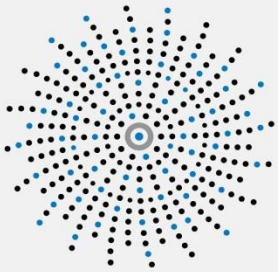
Understanding Healthy Public Policy Processes: A Multiple Case Study of the Use of Road Modification Policy to Improve Active Transportation: City of Vancouver Case Study

May 2014

Prepared for the Canadian Partnership Against Cancer
by the Propel Centre for Population Health Impact

This report highlights the following topics:

- transportation planning,
- hierarchy of modes,
- pedestrians, cycling, transit
- separated cycling facilities,
- mode share



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1. INTRODUCTION

This case study provides a description of the City of Vancouver's approach to developing their road modification policy to better support active transportation. The case description was developed as part of a multiple case study that examined the key processes associated with the successful development of municipal-level road modification policies that support active modes of transportation in Canada. The city was chosen as a case study because they adopted a modal hierarchy, which prioritizes active transportation. The City of Vancouver has been explicit in stating, "The city's transportation decisions will generally reflect a 'hierarchy of modes' for moving people as prioritized [below]

1) walking;
2) cycling;
3) transit;
4) taxi/commercial transit/shared vehicles; and
5) private automobiles" (City of Vancouver, 2012).

The City of Vancouver's goals are ambitious as is evident in their recent policy document *Transportation 2040* (2012) vision statement, which states, **"**by 2040, we envision a city with a smart and efficient transportation system that supports a thriving economy while increasing affordability; healthy citizens who are mobile in a safe, accessible, and vibrant city; and a city that enhances its natural environment to ensure a healthy future for its citizens and the planet" (City of Vancouver, 2012). *Transportation 2040* (2012) strives to make pedestrian travel "safe, convenient, comfortable, and delightful and ensure streets encourage a walking culture, healthy lifestyles, and social connectedness" (City of Vancouver, 2012) Similarly for cycling it should be "safe, convenient, comfortable, and fun for people of all ages and abilities" (City of Vancouver, 2012). It is clear from the vision statement and quotes above that active transportation is seen as a solution to many social, health, and environmental issues. A key aim of the City of Vancouver is that by 2020, sustainable transportation will account for at least 50% of all trips and at least two-thirds of all trips by 2040 (City of Vancouver, 2012).

The plan includes both high level policies and specific actions to achieve this vision. While previous policy in the City of Vancouver restricted road development, the new policies in Transportation 2040 (adopted in 2012) are more explicit, and many of the actions in the plan will require road space reallocation. The policies cover a number of areas, including land use, walking, cycling, transit, motor vehicles, and goods and services movement, as well as encouragement, enforcement, and education (City of Vancouver, 2012). Areas of focus for cycling include upgrading and expanding the cycling network to a new standard that feels comfortable for all ages and abilities, improving integration with transit, providing better parking and end of trip facilities, and using education and encouragement to support cycling as a normal, everyday transportation option. Some specific projects, including improvements to the busy Adanac bikeway, phase one of the Comox-Helmcken Greenway, and the Seaside Greenway extension along Point Grey Road have already been completed. Walking is being encouraged through road modifications and changes to the built environment, such as wider sidewalks, improved intersection designs, placemaking programs designed to create vibrant streets, and continuing to build complete mixed-use communities

where services and amenities are close to where people live and work. For the complete list of policies and actions, consult the *Transportation 2040 Plan as approved by Council* (2012).

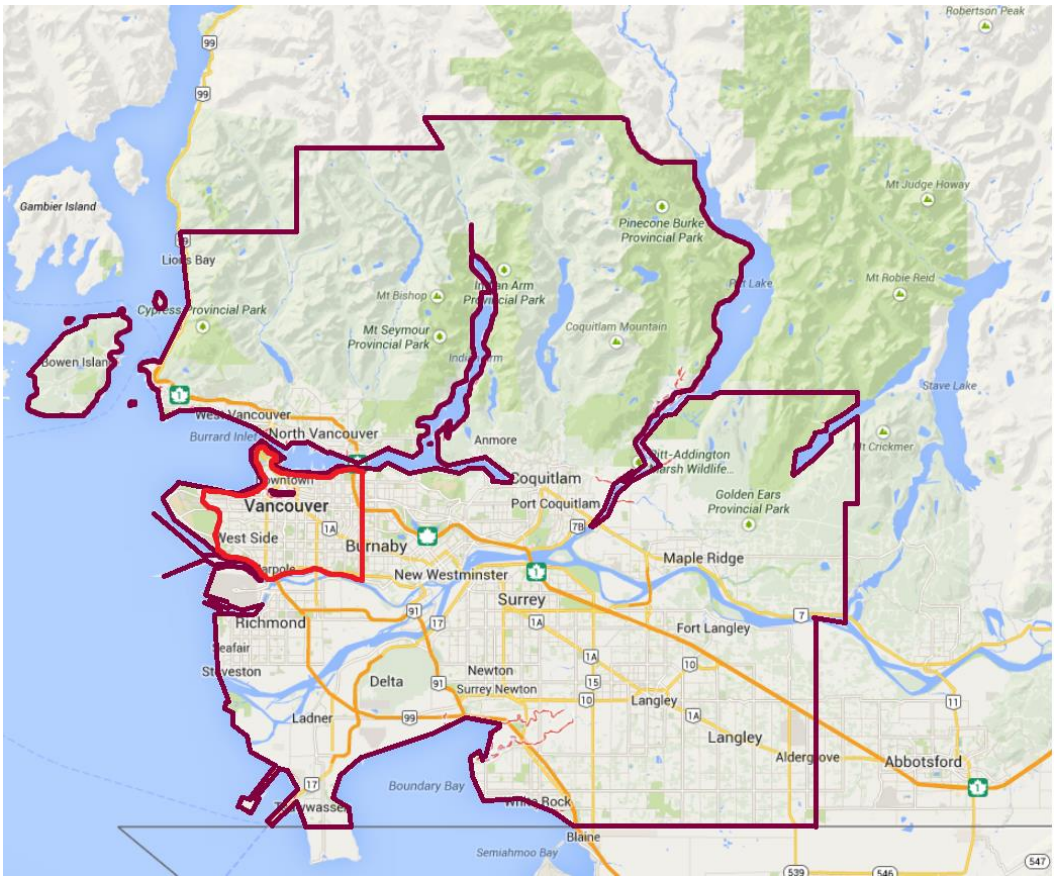
The focus of this case study is *Transportation 2040* (2012) and policies which influenced its development. The plan was strongly influenced by the *Greenest City Action Plan 2020* (City of Vancouver, 2011) policy, which sets a goal to make Vancouver the greenest city in the world, and includes chapters on green transportation and air quality. Vancouver has long been recognized as a leader in progressive urban policy, and Transportation 2040 continues this tradition, receiving the 2013 Canadian Institute of Planners Planning Excellence Award for Sustainable Mobility, Transportation and Infrastructure and the 2013 Planning Institute of British Columbia Gold Award for Excellence in Policy Planning. This case study will briefly highlight how context such as geography, demographics, and history have influenced active transportation policy development. Additionally, key mechanisms that contributed to the development of road modification policy to improve active transportation were examined, such as the role of partnerships, public engagement, framing, and the use of evidence. All documents discussed in this case study are in the reference section and where possible there is a hyperlink. A glossary can also be found in Appendix A that defines the terminology. Please also note that the terms policy and plan are used interchangeably in the case description.

2. BACKGROUND AND CONTEXT

2.1. Geography /Demographics

The City of Vancouver was incorporated in 1867 and is the largest city in British Columbia. With a population of over 600,000 people, it is the eighth most populated city in Canada (City of Vancouver, 2014a; City of Vancouver, 2014b). It is part of Metro Vancouver, sometimes referred to as Greater Vancouver, which has a population of over 2 million. Metro Vancouver is a regional planning body of the province of British Columbia and is comprised of 24 authorities: 22 municipalities, one electoral area, and one treaty First Nation (City of Vancouver, 2014a). Figure 1 below outlines the boundary of the region of Metro Vancouver in burgundy, the City of Vancouver in red, and Downtown Vancouver in Purple (Google Maps, 2014).

Figure 1: Metro Vancouver (Greater Vancouver) Region and the City of Vancouver



(Google Maps, 2014)

At 114 square kilometers, with a density of about 5,249 people per square kilometer, the City of Vancouver is the most densely populated city in Canada (Statistics Canada, 2014a). Twenty-one neighbourhoods are included in the City of Vancouver. The city is surrounded by English Bay, Burrard Inlet and the Fraser River. Metro Vancouver is surrounded by the Pacific Ocean, U.S. border, and Coastal Mountains. These geographical features have contributed to the city's early adoption of densification policies (Punter, 2003). Densification planning is an increase in the level of density over time based on the assessment of appropriate levels for given neighbourhoods and areas. Densification is the opposite of sprawl, which is the result of low-density development and can result in dependency on vehicles for transportation. The inability to sprawl due to geographical boundaries was perceived by key informants to benefit the city as described below:

> We are a city and a region… that's constrained, I would say fortunately so. One of the secrets to Vancouver's success is that we can't sprawl out as easily as other places around North America. We have the mountains to the north, we have the ocean to the west, we have the U.S. border to the south, and since the early 70s we've had the Agricultural Land Reserve, which is a provincial policy to protect agricultural land… We can't just do greenfield development, we have to build up not out and that's been a powerful driving force that's helped shape the city in a good way. (personal communication, January 30, 2014)

Key informants stressed the importance of the following factors with respect to the use of active transportation:

- fairly dense, mixed-use communities that bring people close to daily destinations and make walking the easiest and most convenient option for many trips
- a dense, regular street grid, forming the bones of a city where it is relatively easy to walk or cycle
- development that evolved along historic streetcar lines, resulting in many walkable neighbourhood centres throughout the city
- rejection of freeway plans. When other cities across North America built urban freeways, Vancouver instead invested in transit.

Demographic factors that were also identified as important included shelter costs, income, and education levels.

> Vancouver is an expensive city and the high cost of living is a concern for many residents. Although housing costs are usually viewed as the main problem, transportation is a big part of the solution. By building complete communities where homes, workplaces, and schools are near to each other, and by providing inexpensive transportation choices that reduce travel by private automobile and therefore parking demand, we can help residents save thousands of dollars each year. (City of Vancouver, 2012, p.8)

Shelter costs in Vancouver are high and income levels are lower than the Canadian average, which impacts on affordability for most residents (Statistics Canada, 2011). For 2013, The Canadian Automobile Association estimates that to drive 24,000 kilometers a year would cost approximately $10,225 (Civic LX) to $13,135 (Equinox LT). One person living in the City of Vancouver studied their cost of active transportation (cycling, transit, car share, and car rental) from 2006 to 2013 and found that use of active transportation decreased cost of travel by approximately $7,000 a year, which can be redirected to housing costs (Canadian Veggie, 2012). Another demographic variable impacting active transportation is education level. Educational attainment has been found to influence commuter mode choice (Berrigan, Troiano, McNeel, DiSogra and Ballard-Barbash, 2006). There is a positive correlation between higher education levels and use of more active modes of transportation (Berrigan et al. 2006). With 64.8% of Vancouver residents completing a post-secondary certificate, diploma or degree, the levels of education are higher than the Canadian average of 59.6%, and may be contributing to a more positive view of active transportation (Statistics Canada, 2011). Workers' commuting by active transportation such as walking, cycling, and transit have been increasing steadily since 1994. The modal split was 12.5% walked, 4.4% cycled, and 30% transit (City of Vancouver, 2012). For this research project, transit is considered active transportation because of the activity required to get to and from transit stops (Canadian Institute of Planners, 2014).

Table 1: Key Characteristics of Cases Mode of Transportation

	City of Vancouver		Canada	
	2006	**2011**	**2006**	**2011**
% Workers commuting by vehicle	57.6[a]	51.6[b]	80.0[a]	79.6[b]
% Workers commuting by public transit	25.1[a]	30.0 [b]	11.0[a]	12[b]
% Workers commuting by walking	12,2[a]	12.5[b]	6.4[a]	5.7[b]
% Workers commuting by bicycle	3.7[a]	4.4[b]	1.3[a]	1.3[b]

[a]Canada Census Data (Statistics Canada, 2006)
[b]National Household Survey data (Statistics Canada, 2011)

The combination of geography and demographics influences the need for active transportation. Sprawl limitation, population density, social demographics issues (e.g., high shelter costs and lower than national average income levels), and higher than average education levels all combine to influence the demand for active transportation within the city. Additionally, the City of Vancouver has a relatively fine-grained street grid, lack of urban freeways, mixed-use communities, mild climate, and active local culture (personal communication, April 7, 2014). In addition, to geography and demographic influence, varying levels of government impact policy development in the City of Vancouver.

2.2. Government

Multiple levels of government influence the City of Vancouver and include federal, provincial, regional, and municipal. At a municipal level, an elected council governs the City of Vancouver. A number of agencies and committees are formed to provide council with advice, including the Active Transportation Policy Council. As an advisory body to council, the Active Transportation Policy Council is responsible for providing advice on directions, policies, guidelines, and master plans, as well as advising staff on education and promotion of active transportation. There are 15 voting members and ex-officio representatives from council, parks, school, police, transit, and planning and active transportation staff. The voting members represent different perspectives in an attempt to bring diverse interests to the committee.

The City of Vancouver is the only municipality within British Columbia that does not operate under the *Local Government Act* (1996), but is legislated by the *Vancouver Charter* (1953). City responsibilities related to active transportation include leadership, infrastructure building and maintenance, land use regulation, advocacy, and partnership. The Metro Vancouver Board of Governance is comprised of members from 22 municipalities, and is responsible for delivery of water, sewage, drainage, parks,

affordable housing, planning for air quality, regional growth, parks and acting as a forum for sustainability (Metro Vancouver, 2014).

Transit, ports, and regional infrastructure are the responsibility of regional, provincial or federal government. Regional planning for transit, ports, and regional infrastructure may also include road modification for active transit. This is particularly true for transit planning. Key informants talked about the important role TransLink played in bring forward origin destination survey data, which the City of Vancouver uses in planning. Additionally, TransLink has developed a Regional Cycling Strategy for Metro Vancouver (2011) in which strategies are identified to move cycling forward as a viable transportation option. TransLink is the regional transportation authority responsible for the implementation of programs and projects for public transit as well as other regional transportation infrastructure.

3. THE ACTIVE TRANSPORTATION POLICY CONTEXT

An incremental approach to planning unfolded whereby policies developed in the past, and at different levels of government, helped set the stage and enabled the City of Vancouver to develop more recent road modification policy that incorporates active transportation. A brief review of planning and policy developments within the City of Vancouver is helpful in understanding the planning context today. This review will illustrate agricultural land protection, growth management, and environment issues, such as air pollution and the resulting impact on public health, lead to policies that see active transportation as solutions.

3.1. City Planning

Neighbourhood-scale planning has been a long-standing method of policy development within the City of Vancouver. In the early 1970s, neighbourhood plans were incorporating bike and pedestrian paths into the city's park developments (Punter, 2003). Trails are considered part of an active transportation network. However, early trails in the city were generally missing connectivity to major roadways and destinations to make them efficient modes of travel. Twenty years later, an overarching city vision that included active transportation was developed for the City of Vancouver in a policy document, entitled *CityPlan* (1995). This policy was developed by using a high degree of citizen participation in the development of the recommendations. These recommendations focused on providing transportation choice by improving transit, walking, and cycling. It also recommended mixed-use communities where jobs and other destinations are located closer to home. This type of land use planning makes active transportation easier by decreasing travel time to destinations. CityPlan provided direction for more detailed community plans that followed, and for the City's 1997 Transportation Plan, the predecessor to Transportation 2040.

3.2. Regional Planning

Regional level planning for Metro Vancouver provides important context. Metro Vancouver works with member municipalities to develop high-level growth management strategies, which individual municipalities are obliged to follow. For the City of Vancouver, the influence is a reciprocal one: "The City of Vancouver has been a regional role model for more compact, sustainable development for a long time" (personal communication April 7, 2014).

Perhaps the first regional document to influence active transportation was *The Livable Region 1976/1986: Proposals to Manage the Growth of Greater Vancouver (Greater Vancouver Regional District [GVRD],* 1975). It focused on population growth challenges, protecting what was referred to as open space, restricting land development while encouraging growth targets for urban areas, building compact cities, reducing commuting, and improving public transit (GVRD, 1975). It was updated and called, *Creating our Future: Steps to a More Livable Region* (GVRD, 1990). *Transport 2021 Medium and Long-Range Transportation Plan for Greater Vancouver* (1993) was a joint project of the Greater Vancouver Regional District and the Province of British Columbia. *Transport 2021* (1993) called for efforts to discourage single occupant vehicles in favour of high occupancy vehicles. It also aimed to implement transit improvements and ensure multi-modal traffic capacity by 2006. It asked that local governments support local transport management and growth management (GVRD, 1993). Additionally, it called on the provincial government to fund the recommendations and implementation of incentives and disincentives to support travel behaviour changes. Targets were set to achieve these goals (GVRD, 1993). Recommendations focused on growth management policy development and transportation demand management through education, policy, incentives and disincentives, new enhanced facilities with a focus on bus lanes, minor improvements projects, capital projects, arterial road expansion, and some major capital projects linking transit and roads. It also focused on monitoring the implementation of the recommendations and the importance of land use and transportation planning coordination (GVRD, 1993). *The Livable Region Strategic Plan* was approved in 1996 and reinforced the city's regional vision for more transportation choices and reduced car dependence. According to the Greater Vancouver Regional District:

> Greater Vancouver has historically been in love with the car. As the region's population continues to grow, our dependence on the private automobile needs to be reduced if we are to have any chance of addressing the issues of air pollution, congestion and the spiraling public costs associated with them. The size of the problem is immense. Compared with other large urban areas in Canada, Greater Vancouver has a high rate of car ownership, a low supply of transit per capita, and relatively low transit ridership. The time it takes to travel between work and home keeps increasing because the distances are greater and the number of cars on the road is way up. (GVRD, 1996, p. 13)

The focus was to manage growth in vehicle use by promoting transit, cycling, and walking as well as discouraging single occupant vehicles (GVRD, 1996). More recently, the *Metro Vancouver: Regional Growth Strategy* (2011) continues to support sustainable transportation choices, which encourage transit, cycling, and walking through land use management (GVRD).

3.3. Provincial Planning

In addition to regional level influences on municipal planning, the provincial level also plays a role. The *Land Use Commission Act* (1973), later the *Agricultural Land Use Commission Act* (2002), of British Columbia was approved in 1973. This Act provides guidance to municipalities on the protection of agricultural land. It was approved three years prior to *The Livable Region 1976/1986: Proposals to Manage the Growth of Greater Vancouver (GVRD,* 1975). This Act led regions and municipalities to identify agricultural boundaries and increase densification, otherwise referred to as smart growth. More recently, the provincial government of British Columbia created the *Cycling Infrastructure Project* in 2003

to cost share with local municipal governments' for expansion of cycling for commuting and recreation (News Release, July 6, 2006). Additional reports which focused on active transportation included: *Climate Action Plan* (British Columbia Ministry of the Environment, 2008), and *British Columbia: Provincial Transit Plan* (British Columbia Ministry of Transportation, 2008).

3.4. Other Important Historic Moments

Also of significance, from a historical perspective, was a national conference held in Toronto in 1988 on the public health impacts of air pollution and atmospheric change, which influenced the City of Vancouver report entitled, *Clouds of Change* (City of Vancouver, 1990a). This report discussed the threat of air pollution to public health due to vehicles (City of Vancouver, 1990a). Council supported the report, which focused on environmental concerns and recommendations such as traffic calming. They implemented a monitoring system as a result and measurement of pollution levels showed a decrease in the mean monthly levels in the downtown by about 40% (Punter, 2003). Plans became more integrated and focused on land use, transportation, and environmental concerns.

3.5. Historical Events Influencing Level of Citizen Participation

While the city was dealing with the issues of environmental pollution, they were also experiencing citizen criticism of their planning process. In the early 1990s, prior to a municipal election, a series of articles were written by a professor and the Director of the University of British Columbia's Planning School entitled, "*Future Growth: Future Shock*" (1991). This series discussed the benefits of density and growth and criticized the city's planning process. This was followed by a couple of conferences. One of these conferences was sponsored by the political opposition, which discussed livable and inclusive communities, and brought forward complaints about lack of citizen involvement in planning (Punter, 2003). In response to increasing citizen pressure and divergent interests, the Mayor at the time proposed an enhanced level of citizen participation in the creation of the city plan. He proposed to have the issues outlined to citizens for their discussion and identification of solutions via enhanced involvement in the policy development process:

> The consultation was structured by a set of guiding principles that included parallel participation where the council, planners, and public would agree to: each step in the process, ideas and solutions for 'travelling together' so that consensus could be reached about values and solutions, public rather than planning staff generation of a wide range of ideas, and multi-layered involvement where more people than ever before would read about the plan, attend meetings, comment on key issues, or develop ideas or solutions for consideration. (Punter, 2003, p. 156)

This was a significant change in the traditional expert driven policy development process. A citywide planning focus with extensive public consultation was a change for the city Planning Department and council. The *CityPlan* (1995) citizen engagement process was extensive involving over 10,000 people in various consultation activities. Extensive support was received for enhanced transit, pedestrian, and cyclist paths with treed corridors (City of Vancouver, 1995). *CityPlan* (1995) received criticisms as well as accolades. There were concerns expressed about the consultation of citizens rather than planner-driven decisions, the expense of the consultation process, and the creation of wish lists (Punter, 2003). However, the City of Vancouver planning process won provincial, national, and international planning awards for innovation in public participation (Punter, 2003; McAfee A, 1997). "Few cities have invested

as heavily as Vancouver in community visioning as a foundation for citywide and neighbourhood planning, or established such exemplary processes for assessing community preferences on built form" (Punter, 2003, p. 183-184).

3.6. More Recent City of Vancouver Active Transportation Policy

The City of Vancouver continues to build on the early history of promoting sustainable transportation and the regional and provincial directions. Some of the more recent planning and policy documents, which the City of Vancouver produced to facilitate active transportation include: the *Downtown Transportation Plan* (2002), a variety of neighbourhood plans, *Greenest City Action Plan* (2011), and *Transportation 2040* (2012). Key informants focused on the most recent *Transportation 2040* (2012), which as stated earlier was influenced by the *Greenest City Action Plan* (2011) and its vision of "becoming the greenest city in the world by 2020" (City of Vancouver, 2022, p. 5.). Greenest City targets and recommendations fall into categories, including economy, air quality, waste management, buildings, transportation, air, water, and food (City of Vancouver, 2011). Council championed this policy. *Greenest City* (2011) had ten goals, one of which was green mobility with active transportation being a priority. The Federation of Canadian Municipalities presented the City of Vancouver with the Sustainable Communities Award for this policy in 2012. The Greenest City Action Plan has influenced subsequent City policies, including *Transportation 2040* (2012).

Transportation 2040 (2012) is intended to address a number of challenges, including increasing trips on limited road space, growing demand for transit, health issues related to inactivity, high housing costs, aging population with accessibility requirements, and rising fuel costs (City of Vancouver). The plan includes a number of goals which fall under the social, economic, and environmental pillars of sustainability. These goals go beyond mobility, touching upon public health, safety, accessibility, affordability, vibrant communities, thriving local economies, and resilience in a post-carbon era. The plan establishes specific targets for mode share—over half of all trips by walking, cycling or transit by 2020, and over two-thirds by 2040—and also includes an aspirational safety target of zero traffic-related fatalities.

The plan includes high level policies and specific actions falling under a number of themes: land use, walking, cycling, transit, motor vehicles, goods, services and emergency responses, and education, encouragement and enforcement. Many of the directions will require road space reallocation. While too extensive to list here, they include:

- Making the pedestrian network safer by addressing specific areas of concern, which may include shortening crossing distances and curb radii, installing countdown timers, maximizing visibility at cross walks, providing generous unobstructed sidewalks, increasing accessibility, making streets rain friendly, and addressing gaps in the pedestrian network; and
- Making the cycling network safer by building cycling routes that are comfortable for all ages, which include providing physically separated bicycle facilities on busy streets, upgrading and expanding the cycling network, maintaining bikeways, and making cycling easy to navigate (City of Vancouver, 2012).

The policy was developed with the assistance of partners and champions in public health, universities, non-profit organizations, business groups, other levels of government, staff, and council. The citizen engagement process was extensive (City of Vancouver, 2012). The partnerships and citizen engagement process as well as the evidence used to help facilitate the development and adoption of the *Transportation 2040* (2012) policy will be discussed in the next section. Punter, who conducted a detailed review of the early planning history of the City of Vancouver from the 1960s until 2000, stated that "Vancouver can justifiably claim to be a compact, proto-sustainable city with a livable downtown surrounded by a series of distinct high-density, mixed-use residential areas, whose residents need not commute by car, but can walk, cycle, or use transit for many of their urban trips (2003, p.346). Table 2 below helps to outline some of the policies, which have mentioned road modification policy, to increase active transportation.

Table 2: Policies that include Active Transportation

	1960 – 1989	1990 - 1999	2001 – 2009	2010- 2014
Provincial Policy	Vancouver Charter (1953)	Land Use Commission Act of British Columbia (1973)	Cycling Infrastructure Project (2003) British Columbia: Provincial Transit Plan (2008) Climate Action Plan (2008)	Transport 2045 (in development) Provincial Health Services Authority
Regional Policy	Metro Vancouver: The Livable Region (1976/1986)	Metro Vancouver: Creating our Future: Steps to a More Livable Region, (1990) Transport 2021 (1993) Livable Region Strategic Plan (1996)	TransLink: Transport 2040 (2008)	TransLink: Regional Cycling Strategy (2011) Metro Vancouver: Regional Growth Strategy (2011)

	1960 – 1989	1990 - 1999	2001 – 2009	2010- 2014
Municipal Policy	Vancouver Transportation Study (1967) Development of False Creek (1974) Principles & Processes for Public Involvement in North Park (1983) The Vancouver Plan (1984)	Clouds of Change (1990) CityPlan (1995) Greenways Plan (1997) Transportation Plan (1997) Bicycle Plan (1999) Neighbourhood Plans	Downtown Transportation Plan (2002) Neighbourhood Plans EcoDensity 2008	Olympic Games (2010) Greenest City Action Plan (2011) Regional Growth Strategy 2011 Transportation 2040 (2012) Healthy City Strategy (in development) Neighbourhood Plans
Other Key Documents		Political Oppositions Conference (1991) Richmond Official Community Plan – Transportation (1999) Vancouver developers commission Future Growth: Future Shock by Head of UBC Planning School (1991)		Burnaby: Transportation Plan (2004) University Endowment Lands: Community Plan (2005) University Official Community Plan (2005) UBC: Strategic Transportation Plan (2005) City of North Vancouver: Long-Term Transportation Plan (2008) District of West Vancouver: Strategic Transportation Plan (2010) Richmond Official Community Plan – Transportation Update (2012) District of North Vancouver: Transportation Plan (2012) Media articles Simon Frazer University & UBC Research & web sites HUB: Your Cycling Connection (formerly Vancouver Area Cycling Coalition) Gordon Price (Price Tags blog)

4. KEY POLICY CHANGE MECHANISMS

Several factors facilitated use of road modification policy development to increase active transportation and included the historical and regional context and trends, geography, partners, citizen participation and community engagement, framing and using evidence to influence decision making.

4.1. Key Partners and Champions

Internal Partners and Champions: Council and City Staff

Key informants identified senior managers, council, and staff as internal champions in the policy development process. Vancouver's City Council was critical to the success of *Transportation 2040* (2012). Council was viewed by key informants as progressive about policy issues and took a political stance that supported active transportation issues. Council was identified as a key champion responsible for facilitating the adoption of the policy to incorporate active transportation into road modification policies. They were seen as people who promoted green initiatives and "walked the talk" as illustrated in this quote

> I think it's interesting to look at our local politics. Our current council is very pro green, very pro active and sustainable transportation, and ran on that platform. Some media outlets were critical, and the opposition made it an election issue, but the current council was re-elected in a landslide. (personal communication, January 27, 2014)

City staff were also viewed as champions to the process, Their role will be discussed in greater detail in the citizen participation and community engagement section of the report.

External Partners and Champions

The plan garnered support from a diverse group of external stakeholders— including representatives from other government agencies, emergency services, health care and social service providers, industry leaders, non-profit organizations, and local business and community groups— many of whom actively participated in the development of the plan through regular working group meetings. Many of these groups provided letters of support, supporting evidence, or in-person presentations to council. Some groups were particularly strong in their support for active transportation initiatives, including groups such as HUB, a local cycling advocacy group, the Vancouver Public Space Network, and the Medical Health Officer, all of whom provided formal letters of support as well as an in-person testimonials to council.

In addition to support from external stakeholders and champions, there was also strong support from the general public. Over 10,000 people participated in the public review of the draft directions, and an online questionnaire with almost 1,000 responses indicated over 90% support or conditional support for the draft policy directions (personal communication, January 27, 2014). Council approved the plan unanimously.

Public Health and Academic Institutions

Public health agencies played a key role and have had long-standing involvement in transportation planning in Vancouver. Some of their contributions include bringing health evidence into the planning and engagement process, representation at city council meetings, and education of the public. The

following quote speaks to the importance of public health's as well as the universities' roles and contributions to active transportation policy:

> Public health agencies like Vancouver Coastal Health are key partners for us. Traditionally they might not have been seen as transportation stakeholders, but they're really important. Billions are spent each year on preventable illnesses as a result of sedentary lifestyles. There is mounting evidence that the built environment strongly influences activity levels, and that good design and infrastructure can result in healthier, happier citizens and significant savings. It's an important message for us to deliver, and we will continue to collaborate with universities and health agencies to collect good data, in some cases measuring impacts of specific projects. (personal communication, January 27, 2014)

As stated, academic institutions were identified as having a significant role in active transportation planning. Both the University of British Columbia and Simon Fraser University were identified as being involved in active transportation research and Simon Fraser University has representation on the Active Transportation Council. Additionally, the University of British Columbia developed their own Strategic Transportation Plan (2005), which outlined support of active transportation principles. The universities contributed and continue to contribute to the policy development process by "making sure that the research [being conducted] is shaping policy…by asking the kinds of questions and gathering the data that is locally-relevant and can feed into policy" (personal communication, January 30, 2014). Benefits of research involvement in the policy process were described as "mutually-beneficial" because relationships are being built between the university and city to meet their common goals (personal communication, January 30, 2014).

Community Groups

Advocacy coalitions and key stakeholders also played a significant role in helping to facilitate active transportation policy through partnerships in planning, research contributions, facilitation of implementation, and raising the issues. Partnerships are critical to the success of *Transportation 2040* (2012), including federal level organizations, the provincial government, regional municipal partners, TransLink the regional transportation agency, and city-level partners. City-level partners included schools and academic institutions, business and community associations, transportation non-profits, enforcement, emergency service providers, and a large variety of stakeholder groups. A complete list of the individuals consulted can be found in *Transportation 2040* (2012). In addition to the above-mentioned partnerships, citizen participation was also important.

4.2. Community and Partner Engagement

In the initial planning process for the development of *Transportation 2040 (2012)*, over 10,000 people were involved through a variety of methods such as stakeholder meetings, public events, online forums and questionnaires, artist-facilitated co-design workshops, social media, and emails. Additional education material included postcards, posters, buttons, t-shirts, advertisements, media articles, and bike maps. Town hall meetings were held in every neighbourhood. Involving citizens with diverse interests early in the process to educate them on the issue of active transportation and policy change, and actively listening to what they had to say was identified as key to gaining buy-in.

The level of community engagement was extensive as evident from the number of organizations and individuals who participated in *Transportation 2040* (2012). The steps in the community engagement process included:

- citizen participation, which involved bringing diverse citizens together, educating them on the issues;
- listening to them;
- writing a draft report that incorporated or responded to various issues, concerns, and suggestions;
- testing the recommendations through a second citizen consultation;
- revising the draft to show staff listened and explaining why some advice was not followed; and
- presenting to council (City of Vancouver, 2012).

Regardless of the level of participation and variety of opportunities offered, citizen criticism was still present as illustrated in this quote, "the City of Vancouver currently avoids holding meetings where citizens can actually hear each other. Normally, public input goes into a staff filter at City Hall. We feel it's important for us to promote citizen-to-citizen sharing of information and opinion" (City Hall Watch, June, 2013). One individual reflected

> Maybe it's just an inherent controversy in every city to say, 'we weren't consulted, you didn't listen to our opinion' …but, I know for instance in one of the bike routes in South Vancouver here, active transportation staff went door to door to every resident in that stretch of blocks that was going to be affected. So that is dedicated engagement… They worked really hard and really were everywhere because they had 10,000 people give feedback in all of these different forms. (personal communication, January 30, 2014)

Key informants all spoke about the hard work and innovative methods used to engage the community. Online discussion boards and social media like the use of Twitter were described as useful but challenging: "online forums can be a useful method of community engagement; that said their opinions may not necessarily represent the underlying population" (personal communication, January 30, 2014).

Outreach included staff going out to meet the citizens in the parts of the community where they were located in addition to having the public come meet the staff at pre-determined locations. Going to farmers' markets, transit stations, and community events are just a few examples, and provided an additional way for people to learn about the plan and provide input, particularly groups not inclined to attend formal open houses.

Building and maintaining relationships between key stakeholders, including city staff, external stakeholders, and citizens was deemed critical to the policy development process and mentioned throughout key informant interviews. Active listening was described as critically helpful for staff to build relationships with key stakeholders, particularly with the public. "In my experience, the relationships have been getting stronger just through regular meetings and through… more meaningful listening… being responsive… showing that we understand their concerns, their ideas, their aspirations. Active listening goes a long way" (personal communication, January 27, 2014).

Responding to stakeholder and general public comments, commenting on what was heard and why some of the things may or may not get addressed demonstrated active listening. The process of listening was described to be critically important to raising staff awareness about stakeholder values as they related to active transportation and policy change and understanding the trigger points that could impact the success of the policy efforts. "Active listening helps ensure we understand citizen's concerns, ideas, and aspirations. It also builds trust in the consultation process because people actually feel heard" (personal communication, April 7, 2014). Staff developed messaging to respond to people's values and address potential triggers. As described by a key informant, issues that pertained to the active transportation policy, such as "the economy… health, accessibility in the context of an aging population… these resonate with different people and they cut across sectors. It's not about biking; it's about a better city. It's about developing a city that works for everyone…. Messaging like that is really, really important" (personal communication, January 27, 2014).

Developing relationships, both internally within the City of Vancouver departments and with groups in the community, was essential to gaining buy-in for the incorporation of active transportation into road modification policies and its implementation. According to key informants, engagement, outreach, and relationship building was and is always necessary within the City of Vancouver departments. The municipal government for the City of Vancouver was described as a large organization, comprised of several departments in multiple buildings with a complicated bureaucracy that made it challenging to navigate, particularly when it came to getting sign off on initiatives like policy change from different departments. One of the key informants from public health spoke about the importance of relationships with city planning staff to achieve their environmental health objectives:

> A lot of this work is very relationship based… environmental health has had a long history in planning and reviewing plans from a legislative basis in regards to water and sewer issues. However, what we are doing here, where the city is already taking action, is a kind of soft advocacy, encouraging and supporting - advocacy without legislative backing. So a lot of it requires good relationships and having something of value to add to what they are already doing. (personal communication, January 13, 2014)

Cultivating relationships with organizations in the community was also critical. Businesses were identified as an important sector for the city to work with to address economic impact concerns, particularly when it came to parking removal and building support for policy changes. Despite high rates of active transportation in the City of Vancouver, key informants noted that many businesses felt a majority of their customers discovered and accessed their shops by driving and parking in front of their establishment. Conducting research and surveys to better understand how customers became aware of and frequented businesses was identified as an important way to support projects requiring road modification. Consultants were used at times to conduct this research.

Education was another way to raise awareness and engage in efforts to shift perceptions about the spending patterns of citizens who engaged in active modes of transportation. According to a key informant, "people who cycle spend less per trip, but tend to shop more often and spend more locally" (personal communication, January 27, 2014). Businesses were identified as key partners to engage more actively in the planning process and there was an expressed need to look for champions to promote the message that active transportation is good for business.

Partners other than city staff, such as advocacy coalitions, also assisted in engaging businesses as described in this quote:

> We have an advocacy organization, the HUB: Your Cycling Connection, and they have really come to the table. They launched a whole initiative around bikes for business to try and encourage businesses to find ways to be more bicycle friendly to facilitate them to get bike racks or to promote cycling within their workplaces. And so, I do feel that HUB has played a strong role in trying to allay the fears and controversies or respond to the controversies in a positive way. (personal communication, January 30, 2014)

Workshops were another key strategy used in the policy development process. City staff delivered focused workshops to a diverse group of stakeholders in order to raise their awareness about the policy and gain public support. These workshops covered issues including health, accessibility, how to support local businesses, goods and services movement and delivery, environmental issues, and other relevant planning topics. Messages conveyed in these workshops were tailored to the different audiences so that the information would better resonate with them, especially in the areas of "how we're building on past success, building on existing policies, and addressing new and emerging challenges" (personal communication, January 27, 2014).

Training was provided to public health to assist them to understand components of a healthy built environment, municipal planning land use planning, and how they can support city planning. Three branches of the Provincial Health Services Authority: *Primary Health Care and Population Health,* Strategic Planning, and Population Health Surveillance and Disease Control Planning provided this training. Public health staff commented on the value of this training entitled, *Introduction to Land Use Planning for Health Professionals: Workshop Reader* (Less, Philippe, and Redman, 2008), which can be accessed via an online link in the reference list at the end of this report.

4.3. Framing

Framing and delivering the message was part of the citizen engagement process. Framing was a key piece in writing the policy and communicating it to key stakeholders. Framing involved making the link between active transportation and health, sustainability, community, affordability, accessibility, and the overall idea that it was part of creating a vibrant, livable city. When framed in this way the policy provided a variety of themes and values that were important to different citizens, a strategy used to facilitate buy-in, "my sort of perspective on this is that you push it from all fronts because some [messages] stick with some people and some don't" (personal communication, January 30, 2014).

Framing messages was influenced by the context. The geography as well as past provincial and regional plans resulted in the City of Vancouver becoming an early adopter of smart growth principles and some active transportation road modifications. Other contextual factors, which continue to influence policy development include a growing number of trips on limited road space, increasing demand for transit, health related consequences of inactivity, high housing costs, aging population requiring increased accessibility, rising fuel costs, climate change, and the evolution of the city as a creative, culturally diverse city that can compete in a global marketplace. These context features were used to help frame the messages and were part of the policy report.

Drafting the report included several important features such as building on past reports and experiences, thoroughness, framing, simple language, and readability. As can be seen from the brief description of history earlier in this report, the previous reports built on each other

> Vancouver's been ahead of the curve in North America for a fairly long time… Just in the past half-decade or so, there's been an even bigger push to support sustainable transportation, with the Greenest City Action Plan, and now the new transportation plan. There's a new standard for active transportation facilities, exemplified by our new AAA (all ages and abilities) bike routes in the urban core. (personal communication, January 27, 2014)

> Going further back, we have a long track record of good land use and transportation decisions that have borne meaningful results. The previous transportation plan in 1997 committed us by-and-large to not expanding road space. Over the past 15 years at least, the number of people living and working in the city has been growing, and with it the number of trips and street activity. However, car trips have generally been on the decline during this time, with the growth being accommodated by sustainable modes. We have the data to back this up, and it goes a long way with stakeholders and the general public. (personal communication, January 27, 2014)

Whereas the previous 1997 transportation plan committed the City to not expanding road space, the new plan goes even further. It acknowledges the challenges of increasing trips on limited road space, and many of the actions set forth in the plan will require actively reallocating road space away from the private automobile. It also sets an explicit transportation hierarchy, with walking, cycling, and transit as top priorities. This was a different approach to the previous plan which was more implicit than explicit about the hierarchy.

Careful attention was paid to framing in order to receive as much public support as possible when proposing this modal hierarchy because the media often portrayed the city as waging a war on the car. Keeping apprised of the media was also important because of misinformation that it presented

> One of the biggest challenges is the media and the perception that there's a war on the car… The media needs a story; they will create controversy to sell newspapers…they pit the cyclists against the drivers. That said there are particular journalists or particular newspapers that have taken a more progressive stance… sometimes you get wild media stories in one direction and then the other. (personal communication, Jan 30, 2014)

One event, which the city used to frame messaging around, was the Olympics. The Olympics demonstrated the ability of the city to function with a significantly increased level of active transportation and reduced road space for motor vehicles. The event helped change public perceptions of what streets can be used for because of citizens' experiences with the games. It also presented an opportunity to build on the success of the event:

> The Olympics were a game changer for Vancouver… There was a big jump in walking and cycling and certainly a huge increase in transit… I believe the Olympics also changed social perceptions around streets as public spaces. We had pedestrian zones in the downtown and… more of a culture of fun on the street, a recognition that streets can be places for celebration and for community. We really built on that in the transportation plan and the Olympic Games were a real-life recent example we could point to that resonated with the average person, that people

could say, 'I remember – that worked and was really great.' (personal communication, January 27, 2014)

Another important consideration was writing the policy in clear, simple language, but with enough detail that staff could implement it to effectively communicate to citizens in ways that were respectful of the amount of time they chose to invest in reading the document. "It was written using the wayfinding principle of progressive disclosure, with detail that could be rolled up into higher-level statements. If you had a minute, or 10 minutes, or an hour, you could scan through to get the gist of it or you could drill down deeper" (personal communication, Jan 27, 2014).

After the document was drafted it went through an extensive citizen review process and was changed based on the feedback received. It was noted that, "the document changed dramatically as the result of public or council input" (personal communication, January 30, 2014), demonstrating again that the city listened and responded to the voices.

4.4. Use of Evidence

The use of evidence was also helpful in framing messages to the public. Evidence was a significant mechanism used to gain support for incorporating active transportation into road modification policies and included: a literature review of best practices from around the world, extensive data and trend analysis, stakeholder workshops to gain local knowledge, and peer reviews from outside subject matter experts. Knowledge synthesized from these different sources was useful in getting active transportation on the policy agenda, changing the community culture and how citizens viewed roads and public space, developing policy, and supporting the adoption of policy at council. A variety of players contributed to policy development through evidence. The City gathered and analysed most of the local evidence. Some of the more specific data collected included:

- traffic counts to understand capacity issues and changing trends over time;
- intercept surveys to better understand how customers are traveling to destinations;
- license plate studies to understand whether traffic is local or regional in nature;
- travel time surveys before and after projects, to measure whether travel time increased or decreased, and by how much;
- mode share trend analysis using TransLink's data;
- review of fatality data from the Vancouver Police Department; and
- assessments of collisions involving motor vehicles from Insurance Companies of British Columbia (City of Vancouver, 2012).

In addition to the evidence gathered by the city, other partners researched active transportation and contributed to the local data. As described earlier in the report, Vancouver Coastal Health, Simon Fraser University, University of British Columbia, and TransLink were some of the contributors of evidence. Vancouver Costal Health, and the universities played a valuable role in bringing forward scientific evidence from a neutral standpoint and health perspective. There is a website called Cycling in Cities, which contains some academic publications that resulted from the collaborative research. Knowledge products that highlighted key findings from research were (and continue to be) developed as appropriate

(e.g., two-page brochures) for dissemination. Researchers involved in the work also shared evidence with staff that incorporated it into the reports they wrote to council to push the active transportation policy agenda forward. Key researchers, involved with the Active Transportation Policy Council, also went in-person several times to council to speak about the evidence during the policy development process.

Overall, city-level data such as bicycle counts, traffic counts, population forecasts, employment growth, demographics, costs, trends, travel behaviour, transportation trip analysis, travel times, site specific impacts, traffic fatalities and surveys were critically important pieces of data that were collected and used during policy development and adoption. According to key informants, the city manager and city council were responsive to data and its use to inform decision making as illustrated in this quote:

> We don't just willy-nilly take streets away from cars. We do a lot of careful analysis. We look at traffic impacts, changes to traffic volumes, travel delay, safety impacts. We don't want the city to become gridlocked… There's always going to be some opposition.… They really don't have a leg to stand on if the traffic impacts are negligible and we (have the data that) can demonstrate that. (personal communication, Jan 27, 2014)

In addition to demonstrating and justifying transportation decisions, data collected was also published online to increase transparency. Data related to council decisions was useful to help "tell a story and communicate a message effectively" (personal communication, January 28, 2014), and assisted staff in carefully assessing road modifications. Additionally, the data helped in managing conflict when these road modifications were implemented as it helped to raise awareness of realities such as actual changes in road volume. It also helped to persuade key stakeholders of the merits of the policy change.

At times, consultants were hired to conduct more detailed research. International experts such as those from Walk21 also assisted in gathering evidence. The walkability assessment conducted through Walk21 provided local data, engaged the community, and informed key stakeholders. International experts facilitated workshops, a walkability assessment, and obtained the signature of the mayor on an *International Walking Charter* (1999).

Other international evidence included best practices from other jurisdictions. Best practices were useful to understand others' approach to policy change, how it was working, and whether such change was feasible, information that was a useful input into the development of the policy in the City of Vancouver. Portland and Copenhagen were particularly influential during the city's policy development process:

> What cities respond to seems to be experience from elsewhere. So Portland is always a model city to ours. It has similar climate, it may be smaller than ours but they lay down hoards of infrastructure and they have very high cycling rates and cycling is safer there than it is in other places… certainly the city relies on other case studies or best practices to find out what might work. (personal communication, January 30, 2014)

A peer review of the draft plan also helped improve the final product and gain buy-in from stakeholders. The review group included Donald Shoup who is recognized for his knowledge of parking, and Jarrett Walker who is recognized for his work on transit. As parking was such a contentious issue these experts were deemed particularly valuable consultants.

5. SUMMARY OF KEY FINDINGS AND LESSONS LEARNED

The City of Vancouver is an innovative municipality that uses road modification policy to support active transportation. The city's approach was unique because they adopted a modal hierarchy approach to their policy, which prioritizes transportation modes in the following order: walking, cycling, transit, taxi/commercial transit/shared vehicles, then private vehicles (City of Vancouver, 2012). This case report described the development of *Transportation 2040* and identified several factors and processes that contributed to the successful development of the policy including: the city's historical and regional context and geography, their efforts to align current policy with past policies and experiences, the development of strong partnerships with diverse city staff and external stakeholders, their strong efforts to engage the community and obtain their input during policy development, framing of messages, and the use of scientific, local, and best practice evidence.

Many of these processes were not only important to the development and adoption of the policy, but also to its implementation. When presenting the policy to council, it was important to include the partners to demonstrate support, use evidence to balance public concerns, conduct community engagement to understand citizen needs and educate them on road modification, and to frame the policy in various ways in order for the policy to appeal to a broad population. This background assisted council in their decisions on the adoption and or modifications of the policy. It also helped council to assess any non-supportive delegations and/or media coverage.

The policy that has been developed and implemented thus far and much of the work that was done during the previous phases covered in this report helped to inform how to best prepare for actual implementation. Relationship building with internal staff throughout the development of the policy was seen as a key mechanism that supported implementation. Staff became aware of pending road modifications and would work together across departments to determine how to include active transportation. *Transportation 2040* (2012) also established a number of principles to guide implementation. One of these principles is to coordinate with maintenance and (re)construction projects to implement improvements at little or no additional cost (City of Vancouver, 2012). Another is to "measure progress and adapt policy and actions as necessary" as a means to monitor implementation (City of Vancouver, 2012, p.63).

Implementation is also a time when citizen conflict might arise particularly when it came time to actually making the modifications to roadways to accommodate the policy changes. According to a key informant, "it may or may not be representative of the general population, but we still get pushback when we're trying to deliver projects on the ground" (personal communication, January 30, 2014). Local level data that tracked issues such as transportation bottlenecks was helpful during the policy development phase and also important to implementation. Analysis of data collected on the impacts of road modifications was found to be key to mitigating the conflicts or concerns raised and helping council feel confident their decisions were supported.

Some specific road modifications presented more challenges than others. Particularly challenging was the loss of parking. "Every time you take a parking space away anywhere it's a controversy, but there are a lot of unused parking facilities throughout the city, for example in parking garages, places where people just aren't accustomed to parking. They're used to parking on the road and so it's controversial if you take a parking spot off the road" (personal communication January 30, 2014). Key stakeholders

felt they also needed to find more champions within the business sector, as there was always a challenge when it came time to remove parking spaces. Other challenges mentioned were the bicycle helmet law and lack of funding for implementation of road modifications.

Despite challenges, the City of Vancouver is recognized for its excellence in sustainability planning and has received several awards, including the 2014 Transportation award and 2012 Sustainability Community Award from the Federation of Canadian Municipalities.

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