be passed on to CUTA if and when we receive a response.

Introduction

Russia covers an area double the size of Canada and has more than four times the population. With a population of 142.9 million.[141] Russia's population density is still greater than Canada's, at 8.4 persons/km^2 compared to 3 persons/km^2. Russia has many conditions for successful transit services, including low auto ownership, dense cities, and a limited roadway network. The national government has not significantly invested in a national highway system. As a result, transit usage in the country is very high and continues to provide the majority of motorized trips, even though auto ownership is increasing significantly.

Financing

Loans are available for capital investments in public transit systems. However, there has been limited uptake of these loans.

Fare Subsidies

The requirement to provide concessionary fares was removed in 2005. This has improved the finances of the transit service providers because there are now more paying customers. It is estimated that up to 60% of riders had been taking advantage of these concessionary fares.[142]

Capital Funding

In 2002, the central government spent 6 billion roubles (CAD$ 314 million, Jan 2 2002) on bus purchases and 2.2 billion roubles (CAD$ 115 million, Jan 2 2002) on transit and trolley buses.[143]

The central government has invested in the Moscow subway.

Operating Funding

No evidence was found of operating funding provided by the central government.

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[141] Radio Free Europe. (2011). "Russian Census Results Show Continuing Demographic Crisis". http://www.rferl.org/content/russia_census_results_demographic_crisis/3543674.html (Retrieved April 18, 2011)

[142] United States Department of Transportation. (2007). Developing Effective Mass Transit Systems: Proceedings of the 5th International Workshop on Public Transportation.

[143] Ibid.

Private Sector Involvement

The private sector's role in the provision of transit service has been growing in recent years, as the existing systems have not been able to keep up with demand. The private sector's role is largely in the provision of minibus service on the outskirts of an urban area where the existing system does not extend. They provide about 15% of trips.

Social Inclusion

The service vehicles are increasingly wheelchair accessible.

Administrative Support

There is no evidence of administrative support for transit policy development on the national level.

Level of Policy Integration

There is no evidence of transit policy being integrated with other national policies.

Autonomous Regions

There is no sign that any regions are treated differently by the national government with respect to public transportation.

Planning Requirements

There is no evidence of any planning requirements on the national level with respect to public transportation.

Level of National Government Interest in Transit

Perhaps because transit usage is quite high, the national government has not taken a strong interest in public transportation. Their interest in recent years has been more the result of the economic development aspects that transit service can bring. They have also expressed interest in helping the local service providers replace their aging fleets with newer vehicles.

Lessons Learned

Because the national government never pursued a national highway program, it has not been compelled to pursue a national transit program to right the balance.

The following chart highlights the lessons learned from the study countries that are applicable to Canada.

	US	Australia	New Zealand	Japan	Korea	UK	Italy	France	Germany	Russia
Federal funding for public transit should be long-term, predictable, and at high levels to be effective	✓								✓	
A group that manages and distributes federal transit funds, develops federal transit policies, and coordinates transit policies among different departments and levels of government can be effective	✓		✓			✓				
The federal government should encourage the use of the private sector by local transit authorities to contain costs, reduce risks, and improve service quality						✓	✓			
Federal funding for operating expenses should be provided with discretion	✓								✓	
The majority of funding provided by the federal government for transit should be provided with few "strings attached"	✓									
Housing and road building programs must be complementary to transit programs at all levels of government	✓									
Revenues generated from gas taxes may not be a sustainable source for federal transit funding and alternatives should be sought	✓									
Service quality and integration deteriorates with deregulation			✓			✓			✓	
Local authorities tend to prioritize transit more than federal authorities			✓			✓				
Federal transit policies should be developed in partnership with stakeholders			✓							
Cities with strong control over transit services, the ability to apply congestion charging, and significant sources of funding have strong transit						✓				

	US	Australia	New Zealand	Japan	Korea	UK	Italy	France	Germany	Russia
Planning and funding guidance are important to pass on to local transit authorities						✓	✓			
An employment tax may be a good funding source to complement transportation-related funding sources								✓		
Integration of housing, infrastructure, and transportation responsibility at the federal level could help with integration "on the ground"									✓	

3. COMPARATIVE ANALYSIS

The section below compares the national transit policies of the 11 study countries. The charts provide an indication of how the countries measure up in terms of public transit usage, public transit funding, and the intensity of automobile usage. Automobile usage is notably high in all of the countries, especially the US, which is unsurprising as the number of automobiles per household tends to be directly correlated to a country's Gross National Product (GNP). Transit mode share ranges from a low of 4% in New Zealand to a high of 67% in Russia, which suggests that transit mode share is not linked with GNP. Funding from the federal government also varies quite significantly; generally it is quite high in Europe and North America and lower elsewhere. In Japan and South Korea, funding is lower in part because the private sector plays a significant role in the provision of public transit, but also because these systems are so intensively used that they are able to recover much of their expenses through passenger fares.

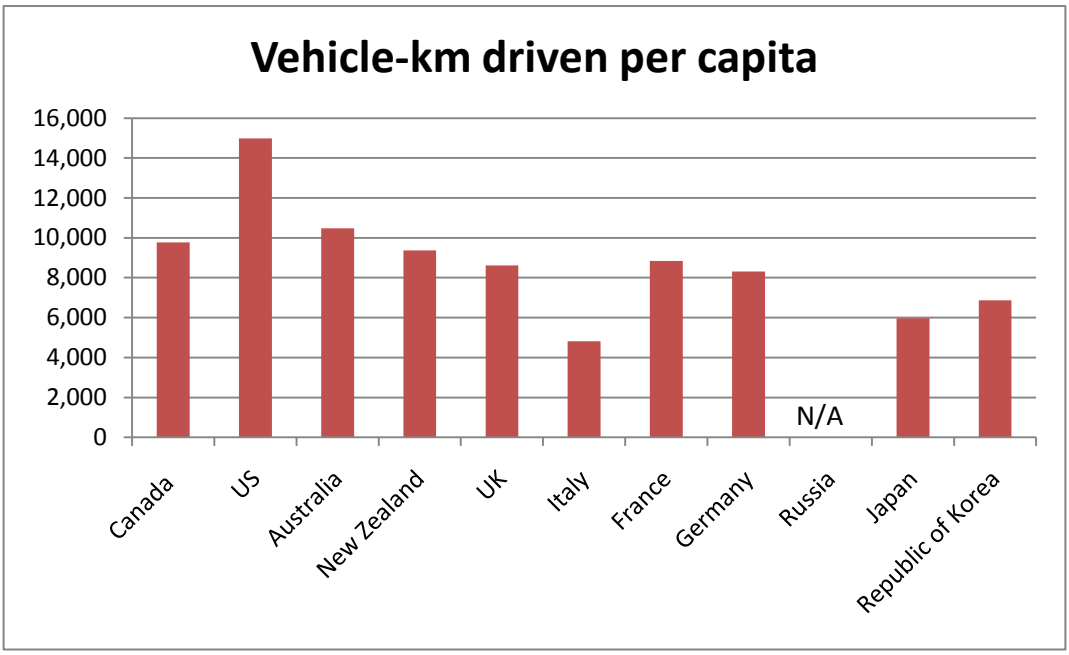

Figure 3: Vehicle-Km Drive Per Capita[144]

Source: International Road Federation (2010)[2]

[144] Annual vehicle-kilometres driven per capita is defined as the total kilometres driven by all motor vehicles within a country for a given year divided by the national population.

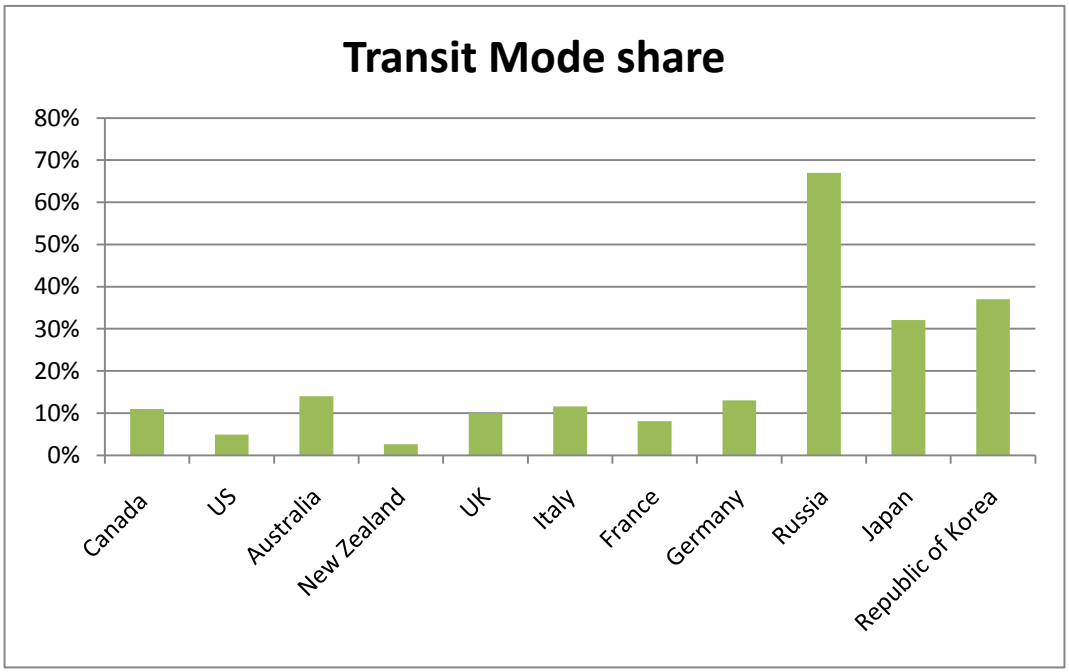

Figure 4: Transit Mode Share[145]

Source: See Appendix A, Sources 12-16, 18-23

[145] Transit mode share is defined as the percentage of trips that are made using public transit. Some countries choose to present this as a percentage of distance travelled by each mode in order to account for the fact that some trips use multiple modes and that some modes and to provide a better indication of how intensely each mode is used. In some countries, only motorized trips are included in the calculations.

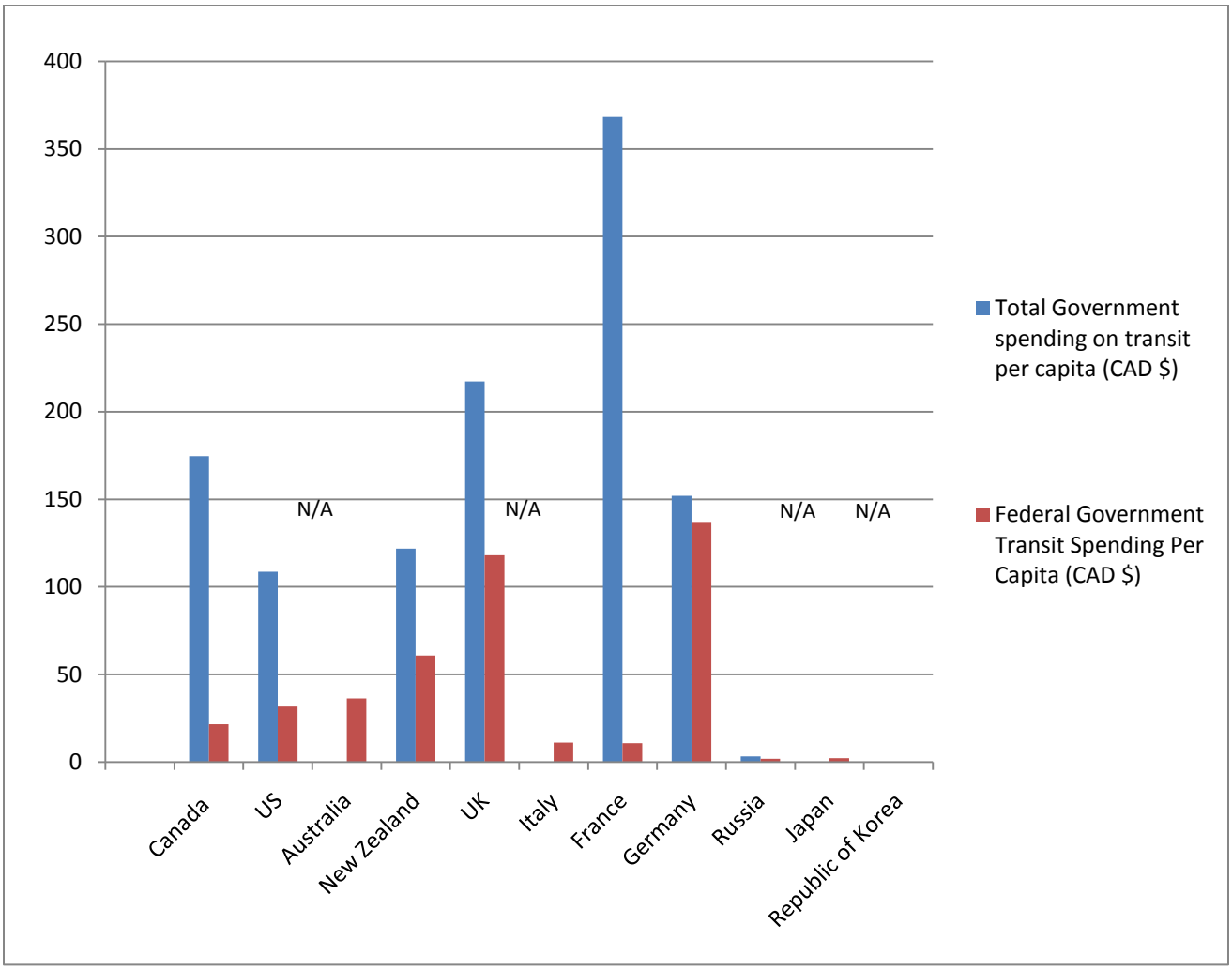

Figure 5: Government Spending on Transit Per Capita[146]

Source: See Appendix A, Sources 8, 24, 25, 28, 29, 32, 34, 37, 42, 43, 45

The study countries are relatively stable and wealthy, and their national transit policies are generally the result of extensive research and weighing against other national priorities. However, due to varying political, financial, and historical considerations, the national government's role in the funding and regulation of transit covers a considerable range. Based on our research into the national transit policies of the 11 countries, the following topics have provided the most useful means for comparing national transit policies.

[146] Year of data: Canada and USA – 2009; New Zealand – 2009/2010; Australia – average for 2008/2009-2013/2014; UK – 2008/2009; Italy – 2010; France and Germany – 2008; Russia – 2007; Japan – average for 2000 and 2002.

Government Investment Subsidies

Trends

In general there is reluctance by national governments to subsidize the operating costs of transit systems, focusing spending instead on capital projects, research and technology, and planning studies. When operating funding is provided, it has been focused either on rural areas or places with low population density that would see service cuts without it or smaller cities that have minor capital requirements. New Zealand is one exception in that it provides 50% of operating funding for all transit systems in the country. There is a feeling that the provision of operating funds would drive wages up, and federal governments feel they contribute enough through capital funds.

In general there is reluctance by national governments to subsidize the operating costs of transit systems, focusing spending instead on capital projects, research and technology, and planning studies.

Funding to subsidize transit for the elderly is almost entirely absent in national government programs, except in the UK and in New Zealand. UK has a free travel policy (except for the weekday morning travel period) for those over 60 or with a disability, while New Zealand allows seniors over the age of 65 and veterans to travel free during off-peak periods. On the other hand, almost all the study countries provide subsidies for the mobility impaired. In Japan and Korea, this funding is for capital infrastructure to improve accessibility, adding escalators or elevators in stations and paying for the roll out of low-floor buses.

A common economic justification for central government subsidies for transit is that national highways and airports are subsidized in most countries for economic development reasons, requiring transit subsidies to put the various modes on equal footing. In many countries, transit infrastructure is also considered a key component of the national infrastructure, and the maintenance of this infrastructure critical for safety, minimizing congestion, and minimizing lifetime operating costs.

	No Operating Subsidies from National Government	**Modest Level of Operating Subsidies from National Government**	**High Level of Operating Subsidies from National Government**
Description	-operating costs are the responsibility of local and regional governments	-limited to smaller cities or rural areas -limited to targeted populations	
Countries	Italy Russia Canada Australia France	US UK Japan Korea	New Zealand Germany

Lessons Learned

Most national governments are reluctant to provide operating funding as it commits them in the long term to public transit and has a potential downside that if federal funding is cut back at a later date, transit service may be severely impacted. As well, federal governments can clearly show the impacts of capital subsidies with their contribution to visible infrastructure such as new vehicles, rail lines, and stations, but the same cannot always be said of operating subsidies. It therefore appears that while a long-term federal government transit policy should not necessarily include significant amounts of operating funding, it should encourage local/regional/provincial governments to provide operating funds or allow transit authorities and local governments to generate their own funding. Having a diverse range of funding sources would somewhat insulate transit services from possible federal budget cut-backs.

Subsidized transit for the elderly is uncommon among the study countries. One reason cited is that as a large part of the demographic is now becoming elderly, implementing this funding would create a large burden on the federal government. Furthermore, as shown by the example of the UK, it is challenging to make this policy "progressive" in the sense that the subsidies may not be directed to those who need it most; wealthy elderly citizens might receive subsidies when low-income working-age citizens would not. Thus, based on the results of our survey, subsidizing transit for the elderly as part of a national transit policy may not be a priority for Canada. Instead, focusing on providing overall higher quality, accessible transit services may be more effective. If funding is provided for the elderly or other marginalized customers, it may be justified by social objectives (i.e., inclusion, health) rather than transportation objectives or provided at the local or regional level based.

Ability to Generate Local Revenues

	Limited Ability to Generate Local Revenues for Transit Operation	**Ability to Implement Road Pricing/Congestion Charging to Fund Transit Operation**	**Allowance for Local Taxation Power to Fund Transit**
Description	-Municipalities may use parking revenues for transit operation -Local contributions to transit service may come from general revenues	-Local and regional governments have access to a significant amount of funding generated by drivers	-Local and regional governments can raise taxes or obtain a share of the local taxes to fund transit
Countries	Australia New Zealand Japan Korea Germany Canada Russia	UK	US France Italy

Trends

Devolution of power and responsibility to local governments to implement taxes for transit systems

As previously mentioned, Canadian municipalities and Canadian metropolitan governance structures are not allowed to directly raise personal income taxes to fund transit operations or capital investments. These are powers reserved for the provincial and federal governments. The main source of funding for municipalities is the property tax, based on property value, which is also the main funding source for general municipal fiscal budgets. The need for more diverse and sustainable funding sources is often raised as a concern by municipal and public transit supporters. It seems that the Canadian situation is also the norm for members of the study countries, among which mainly only France, Italy and the US have delegated more liberal taxation powers to local authorities.

In the US, the federal government collects a gas tax on fuel of 2.86 cents gallon for public transit, but this tax does not represent a locally raised tax. Generally, US regions and municipalities are given the right to raise local taxes to fund transit. These taxes are not limited to a specific type and can include payroll tax, gas tax, sales tax, etc. Although property taxes are not considered to be a "tax" under strict legal terms, revenues raised through financial mechanisms related to property value are substantial and deserve attention. In addition to traditional property "tax" raised by municipalities, additional taxations related to land value (i.e. value capture, tax increment financing, parking taxes) should be examined. Portland, for instance, has used parking taxes and tax increment financing to raise 75% of the funding required for the first phase of its new streetcar system.[147] Mechanisms similar to tax increment financing seem particularly appropriate to fund rapid transit, LRT or streetcar systems which usually significantly increase property values close to the alignments.

In France, local communities also provide transit operating funding from their general revenues (as most countries). In 2008, general municipal funding provided approximately 24% of all funding, 29% of which was provided by the "Employers' Tax", the *Versement Transport.* This payroll tax must be paid by companies of 9 or more employees, based on a yearly aggregate of their salaries. The tax rate varies between 0.55% for cities between 10,000 and 100,000 inhabitants to 2.6% in *Île-de-France* region. Cities with more than 100,000 people can charge 1%, but interestingly enough, they can benefit from a 0.75% extra if they plan to build transit lines operating in dedicated rights-of-way (BRT, LRT, trams), which encourages French municipalities to pursue these modes of transportation.

[147] Portland Streetcar Development Oriented Strategy. 2006. Portland Office of Transportation, Portland Streetcar Inc. http://www.portlandstreetcar.org/pdf/development_200804_report.pdf

Allowance for road pricing

Although more and more countries are exploring the possibility of tolling roads, the power to price roads and structures such as bridges is rarely given to local authorities. In general, highways, and not local or urban roads, are the types of roads on which tolling is imposed. Such toll systems differ in essence from more metropolitan-centric congestion charging that are currently implemented only in London, Stockholm or Rome. Among the countries that were reviewed in this report, congestion pricing schemes exist only in the UK and Italy, and a proposal to implement such a scheme in New York City was defeated by the state government. France recently adopted a law granting communities the rights to implement congestion charges, as a result of the *Grenelle II ,* but implementation has not yet materialized. Germany imposes tools on trucks to enter city centres, but does not charge for personal vehicles that must meet the European vignette standards to be allowed within large urban areas.[149]

New technology allows for precise tracing of vehicle use, which opens the possibility of implementing comprehensive (pay-as-you-drive) road pricing schemes.

Unlike a gas tax, France's Employers' Tax is not dependent on the overall automobile use and aggregate fuel consumption of a given area, but on the overall economic vitality of an urban area.

There are definite advantages for local authorities to be able to price roads in order to fund transit services. Tolling highways is technically feasible and economically justifiable, but physical tolling cannot realistically be implemented on local roads. Rather, new technology allows for precise tracing of vehicle use, which opens the possibility of implementing comprehensive (pay-as-you-drive) road pricing schemes.

Lessons Learned

The authority to raise local taxes to fund transit investments or operations is clearly beneficial to municipalities. However, depending on how public transit is generally financed within a country and the general conditions under which transit services are provided, this power may be of more or less importance. The ability to raise local taxes to fund transit does not guarantee high economic performance or high ridership levels. Germany and Korea for instance, do not grant this right to their municipalities and yet achieve impressive ridership

Portland has used parking taxes and tax increment financing to raise 75% of the funding required for the first phase of its streetcar system.

[149] European Commission on Mobility and Transport. http://ec.europa.eu/transport/road/road_charging/charging_hgv_en.htm

and performance results, as they are influenced by other more dominating factors such as population density and geography.

The case of Germany seems to indicate that if no local tax is raised by municipalities, other sources of governmental financial support are required to provide sufficient funding to provide high quality transit. The German government does provide the majority of governmental funding sources (90%) and almost half of total operating funding. German cities are therefore not disadvantaged by the lack of local transport tax precisely because the national and state governments do provide predictable, stable and sustainable funding. In addition, as taxation schemes are complex and require thorough knowledge of each country, one must look at the complete suite of taxes that are imposed on citizens and not only at the presence/absence of local taxation power to have a better idea of governmental support for transit.

Another lesson learned is that, depending on the type of taxation power given to local authorities, these funding sources may be more or less stable and suitable to fund transportation. For example, a gas tax may be of limited use if it is imposed as a set fee per gallon or litre, as in the case of the US and Canada, because it is not influenced by increasing gas prices, meaning the buying power of the tax revenue decreases over time. Experience has shown that tax revenues that are earmarked for a specific use (e.g. a gas tax or congestion pricing for transit improvements) receive more popular and political support than if raised to be added to a general state treasury.

Another example of how tax characteristics can vary and may be more or less appropriate according to local circumstances is the French Employers' Tax. Unlike a gas tax, the Employers' Tax is not dependent on the overall automobile use and aggregate fuel consumption of a given area, but on the overall economic vitality of an urban area since it fluctuates according to the salaries paid to employees. Interviewees of this study reported that this scheme was seen as a more stable source of funding since car use in France has been stagnating or decreasing over the past few years, which means gas tax revenues would also be decreasing and public transit needs are increasing. In comparison, when the economy is growing, transport needs also grow, as do revenue from the Employer's Tax.

If no local tax is raised by municipalities, other sources of governmental financial support are required to provide sufficient funding to provide high quality transit.

Transit Business Models and Private Sector Involvement

Trends

This section examines the transit business models (the ways in which transit services are planned, managed, and delivered) used by the study countries, as well as New Zealand, Australia, and Korea, and the degree to which the private sector is involved in the planning, delivery, and funding of transit services. The table below is a summary of the findings.

	Transit Systems Mainly Defined by Public Sector	Significant Proportion of Transit Systems with Minimal Public Regulation
Description	-public sector has regulatory control over contracted and commercial transportation services in terms of service quality and pattern	-significant percentage of transit systems are not controlled or regulated by the public sector in terms of quality and pattern
Countries	Italy United States Russia Korea Australia France Germany	New Zealand UK Japan

In most of the countries examined (Italy, US, Canada, Russia, Korea, Australia, France, Germany) and in some areas of the UK, Japan, and New Zealand, the public sector plays a significant role in defining the transit services that are to be provided within their respective jurisdictions. In other words, the governments of these areas have the authority to regulate and set certain controls over public transit services. In these cases, the governing authority may choose to operate their own transit services or contract to a private operator(s) (the ratio of publicly operated services and privately operated services varies among the countries). The benefits of the latter approach can include a reduction in government spending on capital assets such as vehicles (as these may be owned by the private operators) and human resources such as drivers, and the ability to take advantage of existing operators' experience and on-the-ground knowledge about market demand, routing, and scheduling.

Private operators can also provide the necessary driver training and there tends to be less labour unrest in private operations. These contracts are often tendered through a competitive bidding process, and in the contract, the authority often specifies the performance and service standards that must be met by the operators. In most cases, the funding arrangement is a net contract, where the operator retains the fare revenue and the governing authority subsidizes the net cost of the operations. The purpose of this arrangement is to provide an incentive for the operators to grow demand. However, New Zealand has found that this model has resulted in a lack of transparency, as commercial operators are not required to report their ridership levels to the government. This has made it difficult for the New Zealand government to track ridership and for new companies to break into a market as they do not have an accurate picture of the demand or the potential net revenues that can be made.

In the UK and New Zealand, often as a result of deregulation, there are also areas where private operators can provide commercial services that are unregulated (in the case of New Zealand, an anticipated new legislation will likely end this practice in the near future). These services are outside the control of local/regional governments and any individual or organization can initiate a commercial service provided that they register the service and meet basic safety standards. They are not obliged to meet minimum levels of service, or provide off-peak or rural services. In general, the experiences of

these countries have shown that this type of arrangement has often resulted in a lack of service and fare coordination, and a lower level of service quality. To address these issues, governments have tried to implement certain mitigation measures. For example, in UK, under the *Transport* Acts of 2000 and 2008, private operators are allowed to cooperate with each other and with the local government so that there is more integration and improved services. However, to date, few operators have taken advantage of this right to cooperate with each other. There have been some partnerships made between local governments and private operators, though. For example, a local government may provide a transit-priority lane if the operator agrees to provide a minimum level of service. As well, governments have also often supplemented these commercial services with additional contracted services (e.g. during non-peak times and on less lucrative rural routes) to meet basic public goals. However, this often means the governing authority needs to provide more substantial subsidies.

In Europe, the design of the service contracts is regulated by EU regulations. These stipulate that all remuneration for transit services, even if they are provided by a public company, be well defined and that regulating and planning bodies be distinct from operating bodies.

Interestingly, in the United States, before the advent of federal funding for transit, most transit services were provided by private companies. Now transit services are overwhelmingly provided by the public sector. This is likely in large part due to the fact that only public agencies can receive federal funds (although they can use it to pay for private contractor service).

There are many advantages of involving the private sector in the delivery of public transit services. However, it is important for local/regional/ state/provincial governments to be given the authority to define the services that are to be offered in their jurisdiction.

Lessons Learned

Based on the experiences described above, it appears that there are many advantages of involving the private sector in the delivery of public transit services. However, it is important for local/regional/ state/provincial governments to be given the authority to define the services that are to be offered in their jurisdiction, regardless of who operates the services. Contracts also need to specify the performance standards that must be met, and include incentives for increasing ridership and integration, and penalties for non-performance with specific objectives or targets. This allows transit services to be better integrated with each other and ensures the service levels offered meet the needs and goals of the public sector.

Competition with Road Investments

Trends

In this section, the competition for funding between public transit and roadway developments is examined. As seen in the table below, in countries such as the US, Canada, New Zealand, and Australia,

where space has historically been less of a constraint for growth and development, roadway investments have tended to be of higher national priority than public transit. As has been pointed out by an interviewee, national advocacy groups representing the road industry tend to be stronger and more well established than those representing the public transit industry, and emphasis tends to be on providing more road space and connections to improve the mobility of people and goods. As a result, public transit systems often receive significantly less federal funding in comparison to roads and bridges, which in turn often lead to lower quality public transit services being offered and lower public transit mode shares.

In contrast, in countries such as France, Germany, the UK, Italy, and Korea where there is considerably less space per capita and denser urban centres, there has been continued emphasis on public transit services as a means to provide basic transportation services to a large population. Without public transit services, the urban centres simply would not be able to function. As a result, roadway investments typically receive less attention.

Despite the size of the country and seemingly vast unoccupied areas that can accommodate new growth, in order to improve the mobility of our residents, public transit needs to be prioritized ahead of roadway developments.

	Higher Priority for Roadway Investments	**Higher Priority for Public Transit Investments**
Description	-lower population densities -space is less of a constraint for growth and development	-higher population densities -growth and development is constrained by lack of developable land
Countries	United States Canada New Zealand Australia	Germany France United Kingdom Italy Korea

Lessons Learned

Thus, a challenge in Canada is to convince the federal government that despite the size of the country and seemingly vast unoccupied areas that can accommodate new growth, in order to improve the mobility of our residents, public transit needs to be prioritized ahead of roadway developments.

There needs to be recognition that our cities, the economic engines of the country, are growing and intensifying. For these reasons and in order that the cities can function efficiently and compete globally,

as in the case of France, Germany, and Korea, significant and stable public transit investments need to be made.

Level of Policy Integration

For the purpose of this report, the level of policy integration reflects the degree to which a national transit policy is integrated with other policies. The chart below defines three levels of integration.

	Low Integration	**Medium Integration**	**High Integration**
Description	-contradicting national policies -policies may be confusing to those who must comply with them -national policies may overlap or have gaps	-national transportation policies generally stand alone -it may be time-consuming to comply with the policies, but policies are not necessarily confusing or contradictory	-policies reinforce each other -easy to understand and comply with the policies -policies share common goals -mode-blind
Countries		USA UK	Germany France South Korea New Zealand

Note: Russia, Italy, Japan, Canada, and Australia are not listed because they do not have well defined national transit policies

There is a wide range of ways in which national transit policies can be integrated with other policies. National transit policies could be coordinated with other national transportation policies, especially those related to road building, intercity rail transportation, and active transportation, if those areas are funded or regulated on a national level. Policies can also be integrated between national, state, regional and local levels. When policies are integrated, they reinforce each other. Integrating national policies has the benefit of strengthening each policy and getting the most value from investments and effort.

On the other hand, low levels of integration may result in inefficient use of resources, especially if there are overlapping or contradicting policies. It is also problematic from the perspective of regions and cities, as it hinders their ability to deliver local services such as public transit, as well as to access funds.

Trends

In the US, transportation policy integration has occurred successfully in the areas of planning, research, and the environment. National transit policies have also been coordinated, to some extent, with affordable housing. Some countries have been able to integrate their national transit policies with their environmental, energy, economic, health and safety, and civil rights policies.

In the real world, there are a wide range of obstacles to policy integration. For example, in the United States, the FTA mainly partners with urban areas, while the Federal Highway Administration mainly works with the states. Civil servants serving in different departments work with different vocabularies and are familiar with different sets of regulations, which means that any progress towards policy integration must first involve getting to know about each other's organizations and activities. The UK has

a long history of treating different public transit modes differently, so the laws and policies related to bus and rail are different, and so there is a limit to how integrated the respective policies can be.

At times, there has been some integration of policies by requesting input from other departments in producing plans or funding programs. For example, in the past, findings from the US Department of Energy's research have been applied to the context of public transit. Australia, which is in the process of developing a national transit policy and a national urban policy, is also involving the same individuals in the development of the two policies and is ensuring that both policies are aligned with each other as well as other strategic work.

The US has a liveability strategy that requires the integration of policies from the FTA, HUD, EPA, and the US Department of Agriculture. In the United States, the FTA is allowed to reject funding for any metropolitan area that is not upholding policies related to civil rights, the environment, or accessibility.

Photo 3: TTC (CUTA)

It should be noted that integrated policies are different that policies for integrated transportation systems. A discussion of this is included in the planning requirements section.

In the UK, formula funding for local governments are intended for a wide range of transportation needs, giving local governments the responsibility of identifying their priorities. While integration is generally good, the integration of modes may have the negative effect of pushing out the needs of some forms of transportation, such as transit, walking, and cycling.

Lessons Learned

Effective policy integration may require a clear hierarchy of policies. *Americans with Disabilities Act (ADA)*, civil rights, and air quality legislation have been effectively integrated into national transit policy in the US because they have affected all transportation policies. Furthermore, they provide a common language for the different transportation bodies, which has been a barrier to integration in the past. A downside of these types of policies, however, is that they sometimes result in "unfunded mandates."

Presence of Urban Policy Development Unit

For the purpose of this report, an urban policy development unit is a group that advocates for consistent, beneficial policies for urban areas in the area of funding, land use, social housing, transportation, and taxation. The benefits of having such a unit would be to integrate various national policies affecting urban areas and to encourage integration among different levels of government (regions, municipalities, states, etc). It would also be to promote the interests of urban areas at the national level, where they are often underrepresented.

Challenges for urban policy development units are that urban areas have not always been the focus of the national governments (especially in federal systems of government). As such, states or provinces may get jealous or be suspect of direct links between federal government and cities. National governments may also not want to get involved in the problems of urban areas, such as poverty and crime. On the other hand, urban areas may guard their autonomy in certain areas and not want interference by the national government. Logistically, the boundaries of urban areas might be hard to define, and as there is so much variety in urban area needs, this may create difficulties in urban policy development.

Trends

In the United States, it is not the mandate of the FTA to oversee all aspects of urban policy, but among all of the administrations in the US Department of Transportation, it works most directly with urban areas. The FTA distributes funds to urban areas and carries out policies related to the funding programs. It has ten regional offices and five city offices to further improve coordination of programs with transit providers. The transit program has been coordinated with the housing and urban development program since its inception in the 1960s. The transit program also came about as a result of strong lobbying by the American Municipal Association (now the National League of Cities), and cities appear to be a major focus of the current Obama administration.

For the purpose of this report, an urban policy development unit is a group that advocates for consistent, beneficial policies for urban areas in the area of funding, land use, social housing, transportation, and taxation.

In the UK, there is also a unit in the Department for Transportation called Cities Policy that coordinates with the metropolitan areas outside of London.

As well, recently the Australian Government has indicated a renewed interest in urban policy by establishing a Major Cities Unit. This unit provides advice to the Australian Government on policy, planning and infrastructure issues that impact major cities, and it resides within the federal Department of Infrastructure and Transport.

Canada also has a policy development unit. The Policy Group resides within the department of transportation, or Transport Canada. It is responsible for developing, recommending, and coordinating transportation policies.

Lessons Learned

Due to the importance of transit to urban areas, it is critical that a mechanism for coordination between cities and the national government be established in advance of or in conjunction with a national transit program. This mechanism could come in the form of a national urban policy development unit. In most countries, this urban policy development unit resides in a department of transportation or department of infrastructure, rather than another national government department, suggesting that transportation

and infrastructure is a top concern in the relationship between the federal government and urban areas. Some policy development units, such as the US's FTA, distribute funding as well as develop and carry out policy, which may make them a more effective organization than a policy development unit that has no funding mechanism.

Level of Federal Interest in Public Transit

Signs of federal interest in public transit include high levels of investment, protection of transit-related federal spending in the recent recession, and prominence of transit issues in national elections. Based on our discussions with transportation experts in the countries studied and the preceding factors, we have rated the level of federal interest in public transportation on a ten-point scale, shown in Table 4. The UK, France, US, and Korea were countries that appeared to have the highest interest in public transit at the federal level. Interestingly, this did not necessarily appear to correlate with the degree to which transportation and transit are considered local responsibilities.

Table 4: Relative Level of Federal Interest in Public Transit

Country	Level of Federal Interest in Public Transit (0 = no interest, 10 = very high
Canada	4
US	8
Australia	4
New Zealand	5
UK	7
Italy	4
France	7
Germany	6
Russia	2
Japan	4
Republic of Korea	8

Trends

It appears that many national governments of the study countries have begun playing a more active role in public transit policy in the past 10 years, paying greater attention to policy issues and also providing more funding. The Korean government has been very active over the past six years, with funding programs for public transportation and land use integration, TDM measures, smart technology, and for helping the mobility disadvantaged. In France, the *Grenelle Environnement* policy making process has defined key government policies for ecological and sustainable development, with public transportation playing a key role. As well, the German federal government continues to transfer stable, recurring, and flexible funding to local jurisdictions for public transit.

In the US, federal interest and funding has been increasing as the economic benefits of mass transit have begun to be demonstrated. As well, the Australian government has become more involved with the creation of its Major Cities Unit and the national public transit policy that is currently being developed by Infrastructure Australia. Even in Japan, where the federal government has historically played a very limited role in funding mass transit, the government has become more active in the past decade as a response to service cuts resulting from depopulation and deregulation in rural areas. In New Zealand, federal funding for public transit has also been increasing over the last several years, and the National Land Transport Fund provides relatively predictable and stable operating and capital funding for public transit.

Those countries that are currently less active in terms of national policy include Canada, Russia, and Italy. Japan has an excellent public transit system that is largely run by the private sector, so the issue had not garnered a great deal of federal attention until service cuts began in depopulating rural areas of

the country over the past decade. While Russia has high transit usage as a legacy of past investments and low funding of roads, only limited funding is made available for capital investments in transit and there has been no national transit policy put in place. In Canada, the federal government has begun to fund capital projects as the awareness of the need for greater funding for public transit has been building at the local level and promoted by national organizations such as the Federation of Canadian Municipalities and CUTA. However, a permanent and predictable funding policy has not yet been implemented and there are no plans for a national public transit policy framework to be developed.

Lessons Learned

In France, Germany, Korea, and Japan, public transit is an integral part of everyday life. With smaller land areas and higher population densities, these countries have had to make public transit a central part of their transportation strategy. However, the higher mode share for public transit has not necessarily resulted in an increased level of federal interest. National aims such as economic growth, employment, environmental protection, and energy independence are instead often the drivers for creating national transit policies.

In the US, Australia, New Zealand, and to a lesser extent the UK and Italy, public transit was not seen as a high priority in the post-war years, as national budgets focused on roadways and vehicles per capita increased. However, with increasing congestion in cities, air pollution problems, higher fuel costs, and the increasing share of transportation as a share of household budgets, many of these countries in the past 10 years have begun to create policies and funding streams for public transit. However, public transit funding has not yet become integrated enough into federal policy. A change in government in these latter countries can still result in funding cuts or reduced policy attention, as has been seen in Italy and the UK, which have both reduced funding in recent years.

Planning Requirements

	Requirement to have long term regional transportation plans	**Requirement to have service standards**	**Requirement to have mode integration**
Description	-Urban agglomeration required to develop strategic regional transportation plan	-Service standard relates to fares, equipment , level of service, etc.	-Require modal integration in planning and operation of transportation
Countries	USA New Zealand UK France Germany Korea	Japan Korea France Germany	France Germany Korea

Trends

Land Use Requirements

In France and Germany funding for capital investment must be coherent with land use planning requirements.

There is a consensus amongst experts and practitioners that the relationship between land use and transportation cannot be underestimated. Unfortunately, acknowledging this fact does not automatically translate into efficient integration between land use and transportation policies. Too often, contradictions between policies, ministries and authority levels can prevent coherent planning between these two spheres, although the trend seems to indicate a general movement towards administrative and political reform allowing for a better integration of land use and transportation planning.

A greater integration between land use and transport policies is achievable if the same entities have power in both of these fields.

Amongst the countries studied, only Germany, France and Korea require public transit to be tied to land use planning (there may be other countries where local or regional governments are tying public transit to land use but we included only those whose requirements stem from national legislation). In both France and Germany, these requirements are linked to capital investments, as the national government's role in public transport is one of funding and high-level regulation. In Germany, project-based funding requires projects to be included into transportation plans, which must respect strategic land use plans. In France, similar integration between transportation projects and land use plans is a condition to accessing national funding.

Complete integration is difficult, however, as regional transit authorities generally do not have power over land use regulations (which are usually in the hands of municipalities). A greater integration between land use and transport policies is achievable if the same entities have power over both of these fields. In France, local authorities must collaborate to create regional authorities responsible for transportation and regional land use planning. This administrative scheme ensure that, even if the ultimate control remains fragmented between municipalities, a sufficient level of integration is achieved between regional and local policies.

In Canada, municipalities that receive federal gas tax transfers are required to complete an Integrated Community Sustainability Plan (ICSP), but integration between land use and transport policies could still be improved significantly as the governing bodies responsible for land use and transportation do not always work together or in a coordinated manner.

Transportation Planning Requirement

Transportation planning is required by national governments in all but three of the countries studied - Australia, Russia and Japan. The most common requirement is that local authorities must adopt strategic, long-term transport plans. Germany, France and Korea have gone a step further, requiring modal integration and service standards.

In both France and Germany, higher priority is given to LRT, BRT and tramway projects.

In France and Germany, for example, national laws do consider mode integration. The multimodal approach is prominent in their policy documents pertaining to passenger and freight transport. In both of these countries, capital investment directed to transit infrastructure can be used for a variety of transit modes, but higher priority is given to LRT, BRT and tramway projects. Part of the funding from the German government can also be used for road projects that must be tied to transit services, or at least have some linkage to with transit infrastructures. Japan and Korea also have service standard requirements, which seem to indicate a higher level of federal implication in public transit management.

Lessons Learned

Transportation planning is quintessential to the creation of more sustainable cities and regions. It is a prerequisite process to the provision of good transit services, more efficient use of existing infrastructure and a departure from automobile dominated transport systems. Long-term transportation plans are commonly use to plan budget and prioritize transit projects within a region. Although mandating local authorities to develop transport plans is not always imposed by national governments, all cities with good quality transit services do have strategic transport plans.

As in other policy fields, tying policy requirements to funding seems a more efficient and easier way of getting local authorities to comply with these duties, as opposed to a punitive approach.

The lack of integration between land use and transportation is now a classic criticism that is applied to most cities around the world. France, Germany and Korea indicate the highest level of requirement in this matter, and tie these requirements to capital funding for transit infrastructures. Land use plans must be integrated with transportation investments to create a built environment supportive of transit services.

Every city should integrate land use and transportation planning. Whether or not these planning requirements are embedded in national laws seems to be of secondary importance, although it ensures that all municipalities do adopt such plans. As in other policy fields, tying policy requirements to funding seems a more efficient and easier way of getting local authorities to comply with these duties, as opposed to a punitive approach for those choosing not to comply.

4. RECOMMENDATIONS

As is the case for Canada, many of the studied countries have adopted national public transit policies due to several common objectives and motivational factors. These include the following: promoting economic development; improving accessibility; reducing traffic congestion; promoting healthier lifestyles; alleviating pressures related to rising gas prices; demand for public transit; protecting the environment, and addressing the issues of climate change and air quality.

In terms of economic development, public transit systems are able to assist regions and countries maintain or enhance their global competitiveness, improve access to employment, and create new jobs (in 2010, Canada's transit industry employed about 45,200 people, with an additional 24,300 jobs in spin-off employment).[150] Providing quality public transit services is also recognized as a way to improve access to education, health care facilities, and other important services. As well, by shifting people from automobiles to public transit vehicles, the number of vehicles on the road and the related economic costs of traffic congestion, roadway maintenance, and parking infrastructure are reduced. Health benefits of public transit include reduced rates of obesity, increased levels of physical activity, reduced air pollution, and reduced health costs (a 2010 study by CUTA found that public transit saves the health care system at least 157 hospital admissions and $115 million each year).

In addition, rising gas prices have made driving less affordable, with the outcome that demand for public transit service has been increasing. For example, an international survey in 2003 averaged the cost of a passenger-kilometre of travel in five large Canadian cities - Montreal, Toronto, Ottawa, Vancouver, and Calgary – and found the cost to be $0.12 by transit and $0.46 by car, representing a 74% savings.[151] Therefore, there has been a need to provide more transit investments over the long term. Last but not least, countries such as the UK and Australia recognize that public transit is an essential tool to reducing the negative environmental impacts of transportation, such as greenhouse gas emissions and surface run-off, and for social equity.

Thus, with all of the returns that can be made from public transit investments, it is recommended that Canada develop a long-term national public transit policy framework. This will ensure that public transit remains a high priority and that all levels of government are working together in a coordinated manner to promote public transit.

The rest of this chapter describes the policies that should make up Canada's national framework. Where possible, relevant policies that have been adopted by other countries and that could be considered for Canada are highlighted. As well, other general recommendations are based on the lessons learned from the countries studied. In the final part of this chapter, actions that CUTA can take to further raise the profile of transit and garner national support for a public transit policy framework are described.

[150] CUTA. *The Economic Impact of Transit Investment: A National Survey.*
[151] CUTA. *Transit Means Business: The Economic Case for Public Transit in Canada.* Issue Paper No. 5.

FUNDING-RELATED TRANSIT POLICIES	EXAMPLES OF SIMILAR POLICIES IMPLEMENTED IN STUDIED COUNTRIES
A national public transit fund should be created to provide long-term, predictable capital funding by the federal government. Municipal governments could be provided with some discretion to use a specific portion of this funding for operating purposes. As well, provincial governments should be strongly encouraged to provide capital *and* operating funding to local and regional transit systems, as provincial governments are responsible for public transit systems under the Canadian constitution.	New Zealand's National Land Transport Fund Germany's GVFG fund US's SAFETEA-LU
To build the national public transit fund, there should be several long-term revenue generating mechanisms put in place to diversify transit funding and to increase overall stability. The federal excise fuel tax could be one of these funding sources, and the federal government should consider increasing the gas tax to generate more revenue for public transit.	France's Employers' Tax
Provincial governments, which as mentioned above are responsible for public transit under the constitution, should give local authorities the ability to raise revenue for transit services via taxes and other types of local charges, especially those related to influencing travel demand (e.g. parking taxes, tolls on bridges, etc.). This will help to avoid placing all of the funding responsibility on the federal and provincial governments and also enable governments responsible for planning transit services to provide matching funding. Some provinces may have to relinquish some taxation powers to the municipalities/regions, or reduce their tax levels in order to avoid an excessive taxation burden on the public. As well, provinces should be required to match or exceed the required municipal/regional funding contributions for public transit, if federal government funding is received. All of these steps will help diversify transit funding and again increase overall stability.	Italy provides local municipalities with the authority to raise transit funding through various mechanisms, including parking fees. Korea charges a Transportation Improvement Charge and has been implementing congestion pricing since 1996.

To receive federal transit funding, governments should be required to: 1. Make commitments to integrate land use with transportation by developing integrated transportation and land use plans (e.g. transit-oriented plans); 2. Develop longer-term, five-or ten-year transportation plans to help local governments move beyond the average political term. 3. Demonstrate value for money (e.g. cost-benefit ratios must be provided); 4. Make commitments to multi-modal planning in their transportation plans; 5. Meet environmental and health objectives (e.g. reduce GHG emissions are minimize energy use); 6. Monitor the success of their services (e.g. ridership numbers, service levels, percentage of services that are on-time, etc.) and provide this performance information to the federal government on an annual basis; and 7. Be willing to have some federal government funds be rescinded if performance objectives or required plans attached to funding are not achieved.	France and Germany require that transit projects support transportation plans and that they be coordinated with land use plans.
Additional funding for research and technology should be allotted for projects that specifically facilitate the use of public transit, such as smart card systems or real-time information systems. The Transportation Research Centre of Transport Canada does currently have an ITS R&D program, as well as funding for road projects (including projects focused on bus technology) and transportation accessibility; however, additional funding could be allocated specifically to public transit research and technology.	The US provides a total of over CAD$20 million each year to several transit research programs, including TCRP, NTI, and UTCs. Korea will invest about CAD$230 million annually between 2008 and 2020 as part of its ITS Master Plan.
Funding for transportation demand management programs should be available from the federal and provincial governments to complement public transit investments and to have a greater influence on travel demand.	The US provides funding for transportation demand management programs such as Safe Routes to School programs, and commute-trip reduction programs. Australia provides funding for a Travelsmart program.

NON-FUNDING-RELATED POLICIES	EXAMPLES OF SIMILAR POLICIES IMPLEMENTED IN STUDIED COUNTRIES
The federal government should develop a national public transit policy that sets nationwide standards for service levels, vehicle equipment, etc.	Australia is in the process of developing a national public transit strategy that will focus on these areas.
There should also be public transit policies embedded within other broader policies/strategies such as multi-modal transportation policies, environmental protection policies, housing policies, strategies to improve mobility and accessibility for all citizens, national urban policies, etc. This approach has proven to be the most effective means of policy integration.	Australia's national urban policy will include public transit as an essential component. France's *Grenelle Environnement* policy focuses on climate change and environmental challenges, and recognizes public transit an important part of the solution.
The levels of government or organizations responsible for providing the transit services should be given access to significant amounts of funding, the ability to generate their own funding, and the responsibility for planning the services. This has been shown to successfully help retain transit ridership and quality of service.	Italy, the US, Russia, Korea, Australia, France, and Germany provide their transit authorities the ability to plan and deliver service, and to some extent, fund their own services.
The federal government should promote the greater use of competitive bidding for contracted services (as these arrangements reduce labour costs, improve efficiencies, and help distribute the operating risks) by offering funding bonuses if transit authorities make a commitment to competitive tendering. This should not be confused with deregulation, which removes controls over the transit industry. As well, contracting authorities should be required to include performance and service standards to receive the funding bonuses. As well, incentives for meeting or exceeding these standards along with penalties when the performance standards are not achieved should be written into the contracts.	In France, Germany, Japan, New Zealand, Korea, the US, the UK, private operators play a significant role in providing transit services. In some cases, they are involved as contracted operators.

The Policy Group within Transport Canada should be expanded (or a new policy unit should be established) and be given the responsibility of developing the national public transit policies and administering the national public transit fund, and be the coordinating unit for the federal government. This group should also be responsible for working with other federal departments and other levels of government to ensure their related strategies recognize the important role of public transit.	Infrastructure Australia is responsible for developing the national public transit strategy. The New Zealand Transport Agency is responsible for administrating the National Land Transport Fund.
OTHER RECOMMENDED ACTIONS/INITIATIVES	**EXAMPLES OF SIMILAR ACTIONS TAKEN OR INITIATIVES IMPLEMENTED IN STUDIED COUNTRIES**
In addition to a national public transit policy framework, a national transport policy or strategy should be developed, and public transit should be an important component of this policy.	New Zealand's National Land Transport Programme
Tax incentives such as tax exemption for employer-provided transit benefits (e.g. discounted transit passes) should be implemented to further promote the use of transit.	In the US, employers can provide their employees with up to USD$230 per month in transit benefits that are not used in the calculation for payroll taxes. In the UK some tax benefits are available to employers who provide a work bus or subsidies to a bus service for their employees.
Both public and private stakeholders (e.g. transit associations, transit users, public and private operators) need to be involved in the development of national transit policies to increase the chances of success and compliance.	In the revision of the *Public Transport Management Act,* New Zealand is involving private operators and industry associations to be a part of the working committee and has made great strides through this collaboration.

	In the development of the French *Grenelle Environnement* policy, the public was given the opportunity sit down with public service providers to define key points of government policy related to ecological and sustainable development issues.
The national government should communicate the many benefits of transit to gain support for transit programs from a wide range of stakeholders.	US

Next Steps for CUTA

The Canadian Urban Transit Association has a central role to play in emphasizing the contribution of public transit to Canada's health, mobility, economic development, environment, and overall quality of life. Public transit can be the catalyst that will help solve many of the issues that face all levels of government. Public transit policies should not fall under one government department, but rather should be embedded within other broader strategies in all levels of government. CUTA needs to play a central role in making business leaders, the media, and various government departments aware of the need to integrate public transit into Canada's goals not just in transportation, but in the areas of the environment, the economy, and housing.

Another role is for CUTA to propose innovative strategies for sustainable funding for public transit. Examples from the 11 study countries could be taken as a starting point to open the discussion within Canada of the best ways to provide more funding for public transit. Many transit agencies in Canada are now under pressure to expand service without any new revenue streams. A coordinated effort with transit agencies, local and regional governments, universities, and members of the public to bring the issue of funding to the highest levels of government and help coordinate a discussion on ways to fund public transit would be a key function for CUTA.

Photo 4: TransLink (CUTA)

CUTA could also help to bring the issue of transportation demand management to the forefront with research work on how congestion charging, for example, could positively impact

commute times in metropolitan areas. While the idea of charging automobile drivers more is a difficult one for politicians to bring up, CUTA can help to introduce the idea with sound research on the economic, social, and health benefits of such projects.

It is recognized that in Canada, the provinces play an important role in bringing and raising local issues at the federal level. Thus, one of the recommended actions for CUTA is to work with the Council of the Federation (CF) to raise the issue and the need for developing a national transit policy framework. The findings of this report could be presented to the CF to help provinces better understand what is being done in other countries and how they would benefit from greater involvement from the federal government in public transit. As well, sustained collaboration with other key stakeholders (the Federation of Canadian Municipalities, the Canadian Chamber of Commerce, environmental and health groups, etc.) will be essential to building consensus on the recommendations and their implementation.

5. CONCLUSION

Our analysis has uncovered the elements of national transit policy frameworks in the study countries of Canada, Italy, the United Kingdom, the United States of America, France, Germany, Russia, Japan, New Zealand, Australia, and the Republic of Korea. The results indicate that every country, including Canada, does have elements of a national transit policy framework. This framework may not exist as a single, well-articulated document that sets broad government objectives and targets for various sectors that influence or relate to public transit. However, elements such as the provision of capital funding for public transit services and allowing the different levels of government to define the transit services that are to be provided in their jurisdiction are common in the study countries. As well, our comparisons between study countries show that there are significant differences among the various transit policy directions that have been implemented. Transportation-related legislation, investment programs, ownership and business models, level of private sector involvement, and even day-to-day practices vary significantly between countries.

Photo 5: RTC (CUTA)

Based on our findings, it is recommended that the federal government, possibly through Transport Canada's Policy Group, should create national public transit policies that are embedded within other broader policies and strategies. These policies would be developed in partnership with both public and private stakeholders to increase the chances of success and compliance. The Policy Group would also be responsible for administering a national public transit fund that would provide long-term, predictable capital funding for public transit in Canada. Revenue-generating mechanisms that would diversify and stabilize funding for transit would also be coordinated by the Policy Group. Additional funding would also be provided for transportation demand management programs (TDM) as well as research and technology that facilitate the use of public transit. The Policy Group would also advocate for tax incentives, promote greater use of competitive bidding for contracted services, and communicate the many benefits of transit to gain support for these policies.

It is also suggested that the provinces should be required to match or exceed federal funding contributions for transit and encouraged to provide both capital and operating funding. Local governments should be required to integrate land use and transportation planning, develop longer term, multi-modal transportation plans, monitor performance and meet certain other objectives. In return, they should be given the ability to raise revenue for transit services via taxes and other local charges.

A national public transit policy framework for Canada that defines roles, responsibilities, and priorities for each level of government and identifies sustainable sources of funding to meeting operating and capital requirements would help Canada solve a number of pressing issues that will allow our country to better prepare for the future. While per capita vehicle ownership has already peaked in countries such as the United States, the demand for alternatives to the automobile such as public transit, walking, and cycling has been increasing, as has the demand for walkable communities. Lengthening commute times,

increased air pollution, growing rates of obesity and their associated health care costs, and rising fuel prices can all be positively impacted with long-term, stable financing and better integrated and supportive public transit policies at the federal level.

Public transit should be viewed as the catalyst for meeting Canada's goals in health, mobility, economic development, protection of the environment, and improved quality of life. It is hoped that the best practices found in the study countries can assist the federal government of Canada in the development of a complete national public transit policy framework. The Canadian Urban Transit Association, in partnership with other key stakeholders, can provide the leadership in making recommendations for such a framework.

Appendix A – Basic Characteristics of Countries Examined

Geography and Demographics

Country	Geography		Demographics						
	Land Area (sq km) [1]	Relevant urban characteristics that support/hinder transit services	Population (million, 2008) [1]	Age distribution (2009) - % [2]			Average Country Density (persons/ sq km, using 2008 pop.)	Distribution of the national population into urban and rural regions % [3]	
				0-14	15-59	60 and over		Urban	Rural
Canada	9,984,670	Low population density in many parts of the country. Only larger cities such as Vancouver, Toronto, and Ottawa have been built around transit.	33.3	16.5	64	19.5	3	80.58	19.4
USA	9,632,030	Post-WWII sprawl beyond the traditional city boundaries; transit services were often not extended; Significant low-density suburban development was encouraged by the widespread adoption of the personal automobile and tax-free mortgages encouraging new home ownership; large investments in federal highway system; relatively inexpensive fuel costs; transit fares kept low by local governments;	304.1	20.3	61.8	17.9	32	82.29	17.7
Australia	7,741,220	Low population density. Larger cities such as Sydney and Melbourne are built around transit; however other cities have been built around the car. Rising oil prices, congestion and environmental and obesity concerns, however, are promoting transit improvements and has played a role in transit ridership increasing.	21.4	19	61.9	19.1	3	89.11	10.9
New Zealand	267,710	Historically, New Zealand's cities have not been built around transit.	4.3	20.4	61.8	17.8	16	86.20	13.8
UK	243,610	London is the dominant urban centre in the country and has maintained high transit usage, but other cities have generally taken the development pattern of US cities	61.4	17.4	60.2	22.4	252	79.64	20.4
Italy	301,340	Italy is made up of a handful of urban areas that were traditionally city-states. The larger cities are dense and support well used transit systems.	59.8	14.2	59.4	26.4	199	68.36	31.6
France	549,190	"Employers Tax" (*Versement Transport*), which generates about 35% of all operating funds spent in urban public transport in France. Substantial investment through the *Grenelle Environnement.* Dense urban environment, expensive fuel; pre-automobile built-environment in city centres; long history of rail transport; popularity of modern trams increasing in past two decades.	62.3	18.4	58.9	22.7	113	85.25	14.7
Germany	357,120	Strong transit culture; substantial intercity and regional rail network; Public transport funding fixed by law;	82.1	13.5	60.8	25.7	230	73.85	26.2
Russia	17,098,240	No federal highway program; little space in cities dedicated to roadways	142.0	14.8	67.4	17.8	8	73.17	26.8
Japan	377,930	High population density and high rates of urbanization. Large mountainous areas limit developable area. Freeway building began only in 1964; most are toll roads. Insurance, gasoline, and licensing is expensive; free parking rare in urban centres.	127.7	13.3	57	29.7	338	66.83	33.2
Republic of Korea	99,720	Urban population is high % of total and country's population is concentrated on just 30% of available land. Korean War of 1950-3 left much of transportation system in ruins. Rapid rebuilding of rail network necessitated government involvement in rail construction, which has continued to today. War also left per capita GDP behind Western levels until 1980s, leaving less money in household budgets to buy automobiles.	48.6	16.8	68.1	15.1	487	60.22	39.8

Government, Political, and Economic Characteristics

Country	Government and Politics				Economy		
	Political structure [4]	**Decision-making and legislative processes [4]**	**Role of federal government in influencing transportation sector**	**Other competing national priorities**	**GDP (CAD$, billion, 2009) [2]**	**Per capita GDP (CAD$, 2009) (based on 2008 population**	**Main industries [5]**
Canada	State Structure: Federal System of Government: Parliamentary	Bicameral legislature, with one body non-elected and the other elected via first past the post	Federal government is responsible for ships and ship lines, airports, ports, railways, canal and work and undertakings that are in the interest of two or more provinces (e.g. vehicle emission standards, transportation safety and security, and urban issues).	Education, and health and social programs	1,610	48,332	transportation equipment, chemicals, processed and unprocessed minerals, food products, wood and paper products, fish products, petroleum and natural gas
USA	State Structure: Federal System of Government: Presidential	Bicameral legislature, with upper house having elected members and lower house having elected members using first past the post	Federal funding of transportation has resulted in fairly uniform transportation agencies in the states. Has resulted in what is possibly the largest construction project in the world, the federal highway system. Federal government is responsible for interstate transportation.	Defense (23% of 2009 national spending), social security (20% of 2009 national spending), and medicare & medicaid (19% of 2009 national spending) [6]	16,648	54,752	highly diversified, world leading, high-technology innovator, second largest industrial output in world; petroleum, steel, motor vehicles, aerospace, telecommunications, chemicals, electronics, food processing, consumer goods, lumber, mining
Australia	State Structure: Federal System of Government: Parliamentary The Australian (Commonwealth) Parliament has legislative power over areas such as trade and commerce with other countries, external affairs, and railway construction with the consent of the affected state. State parliaments have legislative powers over schools, state police, the state judiciary, roads, public transport, and local government	Bicameral legislature, with the upper house having elected officials and the lower house having elected officials using preferential system	Very little. Public transport is responsibility of regional and state governments	Healthcare, Education, and Employment/ Economy	994	46,380	mining, industrial and transportation equipment, food processing, chemicals, steel
New Zealand	State Structure: Unitary System of Government: Parliamentary	There is no upper house, but the lower house is elected using semi-proportional representation	There is a formal federal mechanism to fund regional transport priorities (through the National Land Transport Fund). The Transport Agency also approves procurement procedures developed by the regional authorities.	Roadway development	165	38,652	food processing, wood and paper products, textiles, machinery, transportation equipment, banking and insurance, tourism, mining

Government, Political, and Economic Characteristics

Country	Government and Politics				Economy		
	Political structure [4]	**Decision-making and legislative processes [4]**	**Role of federal government in influencing transportation sector**	**Other competing national priorities**	**GDP (CAD$, billion, 2009) [2]**	**Per capita GDP (CAD$, 2009) (based on 2008 population**	**Main industries [5]**
UK	State Structure: Unitary System of Government: Parliamentary Many authorities, including transportation, have been devolved to Wales, Scotland, N. Ireland, and London	Bicameral legislature, with one body non-elected and the other elected via first past the post	Transportation is a devolved matter, so Scotland, Wales, Northern Ireland, and London determine their own transportation policies. The central government, however, provides funding.	Healthcare, Education, Immigration	3,356	54,645	machine tools, electric power equipment, automation equipment, railroad equipment, shipbuilding, aircraft, motor vehicles and parts, electronics and communications equipment, metals, chemicals, coal, petroleum, paper and paper products, food processing, textiles, clothing, other consumer goods
Italy	State Structure: Unitary System of Government: Parliamentary	Bicameral legislature, with one body elected and the other elected using semi-proportional representation	The federal government provides funding for capital investments, but is not involved in funding operations or managing transit services. This is clearly defined as a responsibility of lower levels of government.	Healthcare	2,545	42,536	tourism, machinery, iron and steel, chemicals, food processing, textiles, motor vehicles, clothing, footwear, ceramics
France	State Structure: Unitary System of Government: Dual executive; Importance of *Intercommunal cooperation* between *communes* and other types of local and regional governments	Bicameral legislature, with upper house having elected members and lower house having elected members using a two-round system	- Recent upsurge in capital funding used mainly for new infrastructure projects, particularly tramway, LRT and BRT, through the *Grenelle Environnement* law. - Provide national legislation framing the overall transportation field, the main of which is the LOTI law.	Local public transport is not a national priority per se; important policy fields in the national budget include: international relations, agriculture, culture, defence, economy, sustainable development, justice, post-secondary education, health, sport, unemployment, etc. [7]	3,136	50,355	machinery, chemicals, automobiles, metallurgy, aircraft, electronics; textiles, food processing; tourism
Germany	State Structure: Federal System of Government: Parliamentary	Budesrat: members of state governments Budestag: elected using Semi-proportional representation	German constitution mandates the Federal government to financially support local public transport. Federal provides funding, but decisions on how to use this funding is a Länder responsibility.	Public transit is a responsibility of federated states (Länder), so not directly a federal priority, although most of the funding comes from the federal level, other priorities include health, defence, education, economy and employment, etc. [8]	4,016	48,910	among the world's largest and most technologically advanced producers of iron, steel, coal, cement, chemicals, machinery, vehicles, machine tools, electronics, food and beverages, shipbuilding, textiles

Government, Political, and Economic Characteristics

Country	Government and Politics				Economy		
	Political structure [4]	**Decision-making and legislative processes [4]**	**Role of federal government in influencing transportation sector**	**Other competing national priorities**	**GDP (CAD$, billion, 2009) [2]**	**Per capita GDP (CAD$, 2009) (based on 2008 population**	**Main industries [5]**
Russia	State Structure: Federal System of Government: Presidential-Parliamentary (President is the head of state and the Prime Minister is the head of government). [9]	Bicameral legislature, with lower house having elected members and upper house having appointed representatives. [10]	Minimal; the federal government has provided some funding for the Moscow subway, but not for other rail networks. It helps invest in bus, trolleybus, and other infrastructure.	Economic development, environment, security	1,562	11,004	mining and extractive industries; machine building; defense industries; road and rail transportation equipment; communications equipment; agricultural machinery and electrical equipment; medical and scientific instruments; consumer durables, textiles, foodstuffs, handicrafts
Japan	State Structure: Unitary System of Government: Parliamentary	Bicameral legislature, with one body elected and the other elected using semi-proportional representation	The Ministry of Land, Infrastructure, and Transport (MLIT) is responsible for transportation sector and public transit regulation. Although local planning takes place, funding comes almost exclusively from the national govt.	Public works, education, national defense.	5,308	41,565	among world's largest and technologically advanced producers of motor vehicles, electronic equipment, machine tools, steel and nonferrous metals, ships, chemicals, textiles, processed foods
Republic of Korea	Local governments are semi-autonomous, and contain executive and legislative bodies of their own.	The Vice Minister for Transport, Logistics, and Maritime Affairs heads up the three offices of the Ministry of Land, Transport, and Maritime Affairs dedicated to public transportation: Transport Policy (Public transportation), Road Policy (Road Planning and Construction), and Railroad Policy (Railroad Planning and Construction, Metropolitan Rail, and High-Speed Rail)	The head of the Ministry of Land, Transport, and Maritime Affairs is appointed by the president. The Ministry is in charge of developing both intercity and arterial roads, as well as the expansion of the public transportation system. This includes development of the high-speed rail network. Korail (Korea Railroad Corporation), the national railroad operator in South Korea, is an agency of the Ministry. Korea Train Express (KTX), Korea's high speed rail system, is operated by Korail.	Defence (12% of national budget); Health (12%); Education (16%) [11]	1,174	24,153	electronics, telecommunications, automobile production, chemicals, shipbuilding, steel

General Transportation Statistics

Country	Average super gasoline price (CAD$/l) - 2008 [1]	Vehicle ownership rate (per 1000 people) - 2007/ 2008 [1]	# of vehicles per Km of Road [1]	Vehicle-km driven [1]			Road network length (km) [1]	Vehicle-km driven per year per km of Road	Mode share				
				vehicle-km (million)	vehicle-km per capita (based on 2008 pop)	Year of vehicle-km data	km of road		Personal vehicle (%)	Transit (%)	Walking/biking (%)	Other (%)	Year of mode share data
Canada	$0.75	605	14	325,373	9,768	2008	1,409,000	230,925	80 [12]*	11 [12]*	7/1 (total 8) [12]*	1 [12]*	2006
USA	$0.56	809	38	4,554,446	14,979	2008	6,506,221	700,014	86.5 [13]	4.9 [13]	3.3 [13]	5.3 [13]	2007
Australia	$0.73	687	18	224,660	10,483	2008	818,356	274,526	80 [14]*	14 [14]*	6 [14]*		2009
New Zealand	$1.08	733	33	40,020	9,375	2008	93,911	426,148	78 [15]	2.6 [15]	18.3 [15]	1.5 [15]	2006-2010
UK	$1.43	526	77	528,910	8,612	2008	419,634	1,260,408	64 [16]	10 [16]	24 [16]	2 [16]	2008
Italy	$1.56	673	83	288,634 [17]	4,824 [17]	2004	487,700	591,827	88.5 [18]	11.6 [18]	n/a	n/a	2009
France	$1.51	598	39	550,700	8,843	2008	951,200	578,953	64.8 [19]	8.1 [19]	22.2/2.6 (total 24.8) [19]	1.7 [19]	2008
Germany	$1.55	554	71	681,995	8,306	2008	644,288	1,058,525	60.8 [20]	12.9 [20]	17.8 [20]	8.6 [20]	2008
Russia	$0.88	245	37	n/a	n/a	n/a	963,000	n/a	n/a	67 [21]	n/a	n/a	2005
Japan	$1.41	593	63	762,613	5,972	2006	1,200,858	635,057	67.7 [22]	32.1 [22]	n/a	0.2 [22]	2008
Republic of Korea	$1.50	346	161	334,032	6,872	2008	104,237	3,204,543	28% [23]	37 (Bus 30; Rail 7) [23]	30 (Walk 28; Bike 2) [23]	5 [23]	2000

*Mode share data refers to commute trips only. Data for all trips was not available.

Public Transit Statistics

Country	Extent and condition of passenger rail (inter- and intra-urban) infrastructure			Transit ridership (annual passenger trips)	Transit ridership per capita (based on 2008 pop.)	Transit Passenger-km per capita			Total government spending on transit (CAD$)*	Total government spending on transit as % of GDP (based on 2009 GDP)	Federal government transit spending (CAD$)*	Federal government's share of total government transit spending (%)*	Total government spending on transit per capita (CAD$)*	Federal government transit spending per capita (CAD$)*
	km of rail system	km of rail system per capita	km of rail system per km of land area			All public transport Modes	Rail only - passenger-km per capita (based on 2008 pop) [1]	Year for rail passenger-km data						
Canada	n/a	n/a	n/a	2,714,528,899 (linked) [24]	81.49	n/a	60	2008	5,815,534,793 [24]	0.36%	718,562,895 [24]	12.6%	175	22
USA	20,956 [24]	0.00007	0.00218	10,134,262,062 (unlinked) [24]	33.33	177 [24]	157	2007	33,010,900,000 [25]	0.20%	9,627,700,000 [25]	29.2%	109	32
Australia	41,461 [26]	0.0001	0.00536	624,100,000 (unlinked) [26]	10.02	1,611 [27]	663	2008	n/a		776,633,333 [28]	n/a	n/a	36
New Zealand	n/a	n/a	n/a	121,500,000 (unlinked) [15]	28.46	274 [29]	91 [29]	2009/2010	519,945,364 [29]	0.32%	259,972,682 [29]	50.0%	122	61
UK	16,000 [30]	33,900 [30]	0.06568	7,704,000,000 (unsure if linked or unlinked) [31]	125.44	n/a	787	2007	13,035,000,000 [32]	0.39%	7,252,000,000 [32]	55.6%	217	118
Italy	16,700 [30]	0.00028	0.05542	5,200,000,000 (unsure of linked or unlinked) [33]	86.91	n/a	n/a	n/a	n/a	n/a	665,950,000 [34]	n/a	n/a	11
France	29,473 [35]	0.00047	0.05367	6,409,315,000 (unsure of linked or unlinked) [36]	102.92	2302.44 [37]	1,590	2008	7,275,632,600 [36]	0.23%	716,071,600 [36]	9.8%	117	11
Germany	33,900 [30]	0.00041	0.09493	7,602,000,000 (linked) [38]	92.58	548 [39]	1,005	2008	13,403,384,000 [8]	0.33%	12,078,872,000 [8]	90.1%	163	147
Russia	6,721 [40]	0.00005	0.00039	37,400,000,000 (unsure of linked or unlinked) [21]	263.47	n/a	1,219	2007	458,000,000 [41]	0.03%	276,000,000 [41]	60.3%	3	2
Japan	27,343 [22]	0.0002	0.07235	28,906,000,000 (unlinked) [22]	226.35	3,855 [22]	3,016	2004	n/a	n/a	278,100,000 [42]	n/a	n/a	2
Republic of Korea	3,399 [43]	0.0001	0.0341	110,000,000 (2001, rail only) [43]	246.20	n/a	1,153	2006	n/a	n/a	10,000,000 [44]	n/a	n/a	0.2

*These figures reflect government subsidies provided to transit systems

Notes and Sources

[1]	Source: International Road Federation's World Road Statistic's Database 2003-2008. Rail passenger-km includes inter-urban and intra-urban rail. Car ownership data is for 2008, except for Russia, whose data is for 2007.
[2]	Source: Economist - Pocket World in Figures - 2010 Edition, unless indicated otherwise
[3]	Source: United Nations, Department of Economic and Social Affairs, Population Division, World Urbanization Prospects: The 2009 Revision, 2010 figures. Urban population is defined as: De facto population living in areas classified as urban according to the criteria used by each area or country. Data refer to 1 July of the year indicated and are presented in thousands.
[4]	Source: Government at a Glance 2009 Available at www.oecd.org/gov/indicators/govataglance, unless indicated otherwise
[5]	Source: CIA Factbook, "Industries"
[6]	Source: Wikipedia, United States federal spending
[7]	Source: Ministère du Budget, des Comptes publics, de la Fonction publique et de la Réforme de l'État. 2010. Le Budget de l'État voté pour 2010 en quelques chiffres. http://www.performance-publique.gouv.fr/fileadmin/medias/documents/ressources/PLF2010/depliant_budget2010.pdf
[8]	Source: Bundesministerium der Finanzen, 2008. http://www.bundesfinanzministerium.de/bundeshaushalt2008/html/index.html
[9]	Source: World Forum on Democracy. http://www.fordemocracy.net/electoral.shtml
[10]	Source: Encyclopedia Britannica. http://www.britannica.com/EBchecked/topic/203555/Federation-Council
[11]	Source: Visual Economics. http://www.visualeconomics.com/how-countries-spend-their-money/
[12]	Source: Statistics Canada, Census 2006
[13]	Source: US Bureau of Transportation Statistic's 2008 Transportation Statistics Annual Report - 2007 figures (US transit ridership in 2007 was 10,418,000,000)
[14]	Source: Australia Bureau of Statistics (2009). 2009 Figures. Non-commuting trips for 2009: 90% of trips involved personal vehicles and 19% of trips involved transit (the totals do not add to 100% as a single trip may involve more than one mode). http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1090C7E66ADE806BCA2576730012D21A?opendocument
[15]	Source: New Zealand Ministry of Transport's Transport Monitoring Indicator Framework. Transit ridership is for 2009, vehicle-km driven are for 2008/2009
[16]	Source: Department for Transport. Statistics, journeys per mode, 2008 data
[17]	Source: OECD "Transport" Statistics 2004
[18]	Source: “UN FUTURO DA COSTRUIRE”. Mode share data was only available for motorized trips.
[19]	Source: Ministère de l’Écologie, du Développement durable, des Transports et du Logement. Commissariat Général au développement Durable. 2010. La Revue du CGDD – La mobilité des Français; Panorama issu de l’enquête nationale transports et déplacement 2008.
[20]	Verband Deutscher Verkehrsunternehmen. 2011. VDV Statistik 2009., http://www.vdv.de/module/layout_upload/st2009_online.pdf; Modal share for trip to work only
[21]	Source: Moscow Conference Proceedings (2005)
[22]	Source: Ministry of Internal Affairs and Communications Statistics Bureau, Director-General for Policy Planning (Statistics Standards) & Statistical Research and Training institute. Japan Statistical Yearbook (http://www.stat.go.jp/english/data/nenkan/1431-12.htm). Figures are for 2008. Mode share only accounts for motorized trips, and transit ridership includes inter-municipal rail. According to the 2000 Population Census (http://www.stat.go.jp/english/data/kokusei/2000/jutsu1/00/04.htm), mode share for commuting trips for all modes was 44.3% passenger vehicles, 27.2% transit, 19.5 walking and cycling, and 7.8% other.
[23]	Source: Korea National Statistical Office
[24]	Sources: US National Transit Database and CUTA (2009 data). US federal government's share of capital funds spent in 2009 was 42% and according to the US Bureau of Transportation Statistic's 2008 Transportation Statistics Annual Report - US transit vehicle-km in 2006 was 7,537,000,000 and rail km was 15,889 km. 1175 km Amtrak network added in so numbers are more comparable with other countries
[25]	Source: APTA 2010 Factbook (2008 data). Total government spending excludes directly generated funds.

[26]	Source: BITRE. Personal Communication. Ridership data is for 2007/2008.
[27]	Source: BITRE Transport Stats Yearbook 2009, 2007/2008 figures. Passenger km figure includes all passenger rail and bus km, including inter-city rail and bus services, but excludes ferry km.
[28]	Source: Budget Background Paper No. 2. http://www.ato.gov.au/budget/2009-10/content/bp2/html/bp2_expense-19.htm and personal communication with Infrastructure Australia. Average annual federal spending between 2008/2009 and 2013/2014 on public transport
[29]	Source: New Zealand Transport Agency (Personal Communication), 2009/2010 data
[30]	Source: Department for Transport. Statistics, road and rail infrastructure, 2007 data
[31]	Source: Department for Transport. Statistics, passenger journeys on public transport, 2009 data
[32]	Source: Department for Transport. Statistics, modes, 2008/2009 data
[33]	Source: AASTRA website. 2006 data
[34]	Source: AASTRA, through email correspondence. 2010 figure
[35]	Source: Ministère de l'Écologie, de l'Énergie du Développement durable et de la Mer, Repères - Chiffres clés du transport, Édition 2010
[36]	Source: GART. L'année 2008 des transports urbains, http://www.gart.org/S-informer/Publications-du-GART/L-annee-2008-des-transports-urbains
[37]	Source: INSEE, Institut national des statistiques et des études économiques. http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATnon02151, and http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATTEF13627, includes all transit mode, not only urban transit
[39]	Source: Verband Deutscher Verkehrsunternehmen. 2009. VDV Statistik 2008. http://www.vdv.de/module/layout_upload/st2008_online.pdf;
[40]	Note: For Germany, passenger-km per capita was calculated from numbers of the VDV Statistik 2008 publication, excluding heavy rail passenger transport.
[41]	Source: EU Energy and Transport in Figures. 2007 figures
[42]	Source: Notes from 2005 US-Russian Exchange of Transit Officials (reflects 2000/2002 data)
[43]	Source: General Federation of Private Railway and Bus Workers Union. (2011). "Act for Preserving and Maintaining Local Public Transit." http://www.pru.or.jp/document/download.php?id=3144
[44]	Source: Railway Gazette International
[45]	Source: Sang-Kyu Hwang, Director of the Global Research Office for Green Growth and Convergence, The Korea Transportation Institute. Personal communication

Appendix B - Glossary

AOT (Autorités Organisatrices de Transports or Public Transit Authorities) – In France, an AOT is formed by a group of local governments and it is in charge of managing, planning and organizing public transit over their territory, which is usually provided by contracted private transport operators.

Block Grant: A large sum of money granted by the national government to a regional government with only general conditions on how it is to be spent

Bund: The national government of Germany. The Bundesregierung refers to the federal government, Bundestag and Bundesrat are the two national legislative chambers.

Commercial transportation service: A transportation service operated and managed by a private operator and is for-profit.

Concessionary fares: Discounted fares provided to certain types of passengers

Deutsche Bahn (DB): The German national railway company. It was privatized in 1994, although the only stakeholder is the State of Germany. It is now organized as a conglomerate of different subsidiaries, including a subsidiary responsible for operating urban public transit, which is a quasi-private (or semi-public) organization.

Department of Infrastructure and Transport: The Australian national government department that deals with transport infrastructure, transport security, roads, aviation, and maritime development

Deregulation: The removal of regulations related to fares, routes, schedules, and entry into the market.

Devolved: A responsibility that has been transferred to a more local level of government.

Discretionary funding: Funding that is allocated to recipients at the discretion of the fund sponsor.

EntflechtG (Gesetz zur Entflechtung von Gemeinschaftsaufgaben und Finanzhilfen): German legislation, which translates to "Act on the division of powers and financial support between communities" This legislation sets out the terms and rates to which additional federal funding in the fields of education, housing and transportation are subject.

European Commission: Thee executive body of the European Union, responsible for proposing legislation, implementing decisions, upholding the Union's treaties, and the general daily operations of the Union.

Formula funding: Funding that is allocated to a set of recipients in accordance with a formula.

GART (Groupement des Autorités Responsables des Transports or Group of Transport Authorities): The association representing French local elected representatives responsible for providing public transit services.

Gemeinde: German term for "community". A Gemeinde is the smallest administrative unit in Germany, and takes the form of a city, village or township.

Grenelle Environnement: A broad policy that was developed through extensive public participation and resulted in two pieces of legislation: *Grenelle I and II*. The fields affected by this policy are numerous and include public transit. The focus of *Grenelle II* is on implementation and provides objectives for various fields of activity, including transportation.

Intelligent Transportation Systems (ITS): The application of advanced electronics, communications, control, and sensing and detecting devices in transportation systems to improve safety and efficiency through the transmission of real-time information.

Länder: The German term for "states". Germany has 16 states, including the three Free States of Bavaria, Saxony and Thuringia, and the city-states Bremen and Hambourg.

Parliamentary government: A government where the members of an executive branch (the cabinet and its leader - a prime minister, premier, or chancellor) are nominated to their positions by a legislature or parliament, and are directly responsible to it.

Prefecture: Japan has 47 prefectures that hold administrative authority within their boundaries. Below the level of prefecture are cities, towns, and villages.

Privatization: The transition of an organization from a public entity to a private entity.

RegG (Gesetz zur Regionalisierung des öffentlichen Personennahverkehrs): German legislation, which translates to "Act on Public Transportation Regionalization". This law allocates the share of the total Regionalization Funds that is available for public transit for each state government.

Road charging: Charging users for use of a road, typically through tolls charged at specific points. Toll levels might vary throughout the day to account for the greater demand for roadspace in the peak period.

SAFETEA-LU: This stands for Safe, Accountable, Flexible, Efficient, Transportation Equity Act – Legacy for Users. It is the law authorizing funding for transportation for the years 2005 to 2009 inclusive.

Shinkansen: Also known as the *bullet train*, it is a network of high-speed rail lines operated by the four companies of the Japan Railways Group – East Japan Railway Company, Central Japan Railway Company, West Japan Railway Company, and the Kyushu Railway Company.

Smart card: Also called an ICC or integrated circuit card, it is used as a contactless stored value prepaid card for electronic ticketing, but can also be more widely used as electronic money for transactions on different transportation modes (bus, ferry, rail) and at retail stores, vending machines, parking lots, and leisure facilities.

Tax-deductible: This refers to an amount of money that can be deducted from the taxable amount.

Tax-exempt: This refers to a benefit that will not be taxed.

Transportation demand management (TDM): Also known as mobility management, TDM is a term for the wide range of strategies, policies and products that increase transportation system efficiency. Higher value trips and lower cost modes are given priority.

Trust fund: This refers to a fund that is reserved for a particular purpose.

Vehicle registration tax: A tax that is paid by the owner of a vehicle when they are registering the vehicle. In the case of New Zealand, the revenue collected from the tax is used to fund public transit.

Appendix C – Letter of Introduction to Interviewees

CUTA ACTU
CANADIAN URBAN TRANSIT ASSOCIATION
ASSOCIATION CANADIENNE DU TRANSPORT URBAIN

21 December 2010

TO WHOM IT MAY CONCERN,

The Canadian Urban Transit Association (CUTA) represents the public transit industry in Canada. CUTA's membership includes public transit systems, suppliers and manufacturers, government agencies, and individuals, and its mission is to strengthen public transit's contribution to the quality of life, environment, health, mobility and economic development of Canadian communities, and to help members fulfill their mandates.

One of CUTA's roles is to maintain an active dialogue with governments and to contribute to the development of policies aimed at improving public transportation across Canada. A fundamental aspect of ensuring long-term planning of public transit is to have strong policies and funding mechanisms in place that are sustainable and predictable. In order to strengthen its knowledge and to have meaningful inputs into Canada's transportation policies, CUTA has commissioned a study to identify best practices in terms of long-term and predictable strategies for public transit in G8 countries.

CUTA has hired Stantec Consulting, a large North American consulting firm, to conduct research to support CUTA's policy dialogue with federal stakeholders as a primary target audience, and provincial and municipal decision makers as secondary target audiences. The terms of reference for their work are attached.

Most specifically, CUTA is working towards the development of a Canadian transit policy framework that would ensure ambitious, long-term, predictable, and sustainable transit investments.

Your contribution to this study is highly appreciated. The final report will be made public on our website - www.cutaactu.ca.

Sincerely,

Michael Roschlau
President and CEO

Attached Terms of Reference: CUTA: G8 and Korea, New Zealand and Australia National Strategies on Public Policy Framework Study

Main Office / Bureau principal
Suite 1401 55 York Street Toronto, ON Canada M5J 1R7
416.365.9800 416.365.1295 transit@cutaactu.ca www.cutaactu.ca

Ottawa Office / Bureau d'Ottawa
1500 St. Laurent Boulevard Ottawa, ON Canada K1G 0Z8
613.842.3616 613.744.7271

Appendix D - Interview Questions

1) Does your country have a national transit/public transport policy?

2) If so, what are the main elements of this policy? How much funding does the national government provide under this policy each year?

3) When did this policy get adopted?

4) Which private or public stakeholders or agencies were involved in the adoption of this national transit/public transport policy and what actions did they take?

5) What were the driving factors that led to this transit/public transport policy being adopted?

6) What difference did it make to have a national transit/public transport policy in place? What progress was achieved thanks to the adoption of a national policy on transit?

7) Where does transit/public transport stand in the country in relation to other priorities such as healthcare, education, defense, etc?

8) From your perspective, what were the key lessons learned in the process of developing this national transit/public transport policy?

9) What social, environmental, cultural or economic impacts has this transit/public transport policy had in your country?

10) Are there any other individuals we should speak to? Could you provide us with their contact information?

11) Are there any documents or websites we should refer to that summarize your country's transit/public transport policies, legislation, or funding?

Appendix E – List of Interviewees by Country

Country	Interviewees
USA	American Public Transportation Association - staff
	United States Department of Transportation – Federal Transit Administration staff
Australia	Graham Currie, Professor, Monash University
	Paul Mees, Professor, Royal Melbourne Institute of Technology (RMIT)
	Michael Deegan, Office Coordinator, Infrastructure Australia
	David Ashmore, Jacobs Consulting
New Zealand	David Ashmore, Jacobs Consulting
	Paul Mees, Professor, Royal Melbourne Institute of Technology (RMIT),
	John Stone, Professor, University of Melbourne
	Mark Lambert, Manager of Public Transport Operations, Auckland Transport
	John Edward, Principal Adviser - Investment and Revenue - Road & Rail, Ministry of Transport
UK	David Ashmore, Jacobs Consulting
	Paul Mees, Professor, Royal Melbourne Institute of Technology (RMIT),
	Peter Mackie, Professor, University of Leeds
	Department for Transport – staff from Cities / Regions and Buses Departments
	Peter White, Professor, University of Westminster
	Stephen Joseph, Campaign for Better Transport (CBT)
	Tony Depledge, Arriva
	Jonathan Bray, Passenger Transport Executive Group (PTEG)
Italy	Emanuele Proia, ASSTRA
	Maria Antonietta Argilli, Responsabile Ufficio Stampa ASSTRA
France	Anette Gogneau, Head of the transport policies office, Ministère du Développement durable
	Anne Meyer Clientèle, Exploitation et Recherche, UTP (Union des Transports Publics et Ferroviaires
	Guy Le Bras, CEO, Group of Transport Authorities, GART
Germany	Michael Glotz-Richter, Senator for Environment, Housing and Transportation and European appointee on Sustainable Mobility, Free Hanseatic City Bremen.
	Daniel Brand, Head of Department of employment and general civil law, Criminal and traffic law, Verband Deutscher Verkehrsunternehmen, VDV.
	Martin Schäfer, Head of Department for passenger transport law and law on transport economics, VDV.
Russia	UITP (International Association of Public Transport)
	Solomenko Institute of Transport Issues of the Russian Academy of Sciences (pending)
	Russian Ministry of Transport (pending)
Korea	Kee Yeong Hwang, Korea Transport Institute
	Sang-Kyu Hwang, Director of the Global Research Office for Green Growth and Convergence, The Korea Transportation Institute
	Je-Mu Won, Professor, Department of Transportation, Hanyang University
Japan	Marcus Enoch, Senior Lecturer in Transport Studies, Loughborough University

	Tadashi Ito, Associate Professor, Department of Engineering and Urban Design, Hiroshima Institute of Technology
	Kenichi Shoji, Professor of Transport Economics and Policy, Kobe University
	Yasunori Muromachi, Professor of Urban Transportation, Tokyo Institute of Technology
	Shigeru Morichi, President of the Institute for Transport Policy Studies and Program Director of the National Graduate Institute of Policy Studies
	Yuki Tanaka, Director of International Affairs Office, Japan International Transport Institute