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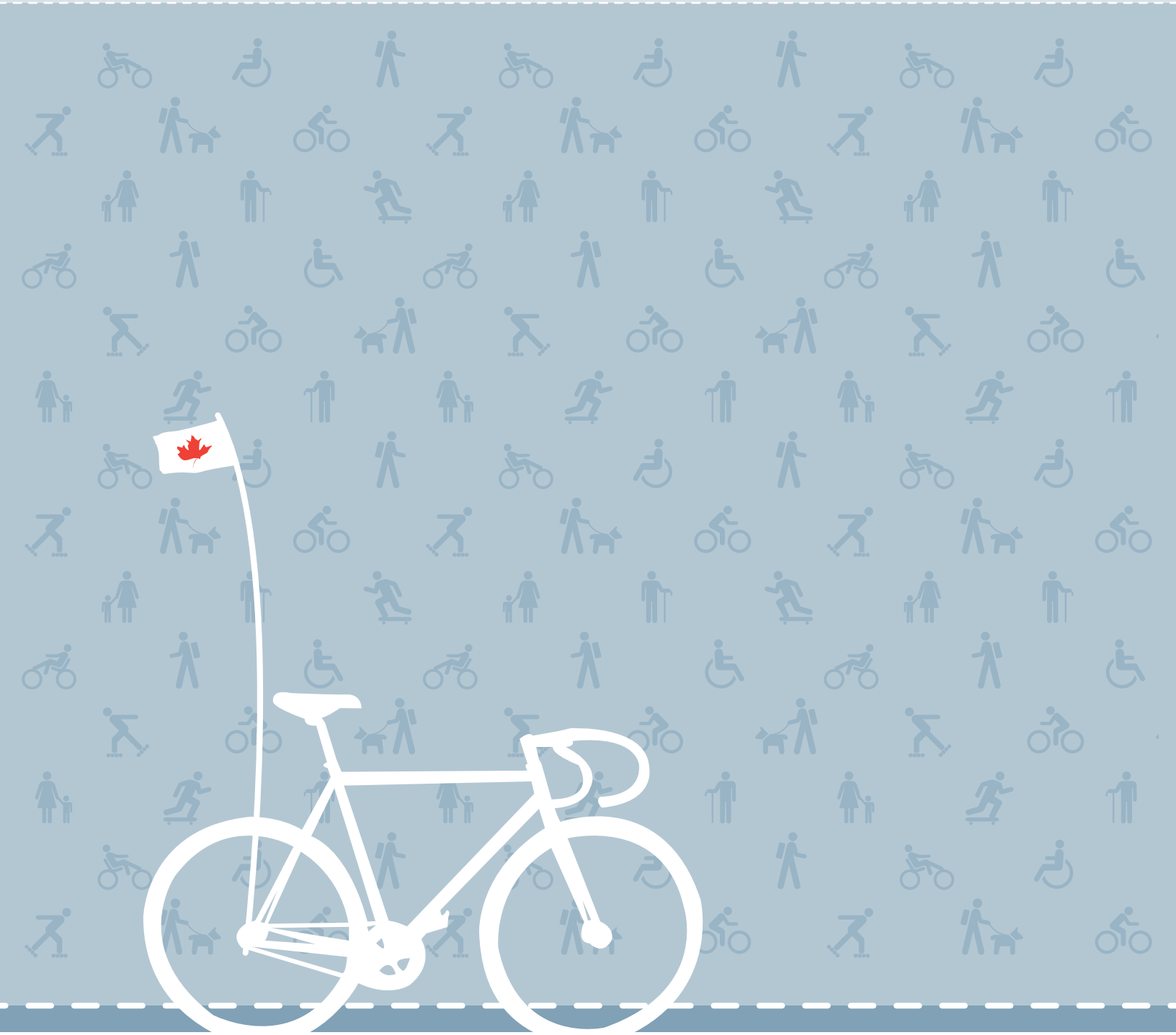

ACTIVE TRANSPORTATION IN CANADA

a resource and planning guide

Cette publication est aussi disponible en français sous le titre Lignes directrices canadiennes pour la mesure des résultats des initiatives de gestion de la demande en transport – Guide de l'utilisateur.

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1.0 INTRODUCTION

Active Transportation in Canada: a resource and planning guide is a resource tool for transportation planners and related professionals (e.g., city or town planners, town engineers, etc.) to accommodate, promote and support active transportation in current and long-range planning and development. With an emphasis on Canadian cities and regions where planning for active transportation might be a new or recent undertaking, this guide includes the following sections:

- ✓ **Active Transportation: a primer -** This overview and rationale section asks the question, *"What is active transportation and why is it important?"* In answering it, the section provides an overview of the key drivers or rationale for active transportation, including its public health, environmental, social/community, and local economic benefits.

- ✓ **Active transportation in Canada -** This section looks at who is doing what in the realm of active transportation in Canada. It traces the evolution of active transportation in Canada from bicycle and pedestrian plans to today's more integrated, sophisticated and comprehensive strategies and plans. A summary of trends in active transportation behaviour and a key opportunities that planners can leverage, as well as the challenges that need to be addressed is outlined.

ACTIVE TRANSPORTATION

Active transportation refers to all human-powered forms of transportation, in particular walking and cycling. It includes the use of mobility aids such as wheel chairs, and can also encompass other active transport variations such as in-line skating, skateboarding, cross-country skiing, and even kayaking. Active transportation can also be combined with other modes, such as public transit.

✓ **Planning for Active Transportation -** This section provides a simple and effective planning approach for developing active transportation projects in your community and/or incorporating active transportation into existing planning and policy documents (e.g., transportation plans, land use plans, etc.). It is organized around a planning framework that will help you determine:

- Current active transportation situation, opportunities and trends in the local area;
- Priority areas for action (i.e., *What matters most in my community?*):
- Strategies and actions to respond to community active transportation priorities; and,
- How to monitor and evaluate active transportation activities to support future projects and/or program expansion.

This section also includes a series of handy speaking points on the benefits of active transportation, intended for use when working with elected officials, municipal departments, active transportation stakeholders and the community at large.

✓ **Tools and Resources -** An appendix of supporting tools, case studies and links to other resources.

1.1 WHO SHOULD USE THIS GUIDE

This guide is intended primarily for municipal and regional transportation planners in, communities with limited active transportation planning and implementation experience, but can also be used by other individuals, including allied professionals (e.g., community planners, engineers, public health officers, etc.). While the guide is intended primarily for town and transportation planners, it recognizes that all types of planners (e.g., recreation, environmental, economic development, etc.) at all levels (e.g., local, regional , provincial, etc.) have a role to play in promoting and supporting active transportation in their communities.

Another group that can use this guide is elected representatives, who are a community's major decision-makers and are critical players in helping support and promote active transportation.

Finally, representatives from local advocacy organizations (e.g., environmental groups, healthy living associations, etc.) and community groups with an interest in active transportation (e.g., Chambers of Commerce) can also use this guide to support community-based active transportation projects initiated outside of City Hall, or as a resource guide to help better support and engage with active transportation projects initiated by the local government.

1.2 HOW TO USE THIS GUIDE

This guide is designed to be used as a step-by-step planning guide to help design, implement and evaluate active transportation initiatives (programs, projects, policies) in your community, as a general resource for individuals interested in learning more about active transportation, or for communities looking to develop a specific active transportation project or program.

This guide's active transportation planning framework is organized around a ten step planning approach. The approach has four phases that correspond to the key planning questions each section asks – *What is happening? What matters most? What can we do about it? Are we doing it?* Answering these questions will require guide users to go through a corresponding set of individual planning steps. Each of the ten steps is further broken down into more detailed tasks, which are supported by corresponding tools, planning tips and case study illustrations. A table illustrating a range of typical active transportation projects is also provided that indicates the potential time, capital costs and technical resources required for each project type.

Figure: Guide Organization and Framework

PHASE	PLANNING STEP	KEY QUESTIONS
What is happening?	1-Getting Started	• What needs to happen first?
	2-Stakeholders & Participation	• Who needs to be involved and how?
	3-Situation Assessment	• What's the state of active transportation in your community? Who's doing it? Where? When? • What are the opportunities and barriers to increasing the active transportation mode share?
What matters most?	4-Vision	• What's the vision for active transportation in your community?
	5-Objectives	• What does the community care most about or value most? Are these values captured in existing planning and policy documents? • How can these community values be used to identify active transportation priorities?
What can we do about it?	6-Option Identification	• What active transportation options, or actions, can we undertake?
	7-Option Evaluation	• What active transportation options best support other community development objectives and priorities (e.g., downtown revitalization, improved transportation)? • How can we organize active transportation actions to integrate and coordinate them with other town planning initiatives?
	8-Implementation	• How do we implement active transportation actions?
Are we doing it?	9-Monitoring & Evaluation	• How can we monitor and evaluate our active transportation actions to see how effective they are? • What should be monitored and who should be responsible for evaluating?
	10-Adjust and Modify	• How can we be sure our active transportation actions stay relevant and effective in the future?

This approach is non-linear and flexible. Guide users can go back and revisit planning steps as new information or resources become available, or when new stakeholders enter the planning process. Users may also use this this guide to support a single planning step (e.g., conducting a situation assessment).

It is anticipated that guide users will:

- Be at different stages of active transportation planning and programming (i.e., some communities may have already have projects and programs up and running, while others might only be starting to think about it);

- Be using the guide for different purposes (i.e., one community may use it to develop a broad active transportation strategy, where another city might use it to support one particular project, like a pedestrian and bicycle route mapping initiative); or,

- Have different planning resources at their disposal (i.e., some communities may have the human and financial resources to undertake a project "in house", while others may have to secure funding before proceeding).

Short, case study illustrations called 'A Case in Point' are spread throughout the document. They profile some successful active transportation initiatives, plans, programs and research from around the country. Links to existing projects and best practice examples are also provided in the 'Did you Know' and 'Planning Tip' information boxes that are spread throughout the guide. The Tools and Resources Appendix provides additional details and contact information along with links to additional active transportation planning case studies, resources and tools.

1.3 KEY TERMS

The following is a summary of key terms related to active transportation planning. Additional terms and concepts are defined in text boxes throughout this guide.

- **Active transportation:** Active transportation is any form of human-powered transportation. It is any trip made for the purposes of getting yourself, or others, to a particular destination - to work, to school, to the store or to visit friends. Walking and cycling are the most popular forms of active transportation and are often combined with other modes, notably public transit.

- **Active transportation infrastructure:** Active transportation infrastructure includes those elements that support active transportation, such as improved sidewalks, dedicated bike lanes, pedestrian-bicycle signals and safer crossing points, bike racks, and greenways for walking and cycling.

- **Built environment:** Built environment refers to the man-made surroundings that provide the setting for human activity. These spaces range from rural streets to bustling downtowns and all the man-made places in between.

- **Compact urban form:** A compact urban form is characterized by relatively high density, mixed land-use and pedestrian-oriented habitation.

- **Connectivity:** Connectivity is the measure of the efficiency of a transportation network. It refers to the directness of transportation links and the number of connections in the path or road network.

- **Density:** Density is a measure of urban and rural form. It can be measured in a number of different ways, including the number of people, jobs or buildings in a given area.

- **Infill:** The use of land within a built-up area for further development. Infill development often focuses on the reuse of obsolete or underutilized buildings and sites.

- **Land use:** The human modification of natural environment or wilderness into built environment such as fields, pastures, and settlements.

- **Official Community Plan (OCP):** A statement of community development objectives and policies to guide land use management and development within a given area. Most cities and towns have such a plan, but they go by different names across Canada (e.g., Official Plan, Land Use Plan, Municipal Development Plan, etc.).

2.0 ACTIVE TRANSPORTATION: A PRIMER

This section provides an overview of active transportation in Canada, including its many benefits and national trends. This also touches on some of the common challenges to, and opportunities for, active transportation in Canada.

2.1 BENEFITS AND RATIONALE

The case for active transportation is strong. As both a transportation strategy and a mode of transportation, active transportation (AT) meets multiple community, planning, environmental and transportation objectives. This sub-section provides an overview of some of the key benefits of expanding and supporting active transportation networks and programs, including:

- **Public health and safety:** As a more physically active and therefore healthier form of transportation, there are proven links between AT and improved public health outcomes. Well-designed networks and purpose-built infrastructure can also greatly improve pedestrian and cyclist safety.

- **Environment and sustainability:** AT has multiple environmental benefits. As a self-propelled form of transportation, it generates far less air pollution emissions and is far less carbon intensive than other forms of transportation, particularly the single occupant vehicle. Active transportation is also an important part of any municipal GHG reduction strategy or air quality plan.

- **Economic and financial:** The development and maintenance costs of AT infrastructure are far lower than other transportation infrastructure, both overall and on a per-capita basis. Studies have also indicated that AT infrastructure and amenities can have positive local economic development impacts and produce individual cost savings.

- **Community and quality of life:** Improved pedestrian and bicycle networks can have many positive impacts on overall community and individual well-being, social cohesion, community identity, and equality issues.

- **Transportation and connections:** A good municipal AT network improves connections to, and between, community destinations, which improves the broader transportation network. With the majority of transit trips beginning and ending with walking, public transit ridership in particular can benefit from an expanded AT network.

2.1.1 Public Health and Safety

One of the strongest drivers of active transportation is public health. Increased reliance on motorized vehicles for everyday transport has contributed to a reduction in Canadians' physical activity levels, which has resulted in corresponding health impacts. Current research shows that Canada, along with the United States and other more auto-dependent countries, are in the midst of an obesity epidemic that has been linked to our declining physical activity. Obesity and physical inactivity is considered a "conveyor belt" to heart disease, stroke and other chronic conditions, including cardiovascular disease, type 2 diabetes, and various cancers. On the other hand, physical activity is associated with positive health outcomes of improved fitness and physical, mental and social health.

The impact of a community's built environment, land-use choices and transportation networks on public health is undeniable. Current research indicates that:[1]

- 60% of Canadian adults are considered overweight or obese, along with 26% of Canadian children and youth.

- 1 in 3 obese children will be diabetic.

- Risk of obesity goes up 6% for every hour spent in a car each day, while the risk of obesity goes down by almost 5% for every kilometre walked a day.

- Only 12% of Canadians' home-based trips (e.g., grocery store, work, school) are on foot or bicycle.

- 91% of Canadian children and youth and 51% of Canadian adults are not getting the recommended levels of daily physical activity.

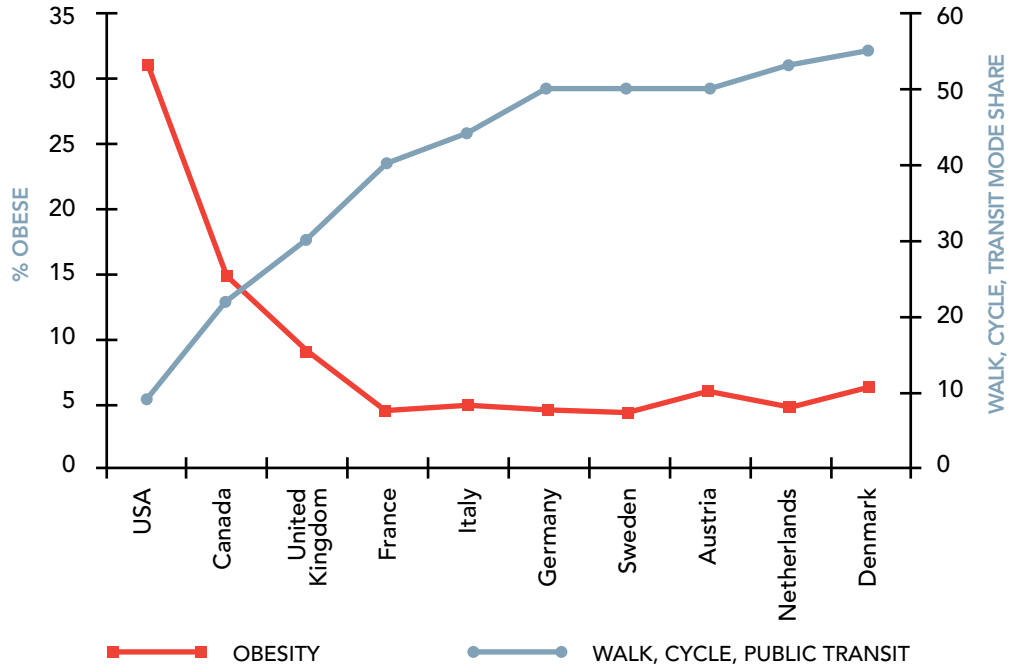
- Low physical activity rates result in an estimated $5.3 billion per year in direct and indirect health care costs.

1 Data sources: Canadian Heart and Stroke Foundation, Health Canada, BC Provincial Health Services Authority.

Reducing Canadians' reliance on cars and increasing walking and cycling will help increase physical activity levels, lower the risk of obesity and address other health conditions, such as heart disease, some cancers and type 2 diabetes. Emerging evidence-based research also clearly shows that a lack of physical activity is associated with mental health issues, including depression[2]. Expanding active transportation networks will help provide opportunities for physical activity, easy access to recreation, and reduce automobile dependency.

Active transportation also helps upgrade and improve the overall performance and safety of the transportation network through traffic calming, streetscape improvements, traffic speed reductions, vehicle restrictions, road space reallocation and other common AT activities. The safety benefits generated by these improvements not only apply to pedestrian and cyclists, but also drivers.

Figure: A Comparison of Walking, Cycling and Public Transit Use and Obesity Rates



2 Leading Health Indicators for Healthy People 2010, Institute of Medecin, National Academy of Sciences, 2010.

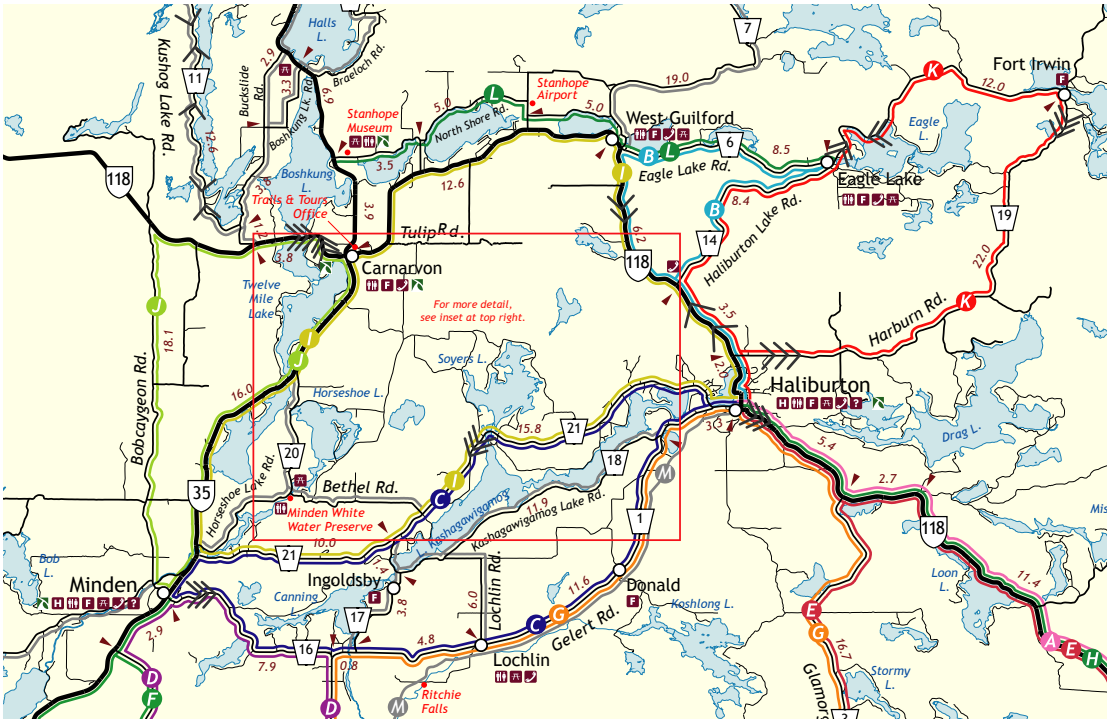
A CASE IN POINT

Health Authority and Municipal leaders working together on AT advocacy and planning in Haliburton, Ontario

Recognizing the connection between the built environment and community health, Haliburton County formed a volunteer *Communities in Action Committee and the Haliburton Highlands Cycling Coalition*. The committees include representation from the Haliburton, Kawartha, Pine Ridge District Health as well as local community and municipal leaders, who are working together on active transportation planning for the region.

Including health board and municipal leadership in this kind of cross-agency partnership has helped to raise public and political awareness of the need for active transportation planning. Pooling their resources has allowed members to extend their reach through enhanced education and marketing programs, while working to create environments that will encourage physically active communities.

More information: http://www.haliburtoncooperative.on.ca/CIA/



Part of a cycling route map created by Haliburton Highlands Cycling Coalition.
http://www.cyclehaliburton.ca/maps.htm

2.1.2 Environment and Sustainability

Active transportation is virtually non-polluting and among the most environmentally friendly forms of transportation. Replacing vehicle trips with active transportation contributes to:

- Reduced air pollution;
- Reduced greenhouse gas emissions;
- Reduced energy consumption; and,
- More efficient land use (which can help protect and preserve green space, open space and environmentally sensitive areas)

Reduced air pollution: One of the primary environmental benefits of increasing active transportation is improved air quality. About 40% of hazardous air pollutants in urban areas are generated by the transportation sector[3]. The air pollutants emitted by motor vehicles include volatile organic compounds, nitrogen oxides, particulate matter, carbon monoxide, and sulfur oxides. These pollutants can have serious impacts on human health, but they also impact the larger natural environment, causing vegetation and crop damage[4].

Replacing short vehicle trips with active transportation could significantly reduce air pollution because emissions are highest when a car is first started. It is estimated that 90% of the emissions in a typical 11-kilometre trip are generated in the first 1.6 kilometres, before the engine warms up. This means that replacing short car trips with active transportation could have a significant effect on reducing emissions. This is not well-reflected in measurements such as "vehicle kilometres travelled" or "trip numbers" that don't record the high impact of short trips[5]. While some concerns have been raised over increased exposure to air borne pollutions among pedestrians and cyclists, studies have concluded that the health benefits far outweigh the risks[6].

Reduced greenhouse gas emissions: : In 2006, 25% of Canada's greenhouse gas emissions were produced by the transportation sector, with urban passenger travel being responsible for almost half of the transportation total[7]. In addition, of the average Canadian household's environmental impact, transportation accounts for: almost half of toxic air pollution, more than a third of greenhouse gas emissions, and almost 20% of toxic water pollution[8]. An average car releases about .85 kilograms of CO2 per kilometre whereas active transportation releases virtually none. This means that active transportation can play a significant role to help meet the climate change targets set out by all levels of government.

3 Environmental Protection Agency, 1999
4 Transport Canada, *Active Transportation in the Canadian Context*, 2006
5 Victoria Transportation Policy Institute, *Online Transportation Demand Management Encyclopaedia*, 2010.
6 Folk, Jens, Homann Jespersen, Per and Jette Ran, Differences in cyclists and car drivers exposure to air pollution from traffic in the city of Copenhagen, *The Science of the Total Environment*, 2001.
7 Transport Canada, *Active Transportation in the Canadian Context*, 2006
8 David Suzuki Foundation, *Reduce your Carbon Footprint*, 2010

Reduced energy consumption: With increasing financial and environmental costs and decreasing supply of fossil fuels, the low energy option of active transportation is a great alternative to vehicle use. In terms of energy consumption, cycling is the most efficient mode of urban transportation. In addition to needing very little energy to operate a bicycle (three times less than walking), the life cycle energy cost of a bicycle is also quite small according to Transport Canada research. In fact, bicycle manufacturing uses 100 times less energy than auto manufacturing and very little waste is generated over the life cycle of a bicycle[9]. In addition, a bike can travel 423 kilometres on the equivalent energy of a litre of gas. Overall, a commuting cyclist has about one-tenth the ecological footprint of a commuting driver. The following chart summarizes the energy savings from cycling in terms of the embodied energy (used in manufacturing) and fuel (used in operating – e.g., gasoline, calories) per passenger kilometre.

On 350 calories a cyclist can travel 16 kilometres, a pedestrian 5.6 kilometres, and an automobile 30.4 metres.
Source: Transportation Alternatives - Bicycle Blueprint, 1998

Table: Energy Use By Mode (mJ/Passenger km)

MODE	EMBODIED	FUEL	TOTAL
Bicycle	0.5	0.3	0.8
Light Rail	0.7	1.4	2.1
Bus	0.7	2.1	2.8
Heavy Rail	0.9	1.9	2.8
Car, Petrol	1.4	3.0	4.4
Car, Diesel	1.4	3.3	4.8
Ferry	1.2	4.3	5.5

Source: Victoria Transportation Policy Institute, "Energy Conservation and Emission Reduction Strategies"

Efficient Land Use: Active transportation supports and can facilitate more complete, compact community development. Communities that are automobile dependent require more land for roads and parking and create longer distances between major destinations (places of work, recreation facilities and areas, schools, shopping, etc.).

9 Transport Canada, *Bike Sharing Guide*, www.tc.gc.ca/media/documents/programs/bsg.pdf

A CASE IN POINT

Linking Active Transportation to Climate Change Mitigation in the Comox Valley, British Columbia

The Comox Valley Regional District on Vancouver Island recently completed its Regional Growth Strategy. The strategy includes numerous policies to support active transportation in its transportation, growth management, public health and safety, and climate change chapters. In BC, the provincial government established Canada's most stringent greenhouse gas (GHG) reduction targets (33% reduction from 2007 levels by 2020, 80% by 2050) and has required all regional districts and municipalities to update their plans to include GHG reduction targets and supporting policies by 2011. In the Comox Valley Regional Growth Strategy, active transportation was recognized as a key tool for meeting these targets. "Given that transportation is the largest contributor to GHGs in the Comox Valley," the strategy reads, "developing more pedestrian, cycling and transit-supportive land uses will be absolutely critical in reducing GHGs."

More information: http://www.comoxvalleyrd.ca/section_rgs/

2.1.3 Economic Development and Financial

Active transportation improvements represent a cost-effective approach to developing a more efficient, equitable and sustainable transportation system that contributes to local economic development. Typical economic benefits and improvements include:

- Reduced transportation infrastructure development and maintenance costs;
- Positive local economic development impacts; and
- Individual cost savings

Reduced transportation infrastructure costs: Developing and maintaining bicycle and pedestrian facilities is far less costly than the construction and maintenance of facilities for automobiles. For example, the cost of creating a bike lane is approximately $20,000/km if no road widening is needed, and $150,000/

DID YOU KNOW...

Recent research shows that relatively small shift from automobiles to more active modes of transportation can have an outsized impact on congestion. According to the U.S. Federal Highway Administration, there was a 3% drop in traffic on "urban interstates" from 2007 to 2008. This translated to a nearly 30% reduction in peak hour congestion. This indicates that when a road network is at capacity, adding or subtracting even a single vehicle has disproportionate effects for the transportation network.

More information: League of American Bicyclists, "The Economic Benefots of Bicycle Infrastructure Investment", 2009.

km if road widening is required. Comparatively, it costs approximately $1.3 million/km to widen a two lane urban arterial road to four lanes[10]. In addition, in urban areas, where cars and bicyclists travel at similar speeds, bike lanes can accommodate 7 to 12 times as many people per metre of lane per hour than car lanes. Pedestrian infrastructure such as sidewalks can handle approximately 20 times the volume of people per hour than roads for cars in urban traffic[11]. Parking infrastructure for cycling is also much more cost efficient. High-quality bike parking (i.e., secure and covered) typically costs $100-500 per bike, whereas typical car parking costs $10,000 per surface stall and up to $50,000 for structured parking (i.e., underground and above ground parkades)[12].

Overall, shifting from automotive to active transportation is estimated to produce cost savings in roadway infrastructure and traffic service of 3¢/km for urban driving and 2¢/km for rural driving[13].

A CASE IN POINT

Investing in Active Transportation Safety and Improving the Bottom Line in BC

The Insurance Corporation of BC (ICBC) is BC's publicly owned and operated provincial insurance agency. ICBC provides funding for improving road safety by contributing to municipal transportation improvement projects. Projects must not only improve vehicle safety, but also benefit pedestrians and cyclists, particularly in and near school zones. In 2009, ICBC contributed approximately $8.1 million to road improvements throughout B.C. An evaluation carried out and the end of 2009 concluded that for every dollar invested, ICBC and its customers see a return five to 12 times the investment. That is, for every dollar invested, ICBC and its customers save $5.60 over two years and $12.80 over five years on insurance premiums through the resulting safety improvement for drivers, cyclists and pedestrians.

More information: www.icbc.com/road-safety/safer-roads/invest-roads

10 Toronto Coalition for Active Transportation, Bike Lanes; Good for business, 2009.
11 Campbell, Richard, and Margaret Wittgens, "The Business Case for Active Transportation: The Economic Benefits of Walking and Cycling," 2004.
12 Pedestrian and Bicycling Information Centre, "Bicycle Parking", 2010.
13 Victoria Transportation Policy Institute, "Quantifying the Benefits of Nonmotorized Transportation For Achieving Mobility Management Objectives," 2010.

Local economic development benefits: Active transportation infrastructure supports local businesses because cyclists and pedestrians are more likely to spend their money at local destinations, thereby increasing economic viability within their community and increasing revenue for local business. Despite concerns that eliminating on-street parking to create bike lanes may harm local business, experiences in San Francisco and Toronto show that improving active transportation infrastructure has positive impacts on business. Along San Francisco's reconfigured Valencia Street – a busy commercial artery -- two-thirds of merchants surveyed said that the bike lanes had a positive overall impact on their business. Two-thirds of the merchants also supported more traffic calming measures on the street[14]. Businesses along Toronto's Bloor Street had a similar experience (see text box for details).

Providing for active transportation can also support a community's overall livability, which, in turn, can help both retain and attract new businesses. Numerous studies have shown that livable cities are more attractive to knowledge-based businesses whose employees tend to seek amenity-rich communities. One of the important components of more livable communities is the "street level culture" they boast, where mixed-uses, sidewalk cafes, great streets and a safe pedestrian and bicyclist environment supports a vibrant public realm[15]. Creating safe and attractive streets for active transportation will help to increase the vibrancy of a community, making it more attractive to diverse professionals. It is now common for cities and communities to be rated for their livability – both nationally and internationally.

A CASE IN POINT

Toronto, Ontario – Building the Business Case for Active Transportation

A 2009 study of Bloor Street, a major commercial street in Toronto, showed that active transportation is good for business. Study results indicated that people who had biked and walked to the area spent more money in the area per month than those who drove there. The study concluded that the addition of bike lanes would be unlikely to harm local business and predicted that commercial activity on the street would likely increase. Three-quarters of merchants surveyed on the street believed that business activity would improve or stay the same if a bike lane replaced half of the on-street parking.

More info:
http://www.cleanairpartnership.org/pdf/bike-lanes-parking.pdf

14 Drennen, Emily, "Economic Effects of Traffic Calming on Urban Small Businesses," 2003. http://www.bikewalk.org/2004conference/sessions/28_Business_calm/TrafficCalming_summary.pdf.
15 Richard Florida, The Rise of the Creative Class, 2002.

Individual savings benefits: Active transportation is the most economical transportation mode for individuals living in urban areas. The high cost of car ownership makes transportation the second biggest area of expenditure in a typical household after housing costs. Recent studies indicate that both walking and cycling cost, on average, about of 3 cents per kilometre[16]. The average mid-size car driven 16,000 kilometres in a year costs about 46 cents per kilometre, or $7,574 for the year, including gas, oil, maintenance, tires, insurance, license, registration, taxes, depreciation, and finance charges[17]. Increasing active transportation and decreasing vehicle use can clearly save individuals money, especially if a household is able to eliminate one car.

Indirect benefits: Active transportation has many economic benefits that are not always obvious because the costs and benefits are borne and accrued by society in general rather than the individual user. External costs include time lost to traffic congestion, health expenses from air pollution-caused illnesses, road construction, and collisions. For example, according to Metrolinx, the regional transportation planning agency for the Greater Toronto Area (GTA) and Hamilton areas, vehicle congestion costs the region $2.7 billion annually in lost opportunities for economic expansion.[18] Overall, externalities increase the true cost of driving a car by about 75 cents per kilometre. Replacing a car trip with an active transportation trip saves individuals and society $1.70 per kilometre, while a typical 1.25 kilometre bike trip would save $3.45.[19]

16 Litman, Todd, "Quantifying the Benefits of Non-motorized Transportation for Achieving Mobility Management Objectives" Victoria Transport Policy Institute, 2010.
17 Litman, Todd, "Transportation Affordability" TDM Encyclopedia, 2010.
18 Metrolinx, "The Big Move", 2008. www.metrolinx.com/mx/thebigmove/en/introduction/1_3_GTHA_challenges.aspx
19 Litman, Todd. *Transportation Cost and Benefit Analysis*. Victoria, BC: Victoria Transport Policy Institute, 2007. http://www.vtpi.org/nmt-tdm.pdf

2.1.4 Community and Livability

Increasing active transportation can have many positive impacts on overall community well-being and livability. Typical benefits include:

- Improved well-being
- Increased social cohesion
- Increased community identity
- Increased equality

Improved well-being: Active transportation can have a positive impact on community and individual well-being. A recent Statistics Canada study revealed that 19% of cyclists reported their commute as the most pleasant activity of the day, whereas only 2% of drivers felt the same. Similarly, the probability that a driver would enjoy their commute was only 37%, compared with 59% for cyclists and 46% for pedestrians[20]. Spending time in automobile traffic and congestion causes stress for many commuters and decreases work performance and productivity. In addition, noise pollution from cars is associated with nervousness, depression, sleeplessness and irritability. Finally, as noted in the Public Health and Safety sub-section, a lack of physical activity is also associated with mental health issues such as depression.

DID YOU KNOW...

THE IMPORTANCE OF "THIRD PLACES"

In his book *The Great Good Places* Ray Oldenburg uses the term "third places" to describe natural places for public gathering. Coffee shops, bars, stores and even public benches all provide places for important social interactions beyond homes (first places) and places of work (second places). These spaces both encourage and evolve out of active transportation in neighbourhoods.

More information:
http://www.pps.org/roldenburg/

20 Statistics Canada "Like commuting? Workers' perceptions of their daily commute," 2008, www.statcan.gc.ca/pub/11-008-x/2006004/9516-eng.htm

Increased social cohesion: Transportation systems can support or diminish a sense of community by encouraging or discouraging social interaction and a sense of belonging. Car-dependent communities increase the physical and social distances between neighbours, amenities and workplaces. This diminishes opportunities for social contact, which can weaken overall "neighbourliness" and trust in communities[21]. One well-known study of streets in San Francisco found that heavy traffic has a discernable negative impact on the stress and social behaviour (e.g., friendliness and street activity) of the neighbourhood. In the study, residents on streets with heavy traffic were more likely to withdraw from the street by drawing blinds, closing windows and walking less. Residents on streets with light traffic had three times more friends and two times as many acquaintances as residents on streets with heavy traffic[22].

Designing communities for active transportation provides more opportunities for physical and social connections and interaction. Active transportation networks and infrastructure can help foster community and neighbourhood interaction that, in turn, can help encourage a greater sense of community.

Increased community identity: Planning for active transportation can lead to increased social interaction when streets and public spaces are designed as comfortable places where people enjoy spending time. The increased social interaction and active engagement with one's surroundings that comes from walking and cycling can have a powerful influence on one's emotional and intellectual sense of home and neighbourhood. These interactions can create both a strong feeling of belonging as well as a sense of distinction from other communities.

DID YOU KNOW...

MAKING WALKING SAFE FOR SENIORS

Research done through Transport Canada's Urban Transportation Showcase Program found that extending the time of pedestrian crosswalk signals was an effective and simple way to make active transportation easier for seniors. Including audible signals that count down the length of time available to cross was another intervention found to help get seniors active and make walking safer for all.

More information: Transport Canada Urban Showcase Program, "Complete Streets: Making Canada's roads safer for all", 2009.

21 Putnam, Robert, *Bowling alone: The collapse and revival of American community*, (2000)
22 Appleyard, Donald, "Three Streets in San Francisco", in *Liveable Streets*, 1981.

Increased equality: : Investing in active transportation and creating environments that are conducive to walking and cycling help ensure that activities are accessible to all members of society, regardless of income or physical disability. Approximately 20% of Canadian households do not own a car. Another 10% cannot drive because of a disability, while a further 10% simply do not have the income to support car ownership[23]. In addition, approximately 40% of the average Canadian's life is spent either as a senior citizen or as a child without a driver's license. Safe pedestrian access to transit is particularly important, as many citizens simply do not have the option of driving. Prioritizing investments in active transportation, including neighbourhood walkability and safe cycling facilities is an important step in increasing the equity of a community's transportation system and the mobility of all Canadians. With a rapidly aging population, investments in active transportation today will also help ensure greater mobility for tomorrow's growing number of seniors.

A CASE IN POINT

Transforming Civic Identity in Whitehorse, Yukon

Over the last several years, Whitehorse has transformed its civic identity from a car-dependent community to one that values active transportation. With strong leadership, promotion, participatory events like the Urban Transportation Showcase Program's Wheel 2 Work campaign, and the addition of high-profile bike facilities, Whitehorse's car-dependent mindset has been changed. These actions have legitimized active tranportation travel choices that may not have seemed popular before the campaigns. As a result, Whitehorse sees itself as a city that values walking, cycling and public transit. This has led to even more initaitves to increase active transportation in Whitehorse because supporting active transportation initiatives is now a politically smart move.

Please visit the City of Whitehorse's Transportation Department at www.city.whitehorse.yk.ca

23 Litman, Todd, "Quantifying the Benefits of Non-motorized Transportation for Achieving Mobility Management Objectives" Victoria Transport Policy Institute, 2010

3.0 ACTIVE TRANSPORTATION IN CANADA

This section provides an overview of the evolution of active transportation in Canada from stand-alone bicycle and pedestrian plans to today's more integrated and comprehensive strategies and plans.

3.1 BACKGROUND AND HISTORY

While there were earlier bicyle network plans, active transportation planning in Canada started to really emerge in the late 1980s and early 1990s in combination with a general upsurge in global environmental awareness and advocacy. These early bicycle planning initiatives started appearing in more centres as local governments became more aware of the compound benefits of expanding municipal cycling facilities (e.g., improving air quality and reducing GHG emissions, improving cyclist safety, reducing traffic congestion reduction, etc.). Supported by cycling advocacy groups, and environmental and smart growth organizations, municipalities began to develop long-term strategies for cycling.

These early plans often focused heavily on designating bike routes, locating new end-of-trip infrastructure and safety improvements. At the same time the focus on cycling was sharpening, the importance of walking as a mode of transportation also grew and some municipalities began developing pedestrian plans (e.g. Ottawa, ON, Calgary, AB). Obvious synergies between cycling and pedestrian policies emerged which helped encourage and lead some municipalities to write combined pedestrian and cycling plans (e.g. Kamloops, BC, York, ON). Over time, and as awareness of the population health benefits continued to grow, these combined pedestrian-bicycle plans evolved into active transportation plans which recognized a greater range of self-powered transportation modes, including skate-boarding, in-line skating, wheelchairs, personal scooters, etc.

As active transportation planning has evolved, local governments and active transportation advocates have begun to recognize that it is not enough to build infrastructure and expect a significant shift to active transportation modes. In most communities, local infrastructure and land use patterns are car-oriented. This presents a significant challenge, particularly

in combination with entrenched attitudes about automobile use. In addition to amending policies regulating right-of-way and road standards to better accommodate pedestrians and cyclists, existing roadways may require retrofitting (e.g. through street re-design or road diets).

Today, major stakeholders increasingly understand the need for partnerships as part of active transportation planning, and municipalities often work in tandem with other organizations (e.g. local health authorities, school boards, regional transportation organizations, cycling advocacy groups, developers, etc.). Partnering with other stakeholders also allows local government to more clearly link active transportation choices with specific lifestyle choices (e.g. staying in shape, spending less time in traffic, helping the environment).

Today, active transportation planning has become even more sophisticated, particularly as additional research has revealed the strong connections between an individual's health, transportation choices, and the surrounding built environment. Studies have helped build an understanding of the relationships between perceptions of safety, comfort and distances travelled, and the use of active, non-motorized transportation. For more information on current and recent Canadian active transportation studies, visit the University of British Columbia's *Active Transportation Collaboratory* (www.act-trans.ubc.ca/) or the BC Healthy Living Alliance's *Built Environment and Active Transportation Initiative* (www.bchealthyliving.ca/node/108).

3.2 ACTIVE TRANSPORTATION TRENDS

This section summarizes some of the major trends in Active Transportation in Canada. Active transportation is on an upward trend in Canada. This is evidenced by the number of projects underway, the increasingly supportive policy environments, involvement of multiple groups in project planning (e.g., health groups, environmental groups, etc.), and levels of people using active transportation. Governments at every level are coming to realise the benefits of active transportation. The environmental, climate change, health, social and economic benefits of increasing active transportation have also resulted in support for active transportation from diverse interest groups and professions , like doctors and teachers. This broad backing has supported municipalities in their development and implementation of new active transportation plans, policies and programs.

Public support and awareness is growing: In a 2004 nation-wide survey, 84% of respondents agreed that they would like to walk more often and 64% agreed they would like to cycle more often[24].In addition, 84% of those surveyed also supported spending to create dedicated bike lanes and paths. The main motivation for using active transportation continues to be for exercise and health and to help the environment, although practicality,

24 York University, Institute for Social Research, *National Survey on Active Transportation*, 2004.

convenience and pleasure are other noted reasons. With the increase in public health research in active transportation, more and more local, provincial and national health agencies and organizations (e.g., Heart and Stroke Foundation, BC Provincial Health Services Authority, etc.) have launched programs to support more active transportation choices.

Mode share is up: Nationally, statistics indicate that journey to work mode shares for walking, cycling and transit (where many trips start and end with walking or cycling) are relatively stable. According to census data, walking is the most common form of active transportation, accounting for five times the rate of cycling in terms of commuting trips (6.4% compared to 1.3% in 2006). Rates for cycling to work have begun to rise slightly, from 1.1% to 1.3% in 2006. In additon, 23% of Canadian children walk to school[25].

A NOTE ON STATISTICS...

Because there is no nation-wide tracking of the modal share for trip purposes other than to work, any analysis of the rates and trends of active transportation in Canada are limited. The census is the only fully comparable source of information on active transportation in Canada, but the data is limiting because: it is collected every five years; it is collected in May (i.e., it does not account for seasonal variation); it only records trips to work; it only records the primary mode used (i.e., any walking or cycling components that may be part of a car or transit journey are not counted).

Table: Modal share for trips to work

	CAR - single	CAR - with passenger	TRANSIT	WALKING	CYCLING	OTHER
1996	73.3 %	7.4 %	10.1 %	7.0 %	1.1 %	1.0 %
2001	73.8 %	6.9 %	10.5 %	6.6 %	1.2 %	1.1 %
2006	72.3 %	7.7 %	11.0 %	6.4 %	1.3 %	1.3 %

Source: Statistics Canada

Across the provinces, rates of walking or cycling to work were fairly consistent in 2006. The highest active transportation rate (9.6%) occurred in Saskatchewan and lowest rate occurred in Ontario (6.8%) (see table on following page)[26]. The territories have far higher active transportation rates than any of the provinces. In Nunavut, almost half the population walks to work (in May, the month of the census). In 2001 Canadians cycled to work at three times the rate of Americans (1.2% compared to 0.4%), despite the colder climate[27]. On the other hand, when compared to Europe, active transportation rates in Canada have much room for improvement.

25 Institute for Social Research, York University, *National Survey on Active Transportation*, 2004.
26 Statistics Canada, 2006 Census.
27 Pucher, John, and Ralph Buehler, *Sustainable Transport in Canadian Cities: Cycling Trends and Policies*, Berkeley Planning Journal, 2006.

Table: Active transportation modal share for trips to work, 2006

	WALKING	CYCLING	TOTAL A T
Canada	6.4	1.3	7.7
N.L.	7.7	0.3	8.0
P.E.I.	6.6	0.7	7.3
N.S.	8.2	0.7	8.9
N.B.	6.6	0.7	7.3
Que.	6.6	1.4	8.0
Ont.	5.6	1.2	6.8
Man.	7.4	1.6	9.0
Sask.	8.1	1.5	9.6
Alta.	5.9	1.1	7.0
B.C.	6.9	2.0	8.9
Yukon	13.2	2.6	15.8
N.W.T.	26.3	2.0	28.3
Nunavut	49.5	0.1	49.6

Source: Statistics Canada

Cycling to work is beginning to increase in cities of all sizes: While rates vary across the country, cycling to work is growing in popularity as facilities become more developed. Cycling to work is slightly more common in metropolitan areas (1.4%) than in the country as a whole (1.3%), although the growth rate is the almost the same for both Census Metropolitan Areas (CMAs) and the entire country at 16% and 18% respectively over the last ten years. Victoria has been particularly successful in terms of cycling to work. In 2006, 5.6% of residents in the Victoria area cycled to work, which is twice the rate of Saskatoon, the second highest ranking city at 2.4%. Other cities with high bike-to-work rates in 2006 included Kingston (2.4%), Peterborough (2.3%), Ottawa (2.2%), and Kelowna (2.1%). Seventy-four percent of CMAs have experienced growth in cycling rates over the past ten years. Quebec's cities have increased their cycling modal share across the board[28].

28 Statistics Canada, 2006 Census.

Table: Percentage of trips to work by bicycle in small and medium-sized Canadian cities

	1996	2001	2006	TREND
Total CMA population	1.2	1.3	1.4	↑
St. John's	0.3	0.1	0.3	↔
Halifax	1.0	0.9	1.0	↔
Moncton	0.7	0.6	1.0	↑
Saint John	0.2	0.4	0.3	↑
Gatineau	1.4	1.6	1.7	↑
Québec	0.9	1.3	1.4	↑
Saguenay	0.6	0.8	0.8	↑
Sherbrooke	0.7	0.9	0.9	↑
Trois-Rivières	1.2	1.5	1.4	↑
Barrie	0.7	0.5	0.6	↓
Brantford	0.7	1.0	1.1	↑
Greater Sudbury	0.5	0.4	0.7	↑
Guelph	2.1	1.8	2.3	↑
Hamilton	0.7	0.9	0.9	↑
Kingston	2.1	2.2	2.4	↑
Kitchener	1.1	1.1	1.6	↑
London	1.5	1.4	1.6	↑
Oshawa	0.4	0.5	0.4	↔
Ottawa	2.3	2.0	2.2	↓
Peterborough	1.7	1.8	2.3	↑
St. Catharines-Niagara	0.9	0.9	1.5	↑
Thunder Bay	1.0	1.0	1.6	↑
Windsor	1.1	1.1	1.3	↑
Winnipeg	1.4	1.4	1.6	↑
Regina	1.1	1.4	1.4	↑
Saskatoon	2.0	2.5	2.4	↑
Calgary	1.1	1.5	1.3	↑
Edmonton	1.1	1.2	1.1	↔
Abbotsford	0.9	0.9	0.7	↓
Kelowna	2.0	2.1	2.1	↑
Victoria	4.9	4.8	5.6	↑

Safety is improving: The number of cyclist and pedestrian injuries and fatalities has fallen significantly over the last few decades. Despite the increasing number of cyclists on the roads, from 1984 to 2002, cycling fatalities in Canada fell by 50%, from 126 to 63, and injuries fell by 33%, from 11,391 to 7,596. Fatalities fell by 61% in Ontario, by 60% in British Columbia, and 46% in Quebec. In Alberta, cycling fatalities remained roughly constant. Injuries also fell in British Columbia, Ontario and Quebec but increased in Alberta[29].

Smart growth development is on the rise: Increasingly, developers across the country are building smarter, greener projects featuring mixed-used, compact, pedestrian/cyclist-friendly components. In many cities, these developments are also helping revitalize town centres and downtowns by bringing more people to live, work and play in those areas. Increasingly, these projects are being supported by municipal policies requiring developers to include active transportation features in new developments. Across Canada, there are examples of larger scale developments that have included pathways, greenways or even traffic-separated bikeways that link into, connect with, or expand existing networks. Many city governments are supporting these projects through parallel investments in the public realm, including improvements to pedestrian and cycling networks. Finally, many Canadian cities (Vancouver, Ottawa, Toronto, etc.) now require active transportation features in new developments (e.g., covered bicycle parking) through their zoning bylaws.

29 Pucher, John, and Ralph Buehler, *Sustainable Transport in Canadian Cities: Cycling Trends and Policies*, Berkeley Planning Journal, 2006.

Integration with transit: Integrating active transportation with public transit is a vital step in increasing active transportation, giving people more options for decreasing the use of their vehicles. Recognizing the links between walking, riding and transit, public transit agencies across Canada have improved connections between active transportation networks and transit. In many jurisdictions, bike racks have been installed on buses. Safe, secure bike parking has also been provided at major transit stops and stations. Many cities, towns and transit agencies have worked together to improve pedestrian linkages to transit stations and/or provide pedestrian amenities at transit stops (e.g., additional covered seating, improved lighting, etc.).

Best practices and better design: From new crosswalk designs that improve pedestrian safety to cyclist activated crossing lights, street design standards have evolved and changed to better support and protect other street users, namely pedestrians and bicyclists. New design standards have been developed and adopted across the country by different levels of government[30]. Collectively, these new standards and design guidelines will help improve and expand AT networks nationwide.

A CASE IN POINT

Active Transportation Events and Infrastructure – Kelowna, British Columbia

Kelowna has worked on a series of initiatives to create an integrated active transportation network, and has successfully incorporated the goals of its bicycle network plan into other city bylaws. Kelowna's policies and bylaws require new bicycle infrastructure to be included in road and building construction projects. As a result, Kelowna has a 250km network of bike lanes and enhanced end-of-trip facilities. The success of the network has led to a wider acceptance of the need to accommodate cyclists on municipal roads. The City has also begun to integrate public transit into its active transportation planning, recognizing that transit ridership increases in the fall and winter as walking and cycling decreases. Kelowna has effectively pursued regional partnerships in order to access funding from higher levels of government, and has applied $2.9 million of gas tax revenues to active transportation improvements.

More information:
www.city.kelowna.bc.ca/CM/Page377.aspx

30 Velo Quebec publishes a Technical Handbook of Bikeway Design that includes design details and best practices for bike paths, lanes, shared roadways, intersection design, multiuse trails, contraflow bike lanes, and bike boulevards. For more information, or to order a copy, please visit: www.velo.qc.ca

3.3 CHALLENGES AND OPPORTUNITIES

Despite the increasing support for active transportation, many communities still face real barriers to getting people out of their cars to walk, bike, roll, or take transit. The following section further outlines some of the specific challenges planners face in increasing active transportation modal share in their communities and the corresponding opportunities available to address them.

Safety and security: Many people perceive walking and cycling as being unsafe in their communities. This perceived or very real concern may come from having to ride in traffic, unsafe pedestrian road crossings, missing or unmaintained sidewalks, and/or unmaintained roads and bike lanes. Bike theft and the threat of personal attack can also influence perceptions of safety.

Concerns over safety and security can be overcome through a combination of:

- ✓ Providing dedicated cycling lanes and bike parking;
- ✓ Implementing traffic calming and pedestrian safety features such as corner bulges, raised crosswalks and median refuges;
- ✓ Installing and maintaining sidewalks, ramps and crossings;
- ✓ Requiring active transportation infrastructure improvements in redevelopments and public works projects;
- ✓ Ensuring streets and paths are well-lit; and,
- ✓ Providing safety education and information for drivers, pedestrians and cyclists.

DID YOU KNOW...

CPTED - DESIGN FOR CRIME PREVENTION

Crime Prevention Through Environmental Design (or CPTED) is a set of design principles based on the theory that good design of the built environment can reduce crime, reduce the fear of crime, and improve the quality of life. This includes guidelines to increase the natural surveillance of areas (the number of “eyes on the street”), improve lighting, remove obstructions and make clear delineations between public and private space, among others.

More information:
http://www.rcmp-grc.gc.ca/pubs/ccaps-spcca/safecomm-seccollect-eng.htm

Walkinginfo.org (http://www.walkinginfo.org/engineering/) is a great resource for standards and best practices in designing safe streets for pedestrians and cyclists.

Existing land use patterns: Among professionals working in the field, the most commonly cited challenges to increasing active transportation modal share are existing land use patterns and roadway space allocations. Low-density, single-use, auto-dependent development can make walking and cycling between destinations time consuming and unrealistic for many people. In Canada, the average one way commute is 31 minutes[31]. In an urban or suburban environment, that would equate to a 25km commute for cars, 8km for cyclists and 2.5km for pedestrians. Since people generally desire shorter commuting times, spawling, low density land use patterns tend to discourage more active forms of transportation with their less direct and longer distances between destinations.The longer a trip takes, the less likely people are to choose a more active form of transportation. The graphic below illustrates how poor connections between places creates greater distances between destination that, in turn can help encourage more driving.

Figure: How Land Use Can Affect Travel Distances and AT Options

About 300 metres (1000 feet) from A to B.
Route distance approximately 1.2km (4000 feet)

About 300 metres (1000 feet) from A to B.
Route distance approximately 300 metres (1000 feet)

It should be noted that many Canadian communities and urban neighborhoods developed in the first half of the last century have urban forms that, if protected and enhanced, can support walking and cycling to meet many day-to-day needs. However, during the last decades of the last century, development patterns moved to a lower density, single-use, auto-focused (and auto-dependent) model that reduced opportunities for walking and cycling to meet day-to-day needs. Often, the design of the road system and roadway space allocations followed suit.

31 Turcotte, Martin, The Time it Takes to get to Work and Back, 2005.

While overcoming this challenge is certainly a longer-term undertaking, planners can help improve AT connections and support the development of more compact, mixed-use communities by:

- ✓ Supporting smart growth land use plans and policies[32];
- ✓ Developing policies and incentives to direct development to mixed-use, compact, town centre areas;
- ✓ Developing policies and programs requiring AT facilities (e.g., end-of-trip facilities, pedestrian/bicycle safety features, etc.)[33]
- ✓ Identifying and developing a formal pedestrian and cycling network with direct routes between major origins and destinations; and,
- ✓ Supporting inter-modal AT opportunities through such measures as putting bike racks on buses, making transit stations universally accessible, etc. For a good example, see TransLink's Accessible Transit program (www.translink.ca/en/cycling/bikes-on-transit.aspx).

DID YOU KNOW...

LOCATION EFFICIENT MORTGAGES – ACCOUNTING FOR SPRAWL

Tools like location efficient mortgages are helping to better account for the cost of car use. According to the Natural Resources Defense Council: "A Location Efficient Mortgage® increases the amount of money homebuyers in urban areas are able to borrow by taking into account the money they save by living in neighborhoods where they can shop at nearby stores and use public transit, rather than driving to work and to the mall. The Location Efficient Mortgage® program was designed to encourage the development of efficient, environmentally progressive communities and to reduce urban sprawl and dependence on cars."

More information: http://www.nrdc.org/cities/smartgrowth/qlem.asp

32 Download the highlights of the CMHC's, "Smart Growth in Canada: A Report Card" at www.smartgrowth.ca/research_e.html for examples of smart growth land use plans in Canada.

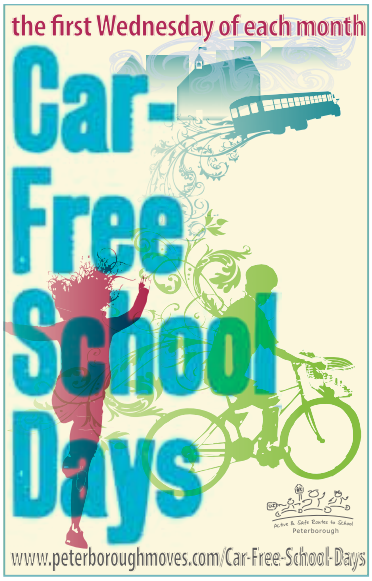
33 Transport Canada has a *Bicycle End of Trip Facilities Guide for Municipalities and Employers* available at www.tc.gc.ca/eng/programs/environment-urban-menu-eng-1887.htm.

Cold climates and difficult terrain: The physical geography of many parts of Canada can be a major barrier to active transportation. Cold, wet, or snowy winters along with hills and windy stretches can make walking and cycling uncomfortable and inconvenient.

To support year-round active transportation, municipalities can make walking and cycling easier, safer and more convenient for people in all types of weather. Municipalities can:

- ✓ Clear sidewalks and bike paths on designated "winter routes" (this can include leaves in the fall and snow in the winter);
- ✓ Hold seasonal events like walk-to-school day, or bike-to-work week to get first timers out (many people discover they prefer cycling, walking or taking transit to work and go on to do so even over the winter months); and
- ✓ Encourage end-of-trip facilities such as bike parking, showers and change rooms (many municipalities have had great success by implementing development standards that require these facilities).

A CASE IN POINT



Active Transportation in Peterborough, ON

Peterborough has initiated a series of programs and infrastructure improvements, aimed at encouraging residents to use active modes of transportation. An "Active and Safe Routes to School" program was launched, along with a monthly IWALK Challenge for elementary school students, with incentives being awarded to participating schools. Improved infrastructure and year-round maintenance have also helped to encourage active transportation in Peterborough. Other projects included widening the Peterborough Pedestrian Bridge, and adding better lighting. Also added were mid-block crosswalks close to key destinations on arterial roads (near schools, parks and churches) to enhance access for active transportation users. Bike lanes in Peterborough are swept as the first priority in the spring, part of a maintenance program designed to encourage year-round use of active transportation facilities.

More information: www.peterboroughmoves.com/

Limited municipal capacity and coordination: One of the most common challenges in advancing active transportation is the limited staff resources that most, if not all local governments face. Many municipalities might not have a department or even a staff member responsible for active transportation. In addition, overlapping jurisdictions, lack of coordination across regions, and complex project approval and funding processes, can slow or halt action.

Active transportation benefits from "champions," both at the municipal level and in the larger community. Such champions can help support and motivate action, and provide additional technical or human resource capacity. Consider the following activities to help build an active transportation constituency at city hall, build community and staff awareness of AT, and provide additional planning capacity:

- ✓ Educate and engage elected officials;
- ✓ Educate and engage municipal managers and department heads to build support, collaboration and cooperation between departments and staff;

- ✓ Support municipal staff with training and education in order to fully understand the issues and to be able to support robust processes in their communities (many non-profit organizations and some larger health groups like the Heart and Stroke Foundation offer workshops and tools);
- ✓ Engage community groups, such as cycling coalitions, school-based organizations and business groups to help promote active transportation; and
- ✓ Establish an AT advisory committee with staff and citizen members to help advance and support AT policy and program development.

Limited funding: Most municipalities, particularly smaller centres, face very real funding challenges. Active transportation can be perceived as a "luxury" item or as a less important budget item that can be the first cut in tough times. In many cases, active transportation projects depend on a mix of municipal funding and grant financing from higher levels of government.

Despite the challenges, there are very real opportunities to improve AT funding. Because active transportation has mobility, health, social, environmental, and economic benefits, there is significant potential to collaborate with different departments, agencies, and community groups with similar agendas. Some partnership opportunities for funding infrastructure, planning activities or the promotion of active transportation opportunities include:[34]

- ✓ Public Health Departments, provincial health agencies, and national health organizations such as the Heart and Stroke Foundation;
- ✓ Green development funds (e.g., the Federation of Canadian Municipalities' Green Municipal Fund);
- ✓ Provincial and federal climate change mitigation initiatives and programs (some of which include funding programs);
- ✓ Private sector (through development agreements);
- ✓ Co-projects with transit agencies and transportation departments;
- ✓ Accessibility groups working towards universal accessibility such as ramps and lifts on transit and sidewalks; and,
- ✓ Schools and school districts - on initiatives like Active and Safe Routes to School programs.

34 See Appendix for more details on selected funding opportunities and programs.

The slow pace of change: Many cities that are just beginning to plan for active transportation may face challenges in moving their plans forward. This is partly because municipalities do not have a good sense of the numbers, patterns, motivations or facilities of active transportation users in their communities. This makes outcomes hard to measure, and it can then be difficult to justify investment in active transportation.

It takes time to gain real ground in active transportation and projects can take several years to plan and engineer, which can be a challenge with unpredictable annual budgets. Examples like the District of Saanich in BC (see Case in Point for more details) show that long-term dedication and supportive policies can have a real impact in getting people moving in active transportation. Success has been had by cities that:

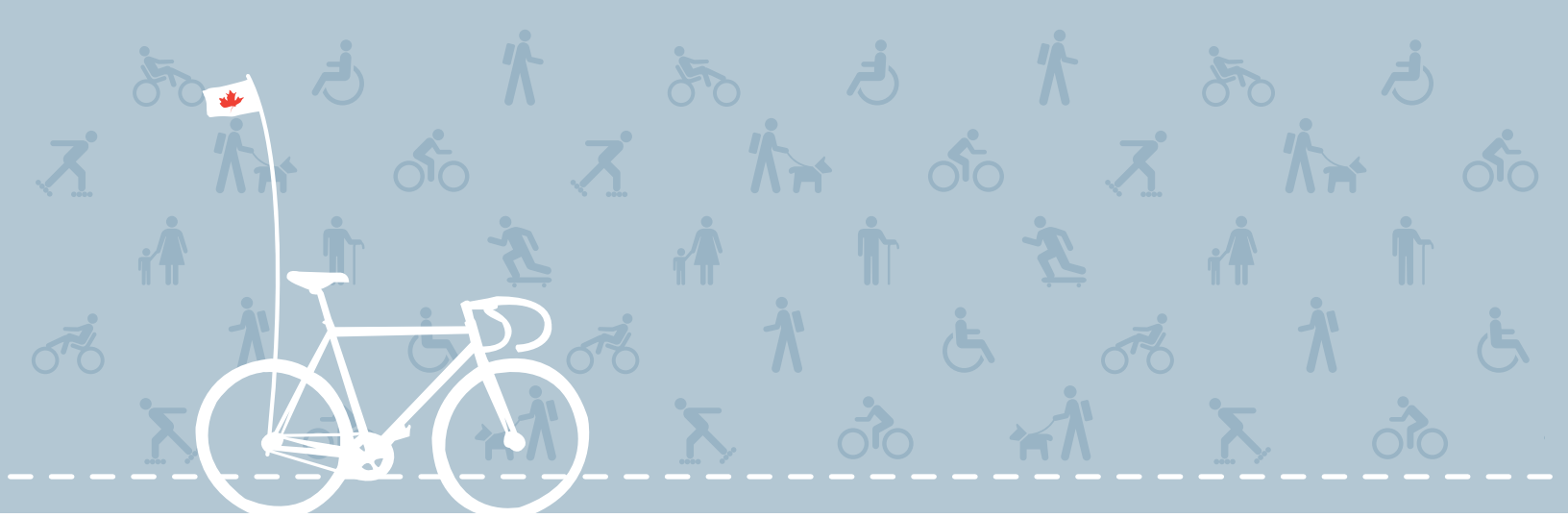
- ✓ Begin with active transportation policies that are developed in pieces to make positive progress in small steps (as support grows, policies can be revisited to align and coordinate efforts);
- ✓ Develop high-level policies that are supportive of active transportation (this allows cities to systematically plan for active transportation without conflict at the project level); and
- ✓ Provide long-term and consistent dedication from staff, managers and elected officials.

A CASE IN POINT

Improving Bicycle Mode Share Over the Long-term in Saanich, BC

The District of Saanich has a long history of active transportation planning, developing its first Bicycle Master Plan in 1994. Saanich has a strong network of neighbourhood and commuter bicycle routes, achieved through long-term dedication, planning requirements and internal and external partnerships. Bicycle facilities (e.g., new curb lanes, bicycle parking) are required as part of new development, including institutional, multi-unit residential, workplace, car parking and road re-surfacing projects. Saanich has also established strategic partnerships with local stakeholders, including Saanich Bicycle and Pedestrian Mobility Advisory Committee and the Greater Victoria Cycling Coalition. Working with the Insurance Corporation of British Columbia, and the local police force, Saanich has improved safety for pedestrians, cyclists and other road users through its Safer City Program, which incorporates road safety into all City initiatives. A 2004 Travel Behaviour Survey indicated that "to and from work" bicycle travel increased from 4% cent in 1999 to 11% in 2004. "It sounds cliché," says Colin Doyle the director of Saanich's Engineering Department, "but the survey results support the idea that if you build it, they will come. There's a lot of latent demand for cycling that has been brought out by our on and off road improvements."

More information: www.saanich.ca or
http://www.tc.gc.ca/eng/programs/environment-utsp-activetransportationprogram-1059.htm



4.0 PLANNING FOR ACTIVE TRANSPORTATION

This guide takes the approach that planning for active transportation can, and should, be integrated with existing planning and development activities across all municipal departments (e.g., Planning, Engineering, Economic Development, Transportation, Health, Recreation, etc.). Active transportation is not just a transportation issue.

To help integrate active transportation planning into current planning and urban development initiatives, and to make it easier for town and transportation planners to take action, this guide is organized around a strategic planning approach with the belief that all planning -- land use, transportation, environmental, public health, etc. -- is more effective if it is strategic. This is because no matter the type of planning, all of it is ultimately about making the best decision possible.

Planning for active transportation using a more strategic approach will not only help communities decide *what* to do, but also *how* to do it and *when* to do it. It can also make decision-making more transparent and objective, engage community stakeholders to build a greater constituency for the project, and ensure that municipal capacity – human resources, time, financial resources, etc. – is considered when prioritizing active transportation programs, policies and projects.

The planning framework also respects the fact that each city or town is unique. Each city's planning context (i.e., capacity, existing plans, etc.), current transportation situation (i.e., existing networks, connections, opportunities and challenges), and their stage of active transportation planning (i.e., some cities may be quite advanced, while others may be at "square one") will be different.

Here, it is important to note that there are many planning tools and guides available (see Appendices). We have highlighted areas where other guides and resources can be harnessed to support your planning work. We encourage users of this guide to built up a resource library and take advantage of of existing and complimentary tools and resources.

It is also important to note that there are many types of active tranportation projects that can be implemented. These range from larger scale capital improvement projects, like building a traffic separated bike lane, to smaller, less resource intensive "first step" projects, like carrying out a neighbourhood active transportation audit. Going through this guide's planning approach will help you decide what scale of project would work best in your community and why. For a list of potential project types, see the table on page 61. The list shows a range of "typical" active transportation options organized into three general themes -- policies, programs and infrastructure. Examples of similar projects profiled in this guide are cross-referenced in the the 'Notes and Examples' column, while weblinks to other example projects are provided wherever possible.

4.1 A STRATEGIC PLANNING APPROACH

As illustrated, this guide's strategic planning framework is organized around a four-phase, ten-step planning process. Each phase, asks one of the following guiding questions. Answering them will requires users to go through a corresponding set of planning steps which, in turn, are broken down into more detailed planning tasks. A checklist at the end of this section can be used as a guide to ensure each of the steps have been considered and completed.

What is happening?

- *Are we ready to undertake a planning process? What needs to be put in place?*
- *Who needs to be involved in planning for active transportation and how?*
- *What is the current situation with active transportation?*

What matters most?

- *Which of the active transportation benefits does our community care most about (i.e., public health and safety, environmental, community design, economic)?*
- *What are our community's priorities and how can they be matched to active transportation actions?*

What can we do about it?

- *What active transportation options should we be considering?*
- *How do we decide which options or actions are best for us, based on our local community values and our current situation?*
- *How should we organize and prioritize active transportation options and actions to integrate and coordinate with other town planning projects?*

Are we doing it?

- *How should we monitor and evaluate our active transportation actions?*
- *What should be monitored and who should be responsible for evaluating?*

Using a more strategic planning process will help answer these questions, but also help ensure that community values (i.e., what matters locally) are considered when identifying and prioritizing actions. The approach also helps avoid the "laundry list" or "wish list" syndrome that can plague less strategic approaches to transportation planning. It's always easier to undertake one or two projects and to do them well, rather than developing a long list of projects (some realistic, some not so much) that could take decades to complete.

It is important to note that the strategic planning process is not linear. It is organized in a circle, as it may be necessary to revisit certain sections as new information becomes available or new stakeholders become involved. The "public participation" and "new information" headers in the centre of the diagram illustrate this dynamic planning context.

Figure: Active Transportation Strategic Planning Process

DID YOU KNOW...

ACTIVE TRANSPORTATION BENEFITS – PERSPECTIVE FROM THE WORLD HEALTH ORGANIZATION

The World Health Organization promotes active transportation as a key strategy and development area for municipalities to undertake. Beyond encouraging health benefits for residents, the World Health Organization recognizes that cities that invest in active transportation programs and policies can:

- Save money on transportation infrastructure;
- Have more productive citizens and workers;
- Be more liveable and attractive to residents, employers and visitors;
- Have less air and noise pollution and better access to green spaces;
- Enhance neighbourhood revitalization, social cohesion and community identity; and,
- Expand social networks.

Source: Peggy Edwards and Agis D. Tsouros, A healthy city is an active city: a physical activity planning guide, World Health Organization, 2008.

4.1.1 What is happening?

The first phase of the planning process helps answer these questions:

- *Are we ready to undertake a planning process? What needs to be put in place?*
- *Who needs to be involved in planning for active transportation and how?*
- *What is the current situation with active transportation – How are people getting around? How much supportive infrastructure is available?*

After completing this work, you will have a clearer picture of what is already happening in the community with active transportation, and which municipal staff and external stakeholders need to be involved. This phase involves three steps.

STEP 1: GETTING STARTED

The first step in an active transportation planning process is to get organized and "plan to plan." A successful process requires commitment, dedicated resources, and the right stakeholders to be involved. This planning step involves the following three tasks:

TASK 1: Frame the challenge
TASK 2: Get organized
TASK 3: Plan to plan

Task 1: Frame the challenge

It is important at the outset to understand what factors motivated the planning process in the first place. This is known as the "triggering event". While this will obviously differ from place to place, exploring and understanding what the driving forces are will help frame the planning challenge and provide background information for the project.

Sometimes the triggering event might be related to new information that is made available, such as a measurable increase in auto related air pollution, or an increase in bicycle or pedestrian fatalities. At other times, there may be no specific event, but a slow and gradual build up of interest in active transportation. The motivation may also be driven by policy or direction from the regional government, or the availability of new funding for active transportation. The Peel Region case study below illustrates how health concerns motivated the initiation of healthy built environment planning to increase active transportation and supported developing a partnership with the Regional Planning Department and Peel Health as a first step in that process.

A CASE IN POINT

"FRAME THE CHALLENGE"
Planning for Healthier Built Environments – Peel, Ontario

Following concern over rising diabetes rates and automobile dependence, the Region of Peel formalized the relationship between their Regional Planning Department and Peel Health (the Region's health authority). Aimed at creating a healthy built environment, this partnership ensures that the Region's planning initiatives incorporate a community health perspective. Peel Health provides feedback on regional planning and on proposed developments in the region. They also offer input on regional and municipal policies, mainstreaming active transportation objectives in relevant planning documents.

More info: http://www.peelregion.ca/health-wellness.htm

Task 2: Get Organized

Without coordination, organization, respected leadership and commitment, the planning process can stall before it starts. There may be a need to "sell" the idea of active transportation planning to elected officials, politicians and other key stakeholders who may not see or understand active transportation and its many benefits. To do this you might need to get organized with some key "talking points" around active transportation. See Section 2 – "Benefits and Rationale" - for an overview of key benefits and rationale. The box below also summarizes key messages that can be used to build commitment.

KEY ACTIVE TRANSPORTATION MESSAGES

While communities of all sizes in all regions of Canada are pursuing active transportation, the need to "sell" its benefits and applications with some elected representatives, department staff and community members is still sometimes necessary. Here are four key messages that you should share with your Advisory Group and use to help promote and build support for active transportation in your community.

1. **Active transportation meets multiple planning objectives.**
   AT improves efficiency and effectiveness of the transportation system, builds transit ridership, supports 'smart growth' planning, climate change and greenhouse gas reduction strategies, as well as revitalization and economic development initiatives.

2. **Active transportation improves community health, safety and well-being.**
   AT is a major component of supporting more active, healthier lifestyles that will help reduce obesity levels and associated chronic diseases. The benefits of physical activity promote well-being and help combat mental illness and social isolation.

3. **Active transportation is good for the bottom line.**
   AT is cost effective and supports "triple bottom line" initiatives. Communities built to support active transportation are often more attractive to live in and retain property values better than more auto-dependent communities. Transportation infrastructure built for active transportation is less costly than infrastructure for cars.

4. **Active transportation matters to many groups, departments and people.**
   AT is about helping people and making communities better, safer, healthier places to live, work and play. With its wide ranging benefits, it should be everyone's agenda, from planning departments to school boards, and from chambers of commerce to health care providers.

Whether formalized or not, it may be the case that a group is already established to undertake the planning work. If not, it is important to identify and engage a core planning team that can contribute to the process. Some processes will require a core team that shares responsibilities and meets regularly. Other projects will primarily be the responsibility

of one individual and the core team will act more as an advisory committee, and meet only when needed. Consider the following questions in determining who should be recruited to a core planning team:

- *Who is going to lead the effort?*
- *Which municipal departments should be involved?*
- *Who can contribute expertise (e.g., Engineering Department, Recreation Department)? Who will likely be involved in implementing actions (e.g., Public Works)?*
- *What external organizations should be involved in the core group (e.g., cycling advocacy organizations, educational institutions)?*

This core planning team can act as executive advisory committee and help provide valuable input, build relationships and linkages to important stakeholder groups, help source and secure needed funding, and provide additional technical and human resources. An effective core group can also "set the tone" for a positive, participatory process and promote the inter-departmental cooperation and community collaboration that will help the overall planning process succeed.

A PLANNING TIP...

THE IMPORTANCE OF THE PROCESS LEADER OR FACILITATOR

All active transportation planning requires cooperation and collaboration between municipal departments and amongst a wide range of stakeholders. Because of this – and the fact that stakeholders may disagree on issues and approaches – having someone with good facilitation skills to lead the project is important. In addition to managing the overall project, the facilitation role of a project leader includes:

1. Assisting the planning team;
2. Ensuring that engagement is effective and fair, and;
3. Maintaining progress of the group.

Someone "in house" may have the skills necessary to lead the project, or you may find that hiring an external consultant can benefit the planning process. For example, Armstrong, BC recently completed their Active Transportation Plan with the assistance of a consultant, who provided guidance and facilitation throughout the process. For more information on Armstong's Active Transportation Plan, you can download the plan here: ubcm.ca/assets/Funding~Programs/Documents/beat-armstrong-report.pdf

Task 3: Plan to Plan

It is important to be clear about the scope and expectations for the project before getting started. Do you intend to go through the entire process and develop a stand-alone Active Transportation Plan? Or do you anticipate using the guide to support a more modest step, like profiling the state of active transportation in your community? While the scope of the project can change and evolve as you move through the process, having an idea of what you expect to achieve is an important early step.

By having an understanding of the potential end goal, it will be easier to design the planning process and ensure that there are the resources to complete it (e.g., staff time, political support, funding). Here, it is worthwhile to take the time to "walk through" the planning process in its entirety. Ask yourself:

- *Who are the stakeholders and decision-makers and how could they be involved?*
- *What are the major active transportation opportunities and barriers?*
- *What do you think matters most to the local community? Is AT even on the radar?*
- *What municipal planning or development processes are underway or planned in the near future that could accommodate and benefit from active transportation planning?*
- *What are some strategies or actions that could be undertaken? How could they be implemented and monitored and evaluated?*

Having established the scope and expectations for the process, you can begin pursuing necessary resources to complete the work.

STEP 1: REVIEW CHECKLIST	✓
Is there organizational and political leadership to support the process?	
Is there commitment to complete and implement the plan or project?	
Has a core team been formed and/or the individual responsible identified?	
Is the scope established?	
Are resources secured – funding, time, human resources?	

STEP 2: STAKEHOLDERS AND PARTICIPATION

A participatory planning approach engages different stakeholders so that their views, expertise, values and issues can be included in the planning process. Stakeholders can also be important project "ambassadors" or "messengers" and help spread the word within their social and professional networks. While working with stakeholders can take more time and require more careful facilitation, it ultimately provides better, more durable results. Why? Because it engages those people who are not only most likely to benefit from active transportation, but often those stakeholders and organizations whose participation will be critical to implementing the resulting active transportation actions (e.g., school boards, local business associations, etc.). This step involves two tasks:

TASK 1: Identify Stakeholders
TASK 2: Determine Level of Community Engagement

Task 1: Identify stakeholders

While stakeholder involvement can change substantially from one community and project to another, its objectives remain the same – to improve the planning process and build broader public awareness of, and support for, resulting active transportation actions.

Beyond staff from relevant municipal departments, typical stakeholders outside of local government include representatives from non-profit, educational and academic institutions with expertise or experience in active transportation, and the private sector. This table illustrates a number of stakeholders and the potential contribution they could make to the planning effort through their involvement on the project.

Table: Stakeholders and potential AT planning contributions

STAKEHOLDER	POTENTIAL CONTRIBUTION – LINK TO ACTIVE TRANSPORTATION PLANNING
Local Government	
Staff (e.g., Transportation, Planning, Engineering, Health, etc.)	Information on existing plans and priorities; technical expertise for the situation assessment, evaluating alternatives and implementation; funding and financial resources; monitoring and evaluation support
Elected representatives	Political support and leadership; technical expertise
Non-profits	
Transportation advocacy groups	Outreach for broader community engagement; input in AT alternatives for consideration; support for implementation and monitoring and evaluation
Neighbourhood groups	Input on situation assessment and possible AT actions specific to a local area
Under-represented groups (e.g., low income populations, persons with disabilities, seniors, youth)	Outreach and communications, situation assessment input

STAKEHOLDER	POTENTIAL CONTRIBUTION – LINK TO ACTIVE TRANSPORTATION PLANNING
Public	
County and regional governments	Funding, outreach and communications, technical support, critical implementation support, monitoring and evaluation
Local institutional Boards and Authorities (e.g. transport, health authorities)	Outreach and communications, implementation support, monitoring and evaluation
Business	
Business Associations (e.g., Chambers of Commerce, real estate associations)	Funding, outreach and communications, implementation support, situation assessment input, political-community support
News media	Outreach, communications, public education, awareness raising
Academic & Professional	
Schools and post-secondary institutions	Staff and student support, facilities, outreach and communications, monitoring and evaluation support
Professional associations	Technical support, active transportation knowledge (e.g., professional engineering or planning association members)

HALIFAX REGIONAL MUNICIPALITY

ACTIVE TRANSPORTATION PLAN

Newsletter No. 1

WHAT IS ACTIVE TRANSPORTATION?

Active Transportation (AT) is any non-motorized, self propelled mode of transportation. It is a rapidly growing approach to traffic congestion mediation, emissions reduction and more healthy lifestyles across much of North America.

WHY IS HRM UNDERTAKING AN ACTIVE TRANSPORTATION PLAN?

Like many similar cities, HRM faces ever growing automobile traffic and air pollution, and a population that is increasingly overweight and obese with the resulting negative health impacts. Recent research prepared for The Heart and Stroke Foundation of Nova Scotia determined that 48% of HRM residents are physically inactive. The economic burden of physically inactivity in HRM is $68 million annually and contributes to 200 premature deaths each year or 850 productive years of life.

By providing a variety of viable and safe transportation alternatives to private cars, the ATP will facilitate and encourage a more active lifestyle, decrease reliance on the automobile and contribute to the present and future health of our communities.

Research from other cities shows that many people will choose Active Transportation as part of their daily commute as well as for general excursions. Factors that can limit participation in Active Transportation include time constraints, safety concerns and a lack of quality infrastructure and support systems. If safe and efficient alternative transportation networks are available for walking and cycling between origin and destination areas, and include links to public transit and ferry systems, then Active Transportation will be a far more viable option for a larger segment of the population. HRM wants to look beyond individual Active Transportation modes and their related infrastructure to determine how various networks and facilities can be linked together in an efficient and cost-effective strategy that is implemented in a phased manner. The result will be a plan that supports and encourages year-round active transportation as an important part of a healthy community with more residents and visitors following an active lifestyle.

This is the first in a series of newsletters designed to inform you about the current study to develop the HRM Active Transportation Plan.

The Halifax Regional Municipality has initiated this study to develop an Active Transportation Plan that will connect, integrate, enhance and expand existing on and off-road facilities for a variety of self-propelled modes of transportation. The Plan will also facilitate these active modes of transportation for lifestyle, leisure, tourism and commuting purposes.

The HRM has selected the consulting firm of SGE Acres, in association with Marshall Macklin Monaghan and Go For Green, from a number of firms that responded to a public proposal call, to assist staff in undertaking this study that will be completed in early 2006.

A PLANNING TIP...

USE A RANGE OF STRATEGIES TO ENGAGE STAKEHOLDERS

Although stakeholder involvement will vary from community to community, it is important to think about which groups and individuals you would like to engage. You will likely need to develop a range of engagement strategies, e.g. newsletters, stakeholder workshops, etc.

For example, Halifax Regional Municipality (HRM) used a range of methods to engage individual and group stakeholders when preparing their AT plan. Over 500 individuals and group members participated in the consultation program, including youth and special needs populations. Strategies included community newsletters with feedback forms, a dedicated project email address, workshops, and a web page for community comments. Input from suburban, urban, and rural HRM residents was a key element in developing the AT plan, and feedback was received from a diverse range of stakeholder groups, including seniors' walking associations, youth organizations, and environmental advocacy groups . For more inforamtion on HRM's Active Transportation Plan, go to: http://www.halifax.ca/tdm/activetransportation/index.html

Task 2: Determine Level of Community Engagement

Identifying stakeholders is only the first step in actually collecting meaningful and useful information. The timing and methods for community engagement need to be carefully considered in order to maximize these efforts. It is important to always keep in mind – *How is the information being collected going to be used? Will it help us make better decisions?*

Here it is important to recognize that community participation and input can be expensive and time consuming. It is essential to determine the level of community engagement most appropriate to the project. Your core group should develop a simple brief that outlines:

1. The level of engagement to be undertaken;
2. Methods to be used;
3. General timing of community outreach; and
4. How information and feedback will be reported back to the community.

In developing this plan, it is necessary to carefully consider which stakeholders can and should be providing which types of input. For example, a booth at a neighbourhood festival may not be the best group to ask about the technical design options for on-street bike lanes but would be an excellent method for getting input on challenges that prevent people from getting out of their cars, and ideas for active transportation improvements in their neighbourhood. With this in mind you can effectively plan an engagement strategy that will best provide the information you will need as you move through the process.

A PLANNING TIP...

COMMUNICATING ACTIVE TRANSPORTATION BENEFITS

With busy schedules and tight budgets, getting the message across that AT is a priority, can be a challenge. Section 2 of this guide - "Benefits and Rationale" and the "Key Messages" provide some important talking points, but there are many options for communicating AT benefits. These include:

- **Create a Brochure:** A well-designed brochure is an easy way to get messages and information out.
- **Develop a Website:** You may consider creating a simple project website to communicate the purpose of the project, post community feedback, and eventually, results. This can be a great way to include multi-media tools, and get youth involved (you could even challenge local youth to create their own videos to communicate the benefits of AT!).
- **Hold an Event:** Festive and fun events can help raise public awareness and engage people who may not normally get involved in municipal planning events.

Marketing toolkits might help you generate ideas for marketing AT projects in your community. For example, the BC Parks and Recreation Association (BCRPA) created the "Active Communities Marketing Toolkit", which is available online at:
http://www.bcrpa.bc.ca/recreation_parks/active_communities/communications.htm

Smart Commute Mississauga has established a website to help spread the word about AT projects in their community. Acting as a central resource for promoting AT in Missisauga, the website includes commuter polls, media information, community newsletters, and information on local events:
http://www.smartcommutemiss.ca

Additional AT marketing resources are listed in the appendices of this guide.

STEP 2: REVIEW CHECKLIST	✓
Have stakeholders who can and should contribute to the process been identified?	
Is there a plan for how, when and why to engage particular stakeholders?	

STEP 3: SITUATION ASSESSMENT

The third step in the planning process – the situation assessment – is designed to determine what is going on in terms of active transportation in the local community. *What walking and cycling infrastructure exists? Are there plans and policies in place? Who is currently using active transportation? What are the major AT origins and destinations? What's the modal split?*

There are numerous assessment tools available to support this work. These range from specific walking or cycling infrastructure checklists to more general transportation assessments that include a review of existing policies and plans, measures for current mode share rates, etc. Some of these assessment tools are highlighted in the 'Tools and Checklists' information box.

New technologies and digital applications can be helpful in this step. For example, Google has added bike routes to its mapping application.

This planning step involves the following tasks:

TASK 1: Conduct a Situation Assessment
TASK 2: Assess the Strengths, Weaknesses, Opportunities, Threats

Task 1: Conduct a Situation Assessment

Who is currently using active transportation and why? Is there adequate, safe and accessible infrastructure? Are employers active in supporting active transportation for commuting to work? These are some of the questions that need to be asked to draw a complete pictures of AT in your community. For this task, it is important to keep a focus on what is possible given available resources. Without restrictions, data collection could go on indefinitely and consume an entire budget. Consider the following questions in determining how to spend time and other resources wisely to get the most relevant and effective information for the process:

- *What information on active transportation already exists (e.g., past studies and reports, census information, etc.)?*
- *Is the information useful? Will it help support decision-making?*

Information collection for the situation assessment should involve a mix of 'desktop research' and public engagement. Begin with a review of existing research and analysis including past plans, reports produced by government agencies, academic papers, etc. It is important to make an effort to ensure relevant past work is incorporated wherever possible. This is an opportunity to reinforce how your active transportation planning process can be integrated with other department's efforts to help avoid 'reinventing the wheel'.

Community engagement Input may come in the form of community mapping to identify high active transportation use areas or safety concerns, meetings with interest groups to get better perspective on local impacts, etc.

With this information, you can build a profile of active transportation in your community. This following outline could be used as a starting point for information to be included in a profile document:

- Existing plans, policies and programs related to active transportation
- Existing infrastructure supporting active transportation
- Current mode share and recent trends in modal shifts
- Overview of agencies and organizations working on active transportation
- Barriers (e.g., major arterials through town, lack of bike lanes, etc.)
- Reference other planning initiatives in your city. For example, observations about mode share, infrastructure improvements and programming may be available (e.g., Land Use Plans, Transportation Plans, Official Community Plans and/or Growth Strategies).

Remember to check in with the core planning team and other experts or those with past experience in active transportation. Talking to other staff members and non-governmental agencies and community members can help clarify and validate information collected.

A CASE IN POINT

"BEING CREATIVE WITH ENGAGEMENT"
Surrey Bike Fest – Surrey, BC

As part of Surrey's Bicycle Recreation Facility Strategy, the project group organized a one day festival in a local park that featured food, music, performances, trick riding displays and several stations where community members could provide feedback on the proposed strategy in a number of creative, family-friendly ways. One of the stations included a modeling box where youth could make a" dream bike park" out of clay. A graffiti wall and speakers' corner was set up where people could either write comments or leave a video message for Surrey Parks and Recreation and City Council. The event attracted over 400 people, becoming the department's best-attended public event. The resulting video and community messages were also critical to "selling" the project with Council.

More information: www.surrey.ca

TOOLS AND CHECKLISTS

Many active transportation tools and checklists exist to help you conduct your community situation assessment. Below is a list of three useful tools, and additional resources are included in this guide's Tools and Resources appendix:

- **Guideline for Reviewing Official Plans:** A step-by-step guide for reviewing Ontario OCPs to improve health and active transportation outcomes, along with key concepts and keywords related to health and the built environment.
  http://www.hkpr.on.ca/healthy-lifestyles-master.asp?id=3270
- **Draft Checklist for Planners to Design Active Communities:** Designed to help planners create active communities, the checklist include principles and specific criteria relating to: density, connectivity, design, streetscape, transit, land use, parklands and trails, safety
  http://www.hkpr.on.ca/healthy-lifestyles-master.asp?id=3270
- **WalkON Walkability Checklist:** Created to help evaluate the walkability of communities, the checklist includes tools to assess: connectivity, proximity and access to amenities, aesthetics, and safety.
  http://www.walkon.ca/how-walkable-your-community

Task 2: Assess the Strengths, Weaknesses, Opportunities, Threats

Once all the necessary components of your situation assessment have been collected and merged into a profile document, a Strengths, Weaknesses, Opportunities and Threats (S.W.O.T.) analysis should be conducted. The SWOT analysis will help to identify and frame critical issues in the process and create the framework for developing objectives. The key question to keep in mind here is:

- *What can we do to build on our current strengths, minimize our weaknesses, capitalize on our opportunities and defend against our threats?*

During this step, it will be helpful to organize information under thematic headings (e.g., infrastructure, behaviour, seasonality, etc.). Keep in mind that as more analysis is conducted these categories may change and new ones may be added. What you are trying to do is capture all the critical issues and organize them in a way that they can be useful for evaluating alternatives.

A PLANNING TIP...

CONDUCTING A SWOT ANALYSIS

The following prompts can help identify strengths, weaknesses, opportunities and threats.

Strengths:

- What are the community's strongest resources in terms of active transportation (e.g., existing infrastructure, compact neighbourhoods, etc.)
- With support, promotion or investment, what resources could become strengths?

Weaknesses:

- What are the community's biggest weaknesses and problems in terms of active transportation (e.g., lack of awareness of the benefits, sprawling communities, widely separated destinations and origins, etc.)
- What barriers currently stand in the way of active transportation actions?

Opportunities:

- What external opportunities are available to maximize, enhance or support AT (e.g., senior government funding, planned major developments, etc.)?

Threats:

- What external threats could impacts the viability of identified opportunities?
- Which could become worse, and under what circumstances (e.g., senior government funding cuts)?

It's also helpful to distinguish between internal and external issues. Strengths and weaknesses should identify those factors that are internal to your community or span of control (e.g., having an existing network of trails) and opportunities and threats should deal with external factors (e.g., the weather).

STEP 3: REVIEW CHECKLIST	✓
Has the current situation for active transportation been assessed?	
Has SWOT analysis been conducted and has it identified key issues that can guide decision-making?	
Are there information gaps that need to be filled? Does more research need to be conducted? Or more community engagement?	

A CASE IN POINT

The B.E.A.T. Active Transportation Checklist

Built Environment and Active Transportation (B.E.A.T.) is a partnership between the BC Recreation and Parks Association and the Union of BC Municipalities, and is funded through the BC Healthy Living Alliance. B.E.A.T. offers support and resources for municipalities, including a Neighbourhood Assessment tool designed to help local governments (and other stakeholders) understand how the built environment affects active transportation in their neighbourhoods. Looking at existing land use and infrastructure (including pedestrian, cycling, trails, and transit facilities) the tool can be used to compare different neighbourhoods, and to indicate which areas might require future work to encourage greater levels of physical activity. Additional resources (including assessments and checklists) are provided on the B.E.A.T. website, to assist municipalities interested in developing active transportation plans for their communities.

More information:
www.physicalactivitystrategy.ca/pdfs/BEAT/B.E.A.T.Neighbourhood_Assessment.pdf

4.1.2 What matters most?

Envisioning "what matters most" engages creative thinking to form a "big picture" image of what active transportation actions can achieve. Grounded in information from the situation assessment, a long-term vision can be translated into substantial and specific objectives and actions that are able to guide practical decision-making.

This phase of planning includes two steps to help planners answer these questions:

- *What does the ideal future of active transportation look like in our community?*
- *What community values and objectives must be considered when developing active transportation plans and strategies and how can we identify them?*

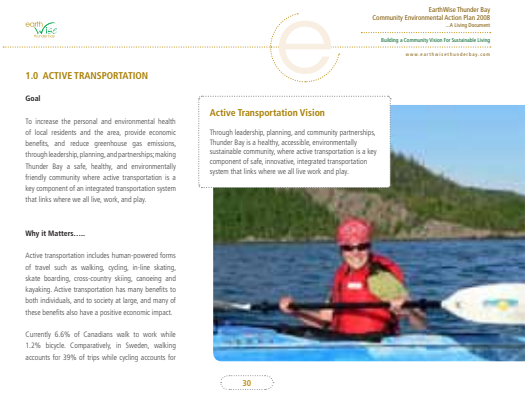
After completing this phase, planners will have a better understanding of community issues and values around active transportation and which of them are most important. The outcome of this phase will be a long-term vision and set of objectives that reflect the community's issues and values.

STEP 4: VISION

Creating a vision for active transportation in region begins to answer the question "what matters most"? A vision should articulate the future you want to see. Pick a time horizon (e.g., 5 years, 15 years) and describe what you see – *Are there dedicated spaces for AT? Has the city developed around nodes of complete communities? Are people healthier, happier, having more interactions on the street? Are people travelling to work, play and school using AT?*

In developing a vision, it is important to think broadly enough to inspire big-picture, 'out of the box' thinking, but specific enough to provide direction for the process. Whether or not a specific 'vision statement' is actually penned, the vision concept should be succinct, clear and easily communicated. An effective vision is one that can be easily explained to an outsider of the process and generate a reaction that shows understanding and interest (if not enthusiasm!).

A CASE IN POINT



An Active Transportation Vision for Thunder Bay, Ontario

The Vision for Thunder Bay's Active Transportation Plan is:

Through leadership, planning, and community partnerships, Thunder Bay is a healthy, accessible, environmentally sustainable community, where active transportation is a key component of a safe, innovative, integrated transportation system that links where we all live, work and play.

More information:
www.thunderbay.ca/Living/Getting_Around/Active_Transportation/Active_Transportation_Plan.htm

STEP 4: REVIEW CHECKLIST	✓
Has a vision for active transportation been developed?	
Is it worded in a way that will be effective to communicate to other stakeholders?	

STEP 5: OBJECTIVES

Objectives should be the backbone of any active transportation planning process. They bring focus to hard decisions around which are the best options or alternatives to pursue. They can also feed into monitoring and evaluation so that stakeholders can follow progress that's made. This step involves two tasks:

TASK 1: Identify Issues and Develop Objectives
TASK 2: Develop Measures

Task 1: Identify Issues and Develop Objectives

In developing objectives for an active transportation planning process, you are essentially trying to determine what the core issues are. This should be informed by the information collected in the situation assessment process, input provided by stakeholders, and big picture ideas collected in the visioning process. In a way, objectives are the middle ground between issues and the vision - they represent an ideal response to the issues identified and articulate how to achieve the vision.

Consider the following in developing a set of objectives for your active transportation planning process:

- *What are the key issues that emerged from the SWOT analysis in the Situation Assessment?*
- *What are the values that we had in mind when developing our vision statement (e.g., environmental wellbeing, etc.)?*
- *Review the "Benefits and Rationale" section in Section 2 of this guide – Are these relevant to this process and can they be incorporated as objectives?*
- *Are there objectives from other relevant community planning processes that should be incorporated (e.g., from an Official Community Plan, Regional Growth Strategy, Transportation Master Plan, Sustainability Strategy).*

In the end, you want to have a concise set of objectives. It is helpful to word these in a way that they are specific to a particular value and clearly phrased to indicate a direction of preference. A rule of thumb for this is to make sure each objective contains a NOUN that describes the object of importance (e.g., greenhouse gases, health) and a VERB that indicates the direction of preference (e.g., increase/ decrease, more/less).

A PLANNING TIP...

ACTIVE TRANSPORTATION OBJECTIVES – A STARTING POINT

There are a number of general objectives that many active transportation projects are likely to share. The "Benefits and Rationale" section provided earlier is a good starting point for these. While the objectives for each community will differ based on local priorities, the following are some objectives that could be considered for your process:

VERB NOUN

- Improve safety conditions for pedestrians and cyclists
- Improve community health and wellbeing among our residents
- Reduce greenhouse gas emissions from auto travel
- Enhance street life
- Reduce transportation infrastructure costs in our community

Below are some examples of objectives created by City of Fredericton, as part of their Trails and Bikeways Master Plan:

- Create conditions for network users that promotes safety of use and accessibility for all ages, skill levels and mobility types including special needs populations.
- Build upon the existing off-road network to enhance user experiences and minimize cost outlays.
- Develop a city-wide AT network consistent with the overall vision of the project, the City of Fredericton Municipal Plan (2006), other local strategic plans and Provincial legislation.

For more informaiton on Fredericton's Trails and Bikeways Master Plan, go to: http://www.fredericton.ca/en/recleisure/resources/TrailsBikewaysMasterPlan.pdf

Task 2: Develop Measures

It is important for objectives to be measurable so that you can assess which alternatives will have the greatest impact on objectives, and compared between alternatives. Measures are also used for monitoring and evaluation – the indicators developed here can tell you, over time, what the impact of your plan is.

In some cases, an appropriate measure to use is obvious. For example, for the objective "Reduce greenhouse gas emissions from auto travel", the obvious measure would be "kilograms or tonnes of greenhouse gases". For other objectives you will need to consider measures that are more indirect. For example, for the objective "Improve safety conditions for pedestrians and cyclists" you may want to measure the number of accidents involving pedestrians and cyclists.

A PLANNING TIP...

SAMPLE MEASURES

The following table provides sample measures for each of the objectives above.

OBJECTIVE	MEASURE
Improve safety conditions for pedestrians and cyclists	Number of accidents involving pedestrians and cyclists
Improve community health and wellbeing among our residents	Obesity rates, diabetes, heart condition rates
Reduce greenhouse gas emissions from auto travel	Tonnes/ kilograms of greenhouse gases emitted
Enhance street life	Number of people on the street (foot counts), number of local events

Developing specific measures can be time consuming, and this level of detail is not needed for all processes. Sometimes it is best to have a general discussion of measures so that stakeholders are "on the same page". This way, when active transportation alternatives are being evaluated there is a consistent basis for deciding why to take on one action and not the other.

STEP 5: REVIEW CHECKLIST	✓
Have objectives been developed?	
Do the objectives capture the issues that need to be considered in making good decisions about active transportation?	
Are there any redundancies that need to be eliminated?	
Have measures for each of the objectives been developed? Do they accurately reflect what the objectives are trying to achieve?	
If all of the objectives were achieved, would the vision be reached?	

4.1.3 What can we do about it?

This phase gets into the action and asks what opportunities exist to promote and facilitate active transportation in your community. Building off of the situation assessment and active transporation objectives developed in earlier planning steps, this phase starts to identify the active transportation project, program and policy options that would support your objectives and improve active transportation in your community. This planning phase also examines the how to evaluate the options you have identified to determine which ones make the most sense for your community.

This phase asks the following questions:

- *What active transportation options or actions could we be considering?*
- *How do we decide which active transportation options are best for us, based on our local community values and our current community context?*
- *How should we best organize and prioritize active transportation options to integrate and coordinate with other town planning projects?*

STEP 6: IDENTIFY OPTIONS

The first step in developing any active transportation strategy or a smaller, stand-alone active transportation is to gather all the ideas about what can be done to promote active transportation in your community. This may include infrastructure projects (e.g., traffic calming, bikes lanes, etc.), programs (e.g., bike safety training, safe routes to schools programs, etc.), events (bike to work week, car free day, etc.), among others. Likely, you will have already generated a number of ideas for action at this point. These may have come from the situation assessment, from stakeholder and community input, from examples in other communities, etc. This step includes two tasks:

TASK 1: Create a List of Options
TASK 2: Refine and Organize Ideas

Task 1: Create a List of Options

The first task is to review the work you have completed and to 'mine' your meeting notes, the situation assessment and action ideas/options set aside to be considered as part of the strategy. Combine these into an initial list of potential options, or alternatives.

At this point you may decide to go out to the community again. Brainstorming alternatives for active transportation can be one of the best ways to engage the broader community in the process and ensure community members are 'heard' and feel committed to process. Whether working with your core planning team or in a community forum, one way to generate ideas is to review the objectives generated in Step 5 and ask: *What actions could*

be undertaken to achieve address the priority objectives? Another option for brainstorming is to use focus questions as guides. Questions may include:

- *What types of infrastructure are most important in promoting active transportation?*
- *How can we get different populations using active transportation (e.g., children, seniors, etc.)*
- *How can we build capacity to create robust active transportation solutions?*
- *What actions can we take that will have simultaneous benefits?*

At the brainstorming stage, no idea is too big, or too small, or too "out there" for your list.

DID YOU KNOW...

PLANNING FOR EQUAL ACCESS ACTIVE TRANSPORTATION

It's important to keep all residents in mind when identifying alternatives and designing your strategy. The following tips can help with this:

- **Children:** Encourage kids to walk to school through programs like the "walking school bus"
- **Seniors:** Help seniors "age in place" by increasing the length of walking signals and incorporating audible signals
- **People with Disabilities:** Create design guidelines for sidewalks, ramps and curbs to be built to universal standards – allowing passage for wheelchairs and scooters.

Another idea is to keep in mind the 8-80 rule – would you send an 8 year old and an 80 year old out on a walk or bike ride on that infrastructure? Is it accessible and safe for all age and mobility groups?

Further ideas and best practices are available at the resources below:

- 8-80 Cities: http://www.8-80cities.org/8-80_Rule.html
- Union of BC Municipalities' "Planning for the Future: Age Friendly and Disability Friendly Official Community Plans": http://ubcm.ca/assets/Library/Policy~Topics/Healthy~Communities/Planning%20for%20the%20Future.pdf
- American Association of Retired Persons' Livable Communities initiatives: http://www.aarp.org/research/ppi/liv-com/
- Kids on the Move: www.kidsonthemove.ca

Again, it is important to note that there are many types of active tranportation projects that can be implemented in your community. The scale and scope of these projects range widely, from larger scale capital improvement projects, like building new corner bulges and mid-street pedestrian refuges, to smaller, "first step" projects, like working with a local school to implement a "walking school bus" program.

The table on the following page shows a range of "typical" active transportation options. It is organized into three general themes -- policies, programs and infrastructure. Examples of similar projects profiled in this guide are cross-referenced in the the 'Notes and Examples' column, while weblinks to other example projects are provided wherever possible. Please note the list of potential active transportation options is not exhausitive. There are many more types of policies, programs and infrasturucture projects that can be undertaken to support active transportation. Please see the Appendix for links to other resource information and be sure to visit Transport Canada's Case Study Library.[35]

Task 2: Refine and Organize Ideas

The next task is to refine and organize your option ideas so that you have a manageable list to work with. At this point, your list of alternatives may include a wide range of ideas – from actions like small one-off educational events to large-scale infrastructure projects, or from simple policy additions to existing plans and strategies to a full-scale Active Transportation Master Plan for your community.

The point of refining and organizing ideas is to create a final list of alternatives that can be effectively evaluated, and to eliminate redundancies. To do this you may want to group actions that are similar or ones that would likely be done in combination. For example, if a number of different trail segments in a neighbourhood have been proposed these could be clustered into a single alternative.

Some guiding questions that can be used to help refine and organize alternatives include:

- *Which actions are related?*
- *Is there synergy with other initiatives / resources (e.g., are there actions that would be implemented by the Engineering or Public Works Department? Are there some that can be grouped based on the fact that they are education and information campaigns?)*

35 The Case Study Library is a part of Transport Canada's Information Network, established as a forum for active transportation practitioners (and other stakeholders) to share information and lessons learned. Focusing on Canadian examples, the library profiles over 80 sustainable transportation initiatives that have been implemented the country. Case studies are grouped by subject, and profile a range of active transportation policies, programs and infrastructure projects. Please visit: www.tc.gc.ca/eng/programs/environment-utsp-casestudylibrary-229.htm

TOOLS	TECHNICAL REQUIREMENTS	DATA NEEDS / RESEARCH	POTENTIAL TIME REQUIRMENTS	POTENTIAL CAPITAL COSTS $	STAKEHOLDERS & ENGAGEMENT	POTENTIAL 'QUICK START'?	NOTES, EXAMPLES AND LINKS
POLICIES							
Reduced Speed Limits	◔	◔	◔	◔	◔	YES	See: www.vtpi.org/tdm/tdm105.htm
AT Policies in Existing Plans (e.g., Official Community Plan, etc.)	◔	◔	◕	◔	◑	YES	See Case in Point, page 13
Zoning/Development Approvals Requirements (i.e., AT infrastructure)	◕	◑	◕	◔	◕	YES	See Case in Point, page 68
Pedestrian & Bicycle Design Guidelines	◕	◑	◕	◔	◔	YES	See: www.completestreets.org
AT/Pedestrian/Bicycle Advisory Committee	○	○	◑	○	◔	YES	See Case in Point, page 35
Tranist Integration (bikes permitted on transit)	○	○	◔	○	○	YES	See: www.translink.ca/en/Cycling/Bikes-on-Transit.aspx
AT Strategy	◑	◕	●	◑	◕	NO	See Planning Tip, page 46
Bicycle/Pedestrian Plan	◑	◕	●	◑	◕	NO	See Case in Point, page 70 and Planning Tip, page 56
Healthy Communities - Active Communities Plan	◑	◕	◑	◔	◑	NO	See Case in Point, page 10
Transportation Demand Management (TDM) Strategy	●	◕	◑	◑	◑	NO	See: www.cnv.org/server.aspx?c=3&i=497
PROGRAMS							
Neighbourhood AT Assessment and Studies	○	◔	◔	○	◑	YES	See Case in Point, page 15, 53 and 70. Also see Tools and Checklists, page 51
AT Mapping (origins, destinations, routes)	◔	◔	◔	◔	◑	YES	See: www.thunderbay.ca/Living/Getting_Around/Active_Transportation/Resources.htm
AT Network Designation	◑	◑	◑	◑	◕	YES	See Case in Point, page 19
AT Awareness / Social Marketing Campaign	◕	◑	◕	◕	●	NO	See Case in Point, page 74 and Planning Tip, page 46
AT Monitoring and Evaluation Program	◕	◑	◕	◕	●	NO	See Planning Tip, page 75
Transit Integration (bikes on transit)	○	◔	◔	○	○	YES	See: www.translink.ca/en/Cycling/Bikes-on-Transit.aspx
Pedestrian Programs (e.g., Active and Safe Routes to School, etc.)	○	○	◑	○	◔	YES	See Case in Point, page 32
Improved Traffic Regulation & Enforcement	◔	○	◑	◔	◔	YES	See: www.bicyclinginfo.org/bikesafe/case_studies/casestudy.cfm?CS_NUM=801
Festival or Event (e.g., Car-Free Day, Bike Fest, Bike Valets, etc.)	○	○	◕	◑	●	NO	See Case in Point, page 50
INFRASTRUCTURE							
On-street Cycling Facilities (separated)	●	●	●	●	◑	NO	See: www.voyagezfute.ca to learn about Montreal's on-street network
On-street Cycling Facilities (not separated)	◕	◕	◕	◑	◑	NO	See: www.bicyclinginfo.org/engineering/facilities.cfm
Signed Bicycle Routes	◔	◑	◔	◔	◔	YES	See: http://onegreencity.com/existingroute.html
Multi-use Paths	◑	◑	◕	●	◔	NO	See: www.london.ca/d.aspx?s=/Transportation/bikepage.htm
Shared Lane Markings ("sharrows")	◔	◑	◑	◔	◔	NO	See: www.ww.edmonton.ca/transportation/cycling_walking/sharrows.aspx
Bicycle Taffic Lights	◔	◑	◕	◑	◔	NO	See Case in Point, page 35
Covered Bicycle Parking / Bike Lockers	◔	◔	◔	◑	◔	NO	See: www.toronto.ca/cycling/locker.htm
Pedestrianized Zones / Streets	◕	◕	●	●	●	NO	See: www.vtpi.org/tdm/tdm6.htm
Pedestrian Safety Upgrades (e.g., crossing lights, corner bulges, etc.)	◑	◕	●	◕	◔	NO	See Did You Know, page 18
Traffic Calming Features (e.g., circles, raised cross walks, etc.)	◕	●	●	◕	◔	NO	See Case in Point, page 19
Transit Integration (bike racks)	◑	◔	◑	◔	○	NO	See Case in Point, page 27

KEY

○ Low requirement (e.g. Low technical capacity requirements)

◔

◑ Medium requirement (e.g. Medium time requirements)

◕

● High requirement (e.g. Potential high capital costs)

Organizing alternatives might be affected by timing, where "x" must happen before "y" can happen. Some strategies might be severely limited by various constraints, such as funding or timing. While it is important not to eliminate alternatives too quickly (i.e., some that seem impossible to implement might just need some creative thinking), it is helpful at this stage to whittle your list down. This initial set of strategies will need to be refined as objectives are clarified, and as more information about the possible impact of a given alternative is gathered. Creating good strategy options is an iterative process.

Fredericton's Trail and Bikeways Map. A common "first step" project is to designate or identify a bicycle or pedestrian route network.

STEP 6: REVIEW CHECKLIST	✓
Have strategies or actions been developed?	
Are there any redundant actions that could be combined or packaged together?	

STEP 7: OPTION EVALUATION

The second planning step in this phase involves comparing and evaluating the actions and options developed in Step 5 to identify your top priorities for action. This step will help planners and stakeholders decide which options (or combination of options) best meet the identified local community objectives, build on active transportation opportunities and strengths, address network gaps and weaknesses, and 'fit' with current town planning priorities. This planning step involves two tasks:

TASK 1: Evaluate Options Against Objectives
TASK 2: Refine and Decide

Task 1: Evaluate Options Against Objectives

This is the step where the 'rubber hits the road'. All of the work you have done up to this point has been to create the framework for decision-making and to identify the particular options, or alternatives, that you will be evaluating in this framework. The overall goal of this task is to decide which options, or alternatives best:

- Meet the identified local community objectives;
- Address the local active transportation needs and opportunities; and,
- 'Fit' with current urban planning priorities and gaps.

The level of analysis here will depend on resources available for the process. For example, some processes will use the measures developed in Step 5 to estimate how well the alternatives could meet the objectives. These estimates, or forecasts, would use statistical data and modeling to compare the potential performance of the alternatives. It other cases, you can use a simple, general framework to gain an understanding of how well each of the alternatives address the objectives.

During this stage, it can be helpful to create a matrix to organize your evaluation (see example). Using this approach you would review the alternatives one at a time and consider how well each could support or advance each of your objectives.

A PLANNING TIP...

SAMPLE MEASURES

The following table provides sample measures for each of the objectives above.

		ALTERNATIVES			
		Build dedicated walking trails	Deliver bike safety workshops	Hold a local "car-free day" event	Install bike racks on local buses
OBJECTIVES	Improve safety conditions for pedestrians and cyclists	HIGH	HIGH	LOW	LOW
	Improve physical activity related health of our residents	MED	MED	MED	MED
	Reduce greenhouse gas emissions from auto travel	MED	MED	MED	MED
	Improve community cohesion	MED	LOW	HIGH	LOW

With the matrix complete you can compare alternatives to see which ones score "HIGH" the most times or have the fewest "LOW" scores. Tallying this up for each alternative will give you a first order idea of which alternatives are best. In this example, "Building dedicated cycling/ walking trails" is the alternative that scored best.

It may also be the case that a number of alternatives received approximately the same scoring overall. Ranking the objectives – to know which of these are most important to your community – adds another level of analysis that can help distill out the best actions. For example, if the objective "Improve safety for pedestrians and cyclists" is more important that the others (e.g., because pedestrian fatalities have recently been on the rise) then the alternative to "Deliver bike safety workshops" should be prioritized above the alternative to "Hold a local car-free day event", even though they had the same scoring overall.

How each of the alternatives score will depend entirely on the local situation in the community. For example, both the 'Dedicated walking trails' and 'Bike safety workshop' alternatives in the example above should have a positive impact on the objective to "Improve physical activity related health of our residents" because they will both encourage more people to cycle and walk or current cyclists and pedestrians to cycle and walk more. However, the degree to which these impact this objective will depend on the current situation of active transportation in your community. If anxiety around the safety of pedestrians around traffic is the biggest barrier in preventing people from walking (an issue that may have been identified through community engagement) – this could have a HIGH impact on the objective to "Improve physical activity related health of our residents" because it will create the biggest change in getting people onto their bikes.

Consider another situation; if a lack of awareness around the benefits of active transportation is the biggest current barrier in your community, holding an event like a car-free day to educate the community about the health, social and environmental benefits of active transportation could have the greatest impact. In this case, the 'MEDIUM' scoring of the 'Hold a car free day event' alternative on the objectives to "Improve physical activity related health of our residents" and "reduce greenhouse gas emissions from auto travel" could be bumped up to a 'HIGH'.

While this process may reveal a clear winner (i.e., one alternative that clearly scores higher than the rest), you could also find that several alternatives perform about the same overall. In this case, how do you determine which alternative is best? It depends which objectives are most important. Once you know which objectives are most important, you can prioritize those alternatives that score best against these, knowing that these alternatives will have the greatest impact in creating the active transportation change you envision in your community.

Having completed the matrix and determined the relative prioritization of objectives, evaluate the results in order to determine which alternatives to include in your strategy. This may be one single alternative or a number of them that will be implemented over time.

Task 2: Refine and Decide

The task of evaluating options or alternatives, especially when undertaken as an integral part of a participatory stakeholder process, is often the most engaging part of the whole planning cycle. As the evaluation process unfolds you will continue to learn about the nature of active transportation in your community. These lessons and insights will help identify the strengths and weaknesses of the actions and strategies you have identified, and will highlight "what matters most" in your community. Your evaluation thus far should provide the information necessary to:

- Better assess "mainstreaming" opportunities; and
- Refine your strategies or active transportation actions.

"Mainstreaming" Options

Mainstreaming focuses on integrating active transportation actions into pre-existing or emerging city plans, programs and policies. Reflecting on the results of your strategy development and evaluation tasks to date, consider:

- *Do any of the actions you've identified to date require coordination with other initiatives in order to maximize the potential for benefit, or to minimize the potential for working at cross-purposes?*
- *Have any new opportunities emerged to mainstream specific actions into other plans, programs or policy development initiatives (e.g., Is your Official Community Plan being revised? Is there a transportation infrastructure project or investment being planned that could be improved by incorporating AT actions?)*
- *Can any 'low hanging fruit' actions be simply handed over for immediate implementation as a part of existing department or program responsibilities?*

A PLANNING TIP...

JUMP START THE PROCESS BY "PICKING THE LOW HANGING FRUIT" AND GETTING VISIBLE RESULTS

Strategic planning can take time. Getting results early on can be a great way to maintain momentum, provide "learning by doing" opportunities and "put results on the ground." The best way to get visible results is to find the 'low hanging fruit' - those projects that are easily 'picked', often because they are simple, cost-effective actions that can be implemented quickly.

For example, Bicycle Valet Winnipeg recently started offering valet services at Winnipeg Blue Bomber's games. Introduced in summer 2010, the project has been a success with football fans, and offers a simple, fun way to encourage active transportation in the community.

It may be that the most important achievements of your planning exercise are near completion. You have formally considered active transportation in your community, brainstormed actions, and evaluated their efficacy. Depending on the answers to the above questions, you may want to begin the process of methodically integrating active transportation actions into existing plans, programs or policy development initiatives.

A CASE IN POINT

Mainstreaming Active Transportation in Calgary, AB

As part of its ongoing active transportation planning, the City of Calgary created a Pedestrian Policy and Design Report in 2008, and then linked the City's new pedestrian policy objectives to existing initiatives through updates within a number of municipal documents, including:

- 2006-2008 Calgary Council Priority 2.1: Encourage alternate forms of transportation
- Sustainability Principles (2007)
- Municipal Development Plan (1995)
- Calgary Transportation Plan (GoPlan) (1995)
- Transit Friendly Design Guidelines (2006)
- Transit Oriented Development Policy Guidelines (2005)
- Sustainable Suburbs (1995)

More information: http://www.calgary.ca/DocGallery/BU/trans_planning/transportation_solutions/pedestrian_report.pdf

Refine Options

Alternatively, there may be more work to be done as a result of your evaluations to date in order to tackle any identified challenges or integrate new ideas. Consider the following:

New Actions & Information Requirements:

- *Are there any new options that have been identified to address weaknesses in your strategies?*
- *Can any options be refined to more effectively meet your objectives, or to address the key AT network weaknesses in your community?*

Planning Constraints:

- *Does the cost of short-listed active transportion actions exceed your available budget? Do you need to prioritize the most important actions, or seek out other sources of funding that will be required?*
- *Have you run up against firm planning constraints (e.g., zoning requirements, road standards) that would hinder your ability to implement an important action? Do you need to coordinate with other levels of government – regional, provincial – to revise policies or standards?*

Capacity:

- *Has the strategy development and evaluation process uncovered capacity issues – lack of knowledge, skills, etc. – that need to be addressed? Are there specific capacity-building actions that need to be developed?*

At this point you could take what you have learned and quickly work through Steps 5 and 6 again. As you move through these steps for the second time, you will note that the process moves quite quickly, and, potentially, can result in new actions and strategies.

Your goal for the end of this step is to formally decide upon and document the best active transportation strategy or action for your particular planning context. Work with your core group and decision makers as required to ensure there is agreement across the board on the preferred overall strategy prior to embarking on Step 8.

A CASE IN POINT

Pedestrian Needs Assessment in Kamloops, BC

As part of its 2002 Pedestrian and Bicycle Master Plan, the City of Kamloops used a Safety Issues Rating and Bicycle and Pedestrian Safety Index to assess the safety of their existing road network from the point of view of all road users.

This information was used to identify and rate possible improvement, and prioritize actions as part of an active transportation implementation strategy.

More information: http://www.kamloops.ca/transportation/pedestrianplan.shtml

A PLANNING TIP...

YOUR ACTIVE TRANSPORTATION STRATEGY: THE WRITTEN PLAN

The following outlines the main sections that could be included in your AT action plan:

Part 1: Introduction
This provides background information and the document's organization.

Part 2: Where are we now?
This describes the current situation, based on information collected in the situation assessment. This also outlines key issues, essentially the SWOT analysis.

Part 3: Where do we want to go?
This contains the vision and objectives that set the strategic direction for the action plan.

Part 4: How can we get there?
This is the strategy and action plan. It outlines the projects that will be implemented and the details needed for who will be involved and what resources are needed.

Part 5: Are we doing it?
This outlines the plan for monitoring results of the strategy and times for periodic updates.

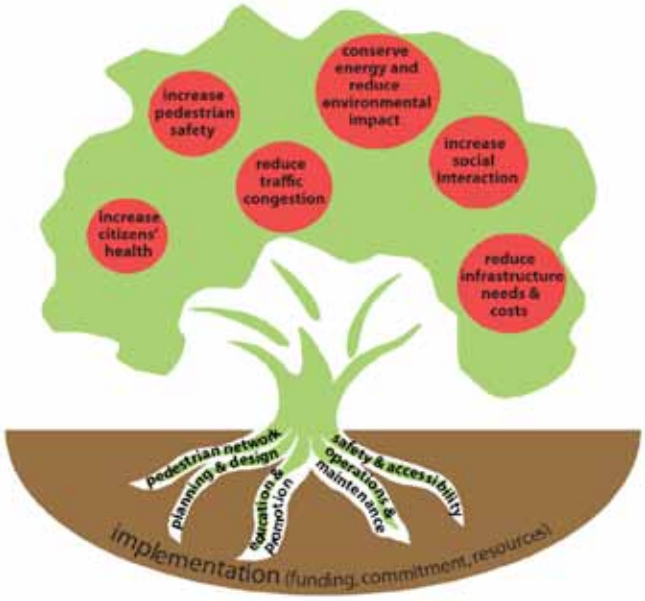
A CASE IN POINT

The Tree as Metaphor for the Pedestrian Plan in Ottawa, ON

Ottawa used the image of a healthy tree as the strategic concept for its 2009 Draft Pedestrian Plan. Recognizing that pedestrian travel is organic, the plan is about "nurturing and cultivating" walking, by "growing" a network of pedestrian facilities throughout the city.

The image of the "healthy tree" also links to Ottawa's sustainability goals, illustrating the connection between active transportation and other municipal objectives

More information: http://www.rmoc.on.ca/residents/onthemove/walking/pedestrian/pedestrian_plan_en.html



STEP 7: REVIEW CHECKLIST	✓
Have alternatives been evaluated against objetives?	
Have been "top" alternatives been refined and final actions selected?	
Have "low hanging fruit" actions been identified?	
Have options for mainstreaming alternatives been considered? Can they actions been integrated into existing plans or coordianted with other initiatives?	

STEP 8: IMPLEMENTATION

Implementation essentially involves deciding how to turn your selected strategy alternatives into an "on the ground" reality. It is one thing to decide which actions to pursue, but quite another to detail them, maintain commitment and secure the required resources! It is important from the outset to ensure everyone involved in this step has a clear idea of what is meant by the selected strategy alternatives. This step involves four planning tasks.

TASK 1: Identify Necessary Steps
TASK 2: Determine Roles and Responsibilities
TASK 3: Determine Timelines, Resources, and Pre-conditions
TASK 4: Implementation

Throughout this task, we encourage you to visit Transport Canada's Case Study Library at www.tc.gc.ca/eng/programs/environment-utsp-casestudylibrary-229.htm. It provides a large number of detailed examples of active transportation implementation projects from across Canada. Additional helpful case studies can be found using the other resources highlighted in this guide's "Tools and Resources" section. Other implementation information can be sourced using the "Case in Point" links in this guide and the web links provided on the active transportation sample project table on page 61.

Task 1: Identify Necessary Steps

The first task in action planning is to identify the specific steps that need to be taken to complete the AT project(s). A well-written action plan is crucial to mobilizing action. Your plan should clearly show all the steps taken in determining the strategy and should identify and detail all of the necessary implementation steps.

Task 2: Determine Roles and Responsibilities

For each of the steps outlined in your action plan, you will then need to consider who needs to be involved and how. This may require commitment from people on your core team and/or may reach beyond to other staff, departments or outside organizations. Be as specific as possible in assigning names and responsibilities to individual tasks. If appropriate, implementation agreements (i.e., Memorandums of Understanding, etc.) can be used to formalize commitment from people and organizations involved.

Task 3: Determine Timelines, Resources and Pre-conditions

Without resources identified, funding in place and pre-conditions met, the action plan will go nowhere. The alternatives that make up the strategy should consider immediate actions, short term (1-2 years), medium term (3-5 years) and long term (5+ years) horizons. Timeframes should also be developed with other initiatives in mind. *Are there other capital projects planned that certain types of infrastructure could be tied into? Is there a specific type of funding going to be made available that can be coordinated with your strategy?*

Securing funding can be a major hurdle, especially given all the competing interests. Active transportation projects however have the benefit of being able to reach across departments, enabling funding to be shared. As it may be difficult to get the entire funding up front, it can be helpful to break longer projects into smaller, stand-alone pieces to make fundraising more manageable.

Task 4: Implementation

With your active transportation plan in hand, you are ready to get into action. There are a number of things to keep in mind the ensure your that plan is implemented effectively:

Oversight and progress checks: Continuous and consistent oversight can go a long way in keeping things on track. It could be a good idea to schedule regular meetings with your core group at the outset to review progress to determine whether or not targets are being met.

Communication: It is important to maintain communication with stakeholders, including, for example, municipal staff and departments you engaged in earlier stages, elected officials, the public. Communication tools such as newsletters and progress updates can help keep your project "top of mind".

Momentum: Constant oversight and communication will both contribute to maintaining momentum. Still, it is important to be aware of how interest and energy towards your project ebbs and flows throughout implementation. While it may fall to be background at some points, certain events and timing (e.g., funding cycles, opportunities to collaborate with other projects) may warrant efforts being ramped up.

Celebrate success: Make a point of highlighting even small successes. Events, press releases, internal announcements can all help boost momentum and keep the project in the minds of staff and citizens.

A CASE IN POINT

Phased Implementation Plan in Fredericton, NB

As part of their 2007 Trails and Bikeways Master Plan, the City of Fredericton created a detailed plan outlining capital and financial requirements, dividing the 20-year timeline into four phases.

Additionally, the phasing strategy builds capacity, giving the City time to gain experience working with AT infrastructure, and to build the partnership opportunities necessary to implement the full phased plan.

Recognizing that AT planning requires multi-year budgeting, as well as internal and external partnerships, Fredericton's implementation strategy provides a central reference point, allowing key stakeholders to coordinate future activities and funding applications.

More information: http://www.fredericton.ca/en/recleisure/resources/TrailsBikewaysMasterPlan.pdf

STEP 8: REVIEW CHECKLIST	✓
Have all the specific steps needed to complete your AT project(s) been identified?	
Have roles and responsibilities for each step been assigned?	
Have all necessary resources been secured – funds, space, etc.	
Have risks and weak links been considered? Have preventative measures for these been identified or a contingency plan developed?	

4.1.4 Are we doing it?

Municipalities require reliable and verifiable data that shows their investments in active transportation are, in fact, having an impact. Because of this, clear and consistent monitoring of implementation activities over time is key. Combining your monitoring efforts with evaluation -- determining how, when and why to tweak and fine-tune the plan – will help you to ensure that your AT strategy will be robust and long-lived.

This phase of planning includes two steps to help planners answer these questions:

- *Is our plan/strategy/action working and making a difference? Have we done what we said we would do?*
- *How can we address makes changes or update the strategy to incorporate new information?*

A PLANNING TIP...

WHAT IS MONITORING AND EVALUATION?

Monitoring:
Strictly speaking, monitoring means to “observe” or to “check performance.” Monitoring is a continuous process of collecting information, using indicators to gauge the process or project. Regular monitoring allows the timely identification of successes or failures. There are two common forms of monitoring:

- Compliance monitoring ensures that what was agreed upon is actually done (e.g., a bike trails network map was created)
- Impact monitoring gauges the impact of actions in relation to the objectives (e.g., automobile-bicycle collisions were reduced by 50%)

Evaluation:
Evaluation uses the information from monitoring to analyze the process, programs and projects to determine if there are opportunities for changes and improvements. Evaluation, like monitoring, should promote learning. In the implementation stage, evaluation is used to determine if the actions are meeting the strategic objectives, efficiently, effectively and/or at all.

STEP 9: MONITORING AND EVALUATION

Often overlooked or downplayed, monitoring and evaluating is one of the most critical steps in the entire planning process. *Is the active transportation project, policy or program generating the anticipated effects? Are project or program stakeholders and agencies doing what they agreed to do in Step 8: Implementation?* These are important questions that this planning step seeks to answer.

Here, it is important to note that monitoring and evaluation (M&E) is not conducted to find fault and be critical. It is a vehicle for accountability and a management tool for improving adaptation and mitigation measures. When conducted regularly, M&E is a proactive management tool that provides timely and reliable information for adjusting and modifying specific climate change actions, programs or plans. Effective monitoring and evaluation will sound the alarm when:

- Internal and external circumstances have changed;
- Key opportunities are being missed;
- Stakeholders or agencies are not carrying out previously agreed to tasks; or,
- AT activities or policies are no longer effective.

M&E will help ensure that adjustments and fine-tuning of project activities can occur and that changes in local priorities can be accommodated so that the climate strategy, plan or action remains useful over time. This planning step involves two tasks:

TASK 1: Prepare a monitoring and evaluation framework
TASK 2: Evaluate and report results of the monitoring and evaluation program

A CASE IN POINT

Implementing and Communicating an Active Transportation Plan in Bridgewater, NS

Following the completion of their Active Transportation and Connectivity Plan in 2009, the Town of Bridgewater created an interactive online map. Established as part of the AT implementation strategy, the map is designed to keep residents informed about the plan's progress.

Map layers illustrate the route master plan, completed and proposed projects, and community destinations. The map also includes information on parks and recreational trails, and bike parking locations.

More information:
http://www.bridgewater.ca/activetransportation/active-transportation.html

A CASE IN POINT

Monitoring Vancouver's Cycling Strategy

Since the 1980s, the City of Vancouver has been promoting cycling as an alternative mode of transportation. Since 1993, the City has monitored cycling in the city to gauge the success of their efforts and to help plan new system improvements.

The City's 1997 Transportation Plan committed to undertaking regular monitoring in order to make the necessary changes to meet the targets set out in the plan. A monitoring and review program was established to help guide future policy decisions and budgeting. The program included:

- Automated and manual counts to assess bike volumes on bikeways and streets;
- Bicycle cordon counts to assess changes in model split;
- Monitoring car volumes on bikeways;
- Monitoring collisions involving cyclists; and,
- Monitoring crime statistics to evaluate the possible correlation between bike facilities and crime.

Monitoring has shown an increase of over 300% on one bike route that has been monitored since 1993. Since they were first established, cordon counts (used to measure travel into a certain boundary area) have shown a two-fold increase in cyclist entering Downtown per day.

Vancouver's experience in implementing a monitoring program also highlights certain challenges. The first involves determining causality between monitoring data and behavioral influences. For example, it is difficult to know if a particular program or infrastructure improvement caused an increase/ decrease in cycling or if it was some unaccounted for factor. Balancing technology and labour posed another difficulty -- the use of volunteers saves money, but requires more coordination, while automated devices can only provide accurate counts in the right conditions.

More information: http://vancouver.ca/bike

Task 1: Prepare a Monitoring and Evaluation Framework

The timing of M&E activities will differ with each project, as will the nature of the objectives monitored and the indicators used. Some projects might lend themselves to shorter monitoring periods -- because indicators are gathered on a more frequent basis (e.g., traffic counts) -- but it is likely that a more thorough evaluation might occur on an annual basis.

Ongoing monitoring is a reflective process. The results obtained from monitoring should be fed back into the plan, influencing its future design and direction (e.g. new knowledge might cause action plans to be rethought to meet objectives).

The objectives and corresponding measures developed in Step 5 should be used to form the basis of your monitoring and evaluation framework. Depending on your strategy, you may wish to incorporate a combination of quantitative measures (e.g., bike counts to measure changes in the number of cyclist along a particular route) or more qualitative techniques (e.g., an intercept survey for pedestrians to rate their perception of safety on a particular pathway). In developing a monitoring plan, keep the following considerations in mind:

- **Be systematic:** It is important to be systematic or consistent in the information you collect for monitoring and evaluation purposes. Information not collected in the same manner (i.e., at different times, using different information sources, etc.) may not be comparable over time.

- **Ease of Collection:** Because data collection can be resource-intensive, it can be best to use data already being collected (e.g., Census data, transit operator passenger counts, etc.). By choosing commonly tracked and easy to access indicators, monitoring can be more useful for comparisons (i.e., with other municipalities).

- **Partnerships:** Monitoring can be a great way to involve external organizations like non-profit organizations. Often they will have the networks and resources to mobilize volunteer labour, to coordinate events, or to contribute to monitoring in other ways.

- **Linked to Objectives:** In order to be truly strategic and build on the work conducted in earlier stages of this process, it is important to maintain the link to objectives. In organizing your monitoring framework, categorize measures with the objective each is relevant to. That way you can be systematic in monitoring which objectives are being most impacted by your strategy.

- **Benchmarks and Baseline Information:** To understand how the strategy impacts identified objectives, it is essential to know what has changed. This requires baseline information or benchmarks. Once established, these benchmarks are used to compare indicators over time.

Table: Objectives to Measures to Benchmarks

OBJECTIVE	MEASURE (LINKED TO OBJECTIVES)	BENCHMARK 2005	BENCHMARK 2010	MONITORING 2015	MONITORING 2020
Improve safety conditions for pedestrians and cyclists	Number of accidents (non-fatal)	110	90		
Improve community health and well-being	Childhood obesity rates	14%	26%		
Reduce GHGs from auto travel	Tonnes GHGs	182,000 t	173,000 t		

- **Documentation:** Deciding how often to monitor and how and when to communicate results is key. It is good idea to spend some time up front thinking about how your monitoring results will be documented and shared. This way, you can be strategic about how you organize data and establish channels of communication early on.

Task 2: Evaluate and Report Results of Monitoring Program

Unlike monitoring, evaluation is not a continuous process. Instead, it occurs at strategic points during the implementation process (e.g., with project phases; at the end of the planning period, or several years after the implementation of a plan/project). An evaluation several years after the end of a given project can provide knowledge about the longer-term results and benefits.

Results should be regularly communicated to the community, to assess responses and to encourage awareness of, involvement in, and support for AT initiatives. Evaluation, like monitoring, should promote learning. The evaluation process is used to determine if actions taken are meeting the strategic objectives – efficiently, effectively and/or at all – and if any of these aspects need to change

In addition, more probing questions should be included in the substantive analysis that considers both compliance and impacts. These questions might be organized according to the following themes:

- *Is the project/strategy/action having the expected results? Why or why not?*
- *What is the impact of actions in relation to the objectives (e.g., automobile-bicycle collisions were reduced by 50%)*
- *Were the actions that were agreed upon actually done? Why or why not?*

The results of the evaluation should be communicated both to the stakeholders and to the community in general.

STEP 9: REVIEW CHECKLIST	✓
Has a framework for monitoring both strategy compliance and impacts been developed?	
Have results been monitored against objectives and evaluated?	

STEP 10: ADJUST AND MODIFY

The context for active transportation in your community will change over time - the primary motivating factors could shift, awareness may grow, the physical environment will change, etc.. For this reason, it is important that your plan remains flexible and dynamic. With a good monitoring and evaluation process in place, you will be able to identify where and when adjustments need to be made. In some cases, fundamental changes may be required or objectives may need to be revisited. In short, adjustments and modifications are expected and should occur whenever new information or new priorities demand it.

STEP 10: REVIEW CHECKLIST	✓
Is new information that could influence the plan being considered?	
Is relevant new information being incorporated into the plan?	

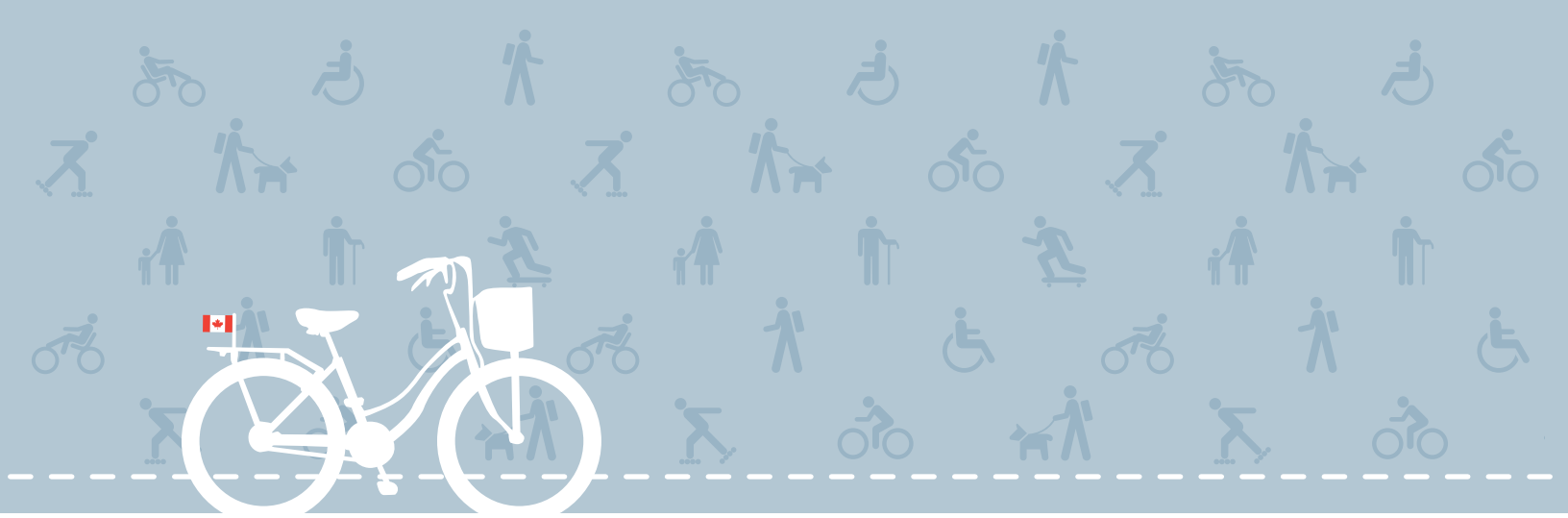
Active Transportation Planning Checklist

The following checklist corresponds to steps laid out in the process and consolidates tasks outline for each step. Keep this on hand to use as a guide as you move through the process.

ACTIVE TRANSPORTATION PLANNING CHECKLIST	✓
STEP 1: GETTING STARTED	
Is there organizational and political leadership to support the process?	
Is there commitment to complete and implement the plan or project?	
Has a core team been formed and/or the individual responsible identified?	
Is the scope established?	
Are resources secured – funding, time, human resources?	
STEP 2: STAKEHOLDERS AND PARTICIPATION	
Have stakeholders who can and should contribute to the process been identified?	
Is there a plan for how, when and why to engage particular stakeholders?	
STEP 3: SITUATION ASSESSMENT	
Has the current situation for active transportation been assessed?	
Has SWOT analysis been conducted and has it identified key issues that can guide decision-making?	
Are there information gaps that need to be filled? Does more research need to be conducted? Or more community engagement?	
STEP 4: VISIONS	
Has a vision for active transportation been developed?	
Is it worded in a way that will be effective to communicate to other stakeholders?	
STEP 5: OBJECTIVES	
Have objectives been developed?	
Do the objectives capture the issues that need to be considered in making good decisions about active transportation?	
Are there any redundancies that need to be eliminated?	
Have measures for each of the objectives been developed? Do they accurately reflect what the objectives are trying to achieve?	
If all of the objectives were achieved, would the vision be reached?	
STEP 6: IDENTIFY OPTIONS	
Have strategies or actions been developed?	
Are there any redundant actions that could be combined or packaged together?	
STEP 7: EVALUATE OPTIONS	
Have alternatives been evaluated against objetives?	
Have been “top” alternatives been refined and final actions selected?	
Have “low hanging fruit” actions been identified?	
Have options for mainstreaming alternatives been considered? Can they actions been integrated into existing plans or coordianted with other initiatives?	

ACTIVE TRANSPORTATION PLANNING CHECKLIST	✓
STEP 8: IMPLEMENTATION	
Have all the specific steps needed to complete your AT project(s) been identified?	
Have roles and responsibilities for each step been assigned?	
Have all necessary resources been secured – funds, space, etc.	
Have risks and weak links been considered? Have preventative measures for these been identified or a contingency plan developed?	
STEP 9: MONITORING AND EVALUATION	
Has a framework for monitoring both strategy compliance and impacts been developed?	
Have results been monitored against objectives and evaluated?	
STEP 10: ADJUST AND MODIFY	
Is new information that could influence the plan being considered?	
Is relevant new information being incorporated into the plan?	

Remember, planning for active transportation using a more strategic approach will not only help communities decide what to do, but also how to do it and when to do it. It can also make decision-making more transparent and objective, engage community stakeholders to build a greater constituency for the project, and ensure that municipal capacity – human resources, time, financial resources, etc. – is considered when prioritizing active transportation programs, policies and projects.



5.0 APPENDICIES

5.1 TOOLS AND RESOURCES

This appendix provides additional information on existing active transportation tools and resources (e.g., AT neighbourhood checklists and assessments, stakeholder assessments, etc.). There is also list of potential funding sources. As with the resource section, please note that this section is not exhaustive. For funding resources, in particular, grants and other funding may be available at the provincial and regional level, or for joint projects (for example, a municipal / health board partner projects). It is worthwhile spending some time researching grants and other funding sources, as there are new programs introduced each year.

Online Tools, Checklists and Calculators

Transport Canada Case Study Library

The Case Study Library is a part of Transport Canada's Information Network, established as a forum for active transportation practitioners (and other stakeholders) to share information and lessons learned. Focusing on active transportation in a Canadian context, the Case Study Library profiles over 60 sustainable transportation initiatives that have been implemented throughout Canada. Case studies are grouped by subject, and profile a range of active transportation, monitoring, planning, and outreach projects.

www.tc.gc.ca/eng/programs/environment-utsp-casestudylibrary-229.htm

BEAT Neighbourhood Assessment

Looking at existing land use patterns and infrastructure, this neighbourhood assessment tool is designed to help local governments (and other stakeholders) understand how the built environment affects active transportation in their neighbourhoods.

www.physicalactivitystrategy.ca/pdfs/BEAT/B.E.A.T.Neighbourhood_Assessment.pdf

Bikeability Checklist
Find out how bikeable is your community is, using this checklist and scoring system. Designed for individuals to rank their neighbourhoods, the checklist also includes helpful information on other resources, and suggestions for individual and community-led improvements.

www.bicyclinginfo.org/pdf/bikabilitychecklist.pdf

Canadian Guidelines for the Measurement of Transportation Demand Management (TDM) Initiatives - User's Guide
This document provides guidelines for measuring the impact of individual or collective TDM initiatives. Effective measurement enables organizations to: prepare a business case for securing funding; evaluate progress toward goals; explain the benefit of investment; improve the design of new or expanded programs; develop forecasting and business case techniques; remain accountable to the public, elected officials and funding agencies; and benchmark results against programs in other areas.The guidelines are based on an examination of international best practices and consultation with Canadian TDM Stakeholder organizations. Supporting information can be found in the Guidelines for the Measurement of the Impact of Transportation Demand Management Initiatives – Technical Report, which is available separately, through Transport Canada.

www.tc.gc.ca/eng/programs/environment-urban-guidelines-practitioners-tdmguide2009-menu-1657.htm

Designing Active Communities Toolkit
Developed by the Physical Activity Team of the Haliburton, Kawartha, Pine Ridge District (HKPRD) Health Unit, this toolkit was created for municipalities, public health practitioners and community organizations. It includes a checklist for planners, including guidelines for reviewing Official Plans, and makes the business case for including active transportation and community design as a theme in planning documents.

www.hkpr.on.ca/healthy-lifestyles-master.asp?id=3270

Urban Transportation Emission Calculator
The Urban Transportation Emissions Calculator (UTEC) is a user-friendly tool for estimating annual emissions from personal, commercial, and public transit vehicles. It estimates greenhouse gas (GHG) and criteria air contaminant (CAC) emissions from the operation of vehicles. It also estimates upstream GHG emissions from the production, refining and transportation of transportation fuels, as well as from production of electricity used by electric vehicles. The primary input to the Tool is vehicle kilometres travelled (VKT) for road vehicles and passenger kilometres travelled (PKT) for rail vehicles. Modifying default values for other inputs, such as expansion factors, and fleet composition, to your local conditions

is not required to run the Tool, but is recommended to improve the accuracy of results. For a detailed description of calculations, assumptions, and data sources, download the User Guide at:

wwwapps.tc.gc.ca/Prog/2/UTEC-CETU/

Walkability Toolkit
This publication by walkON (a partnership of Central West Ontario Regional Heart Health Projects) includes helpful information on a variety of topics, including organizing an advocacy group, influencing planning policy, and working with the media.

www.walkon.ca/files/Tool%20Kit.pdf

Walkability Checklist
This checklist, created by walkON, explores the walkability of neighbourhoods through a short, simple, and user-friendly checklist and scoring system, which is designed to encourage individuals to review the walkability of their community.

www.walkon.ca/type/pedestrian-supports

Walkability Score
This website helps you find a walkable place to live by calculating a Walk Score for any address, including useful information on the benefits of walkable lifestyles, and on the community and financial benefits of walkable neighbourhoods.

www.walkscore.com/

Zerofootprint Calculator
Aimed at corporations and governments, this website provides information on carbon management, including employee education and awareness. A range of resources are available, related carbon footprints, along with education tips for reducing carbon consumption.

www.zerofootprint.net/

Other Resources

Active & Safe Routes to School
Created to promote active transportation for school travel, this community-led initiative provides a range of information in a user-friendly website. Educational resources are provided, along with tools and information to help schools and communities design their own Active & Sage Routes to School program.

www.saferoutestoschool.ca

Active Living by Design
With the aim of creating "healthy communities, where routine physical activity and healthy eating are accessible, easy and affordable to everyone", this US-based initiative works to promote environments that support physical activity. Links to case studies and related resources are provides, along with ideas for creating change at the community level.

www.activelivingbydesign.org

Alberta Centre for Active Living
Established as an advicacy group for physical activity and exercise, the Alberta Centre for Active Living promotes health and quality of life for all age groups through physical activity. Their website includes links to research, and an extensive resources guide.

www.centre4activeliving.ca/keyword.cgi?k=active%20transportation

Better Environmentally Sounds Transportation (BEST)
Based in BC, BEST is a non-profit organization focused on encouraging sustainable transportation through a range of programs and public awareness campaigns. Their website includes information on BEST's available programs, along with fact sheets and other information on sustainable modes of transportation.

www.best.bc.ca/

Canada Walks
Created with the goal of supporting the creation of walkable communities, Canada Walks works with a range of multi-sector organizations, including advocacy groups and walk to scool programs. Their website includes an extensive and up-to-date resource section, including information on best practices, and examples of pedestrian planning across Canada.

www.canadawalks.ca

Canada Mortgage and Housing Corporation – Sustainable Community Planning
CMHC's website includes a wealth of useful resources, including best practices in design and development, tools for planners and designers, and other research on sustainability. Case studies provide useful suggestions and highlight lessons learned in communities across the country.

www.cmhc-schl.gc.ca/en/inpr/su/sucopl

Cities for Cycling
US-based Cities for Cycling is a project of the National Association of City Transportation Officials to catalogue, promote and implement the world's best bicycle transportation practices in American municipalities. Cities for Cycling focuses on implementing world-class bicycle transportation systems through design innovation and the sharing of best practices. To assist local-level leadership, the Cities for Cycling project works to share and promote state-of-the-art practices that ensure safe traffic conditions for all modes of travel, including Design Resources for Urban Bicycle Transportation that have been developed by and for leading bicycling cities.

www.nacto.org/citiesforcycling.html

Communities in Action
Focusing on Haliburton County, Ontario, this website provides information on a range of active transportation initiatives in a rural context. Links to additional resources are included, as well as information on specific projects happening in Haliburton County.

www.haliburtoncooperative.on.ca/CIA/

Commuter Challenge
Established as a national program, Commuter Challenge encourages Canadians to walk, cycle, take transit, carpool or tele-commute, rather than driving a single-occupancy vehicle to work. Along with educational information and active transportation resources, the website profiles participating communities and workplaces.

www.commuterchallenge.ca/

Complete Streets Canada
The U.S.-based Complete Streets Coalition has successfully supported over 100 jurisdictions in their implementation of Complete Streets policies. The Toronto Coalition for Active Transportation and the Toronto Cyclists Union established Complete Streets Canada in 2009, and the organization is currently working toward the goal of developing Canada's first complete streets policy in Toronto.

www.completestreets.ca

Équiterre
Based in Quebec, Équiterre is a non-profit organization which advocates for ecologically and socially fair individual and collective choices in four key areas – agriculture, fair trade, energy efficiency, and sustainable transportation. Through the development of a practical information kit, Équiterre aims to encourage individuals to use a range of sustainable transportation modes, including car-pooling, bicycling, public transport, and walking. More information is available on the organization's website (many of the resources are only available in French).

www.equiterre.org/en/

Federation of Canadian Municipalities (FCM) Green Municipal Fund
Intended to support the development of sustainable communities, the FCM's Green Municipal Fund website provides a range of useful resources. These include a case study database, and links to related tools and resources for building community capacity.

www.sustainablecommunities.fcm.ca

Green Communities Canada
Created to deliver innovative and practical environmental solutions to Canadian households and communities, Green Communities Canada administers a range of sustainable and active transportation programs, including Active & Safe Routes to School. Their website includes profiles and links to member organizations, with information on related programs and resources.

www.greencommunitiescanada.org/

Marketing Active Transportation
Created by the BC Parks and Recreation Association (BCPRA), the "Marketing Active Transportation" toolkit is designed to help municipalities raise awareness about ongoing active transportation planning, events, and programs. The toolkit includes marketing templates, examples, and a range of useful "how to" information to help generate ideas for marketing AT initiatives.

www.bcrpa.bc.ca/recreation_parks/active_communities/communications.htm

Natural Resources Defense Council: A Location Efficient Mortgage®
Designed to better account for the cost of car use, the location efficient mortgage increases the amount of money that homebuyers in urban areas are able to borrow. The lender takes into account the money that borrowers save by living in neighborhoods where they can shop at nearby stores and use public transit, rather than driving to work and to the mall. The Location Efficient Mortgage® program was designed to encourage the development of efficient, environmentally progressive communities and to reduce urban sprawl and dependence on cars.

www.nrdc.org/cities/smartgrowth/qlem.asp

National Complete Streets Coalition
Created to support the development of complete streets policy in U.S.-based jurisdictions, the National Complete Streets Coalition has developed a range of useful tools and resources. Their website includes fact sheets, a case study library, and information on best practices.

www.walk21.com

Pedestrian and Bicycle Information Center (PBIC)
Based in the U.S., PBIC is focused on improving the quality of life in communities by encouraging walking and bicycling both as a means of transportation and physical activity. The organization operates three websites, which are designed for anyone interested in pedestrian and bicycle issues - including planners, engineers, private citizens, advocates and educators – and include free, high-quality images, a searchable case study library, facts about active transportation, and a range of tools intended to help develop plans, policies, and education programs.

www.walkinginfo.org
www.pedbikeinfo.org/
www.bicyclinginfo.org
www.pedbikeimages.org

Peterborough Moves
With the aim of encouraging active transportation, Peterborough Moves runs a range of community-based programs intended to encourage individuals to walk, bike, carpool and bus. Their website includes tools, tips, and useful guidelines aimed at Peterborough City and County residents.

www.peterboroughmoves.com

San Francisco College of Behavioral & Social Sciences - City Links
This website provides links to "Healthy Cities" initiatives, including active transportation-related projects, in the United States and Canada, providing useful examples of sustainable community and active transportation planning in a North American context.

bss.sfsu.edu/pamuk/urban/links.html

Smart Growth Network Canada (SGNC)
SGNC's website provides a range of useful resources focusing on the built environment, including a walkability resource list, and research on the links between smart growth and community health. Links to partner organizations are provided, including other smart growth organizations in Canada.

www.smartgrowth.ca

Toronto Coalition for Active Transportation (TCAT) and Clean Air Partnership (CAP)
Formed in 2006, TCAT was created to give a unified voice to the range of advocacy groups working toward a better cycling and pedestrian environment in Toronto. TCAT works closely with
CAP, guiding CAP's active transportation programming. A range of tools and resources are provided on both the TCAT and CAP websites, including up-to-date research on active transportation, and links to completed projects.

www.torontocat.ca
www.cleanairpartnership.org

Vélo Québec
Established as a non-profit organization over 40 years ago, Vélo Québec acts as a cycling advocacy group, encouraging the use of the bicycle for tourism, and as a means of sustainable transportation. Their website contains links to a range of resources, including two tools designed to support bicycle and pedestrian planning - Vélo Québec's *Technical Handbook of Bikeway Design* and accompanying training course, *Bikeway Planning and Development*.

www.velo.qc.ca

Victoria Transport Policy Institute (VTPI)
VTPI is an independent research organization focusing on transportation-related issues. Their website includes links to current policy research, including an online Transportation Demand Management (TDM) encyclopedia, and an up-to-date research library.

www.vtpi.org/

walkON
Established as a community partnership of Heart Health projects from Central West Ontario, walkON offers a range of community program activities designed to engage communities in creating walkable environments that support active transportation. Their website includes links to research, tools and community checklists.

www.walkon.ca

Walk 21
Created to support the development of healthy communities where people choose to walk, Walk 21 advocates for pedestrian-friendly communities through their International Walking Charter, and yearly Walk 21 Conferences. Their website includes information on best practices, and an up-to-date research library, focusing on walking and pedestrian needs.

Walk 21 is also a partner in the Measuring Walking project, an ongoing international research project, intended to "establish a set of international guidelines for the collection, analysis and dissemination of quantitative and qualitative techniques for measuring walking". Currently, the project website (included below) is in draft form, but will be updated as the initiative progresses.

www.walk21.com/
www.measuring-walking.org

Funding Resources

Federation of Canadian Municipalities (FCM) Green Municipal Fund
Intended to support the creation of sustainable communities, the FCM provides funding for a range of municipal initiatives through the Green Municipal Fund. All municipal governments are eligible, including First Nations. Funding may be applied to plans, feasibility studies and capital projects, and municipalities can apply at any stage of the year.

www.sustainablecommunities.fcm.ca

Bicycle Trade Association of Canada (BTAC)
BTAC provides grants supporting local grassroots cycling projects with a connection to specialty bike retailers. Funding of up to $5000 is available, and eligible projects must encourage and promote cycling and support bicycle advocacy. Priority will be given to bicycle organizations, and to projects that build capacity for cycling, and one of the key goals is to fund projects and communities that have not received BTAC funding in the past.

www.btac.org/grant_program/index.html

Evergreen
Working to create sustainable communities, schools, and homes, Evergreen is a national charity offering a range of community funding projects. Schools and community groups are eligible for funding, and their website also includes an up-to-date list of additional funding resources.

www.evergreen.ca