Trails for Active Transportation

Kingston

KINGSTON

Queen's University

KFL&A PublicHealth

KCAT Kingston Coalition for Active Transportation

hearts@work

Ontario

ACTIVE2010

WALK & BIKE FOR LIFE

Kingston

Walk and Bike for Life

Walk and Bike for Life is a not for profit organization dedicated to improving awareness of the benefits of walking and cycling as activities, and of urban parks and trails as great places. Walk and Bike for Life is committed to empowering communities through community participation and education. Currently, Walk and Bike for Life is working with 10 communities across Ontario as part of the Trails for Active Transportation project, funded by the Ministry of Health Promotion's Trails for Life Fund. The overall goal of the **TFAT** project is to provide communities with the tools necessary to promote and support trails as low-cost, readily available means of transportation and recreation. Our goal is to re-position trails (on-street trails, bikeways, greenways, linear parks, hydro corridors, rail trails) as an integral part of the community, interwoven to its intimate fabric, connecting people who live, work, or play along its path. The project engages local citizens through a series of public meetings and workshops, culminating in the creation of local Community Action Groups (CAGs) who will take on the implementation of their individualized action plan with Walk and Bike for Life's continuing support.

Biography: Gil Penalosa, Executive Director, Walk & Bike for Life

The Trails for Active Transportation project is the brainchild of Walk & Bike for Life Executive Director, Gil Penalosa. A leading executive and urban strategist with years of public and private sector senior managerial experience, Gil is celebrated around the world for his ability to create walkable, bike-able cities with healthier, happier residents

Gil is perhaps most famous for his achievements during his tenure as Commissioner of Parks, Sport and Recreation for the city of Bogotá, Colombia. In Bogotá, a metropolis of 7 million people, Gil led his team to design and build over 200 parks, of which the best known is the Simon Bolivar (360 hectares/899 acres).

Under Gil's leadership, Bogotá was revolutionized through the opening of 91 kilometres of car-free city roads on Sundays. These Sundays are now known as the Ciclovia, where over 1.5 m people come out weekly to walk, run, skate and bike. The Ciclovia model has captured imaginations globally and is emulated in cities large and small.

Because of his uniquely effective blend of pragmatism and passion, Gil's leadership has been sought out by many organizations. Gil works as Senior Advisor with NYC's Project for Public Spaces and as Senior Consultant for the renowned Danish firm Gehl Architects. He serves on the Boards of Directors of American Trails and City Parks Alliance.

Gil is a much sought after international speaker and consultant. In his presentations and workshops on creating better communities, Gil demonstrates how walking and bicycling, and parks and trails, can promote economic development, environmental sustainability, public health, efficient transportation, and recreational opportunities for all people, regardless of social status or physical ability. The Trails for Life project makes Gil's expertise and flair for innovation available to communities throughout Southern Ontario as they attempt to build great places and become vibrant cities with happy, healthier residents.

Gil holds a Master in Business Administration degree from UCLA's Management School. He lives in Ontario, Canada and enjoys outdoor activities with his wife and their three children.

Ontario ACTIVE2010

Ministry of Health Promotion - Active 2010

The Ministry of Health Promotion was created in 2005 with a mandate to support and deliver programs promoting healthy lifestyles and healthy choices in the province of Ontario. The Ministry focuses on a number of key priority areas including active living, healthy eating, injury prevention, Ontario's smoke-free strategy, and mental health. ACTIVE2010 is a comprehensive strategy to increase participation in sport and physical activity throughout Ontario. The Ontario Trails Strategy directly supports the Government's ACTIVE2010 initiative which aims to raise the percentage of Ontarians who are physically active to 55% by the year 2010. The Trails for Life Fund provided 60% of the funding for the Trails for Active Transportation Project.

Contributors:

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Acknowledgments:

Special thanks to Juliana Berrio and Anne MacPhail for your help and to all the Kingston residents for your participation and vision.

Kingston, Frontenac and Lennox & Addington Public Health

KFL&A Public Health is an accredited local public health agency with over 200 staff and 150 volunteers who deliver public health programs and services to the people of the KFL&A area. The underlying goal of its services and programs is to promote and protect the health of the more than 180,000 residents of the Kingston, Frontenac, and Lennox & Addington area. KFLA Public Health works together with our communities to promote and protect the public's health. One of the most significant ways to improve public health is through active transportation. Human-powered travel reduces the risk of chronic diseases by helping people achieve physical activity recommendations and lowers air pollution levels. It is integral to public transit and improves the safety of roads and neighbourhoods. KFL&A Public Health co-chairs the Kingston Coalition for Active Transportation.

KCAT:
Kingston Coalition for Active Transportation

KCAT's mission is to work with a variety of partners within the City of Kingston to develop an environment for walking, cycling and other self-propelled modes of transportation that is safe, secure, convenient, efficient, and attractive. KCAT is comprised of people representing the Centre for Obesity Research and Education, City of Kingston, Community, KFL&A Public Health, Kingston Gets Active, and Limestone District School Board. KCAT was the key community partner in the Trails for Active Transportation project, organizing the meetings with stakeholders and the community workshop, and funding the balance of the project costs.

Hearts@work

The Hearts@work project, administered by KFL&A Public Health, is a collaborative effort of community partners who work together to reduce the risk of chronic diseases related to three main risk factors: unhealthy eating, inactivity, and smoking. The Kingston Colaition for Active Transportation is part of hearts@work.

Queen's University

Queen's is one of Canada's leading universities with an international reputation for scholarship, social purpose, spirit and diversity.

Students and faculty of the schools of Urban and Regional Planning and Kinesiology and Health Studies work with agencies in the City of Kingston to facilitate physical activity through research, planning, and collaboration. Queen's students were key players in organizing and contributing to Kingston's Trails for Active Transportation workshop.

City of Kingston

The City of Kingston is an eclectic mix of old and new "where history and innovation thrive." In its goal to be Canada's most sustainable city, it is enhancing the efficiency of its infrastructure, encouraging less dependence on the automobile, and decreasing use on non-renewable energy. Kingston's K&P Trail, many parks, upgraded transit system, and Bikeway Implementation Plan all provide opportunities for physical activity and enhanced health. The City of Kingston co-chairs the Kingston Coalition for Active Transportation along with KFL&A Public Health. It hosted Kingston's Trails for Active Transportation presentations and workshop in Memorial Hall, City Hall.

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Foreward

Dear Amanda, Gil, and Sarah:

Many thanks for your informative, practical workshop on March 3, 2009. Your passion for walkable, bikeable communities and people-friendly cities was infectious. Gil's presentation including transformations and plans of other cities and communities was inspiring. It demonstrated countless benefits to places that are conducive to walking and cycling, and that similar initiatives can happen in Kingston. Obstacles and opportunities exist across the world, including the Limestone City. Kingston residents were clearly engaged, and worked readily with one another to create short- and long-term recommendations for our community. A recurring theme is to have networks of interconnected trails (including sidewalks and connecting pathways) linked to destination points including transit, worksites, schools, libraries, stores, and parks.

We are indeed grateful to you for your workshop, and for Gil 's presentations at the workshop and to City Council. We appreciate your vast knowledge and experience, and for taking the time before the workshop to learn about Kingston, including factors that influence walking, cycling, and trail successes and challenges in our city.

We are looking forward to taking the next steps from your workshop and this report that will enable more people to walk and cycle more often, and to enjoy being part of a more vibrant, healthy community with a greater quality of life.

Sincerely,

Kris Hebert
City of Kingston
Co-chair, Kingston Coalition for Active Transportation

Anne MacPhail
KFL&A Public Health
Co-chair, Kingston Coalition for Active Transportation

Foreward

Dear Workshop participants:

Many thanks to you for participating in Connecting People and Places: Creating a More Active Kingston. Your enthusiasm, creativity, and realistic recommendations to help Kingston be a more walkable, bikeable city are much appreciated.

The City of Kingston welcomes input from its residents. Watch for upcoming meetings and online opportunities to comment on city projects by checking:

- www.cityofkingston.ca
- The City's page in The Kingston Whig-Standard, Tuesdays and Fridays.

For more information about the Kingston Coalition for Active Transportation, to get involved, or to share your ideas, please contact one of us.

Sincerely,

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Executive Summary

The population of the City of Kingston grew from about 90,000 to 114,000 between 1976 and 2001 and is projected to increase to between 147,000 (medium projection) and 164,000 (high projection) in the next 25 years. [i]

The City of Kingston faces the challenge of maintaining a high quality of life for its citizens amidst population growth and increasing urbanization. This juncture in time represents a once-in-a-lifetime opportunity for cities to re-examine and re-define how they want to live.

A city is only a means to a way of life. If we choose to plan and design our cities for people, we must do it in a way that maximizes people's happiness and quality of life. For decades, city planning has been focused on the car's mobility. A human-scaled or people-centered approach to planning recognizes the benefits to providing safe and convenient facilities for people to walk and bike as a means of transportation and recreation. This approach also emphasizes the importance of parks, trails, and public spaces as great places for interaction and community cohesion.

Walk & Bike for Life initiated the Trails for Active Transportation (TFAT) project to address these emerging issues in communities along the Lake Ontario Waterfront Trail, and in communities with existing trail systems. Kingston was chosen as one of the 10 pilot communities for the Trails for Active Transportation project, the goal of which is to engage citizens in local active transportation issues and empower them with the tools and resources to promote walking and bicycling in their community.

On March 3rd, 2009, Walk & Bike for Life held two events, a luncheon participatory presentation and an evening community workshop called "Connecting People and Places: Creating a Great Kingston." The luncheon sessions was two hours and included a presentation, video, Question & Answer, surveys and discussion. The evening session consisted of a one hour presentation by Gil Penalosa, Executive Director of Walk and Bike for Life, followed by a two hour workshop open to community members. Participants in the luncheon session included the Mayor, local Councilors, the Chief Medical Officer of Health, Public Health Officials, Commissioners, municipal staff, Queen's University Professors, local School Board (Catholic and Public) representatives, community health practitioners, cycling groups and other interested stakeholders. Participants in the evening public meeting and workshop included Kingston residents, local community groups, students, representatives from the local Councilor's office, and municipal staff. Participants provided specific recommendations on how to make Kingston more friendly and inviting to pedestrians, bicyclists and an overall vibrant place with great public spaces.

Some of the key issues that were discussed at the workshop revolved around the community's trail system and the need to improve infrastructure for active transportation in the community. Recommendations from the community included a better trail system with proper signage, seating, maps, and rest/fix up stations.

Physically separated bike lanes on major arterial routes, the closing off of Princess St. to vehicular traffic one day a week as a pilot project and eventually permanently, removing parking and implementing a Complete Streets Policy were key recommendations from the participants in the workshop.

The City of **Kingston** faces the challenge of maintaining a **high quality of life** for its citizens amidst **population growth** and increasing urbanization.

Snapshot Kingston

Map 1: Context map of Kingston, Ontario

The City of Kingston is located on the eastern end of Lake Ontario where the lake turns into the St. Lawrence River and the Thousand Islands. The city is part of Frontenac County and has a population of approximately 117,207 people.[ii]

First settled by the French in 1673, as Fort Frontenac, then captured and destroyed by the British during the Seven Years War in 1758, Kingston, has been a site of vital military importance due to its location and proximity to the United States. Incorporated as a town in 1838, Kingston had the largest population of any centre in Upper Canada until the 1840s. Kingston was officially incorporated as a city in 1846. [iii]

During the late nineteenth and early twentieth centuries Kingston was an important Great Lakes port and a centre for shipbuilding and locomotive manufacturing. Most heavy industry has now left the city, and employment is now primarily in the institutional, military, and service/retail sectors.[iv] Comprising the former City of Kingston, former Kingston Township and former Pittsburgh Township, the new City of Kingston came into being on January 1, 1998. The City is approximately 453 square kilometres in area with the urban/ suburban area comprising 12 percent of the City's land base and 78 percent of the City's 2001 population.[v]

Kingston's current transportation system is primarily centered on road rights-of-way (sidewalks, on-road cycling facilities, transit routes, and general travel lanes), supplemented by an expanding network of off-road, multi-use recreational trails and parking facilities.[vi] In addition Kingston Transit serves the city with a number of bus routes, a system of local ferries serve Howe and Wolfe Islands, and Provincial highways, intercity rail (VIA) a regional airport provide transport outside of the city.

Transportation in Kingston is currently dominated by the automobile. Commute to work data from Statistics Canada 2006 Community profiles indicate that 78.6 per cent of people in Kingston commute to work by car (69% as driver, 9.7% as passenger) while 5.1 per cent take transit, and 14.5% walk or bike (1.8% use other modes). [vii]

Furthermore a study in January 2002, found that during the afternoon commuter peak hour, 82 per cent of trips were made by car, 11 per cent by walking, 6 per cent by transit (3 per cent school bus and 3 per cent public transit) and just over 1 per cent by cycling.[viii]

There are a number of factors, identified in the City's Cycling and Pathways Study that make Kingston an ideal community for walking and cycling. First, the City has an abundance of parks, open space areas, recreational uses, historical and environmental sites and attractions, which could be linked with an improved pathway system. Second, the City currently controls, through ownership / lease / right-of-way a significant amount of public open space of which waterfront property is a major component. Third the study identified increasing public demand for more recreational pathways and greater waterfront access.[ix]

Snapshot Kingston

Kingston has great potential to become a great walking and cycling city given its abundance of parks, historical sites and waterfront pathways.

Furthermore, over the next 25 years, Kingston is expected to grow in population between 30 and 45 per cent.[x] The resulting increase in travel demand will not be able to be accommodated by the current road infrastructure. In addition, parks, public spaces, and recreational opportunities will have to see increased investment in order to sustain a high quality of life for a larger number of people.

There are some promising signs that the City is moving forward to accommodate the increase in growth and to address environmental and public health concerns. In 2002, the City also adopted a Community Strategic Plan, which includes the update of the City's Official Plan, a Waterfront Strategy, Transportation Master Plan, Urban Growth Strategy, Downtown Action Plan, and Cycling and Pathways Study, all of which support policies and frameworks for creating sustainable, transit supportive communities that are pedestrian and cycling-friendly. At the same time the City also recently approved a new vision to be "Canada's most sustainable City."

This report aims to complement and capitalize on these existing plans and bring together specific ideas from the community to move forward on creating a healthy Kingston community that is walkable, bikeable and where residents enjoy its great trails and public places and live happier.

Chapter 1

Trails and People: Making Connections between People and Places

Trails & people

Redefining the word TRAIL

Many communities in Ontario enjoy the benefits of an abundance of natural assets including the trails that take people along the many beautiful creeks, rivers, lakes, and other spectacular natural features that are dotted across this province. Given these existing assets, there is tremendous opportunity to build on what we have to create trails and trail systems that are an integral part of the community, interwoven to its intimate fabric, connecting people who live, work, or play along their path.

Martin Goodman Trail in Toronto, ON

Very often the word 'trail' resonates with a specific activity, be it cycling, walking, cross-country skiing, hiking or other specific recreational activities. At Walk and Bike for Life we see trails as all those things and more. Trails can be used as efficient modes of transportation as well as a mechanism of creating and connecting great public spaces. All too often we see trails used like sports arenas that are "drive-to" facilities. But do we want people to drive to the trail to take a walk or to bike, as they would drive to the arena to play hockey?

Trails become more efficient as the connectivity increases. A network of trails across a city can become an excellent connector of recreational as well as transport users.

Trails are a place to enjoy nature in all seasons.

Trails can connect a myriad of users across many diverse cultural, economic and social backgrounds. Many cities face the challenge of turning their patchwork of trails into a complete network. A successful network of trails has to connect a large portion of the population to many key destination points across the city. These destinations can consist of many different facilities and places of interest that can include work places, schools, city centres, transport hubs, recreational areas, and many other great public places. One of the challenges that Walk and Bike for Life as well as many communities across Ontario are facing is creating a cultural shift in redefining the word 'trail' and incorporating it into the context of active transportation and vibrant city planning.

It is important to note the different needs of different users of trails. Recreational users enjoy the very curvy, winding paths of trails that are often outside of the urbanized areas of the city and allow them to experience the natural beauty and green spaces of a city. In terms of transportation, the most effective and well-used bike and pedestrian paths into urbanized areas do not meander around the city, but are straight corridors between places of origin and destination. Those that use active forms of transport want to get to their destination in the most efficient manner possible and need corridors that go North-South, East-West in a grid system for efficient transportation. An effective trail system is one that combines both of these types of trails. Minneapolis in the United States is an example of a city that has been able to create a network of trails that combines recreational and transport uses and links urbanized areas of the city to natural areas and greenspaces across the city *(see Toolkit for Minneapolis Case Study).*

Trails & people

The Benefits of a Great Trail System

Trails have both “Emotional” and “Quantifiable” benefits. The “Emotional” benefits of trail networks greatly increase the quality of life of its residents. They are social equalizers and sources of happiness for community members. They also strengthen communities and improve safety in neighbourhoods. The “Quantifiable” benefits of trails are ones that can be calculated in terms of several different criteria. They provide benefits that increase property values, increase tourism, increase economic activity, lower health care costs, and create greener more environmentally sound cities by reducing greenhouse gas emissions.[xi]

As mentioned previously, connecting people to great places is one of the main benefits of a successful trail network. One challenge that many cities face is the lack of such places and poor connections to surrounding neighbourhoods. It is difficult to define what exactly makes a great place, it is a subjective topic. Although each great place will be different to almost anyone, there are some common symptoms of great public spaces. [xii]

GOOD PLACES TO SIT

It is simple but often overlooked. Seating is critical to creating an inviting space for people to rest, people-watch and/or interact.

SOCIABILITY/PEOPLE IN GROUPS

People meeting in groups and being social with one another is an indicator of a great public space.

Trails & people

DIVERSITY

A place with a diversity of ages, ethnicities, and abilities is another indicator of a great public space that is accessible and inviting to all.

HIGH PROPORTION OF WOMEN

Women are much more discerning when it comes to choosing a place. If there is a high proportion of women in a place it usually means the area is safer, cleaner and more aesthetically pleasing.

AFFECTION

People are generally affectionate when they feel comfortable in a place.

In a general sense, these symptoms paint the image of a safe, socially active, comfortable and happy place. The place can either be a neighbourhood corner, a park, an entire community, a district, or a whole city. A network of trails that connects all these places can create a city that has so many great places in it that it eventually becomes one great city. This is the goal of many cities, but cities as big as they are, tend to forget that city life blooms on the street corner.

Trails that act as cultural corridors and as a place for active transportation have widespread benefits across all aspects of society and are explained further in the EARTH concept below.

Walking and Bicycling

Walking and bicycling: More than just fun and games

It would be easy to write a laundry list of the perfect conditions needed to make the case for active transportation. These could include; increased public concern and awareness about environmental degradation, climate change, a global economic crisis, an obesity epidemic, and worsening traffic congestion. Today, all of these conditions exist, creating a perfect storm of challenges that make investing in safe and convenient walking and bicycling facilities relevant solutions to many of today's problems.

Walk & Bike for Life has developed the **EARTH** umbrella concept, which represents a shelter from the storm of challenges we are facing today and describes the numerous benefits of walking and bicycling in detail.

The **EARTH** concept

Environment

Only a few years ago scientists questioned the very existence of human-induced climate change. Now there is general agreement within the scientific community that global atmospheric concentrations of greenhouse gases such as carbon dioxide have increased markedly as a result of human activities, particularly through the use of fossil fuels and land use change.[xiii]

In 2004, emissions from the transportation sector accounted for 25 per cent of all the greenhouse gases emitted in Canada. Private vehicles alone (passenger cars and trucks) account for over 11 per cent of total GHG emissions. With such a significant portion of our emissions released through transportation, moving toward more sustainable transportation options such as public transit, bicycling, and walking hold the ability to drastically reduce Canada's carbon footprint.

Shifting away from private car use and toward non-motorized forms of transportation is less daunting than one might perceive. Research shows that a large percentage of trips made by car are within walking and bicycling distance. Metrolinx, the regional transportation authority in the Greater Toronto and Hamilton Area, reported in 2008 that 40 per cent of the total trips taken across the GTHA were within biking distance (under 5 km) and 17 per cent were within walking distance (under 2km).

Using 2006 data from Environment Canada's greenhouse gas inventory, population statistics from Statistics Canada, and Transport Canada's urban transportation emission calculator reveals that if each Kingston driver walked or biked to work one week in a year, the town could reduce its annual emissions by 523.32 tonnes *(see Appendix B for calculations).*

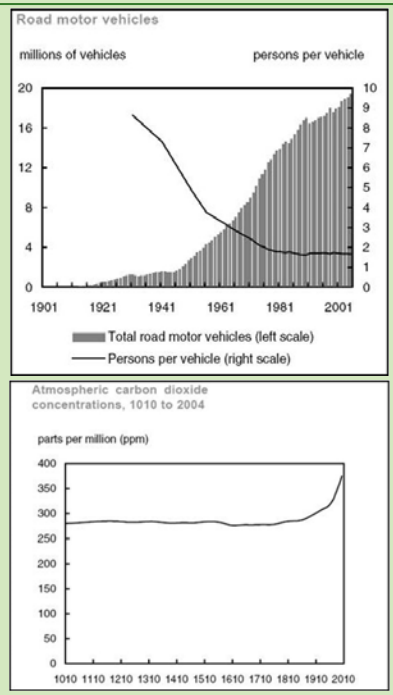


Figure 1: The number of motor vehicles on the road has increased sharply in the last 30 years, as the number of people per vehicle has decreased. A dramatic rise in Carbon Dioxide, the most prevalent Greenhouse Gas, has accompanied this trend. For each commuter in Kingston who switches from vehicular to active transportation, approximately 712.58 kg less of Carbon dioxide will be released into the atmosphere. If each Kingston driver walked or biked to work one week a year, the town could reduce its emissions by 523.32 tonnes *(see Appendix B for calculations).*

The EARTH concept

Economic Activity

In the 19th century, wealth was measured in terms of land, making land the most valuable of any asset. By the 20th century the market's focus had shifted to capital. Today, people are at the heart of the economy. Attracting and retaining highly educated, creative people is the greatest challenge facing cities in the 21st century.

In an ever-more globalized world, the most skilled people – be they carpenters, artists or doctors – can live anywhere they choose. Why live in Kingston and not Vancouver, Paris or Sao Paulo? A walkable, bikeable community is a critical factor in creating lively, attractive neighbourhoods, and quality of life has become a main element of economic competitiveness.

Mercer's Quality of Living survey, used by thousands of companies to decide where to locate their offices, recognizes the importance of active transportation. Pedestrian and bicycling facilities positively influence 5 of the 10 categories used in the survey to determine the best places to set up a business.[1]

Vibrant commercial districts, and the small businesses which populate them, rely heavily on foot traffic. Walkable, bikeable neighborhoods are safer, more attractive, and more pleasant to shop in. Traffic calming is so good for business that business owners in affected areas often go from initial fear over the loss of parking to passionate support for further traffic calming, both in their own neighborhood and others.[xiv]

Have you ever heard anyone return from a vacation in Paris and talk about how beautiful the highways were?

Great public spaces, pedestrian plazas, parks and trails attract tourists and generate economic activity. Tourism is a billion dollar industry. In 2007, tourism in Canada generated $19.7 billion in government revenue alone.[xv] The cities making the most of this service industry are inclusive of all types of people. Crucially, these cities recognize that tourists are primarily pedestrians. Increased investment in the unique beauty of Canadian cities through well-placed trails, parks and public spaces will add to the appeal – and bank accounts – of our neighbourhoods.

[1] Categories positively affected by high quality pedestrian and bicycle infrastructure: Medical and Health Considerations (Air Pollution), Natural Environment (Climate), Public Services and Transit, Recreation (Sport and Leisure Activities), Socio-Cultural Environment (Limitation on Personal Freedom).

Local business owners in Copenhagen had a huge boost in economic activity from increased foot traffic after streets were replaced with pedestrian plazas

The EARTH concept

Recreation

In the year 1700, most physical activity took place in the workplace. In North America in 2008, only about five per cent of our physical activity takes place in the work place, while recreational activities account for 30 per cent.

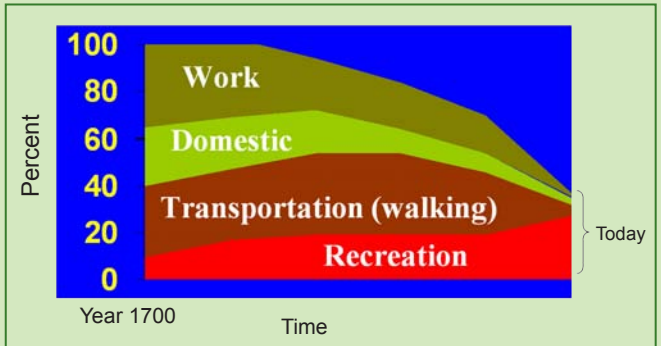


Figure 2: The ways in which we get our physical activity have changed drastically in the past 300 years, as recreation has come to play an increasingly important role in our lives and our physical health.

Walking, bicycling, and running are now some of the most popular forms of physical activities in the world.

In addition, current trends show that people are turning increasingly to unscheduled and unorganized activities such as walking and bicycling as a form of daily exercise. According to Statistics Canada's 2005 Community Health Survey walking is by far the most popular form of physical activity in Canada, with bicycling placing in the top five.[xvi] These activities are free of charge, enjoyable in groups or alone, and accessible to all ages.

In order to build communities that facilitate participation in these activities, it is important to provide city dwellers with the facilities that encourage spending time outdoors. Well-maintained and managed trails, urban parks and public spaces allow residents to enjoy, relax and take pride in their city.

In addition, more localized recreational facilities encourage more frequent use by community members because people have both a physical and mental connection to them. That is, these facilities are physically accessible to users through a short walk or bike ride and mentally connected to them as a result of frequent events, festivals and promotions. For example, you are probably more inclined to take your dog for a walk on a Thursday evening if you can walk to the nearby neighbourhood trail or park as opposed to driving to it. You may even be more inclined to take that walk if you can grab a coffee on your way, or if there are interesting things happening in and around the trails or park.

Recreation is something more than what people do on the weekend

by building and improving upon community trails, parks, greenways, and public spaces it can become part of people's daily routine and serve as a way to unwind, connect with nature, and to just have fun.

A functional and inviting public space provides a number of opportunities for different activities to take place; Portland,Oregon

Wading Pool; Portland, Oregon

The EARTH concept

Transportation

Transportation is about moving people, not about moving cars. Yet the way some North American cities are built, it would appear the opposite is true. Thirty six per cent of Greater Toronto and Hamilton area residents do not have a driver's license.[xvii] To live up to the Canadian principles of equity and accessibility, our cities must be built to allow the mobility of those who cannot - or choose not – to drive.

Furthermore, providing safe, extensive infrastructure for cyclists and pedestrians has been proven to alleviate congestion. Such infrastructure paves the way for affordable, convenient transportation, which in turn can have a profound impact on the economy. Traffic congestion contributes to delays in moving goods, lost productivity and higher fuel costs. Congestion costs Ontario over $5 billion in lost GDP every year.[xviii]

Transportation infrastructure must be designed for the mobility of all users, not just drivers

Cities like Copenhagen and Amsterdam have invested heavily in bicycling infrastructure and have achieved significant results. In Copenhagen, bike mode share has gone from 10% in 1975 to 36% in 2004, outperforming automobile mode share by 9%.[xix] With 329 km of cycling tracks in place, Copenhagen has continuously been improving its infrastructure.[xx] Furthermore, it recognizes that increasing active transportation use is a matter of planning-for-people and creating a cultural shift.

Health

Many Canadians today find themselves driving to the gym to walk on a treadmill. Meanwhile, 23 per cent of Canadians over the age of 18 are obese.[xxi] Obesity is at the root of a myriad of diseases and health problems, and inactivity is one of the major contributing factors to obesity. Sedentary living is creating a huge strain on our healthcare system and our wallets.

Today, health experts agree that 30 minutes of moderate physical exercise can halve vulnerability to heart disease, control blood pressure and reduce cholesterol. Experts say that exercise also increases energy levels and improves moods, sleeping habits and digestion. [xxii]

Building convenient and accessible pedestrian and cycling infrastructure makes it easier for physical activity to become a part of our daily routine. A study from the American Journal of Preventative Medicine published in 2004 found that every additional hour spent in a car was linked to a six per cent increase in a person's chances of becoming obese. Conversely, each kilometer walked was linked to a 4.8 per cent decrease in the chance of becoming obese.[xxiii]

Furthermore, as illustrated in *Figure 3*, obesity rates for several highly industrialized countries consistently drop when alternative forms of transportation, such as walking, cycling, and public transit are used.

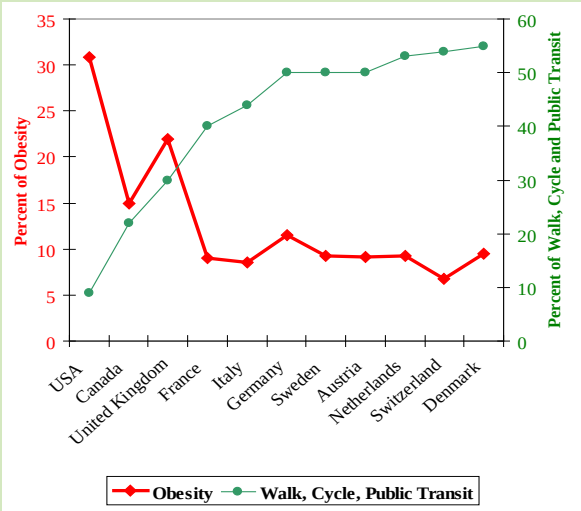


Figure 3: Obesity rates fall sharply with increased walking, bicycling and public transit use.

Chapter 2

Trails for Active Transportation: Kingston

Trails for Active Transportation Methodology

At Walk & Bike for Life we recognize that citizens hold the greatest expertise when it comes to the communities in which they live. Walk & Bike for Life's Trails for Active Transportation project uses this idea as the basis for its approach with engaging communities in connecting trails and promoting more walking and bicycling-friendly places. Walk & Bike for Life held a three hour event as part of the Trails for Active Transportation project. This event included a luncheon presentation and an evening community workshop and discussion.

Luncheon Presentation

On March 3rd, 2009, Walk & Bike for Life held a luncheon presentation session at Kingston City Hall called "Connecting People and Places: Creating a Great Kingston." The session was two hours and included a one hour presentation by Gil Penalosa, Executive Director of Walk & Bike for Life. The presentation showcased best practices in creating more walkable, bikeable and vibrant public spaces from cities in Canada and around the world. Gil Penalosa also spoke about how these practices could be applied to the Town of Kingston. The presentation was followed by a question and answer period and audience discussion. Participants also filled out Individual Surveys, the results of which are included in the "What You Said" section of this report.

Participants in the session included the Mayor, local Councilors, the Chief Medical Officer of Health, Public Health Officials, Commissioners, municipal staff, Queen's University Professors, local School Board (Catholic and Public) representatives, community health practitioners, cycling groups and other interested stakeholders. Just over 60 people attended the luncheon session.

Evening Presentation & Community Workshop

In the evening of March 3rd, 2009 Walk & Bike for Life held a three hour workshop at Kingston City Hall. This session also included a one-hour presentation by Gil Penalosa titled “Connecting People and Places: Creating a Great Kingston.” The presentation was followed by a two hour workshop where participants could come together to gather and discuss different ideas on how to improve the overall walkability, bikeability, and vibrancy of Kingston.

Participants in the evening presentation and workshop included Kingston residents, local community groups, students, representatives from the local Councilor’s office, and municipal staff. Just over 100 people attended the presentation and workshop.

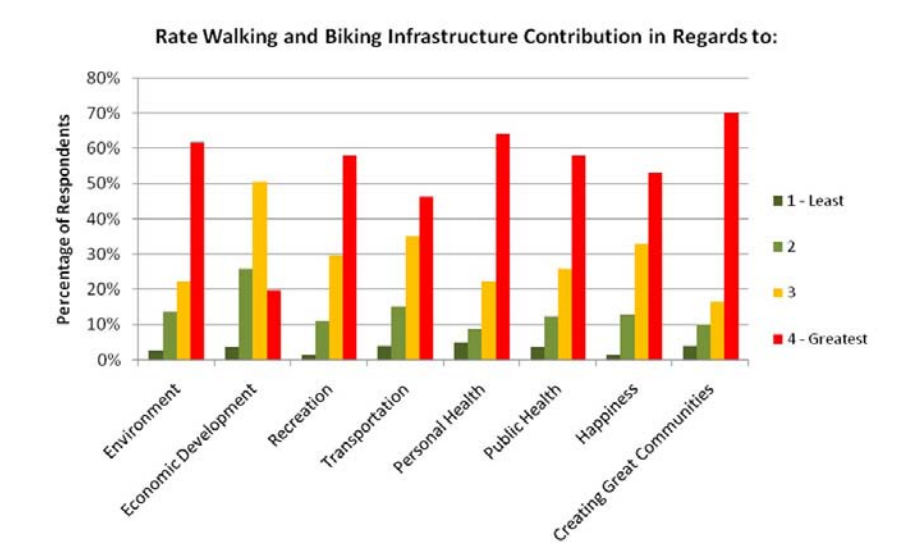
Participants were split into groups of 5-6 people and each group was given a Group Activity Sheet to fill out concerning their short-term (“petunias”) and long-term (“orchids”) recommendations for making Kingston more pedestrian friendly, cycling-friendly and an overall great place. Each group then presented their recommendations to the room, discussing and comparing their ideas with those of other groups. The results of the discussion, surveys, Group Activity Sheets and group presentations are compiled and summarized in the “What You Said” section of this report.

What You Said: Results of the Individual Surveys

Part I – Individual Surveys

Question 1: When you think of the activities of walking and biking and the infrastructure that supports these activities, how would you rate these activities and facilities in regards to their contribution to:

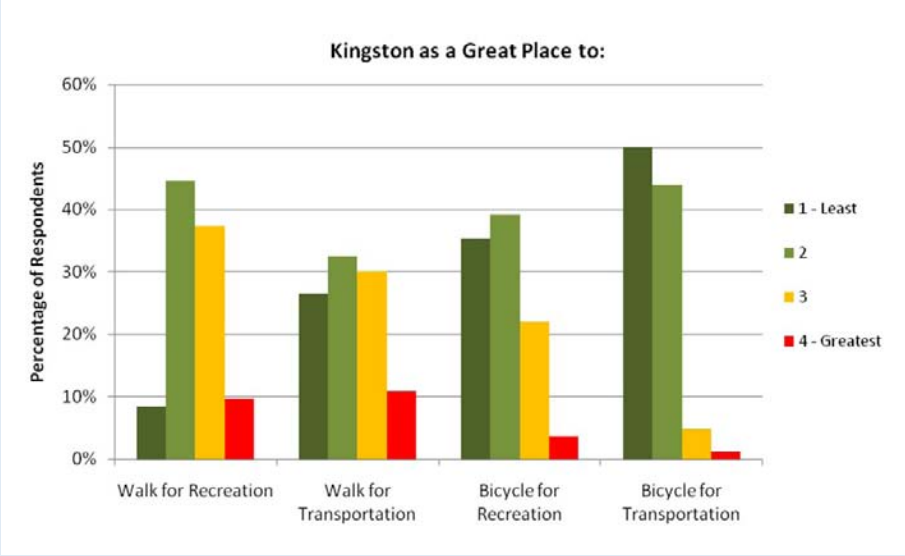
Graph 1 shows that workshop participants saw walking and bicycling as making a positive contribution to an entire range of desirable community characteristics. They were very responsive towards active transport's contribution to the environment (84% combined positive rating), personal health (86% positive rating), and creating great communities (86%) positive rating. The lowest rated category, economic development, still garnered positive ratings from 70% of respondents.



Graph 1: Respondents rate the contribution of Walking and Bicycling in regards to the environment, economic development, recreation, transportation, personal health, public health, happiness and the creation of great communities.

Question 2: How do you rate Kingston as a great place to: Walk for recreation, walk for transportation, bike for recreation, bike for transportation?

Graph 2 shows that Kingston did not rate very highly as a place to walk or bicycle for either transportation or recreation. No category received positive ratings from even half of the respondents, although walking for transportation and recreation came close with positive ratings from 41% and 47% of respondents, respectively. Bicycling for either purpose was rated more negatively by more people. Cycling for transportation was rated as the lowest out of all four categories. 50% of the respondents gave cycling for transport the lowest possible rating and another 44% gave it the second lowest rating.

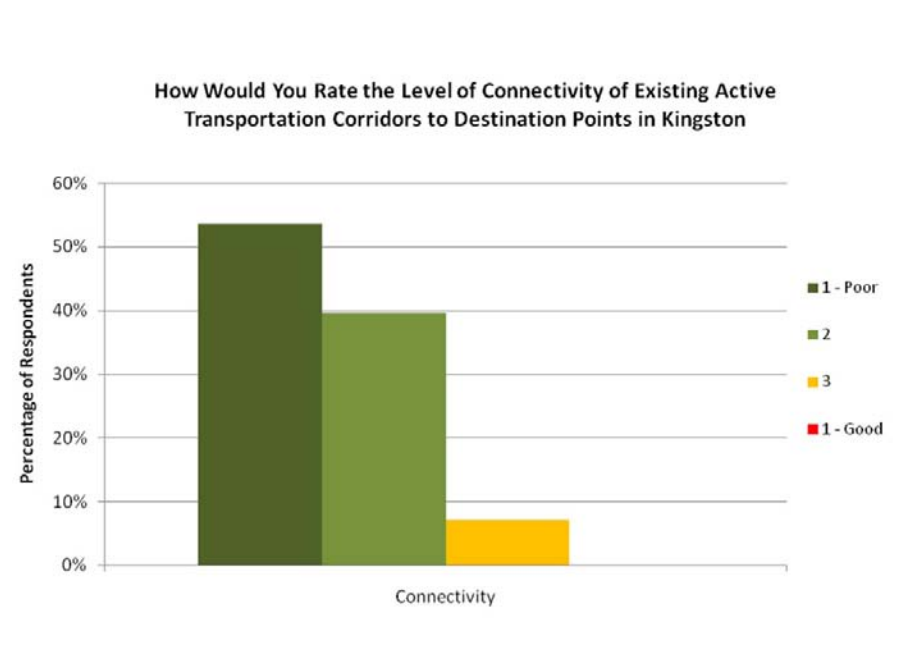


Graph 2: Respondents rate Kingston as a great place to walk for recreation, walk for transportation, bicycle for recreation, and bicycle for transportation.

What You Said: Results of the Individual Surveys

Question 3: How would you rate the level of connectivity between existing active transportation networks (bikeways, trails, walking paths) to destination points in Kingston?

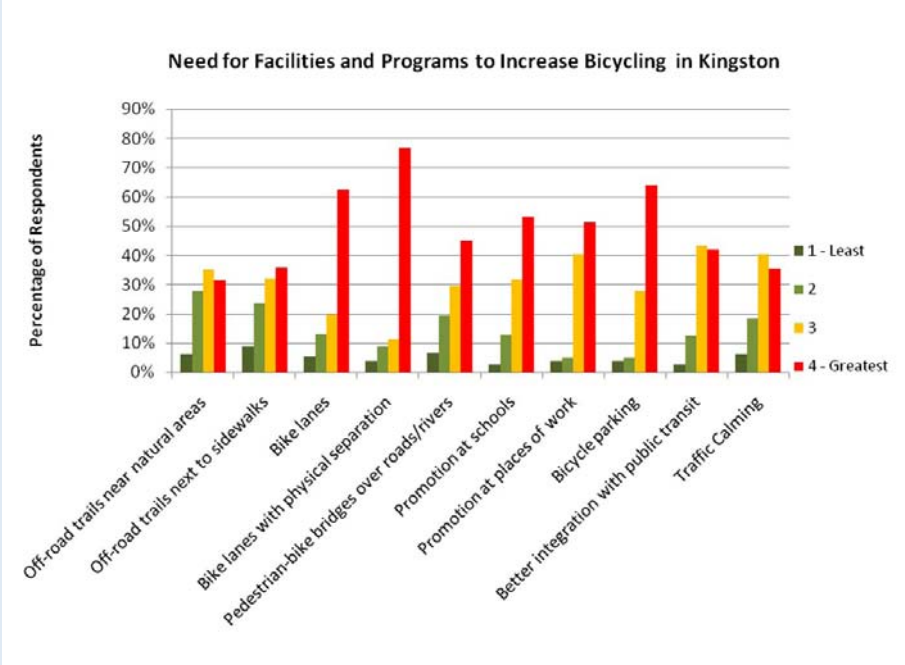
In general, the connectivity of existing active transportation corridors in Kingston was rated very poorly. *Graph 3* shows that 93% of respondents rated the level of connectivity between various active transport routes in Kingston as poor or somewhat poor. In contrast, only 7% of respondents rated the level of connectivity in Kingston as somewhat good and nobody rated it very positively.



Graph 3: Respondents rate the current level of connectivity of existing transportation corridors to destination points in Kingston.

Question 4: How would you rate the need for the following programs and facilities in Kingston to increase the number of people bicycling on a regular basis?

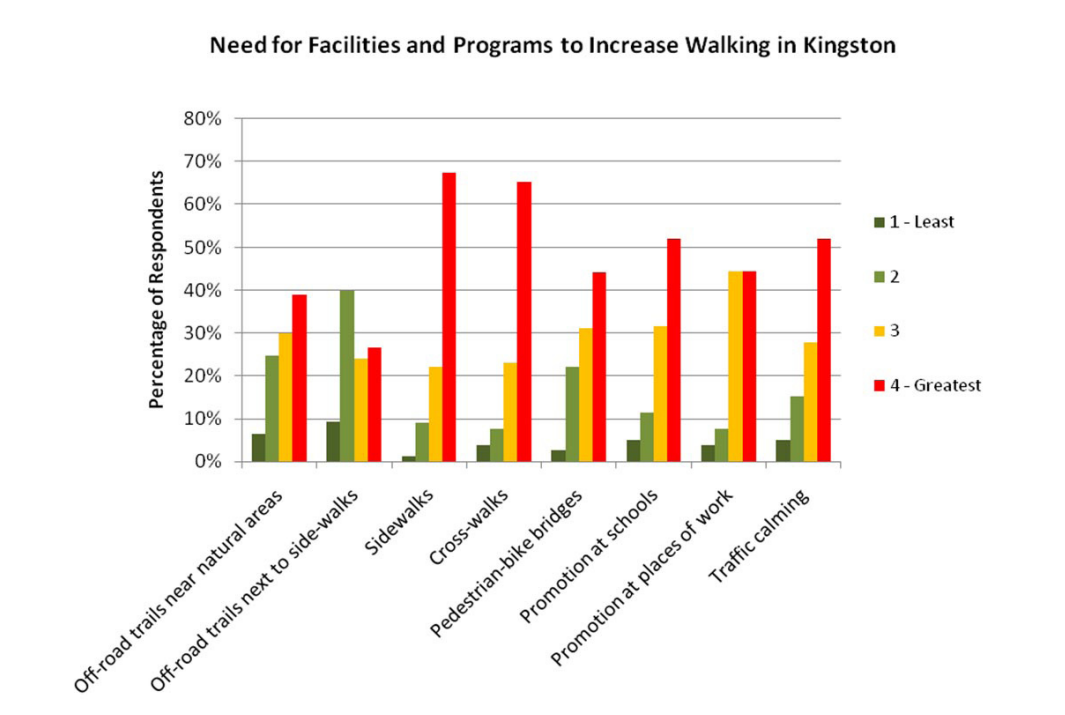
Graph 4 shows that bike lanes with physical separation were seen as the most important initiative to be taken in Kingston. They were seen as a needed initiative by 88% of the respondents, and received the maximum rating from 77%. Promotion at places of work and bicycle parking were rated as somewhat necessary or necessary by over 90% of respondents. Bike lanes in general, promotion at schools, and better integration with public transit also all received combined high/somewhat high scores from more than 80% of respondents. The least needed initiatives were off-road trails near sidewalks and near natural areas.



Graph 4: Respondents rate the need for different programs and facilities to increase bicycling in Kingston

Question 5: How would you rate the need for the following programs and facilities in Kingston to increase the number of people walking on a regular basis?

Graph 5 shows that respondents saw a high need for infrastructure such as sidewalks and crosswalks. These two categories got positive scores of 90% and 88% of respondents, respectively. Promotion at places of work was also seen as a needed measure, though perhaps a less pressing one, by 89% of respondents. The same could be said of promotion at schools, which was seen as a positive action by 84% of the participants. The least needed measures were off road trails near sidewalks and natural areas.



Graph 5: Respondents rate the need for different programs and facilities to increase walking in Kingston

Community Recommendations

What You Said: Results of the Group Activity Session

Community Recommendations

Each group was asked to discuss possible ways to make Kingston more pedestrian-friendly, bicycling-friendly, and a great public place. The following recommendations were of highest importance for the groups. The full list of recommendations can be found in *Appendix A.*

Vision of Kingston in the next twenty years

The first part of the Group Activity Sheets asked the participants to describe how they would like to see their town in the next twenty years. Participants were asked to think about what would make the area a vibrant, healthy community with happy residents. In this section respondents were not restricted by budget or city policies and were encouraged to provide an ideal vision of their community.

Vision of Kingston in Twenty Years:

- Increased focus on pedestrian areas. This includes wider sidewalks, improved lighting, pedestrian-only streets, more seating, improved maintenance of sidewalks during the winter, and safe crosswalks.
- Cycling as a safe and efficient form of transportation in Kingston, with dedicated bike lanes, and more bike parking around the city.
- Emphasis on local business, produce, and goods, rather than creating more “Big Box Stores” that requires a car to drive to.

Participants felt that safe cycling infrastructure would create a more livable and sustainable city.

Emphasis on local business and food was part of the community’s vision.

Community Recommendations

- Higher density development and more mixed income neighbourhoods to reduce segregation in Kingston.

This street (Strøget) in Copenhagen used to be dominated by cars. Now it is a pedestrian-only street and is well used all year round.

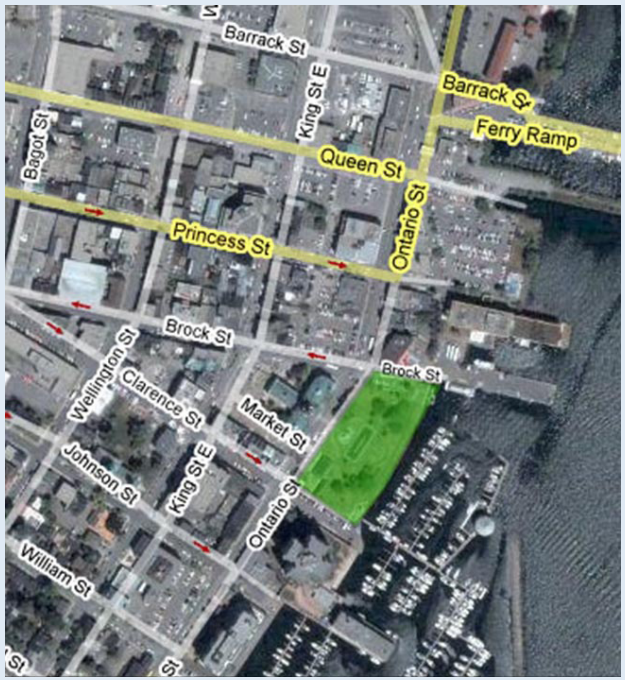
- Princess St. and Division St. revamped through a beautification program with more green spaces, benches, and an overall improvement in the look of the streetscape.
- Improved waterfront as a public space that has more paths and more seating.

Participants' vision included an improved waterfront as a public space.

Community Recommendations

What are the key destination points in the City of Kingston?

- Lower Princess Street
- Confederation Park

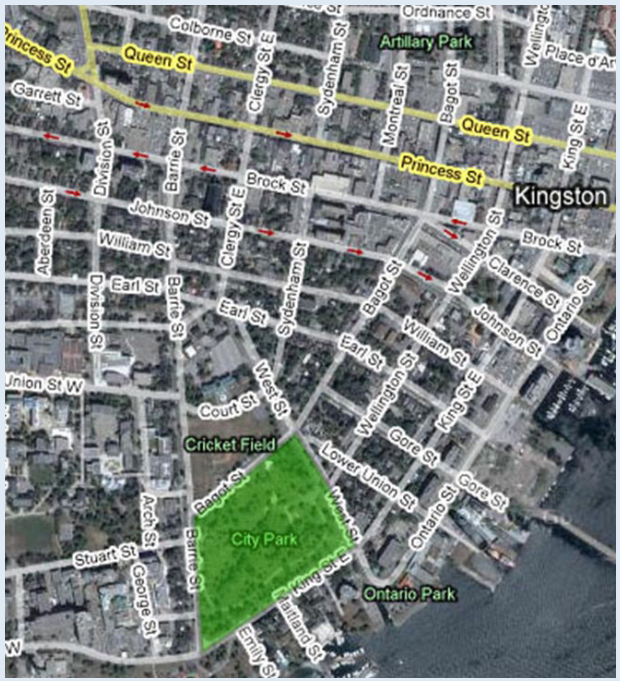


Map 2: Confederation Park

- Lemoine Point
- Kingston Centre
- Queens University

Map 4: Queens University is an important facility in Kingston being a destination point as well a potential source for promoting a more vibrant and active Kingston.

- Cataraqui conservation area
- Wolfe Island
- Belle Island
- City Park



Map 3: City Park

PETUNIAS: Year 1- Low cost, high benefit, good visibility and easy to implement actions that could be taken right away to make Kingston more:

Pedestrian Friendly

- Extend snow ploughing service to all sidewalks in Kingston.

Clearing all sidewalks of snow is an important action to get more people walking in winter.

Year long maintenance allows users to take advantage of the trails during the winter in Ottawa.

Community Recommendations

- Increase and improve pedestrian crosswalks across Kingston.
- Make Princess Street in the downtown core a pedestrian-only zone one day a week.

Bedford Avenue, NYC closed off to vehicular traffic and opened for pedestrians. Pedestrian streets benefit the visitors as well as local business owners.

- Improve the streetscape by adding more benches, improved signage, and lighting.
- Beautify the streets with more greenery (trees, gardens, shrubs).

Brantford, Ontario has recently invested in beautification of its downtown streets.

Community Recommendations

Bicycling Friendly

- Improve bike parking. Make bike racks visible, as well as create secure and well signed bicycle parking in many popular destinations.

Bicycle parking that takes space away from car space not pedestrian space in Portland.

- Launch a promotional campaign to increase ridership and educate people of the benefits of cycling.
- Hold bike clinics/classes for elementary school students.

Students in Amsterdam receive instruction on how to properly navigate the streets on a bicycle.

Community Recommendations

- Establish a bicycle recycling program where old bikes are fixed up and redistributed to lower income families.

The Bicycle Empowerment Network, based in South Africa imports bikes from Europe, the Americas and Asia and distributes them to people in need in Southern Africa.

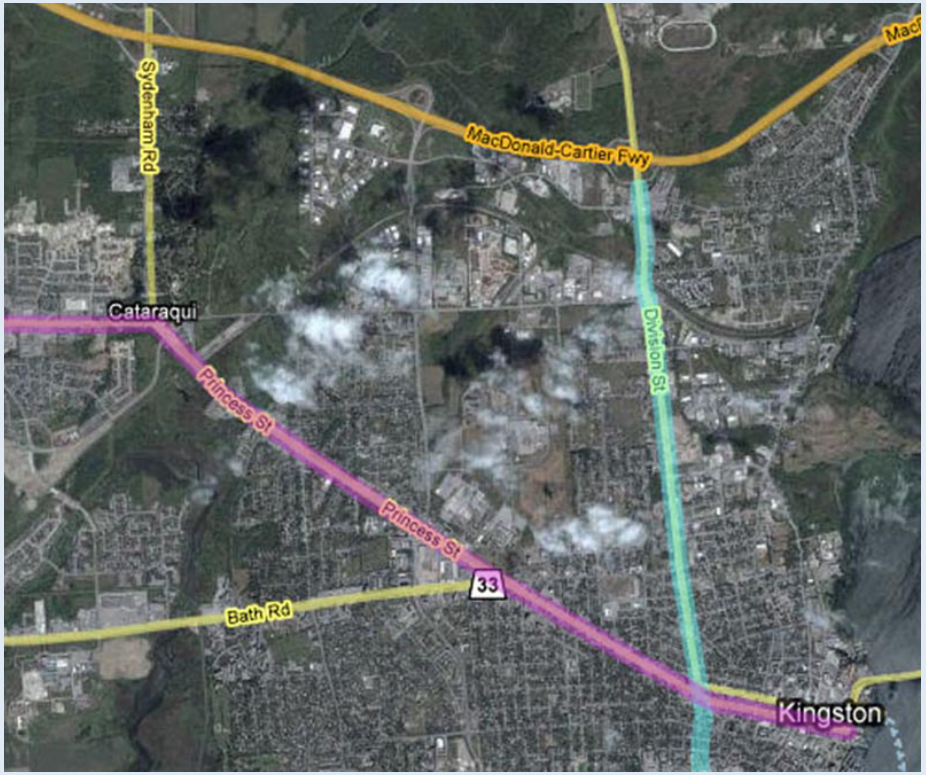
- Hold a bike festival in and around Kingston.
- As a pilot project, put in temporary barriers to physically separate cars and cyclists on existing bike lanes (ie. Division Street).

The Queen's Quay pilot project was a great way to introduce the new concept of physically separated bicycle tracks to Torontonians.

A Great Place

- Car-free Sundays on downtown streets (Princess St. and Division St.)

Car free days are an excellent way to promote biking and open up the streets for public use.



Map 5: Princess St and Division St were identified as potential active transportation corridors as well as good candidates for Car-Free Sundays.

Community Recommendations

- Hold events with local artists painting street murals (e.g. Street art competitions).
- Increase the number of events and activities year-round in Market Square.

Market Square behind City Hall in Kingston, Ontario. Only a few years ago this space was used for an open market. Now people can enjoy it in the winter too. Programming more events in the square would make it a key destination in the city.

Harmony Square in downtown Brantford. The town has recently invested heavily this destination for the downtown and has reaped the rewards. This space is used for skating in the winter, movie nights, festivals and other community events. See www.brantford.ca/content/publishing.nsf/Content/Harmony+Square.

- More bus routes and increased frequency of buses on present routes .
- Improve infrastructure such as bus shelters, public washrooms, water fountains and recycling bins.
- Reduce the speed of traffic to improve the safety of the streets for all users.
- Follow a transportation model that prioritizes pedestrians, cyclists, public transport and cars in that order.

Transportation hierarchy from Transportation Alternatives (www.transalt.org).

ORCHIDS: Year 2-5 - Higher cost, long-term actions to make Kingston more:

Pedestrian Friendly

- Create Pedestrian-only streets.

An example of a pedestrian street in Halifax, Nova Scotia.

- Continue Lakeshore trail as far as Wolfe Island Ferry Dock as one continuous walkable path.

An example of an innovative approach to public seating and pedestrian space in Paris.

Community Recommendations

- Establish and promote self guided heritage walks.

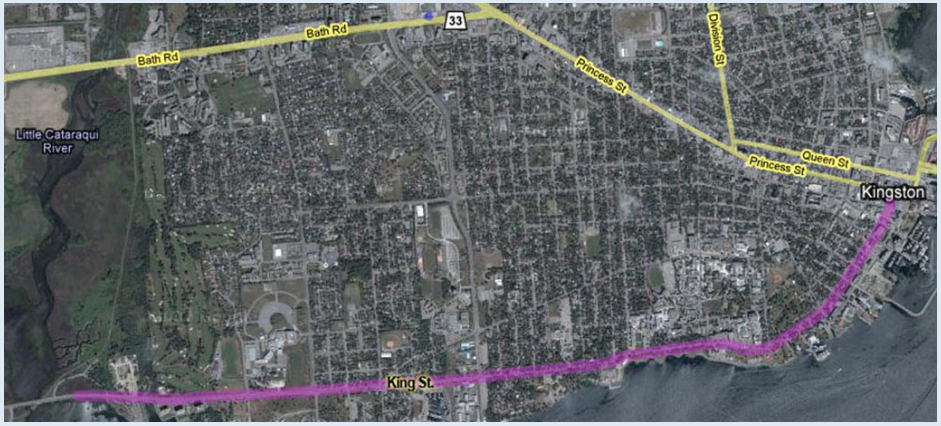
Minneapolis trail system has clear signage with clear separation of users.

- Widen sidewalks on streets with high pedestrian traffic (Princess St.) and fix sidewalks that are in poor condition.
- Connect K&P trail to Market Square.

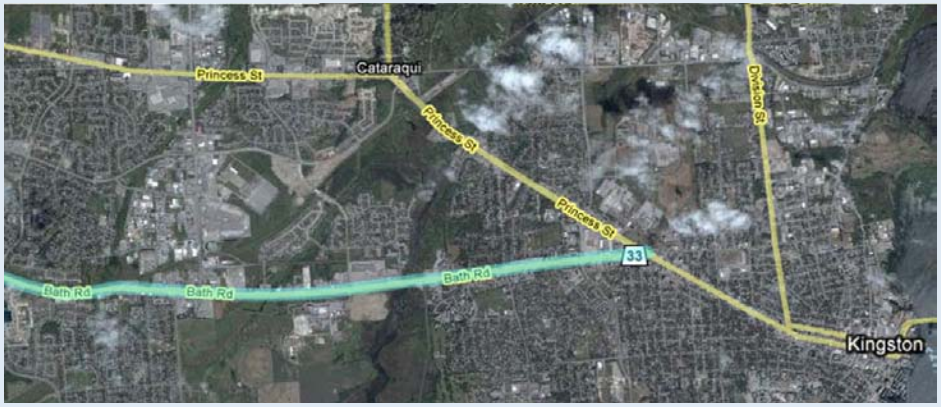
An intersection with adequate crosswalks, traffic calming measures, textured bikeways, pedestrian and cycling oriented traffic lighting, and pedestrian islands.

Bicycling Friendly

- Create a bike network/grid that links bike lanes with popular destinations in Kingston.
  - For example physically separated bike lanes on major arteries. This includes East-West corridors such as King St., Front St. and Bath St. as well as North-South corridors such as Days Rd, Division St., and Princess St.



Map 6: King St. was recommended as East-West corridor for active transportation.



Map 8: Bath Rd. was proposed to be an East-West corridor for active transport.

Map 7: Days Rd could be turned into a North-South corridor for cyclists

Community Recommendations

- Cyclist facilities/stations every 10 or 15 kms that have washrooms, change rooms, benches, pump stations and water fountains.

Counter and air pump station in Copenhagen, Denmark.

- Implement a by-law or city policy that requires all new developments to include bicycle infrastructure.
- Integrate cycling into the workplace by putting showers at places of employment.
- Build separated bike lanes on the waterfront walkway.

Example of physically-separated bicycle infrastructure in Paris.

Great Place

- Improve the waterfront by making the trail wider, longer, more connected to other destinations such as Collins Bay, Lemoine Point, and Kingston Hills.

The Waterfront Trail in Vancouver has clear separation of users and is not only a transportation corridor but also links destinations along the trail.

The Waterfront Trail in Vancouver has clear separation of users and is not only a transportation corridor but also links destinations along the trail.

Community Recommendations

- Princess Street could be made into a pedestrian only street in the fashion of many European cities where cafes, bars, and local shops thrive and create a great public place.

A pedestrian only street in Montreal.

- Remove on-street parking to create more pedestrian and cycle friendly spaces in the city.
- Implement a “Complete Streets Policy in Kingston.

Complete Streets are those designed, built, maintained and operated considering: **Pedestrians**, **Cyclists, Transit and Motor Vehicles.**

An example of a complete street in Copenhagen.

Barriers to implementation

Workshop participants identified potential barriers and obstacles to implementing the above recommendations. The following were identified as the top barriers. Participants were asked to break down the barriers into three categories: Urban, Suburban, and Rural. The full list of the barriers is located in Appendix A.

Urban

- Poor use of space
- Lack of political will
- Local business owners might be hesitant to remove parking in favour of bike lanes.

Suburban

- Lack of connections to downtown
- Public transit not frequent enough
- Dominant car culture
- Distance

Rural

- High speeds on rural roads means that bike facilities need to be physically separated in order to be safe
- Long distances

A paved shoulder in Kingston.

Bike racks on buses in Kingston.

Local resources and partnerships

Workshop participants were also asked to identify some local partnerships or talent that could help implement the proposed improvements. These included:

- Queens University
- St. Lawrence College
- Royal Military College of Canada
- Kingston Gets Active
- Cycle Kingston
- Queen's School of Urban and Regional Planning
- Downtown Kingston! BIA
- KEDCO – Kingston Economic Development Corporation
- OPIRG – Ontario Public Interest Research Group
- Artists in Kingston
- Tourism Kingston

Conclusion

Kingston City Hall.

The information gathered from the community workshop and the individual responses to the surveys demonstrate the great potential that Kingston residents see in their city.
Workshop participants have proposed many actions that would greatly benefit the City of Kingston and its residents. They have outlined specific short term and long term actions in terms of walking, biking, and creating great public spaces.

With regards to pedestrian improvements, one of the key measures outlined was the creation of pedestrian-only streets in downtown Kingston. The most prominent street to be made into a pedestrian zone was Princess Street. In the short term the street closures would be only once a week, but the long term recommendations proposed a permanent closure of some streets. In addition to this, the respondents want to see wider sidewalks, increase the amount of crosswalks, more seating, better lighting and an extension of snow removal to all sidewalks in Kingston.

The short term cycling proposals included a promotion and an education program of the benefits and safety procedures of cycling. Participants also suggested implementing a program where discarded bikes are fixed, and redistributed to lower income families. Another program that was suggested was a pilot project where temporary barriers are setup on existing bike lanes. In the long term, the participants proposed building physically separated bike lanes on major East-West and North-South corridors in Kingston.

The respondents also suggested an initiative where fix-up/rest stations would be setup every 10 or 15 kilometres on popular bike routes. There was also a need for creating a bike network that links popular destinations across Kingston.

In terms of creating great places one of the main suggestions was the implementation of Car-free Sundays and improving public spaces. Princess Street was named as the most likely and popular place where pedestrian only initiatives should take place. Removing on street parking, improving infrastructure and implementing a Complete Streets policy were seen as important measures to be taken. Participants also noted that Kingston is full of artists which should be taken advantage of.

General ideas and examples for pedestrian-friendly, bicycling-friendly, and public space improvements can be found in the Toolkit located on page 47 of this report.

A thriving cycling culture in Kingston! Photo courtesy of John Sheahan.

Chapter 3

Next Steps

Moving from Talking to Doing

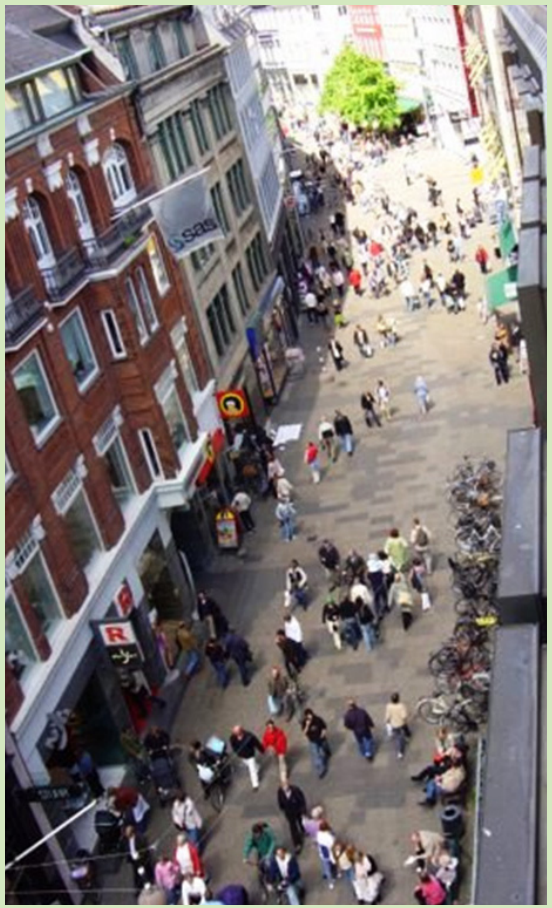
Harnessing this form of holistic planning can help cities become world class destinations. But how do we turn these ideas into action? Gil Penalosa, Executive Director of Walk & Bike for Life, has spent many years working on walking and bicycling in cities. After reflecting on his successes, Gil has identified the following:

five elements which are necessary in order to stop talking and start doing.

Leadership

Every movement needs a leader. Having passionate, committed, and knowledgeable leaders can inspire people to not only understand these issues but act upon them as well. It's not about knowing everything; it's about motivating others and making them understand the importance of your work. It is understood that planning and transportation issues can be incredibly complex and controversial. However, by having leaders who are focused on doing the right things rather than doing things 'right', cities can begin to develop on a human-focused scale. Leaders often occupy positions of power but this is not always necessary. You can become a leader in your community by gathering the knowledge and resources necessary to inspire and create action. Getting involved in relevant community events is a great way to get yourself connected to other actors within your community. Nevertheless, whether it is you who is leading or not, it is imperative that you make your voice heard by those who are. This can be done through, emails, letters, petitions, or events.

Although having passionate, progressive leaders in your area makes it much easier to implement change, don't give up if this is not the case. There are still four more factors that can turn *talking* into *doing.*



One of Copenhagen's successful pedestrian plazas.

Political Will

When it comes to building infrastructure in our city, community members can only do so much. The plans and proposals for new roads, trails, public spaces, and parks need to come from our politicians. It takes guts to take an innovative idea and move forward with it – but the rewards of being that person are considerable and long-lasting. In Copenhagen, the first steps towards improved public spaces were met with intense backlash on multiple fronts. Not only were business owners worried about the impact upon their profits, but drivers were also worried about decreased car mobility. Despite this reaction, leaders in office had a long term vision which they stuck with– and now residents are grateful for their politicians' foresight. With the improved economic activity and decreased congestion brought on by their plans, Copenhagen's placemakers proved that great politicians with the courage to create real change can build world class cities.

That being said, politicians work for the people, and if there is no visible support for an issue coming from constituents, then politicians will be much less likely to fight for it. With so many matters on their minds, we cannot expect politicians to focus on the issues that are not being brought to their attention. Local groups and citizens must work together to make these topics visible to politicians as well as encouraging them to make the gutsy decisions necessary to create real change.

Moving from Talking to Doing

"Doers" in the public sector

It's not enough for politicians to talk about their goals and ideas; someone needs to do the work to follow through upon those promises. Janet Sadik Khan, Transportation Commissioner for New York City was inspired by the cycling facilities that she saw around the world. 30 days after she announced New York City's new bike plan, a physically separated bicycle lane was set up on 9th Avenue. Sadik-Khan is now transforming the meaning of transportation in New York City and being hailed as a visionary for her actions.

New York City's first physically separated bicycle lane.

It is a common theme within the public sector to find different departments, who often work on similar or neighbouring infrastructure, to lack communication or cohesion. Often you will find work being duplicated because certain departments don't think to, or prefer not to work together. Local organizations, citizens, and politicians must work to bring these departments together in order to improve co-operation and efficiency. For example, many municipal, regional, and provincial transportation, public works departments etc. build infrastructure without consulting each other. This often leads to different areas of the same road or public space to be worked on at different times or with different characteristics. This is not only a waste of time, but a massive waste of money. Promoting a more cohesive communication system will help to align departments in both principle and practice. This alignment will in turn lead to more efficient and effective action.

Community Engagement

It takes the work of a strong and active community to make change in our cities. Everyone has their own cause, so if you aren't writing letters and making calls to city officials, then someone else is. If city representatives are not hearing about an issue, they have no way of knowing that it is a priority to their constituents. So citizens need to speak up, speak to their elected officials and make known that transportation is an important issue in this community – politicians are paid to listen.

Sense of Urgency

With the Greater Golden Horseshoe expecting to see a 50% population increase in the next 25 years, carbon emissions pushing the globe's temperature to rise at record rates, and unpredictable fuel prices making it difficult for households and public agencies alike to budget from one year to the next - transportation is one of the most urgent issues facing us today.[xxiv] So why aren't we feeling the pressure to invest in active transportation? The connections are not being made concerning the important role that transportation will play in meeting the great challenges of this generation. A lack of urgency permits complacency and procrastination – attitudes that cities cannot afford. The importance of this issue must be made clear; its urgency will force all stakeholders to pay attention and to begin taking action now.

Community Action Group

What is a Community Action Group?

The Trails for Life program aims to transform ideas into action, and to prompt real, tangible change by harnessing the energy and capability that exist within communities. Walk and Bike for Life acknowledges that the members of every community understand their unique challenges and solutions better than any outside organization. Therefore, the key actor in this process will be the Community Action Group (CAG), a locally driven coalition of individuals and organizations with the passion and capacity to advance initiatives for walkability, bike-ability, and the creation of great public spaces in a given jurisdiction. CAGs will include representation from any and every interested party: members of the public, councillors, government agencies, business leaders, environmental groups, school groups, and any other concerned community members. The Trails for Life program will generate action within a number of promising communities across Ontario through the development of each CAG. Our Walk and Bike for Life Community Action Groups will be given the opportunity and resources to work at a grassroots level to implement unique and localized solutions in their neighbourhoods.

When working with Community Action Groups, Walk and Bike for Life will serve a centrally supporting role, providing assistance with administration, public relations, media and advocacy strategy, and research. As the groups develop, Walk and Bike for Life will facilitate discussion and contact among CAGs throughout Ontario to create a mutually supportive network for information and resource sharing on walkability, bikeability, and quality of life issues in the province.

Chapter 4

Tool Kit

Myths vs. Facts

When it comes to dedicating time and money to the creation of parks, trails, and people-friendly infrastructure, naysayers tend to raise the same objections time and again. Here we will take some time to put these common misconceptions and misunderstandings to rest. This will allow us to focus our time and energy on finding solutions to the challenges faced by our neighbourhoods and on overcoming real, rather than imagined, obstacles.

Myth: Walking and bicycling are not safe modes of transportation.

Fact: Activities become safe when appropriate infrastructure and safety measures are implemented.

Statistics in Canada show that more and more people are choosing to use their cars as their main means of transport – and who can blame them? [xxv] An average of 7 pedestrians and 1 cyclist are killed in motor vehicle accidents every week in Canada. [xxvi] To put that in perspective – each year almost twice as many Canadians are killed by cars while walking and cycling than are killed by firearm violence.[xxvii]

While there are dangers to walking and cycling in Canadian neighbourhoods, there is no reason to throw out walking and cycling as legitimate modes of transportation. Think about it - when water is contaminated, we don't tell people to start drinking juice, we clean up the water! In the same way, we need to clean up our streets by implementing the infrastructure that makes them safe for cyclists and pedestrians. Only through the construction of such infrastructure will pedestrian and cyclist deaths decrease.

Figure 4 shows that cyclist and pedestrian fatality rates decline in direct proportion to the quality of infrastructure in a city. The reasons behind this decline are multilayered. As infrastructure improves, more people cycle. As more people use their bicycles, cyclists become a common sight on the road, making drivers much more aware of, and reactive to, their presence. Conversely, drivers who are not used to seeing cyclists tend to be less respectful, aware and comfortable driving alongside them. In fact, *figures 5 and 6* show that cyclist and pedestrian fatality rates also decline in direct proportion to the number of pedestrians and cyclists using the sidewalks and roads. In the U.S, cycling and walking levels are only about 1% and 5% respectively, with death rates at about:

7 deaths/ 100 million km travelled for cyclists, and 14 deaths/ 100 million km travelled for pedestrians.

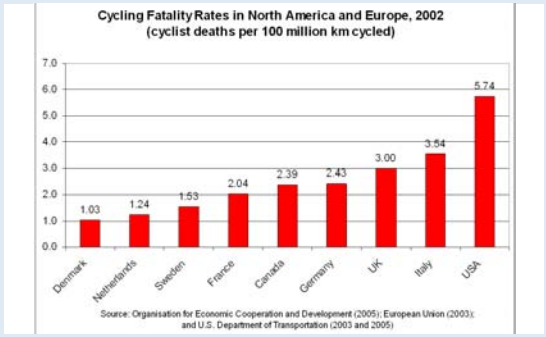


Figure 4: Cyclist fatalities per 100 km of riding. Denmark, famous for their extensive walking and cycling infrastructure, has a fatality rate that is less than half that of Canada's.

In the Netherlands, where cycling and walking levels are more than 4 times higher than those in the US, death rates drop dramatically to 2.5 cyclists/ 100 km travel and only 2 pedestrians /100 km travelled.

So, yes, walking and cycling are dangerous without the proper infrastructure in place. Once that infrastructure is in place, more people will use non-motorized transportation, cars will become more used to sharing the roads, and less pedestrians and cyclists will be killed – making our roads safer for all.

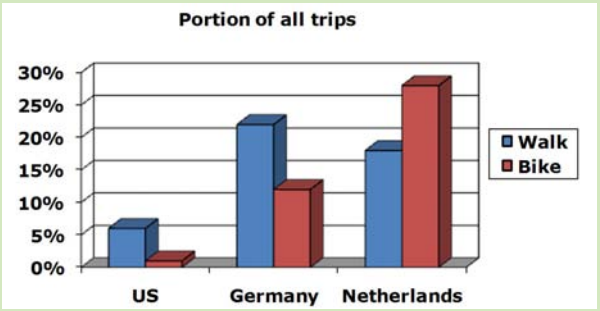


Figure 5: Percentage of trips made by foot and bicycle in the United States, Germany and the Netherlands.

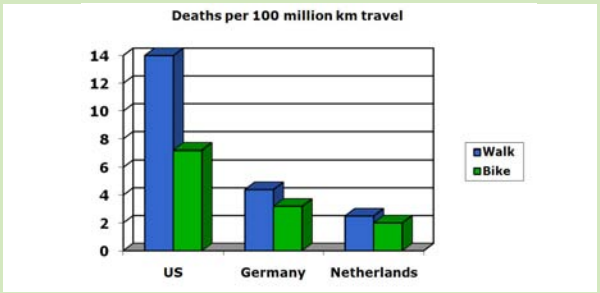


Figure 6: Cyclist and pedestrian deaths per 100 km travelled. Fatality rates are dramatically lowered in countries where there are more pedestrians and cyclists on the roads and sidewalks.

Myths vs. Facts

Myth: Creating walkable, bikeable communities, trails and parks is too expensive.

Fact: Building healthier communities is a matter of priorities.

From 1995 – 2001 Bogota Colombia, a city with approximately one eighth the per capita income of Toronto, built over 850 parks, including 5 parks located in city centers. In 3 years, an 899 acre park with a 280 km separated bicycle path network was built in the heart of the city. Furthermore, the city's bike share program increased to 300 000 users from 28 000. The point is...

changing our cities is a matter of doers, not dollars.

With a cohesive long term plan, short term attainable goals and most importantly, a serious desire to make change, our cities' wealth can be used to reflect our priorities. Of course, cities cannot fund everything proposed, but to say that this infrastructure is too expensive is simply not the case. Pedestrian and cycling infrastructure is much cheaper and serves many more people per dollar than does infrastructure for motorized vehicles. Funding is dependent on how high these issues are on decision makers' list of priorities. Therefore, if they choose to make it a priority, they will always have the funding.

Myth: The people in this city love their cars, this will not transform into a city of cyclists.

Fact: Bicycle infrastructure increases bicycle commuting.

In 1990 Portland, Oregon had a disjointed and minimal trail network made up of bikeways which were often disconnected from one another. The city's residents were not interested in biking, and the majority of trips made to the city centre were by car, with only 2-7% made by bicycle in most places.[xxviii] All that changed when in 2000 a Transportation Master Plan was implemented that included an extensive, accessible and cohesive cycling network *(Figure 7)*. A large part of the city now boasts ridership of over 10% with most of the surrounding areas at 8-10%. [xxix]

In other words, Portland officials doubled their city's ridership just by increasing the extent and integration of their bike trails.

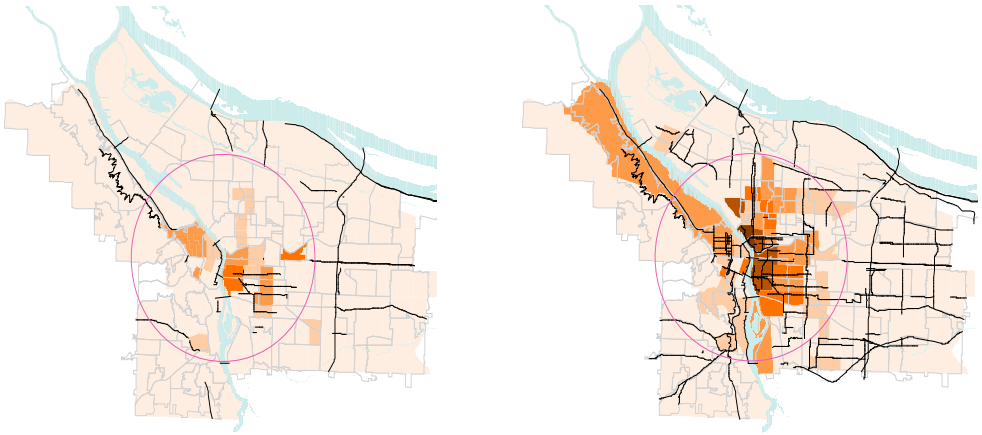


Figure 7: Portland's cycling trails moved from disconnected in 1990 (left) to cohesive and extensive in 2000 (right). Ridership doubled as a result of the change.

Myths vs. Facts

Myth: Winter makes walking and biking impossible in Kingston.

Fact: Kingston's winters are perceived to be much worse than they really are.

The average annual snowfall in Kingston measures 152.9 cm. That is around the same as the levels in Hamilton (144 cm), and much less than in Montreal (226 cm) or Barrie (238 cm). [xxx] Yet often we imagine our winters to be much harsher than they really are. With proper year-round maintenance, including ploughing and salting of sidewalks and bike lanes, walking and biking can easily become viable year-round options.

It is true that on some days it will be too cold, or too snowy to ride a bike. However, it is also true that out of the 365 days in a year it is unlikely that more than 20 will fall into this category. Instead of building our cities around those 20 deep-freeze days, let's work to make a world class city for the other 345.

Maintaining bike trails during the winter times allows people to bicycle throughout the entire year.

Myth: Canadian people want more cars and more highways.

Fact: When citizens become engaged, cities focus on people.

In the Economist's 2007 ranking of the world's cities, Vancouver was rated the number 1 most liveable city in the world. When asked, the Economist Intelligence Unit cited low crime rates, little threat from terrorism, and advanced communications and transportation infrastructure as the reasoning behind Vancouver's rank.[xxxi] The city's award winning transportation isn't car focused. In fact, city staff, politicians and citizens haven't allowed new highways into Vancouver's city centres in 30 years! No one group is dictating these decisions – Vancouver prides itself on extensive citizen engagement and has actively chosen a people-centred way of life.

City planners in Vancouver, with extensive citizen input, coordinate their planning of Land Use and Transportation.

Myths vs. Facts

Myth: European cities can't be used as a guide to make this city more walkable and bikeable. They were built to be people-centred hundreds of years ago.

Fact: Many European cities have seen drastic turnarounds in the last 20 years by taking risks and making the tough decisions during their urban planning development.

Fifteen years ago citizens of Copenhagen, Denmark thought that a vibrant public life based around walking and bicycling was impossible – residents were too dependent on cars, the city's weather was too harsh, and extensive walking and biking was not part of Danish culture. Today, residents know better.

Figure 8 shows that in 25 years the number of people using bicycles as their primary vehicle in Copenhagen has doubled. In those 25 years the number of bicycles entering Copenhagen during the morning rush hour has increased from 8 000 to over 20 000, while the number of cars entering the city has decreased from 23 000 to only 18 000.

Copenhagen's planners made a choice and took the necessary measures to create a walkable and bikeable city. The result has been citizens who are proud, happy and comfortable in their community- no wonder outsiders think that life has always been this way.

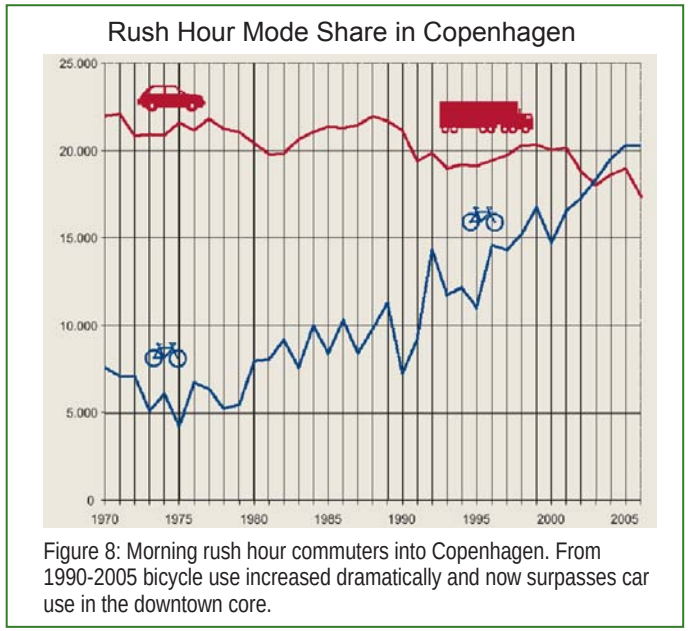


Figure 8: Morning rush hour commuters into Copenhagen. From 1990-2005 bicycle use increased dramatically and now surpasses car use in the downtown core.

Copenhagen has put active transportation as a top priority issue and has made the necessary changes in the past two decades to create a safe and accessible transport network for all users.

Myths vs. Facts

Myth: Walking and cycling infrastructure is about painting lines on the pavement.

Fact: Designing proper infrastructure is about re-evaluating our priorities.

A survey in Portland showed 65% of cyclists to be male and 70% of cyclists aged between 25 and 50.[xxxii] This gender and age imbalance in the cycling community is a direct result of the design of our streets. A prevalent attitude among decision makers seems to be that if there is enough money left over, a bike lane might be painted onto the road. The result is roadways that are great for cars, but intimidating, dangerous and unusable for those who do cycle.

Transportation, just like all other government matters, must be inclusive, and must reflect the needs of all citizens, especially the most vulnerable. Riding a bike beside a large transport truck when separated by only a painted line makes even experienced cyclists feel threatened. So, if you wouldn't feel comfortable putting your 80 year old grandparents out on a bike in your city, consider it a sign that you've still got work to do.

Building better infrastructure requires the recognition that all means of transportation are equally important and, therefore, need to be given equal consideration in planning. That means investing money in physically separated bike lanes, wider sidewalks, clearly marked intersections, and coherent trail systems. It means making the transportation of people, rather than cars, into the primary consideration of road design.

Physically separated facilities are safe and comfortable for all users: drivers, cyclists, and pedestrians.

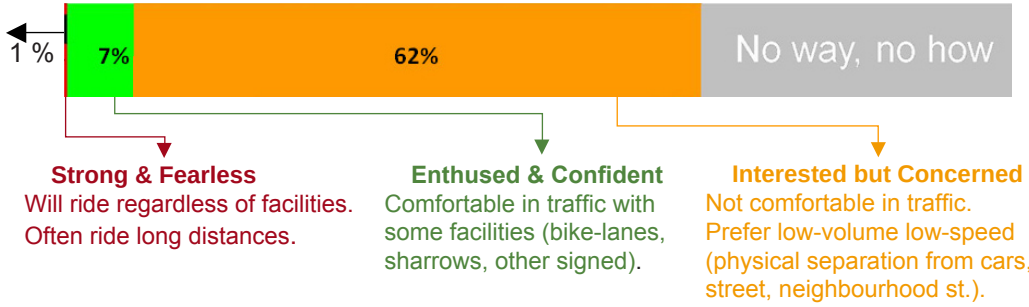


Figure 9: A study of cyclists in Portland shows that 62% of riders fall into the ``interested but concerned`` category. To make a real difference in the habits of residents, planners must satisfy the concerns of this group. A bikeway should not be considered finished until it is safe enough for the most vulnerable commuters – namely children and the elderly.

Case Studies

People Are Doing It! Case Studies in Walkable, Bikeable Communities

Sometimes you need to see it to believe it. Each of the following cities had hurdles to overcome similar to those faced in the Town of Kingston. Taking inspiration from their innovation and experiences can help us to work toward building our cities into unique, healthy, and happy communities.

Chain of Lakes – Minneapolis

Putting their beautiful waterfront scenery to good use, Minneapolis created their famous "Chain of Lakes." With parks and trails located along the lakeshore and 21.4 kilometres of walking/jogging/biking friendly pathways the Chain of Lakes provides a safe and accessible opportunity for residents to actively transport and enjoy themselves. The Chain of Lakes system is a part of an even larger system of trails that totals 80.6 kilometres. This is the Grand Rounds National Scenic Byway. This trail system connects users from many parts of the city, and provides its users with a variety of activities. Along the Grand Rounds there many hiking, biking, and skiing trails. There are also golf courses, scenic pathways, historic sites, gardens, and many other natural features to explore.[xxxiii] It draws over 14 million visitors a year. With the purchase of food, services and accommodations that those visitors make, the trails are generating millions of dollars in revenue for the city.

Minneapolis residents and visitors making the most of their waterfront location

Minneapolis trails combine both recreational and transport uses and connect green spaces to urban areas.

Winter Cycling- Copenhagen, Denmark

In light of the winters in Kingston, some might say that cycling infrastructure is a waste of time and money, claiming that even if bikeways were cleared and salted, no person would want to leave the comfort of their car for the cold of winter. In fact, a number of cities with cold, snowy winters have looked past this perceived impediment and found such perceptions to be unfounded. In Copenhagen, Denmark 30% of residents cycle to work and 70% of those cyclists continue to bike even during Copenhagen's cold, snowy winters. [xxxiv]

Commuters make their way to work during a Copenhagen winter. 70% of cyclists continue to ride during Copenhagen's winters.

Case Studies

Car Free Sunday – Ottawa, Canada

Every Sunday from Victoria Day to Labour Day, Ottawa closes its streets to cars and opens them to people. Over 50 km of roadways are shut down each week allowing citizens and tourists to actively enjoy the city's streets. Car free Sundays are a great way to foster a community atmosphere – not only do they keep people active, but they change our perceptions by presenting our well paved, wide and comfortable roads as public places for all citizens.

Taking back the streets – enjoying Ottawa's wide open road space on the city's summertime car-free Sundays.

Multi-Modal Transportation Centre – Meridian Mississippi

In 1997 Meridian Mississippi, a city of only 38 314 people transformed their central railway station into a community hub and money maker. After consulting with architects, engineers, specialists and, most importantly, the local community, Meridian made a decision to capitalize on the potential of their transit station. Today the Station hosts a railway museum and conference room and is surrounded by a farmer's market, public park, restaurants and a designated festival and events area – all largely supported by the local Business Development Corporation. Local citizens love the station's integration into the community and have shown their financial support. The station offers a patron's program which allows citizens to donate anywhere between $40 and $2500 to dedicate plaques around the station. These plaques have been placed on anything from bricks to lampposts. Tourists are also showing their support for the transformation as the local industry has been stimulated and the station now regularly hosts events such as weddings, conferences and private parties.

Meridian Station, Mississippi

Case Studies

World Class Streets – New York

New York's World Class Streets program is developing several new streetscape projects across the city to enhance public spaces. The World Class Streets initiative is incorporating several methods in enhancing public spaces. It includes: a pubic plaza program, Broadway boulevard project, complete street projects and design standards, safe streets for seniors and students, public art program, coordinated street furniture, and weekend pedestrian and cycling streets. New York is committed to achieving its goal of having a public open space for every resident within 10 minutes of walking for every resident. To do this, the city is creating or enhancing a public plaza in every community. In June 2008, New York launched the NYC Plaza Program that established long-term partnerships between the NYC Department of Small Business Services and community groups in order to maintain and program the plazas so they continue to be well managed and active destinations. One of the great accomplishments of the project is the revamping of 9th avenue. The before and after photos show the extensive transformation the street went through.

Madison Square after DOT pilot project

9th Avenue Before

9th Avenue After

LRT in Bordeaux, France

The city of Bordeaux, France has implemented a new LRT system in an historic and visually sensitive town. The Bordeaux LRT uses innovative technology that removes overhead wires from the streetscape. Using a ground level power supply system the new LRT has managed to diminish the effects of visual pollution that are associated with many rail systems across cities. The ground level power supply system works on the principle that the conductor is only energized when the LRV is over it. In addition, the city used the opportunity of this large construction project and piggy backed on the investment with enhancements to the overall streetscape, facades and beautification. Overall, the citizens of Bordeaux have embraced their new LRT system and commend it for urban rebirth, visual unobtrusiveness, and more open green spaces in the area. [xxxv]

Bordeaux LRT

The 8/80 Rule

The 8/80 Rule

When roads are built, planners do not build one road for new drivers and a separate road for experienced drivers. When creating sidewalks and bikeways, we cannot make them only accessible to experienced cyclists and agile pedestrians. Walk & Bike for Life has created a rule of thumb to help individuals when they are evaluating bicycling and pedestrian infrastructure, we have dubbed it the 8/80 rule.

Step 1:

Think of a child that you love and care for who is approximately 8 years of age. This could be a child, grandchild, sister, brother, cousin etc.

Step 2:

Think of an older adult, approximately 80 years of age who you love and care for. This could be a parent, grandparent, friend etc.

Step 3:

Ask yourself: Would you send that 8 year old along with the 80 year old on a walk, or a bike ride on that infrstructure? If you would, then it is safe enough, if you would not, then it is not safe enough.

This rule may seem simple but it holds many implications. Interestingly, when you are forced to think of the ability of most cycling and pedestrian infrastructure to safely serve all citizens, they often fail.

Helpful Groups and Websites:

Walk and Bike for Life: www.walkandbikeforlife.org

WalkON: http://www.walkon.ca/

Ministry of Health Promotion: http://www.mhp.gov.on.ca/english/default.asp

Complete the Streets: http://www.completestreets.org/

Project for Public Spaces: http://www.pps.org/

Transportation Alternatives: http://www.transalt.org/

Gehl Architects: http://www.gehlarchitects.com

Canada Walks: www.canadawalks.org

Green Communities Canada: www.gca.ca

Waterfront Regeneration Trust: www.waterfrontrail.org

Ontario Trails Council: www.ontariotrails.on.ca

End notes

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[xiv] Drennan, 2003

[xv] Canada. Statistics Canada. “Government revenue attributable to tourism”

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1. Figure 1: Human Activity and the Environment
2. Figure 2: Pan-American Health Organization
3. Figure 3: John Pucher, Rutgers University
4. Figure 4: Organization for Economic Cooperation and Development (2005), European Union (2003), and Us Department of Transportation (2003 and 2005)
5. Figure 5: Complete the Streets
6. Figure 6: Complete the Streets
7. Figure 7: Portland Department of Transportation
8. Figure 8: Gehl Architects
9. Figure 9: Portland Department of Transportation
10. Graphs 1-5: Data from individual survey answers analyzed and compiled by Walk and Bike for Life
11. Maps 1-8: Maps produced by Walk & Bike for Life using Google Maps

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Cycling photo in Kingston courtesy of John Sheahan.

Kingston City Hall photo taken from City of Kingston photo gallery website http://www.cityofkingston.ca/photogallery, July 16, 2009

Air pump and counter picture taken from copenhagenize.com, May 2, 2009

Any images not cited taken by Gil Penalosa, Walk and Bike for Life.

Appendix A Group Activity Sheets

1. How would you like to see this area in 20 years? Think about what would make this area a vibrant, healthy community with happy residents.

- Please beautify Princess St. and Division St.- can we plant more trees and get rid of those horrible power lines? We need wider sidewalks with greenery, benches. By-laws would help if they can be enforced; less littering and more beautiful lawns encourage peaceful walks (we have lots of irresponsible renters and landlords).
- More pedestrian areas, Bike lanes
- Proper walk and bike around the lake
- Leading to Kingston Mills, other commuter areas
- quality of facilities
- Path crossing the cataraqui river
- plowing the sidewalks, widen
- Higher density Development areas
- infill development
- The presentation examples
- Better intermodal/ regional connections
- Bathrust Street! (no bike or pedestrian)
- Better public/pedestrian spaces (closed streets to cars)
- Higher density
- No 3rd crossing “span 2 sprawl”
- grocery shopping downtown –usable
- Retail for the residents
- Change in cultural thinking to accommodate biking-integration of biking in under-serviced areas
- Mixed income neighbourhoods, less social segregation
- Less obesity
- Better connection West-East in general-need more than Bath Rd., Princess and Front St.
- Improve waterfront path and extend it-cleanup brownfields, need destinations and amenities.
- Further improvement and emphasis on local produce, talent, goods, etc.-more local goods in stores.
- Less Big Box stores that need a car to get to.
- Separate cycling/pedestrian lanes
- Connections
- More public transit
- Plowed sidewalks
- Safe crosswalks
- Closed roads for walking/cycling
- Ridged pavement/auditory signals
- Less parking for cars
- Better lighting
- More cycling parking
- Council that values at
- Public water fountains
    - More pedestrian only laneways
    - Waterfront pathways
    - Boat transportation
    - Narrow all main roads
    - Separate all arteries
    - Traffic calming on all smaller roads.
    - Facilities (showers, lockers, washrooms) in new developments-incentives for Developers
    - Cut out all drive thru downtown.

2. What are the key destination points in the City of Kingston? (public spaces, parks, shopping, amenities, employment) Please use the map at your table to visually define using the blue marker.

- Would be great to be able to bike, walk, rollerblade, etc. all the way from downtown core to Lemoine Point
- Our Confederation Park is nice but it could be awesome-plans are underway but we need to act to revitalize this.
- We have a very nice Waterfront, but there is hardly anywhere to sit and to have a coffee/ meal/ drink.
- Lower Princess St.
- Kingston Centre
- High schools
- 'the loop' Cycling route
- KGH, other hospitals
- City Park, waterfront Park-Queen's University
- Cataraqui Mall, Rio Can Centre
- Gardiners Rd. Shopping strip (Big Box)
- Military, Prisons
- Queen's University
- Kingston downtown, Harbour, Gardiners
- Airport, Big Box developments-401 division; Gardiners
- Cat conservation area, nature trails
- Wolf islands, ferries, Unesco world heritage sire
- Universities, St. Lawrence college, Cat Center, Invista Centre.
- Downtown
- Queen's/Kingston General Hospital/ Hotel Dieu
- Les Moines Point
- Cat Centre/ Gardiners Road "power centre" Riolan
- LVEC/k-rock
- St. Lawrence
- Kingston Centre
- RMC/ Fort Henry/CFB
- Belle Island
- Lower Princess St.
- Queen's University
- City Park
- RMC, military base
- Airport
- No Frills
- KGH
- K-Rock Centre
- City Hall
- Kingston Centre, Rio-Can, Cat Centre
- Portsmouth Village
- Via station

3. (YEAR1): Low cost, high benefit, good visibility and easy to implement. List at least two actions that could be taken right away and that wouldn't cost a lot to make The City of Kingston more:

Cycle-friendly

- Encourage cyclists to use roads less heavily travelled by cars where alternatives exist.
- Remove parking along major routes and reuse as bicycle paths. Also wider sidewalks
- Reduce speed of automobiles so road is safer for bikes
- Bicycling skills clinics/ classes for elementary school children
- Major roads such as King St., Front Rd., Days Road are prime locations for a bike lane, with a median if possible (a painted line is not as effective but may be a good start: Union St. is an example, but is not ideal)
- Plastic dividers to establish cycle lane
- Sweep/maintain current cycle routes and paths
- Bicycle parking facilities
- Educate general public on benefits
- Regular events and updates
- Ordinary cyclist on Cycling Groups providing advice
- Pedestrian paths in suburban areas on underutilized paved surfaces
- Require pedestrian paths in new sub divisions.
- Sign close to cause way on city property indicating cyclist priority (better signage all over)
- Have days where streets close to traffic (i.e. Sundays).
- Close lower Princess St., one day for half a day
- painting
- waterfront paths; walking, cycling
- Bike facilities
- Close the streets for one-day (ex: Princess St.) cyclovia
- Separate bike lanes
- Inviting, bike shelters/ bike parking
- Fix it stations
- Signage (make cyclers feel welcome)
- improve bike share
- Look at streets where on-street parking can be sacrificed for bike lanes/wider sidewalks
- Encourage commercial destinations (grocery stores, fast food, other retail) to install better quality and quantity of bike racks, and make sure that city-owned facilities do the same (libraries, etc.)
- On streets where there is space, delineate clearly marked, raised bike lanes.
- City of Kingston meeting and 2004 mandate for more employees and bike to work.
- Eliminate parking on Princess St. on one side of Street.
- Signs as you go across the causeway that give right of way to cyclist.
- Car Free Sunday pilot project
- Increase bike/ parking
- Close Division and Princess to waterfront to cars for cyclists and pedestrians (Sunday).
- Also Ontario from Brock to Johnson
- Bicycle racks and shelters near Market square
- Visible bike racks everywhere
- Subsidized cost of helmets and bikes
- Close roads on weekends
- Car-free Sundays on Princess and John A Macdonald to the lake and around market square.
- Temporary barrier on existing bike lanes-e.g. Division St.
- Underground bicycle parking-secure, convenient downtown perhaps in parking garage-well-signed-also in Market square also at Box store.
- Get institutions to promote biking i.e. Queen's.
- Promote trails
- Bike parking-ensure city facilities-improve parking-lead by example.
- Change city policy for bike parking.
- Create a bicycle recycling program whereby discarded bikes are rehabilitated and made available to needy children

Appendix A Group Activity Sheets

Pedestrian-friendly

- Make downtown Princess St. pedestrian only-perhaps only once a week at first, but expanding as time passes.
- Expand sidewalk plowing to include all sidewalks
- Benches along sidewalks
- Widen pathways through subdivisions
- Continue lakeshore trail at least as far to Wolfe Island Ferry Dock as one continuous walkable path
- Have inexpensive parking just outside downtown core to motivate all to walk and leave car behind.
- What about a median with shrubs (Princess St. and all Division)
- Plow sidewalks!
- More pedestrian crossings especially at residence (Queen's)
- Bump outs
- Active school bus (children)
- Cross walks; signals-timing, delaying
- Traffic calming painting
- Enforce- landlords and landowners to shovel sidewalks
- Crosswalks (more of then) visible, textured
- Trees
- Make walk timing longer
- Better lighting
- Benches
- Japan-little Flags
- Better lighting
- Commitment to better sidewalk plowing/salting and more strictly enforce bylaw for residents to shovel sidewalks in front of property (ex. Of bad areas "fruit belt" and "boy's town")
- More gardens, maps, street furniture
- Better traffic signals for pedestrians
- Police on bikes
- Signage at street-level
- Crosswalks
- Street painting
- Crosswalks-crossing where pedestrians have the right of way
- No parking within one block of a school
- Crosswalks given priority
- Painted lines and stop signs where large driveways are entering
- Car-free Sundays could also include pedestrian
- More visible cross-walks
- Pedestrian right-of-way at intersection without stop light
- Enforcing pedestrian right-of-way
- Train cops-pedestrians first

A Great Place

- A priority to have institutions (e.g. Queen's) encourage bicycling rather than the opposite (now the case). One major approach to this would be enhancement of security for parked bicycles.
- City by-law to oblige residents to shovel sidewalk in front of the residence
- Enhance pedestrian and cycle friendliness.
- We have a Great Waterfront! Why don't we or our city planners improve it or protect it? Projects such as the Block D development for towers (as opposed to the artist centre and shops with the outdoor stage and nice waterfront park) were opposed by all 98% of Kingstonians but private developers won anyway. Not acceptable! Long-term vision is better.
- Festivals, events
- More pedestrian areas near water with easy access (Richardson Beach) needs improvement.
- More trees, landscaping
- Recycling bin
- Benches
- Bus shelters
- Public toilets
- Increase presence of street art (murals)-competition among local artists to draw a mural on a building
- Public space committee created.
- General advertisement of trails in Kingston-public map downtown tourist information maps-Kingston website
- Connect K&P trail with downtown.
- Return to single tickets/rides on the card
- More frequent/more routes of bus.
- Consistent and expanded application of transportation priority 1-pedestrian, 2-bicycle, 3- transit, 4-autos
- Continue to expand public activities in Market Square
- More green in public area/ cities in Bloom.
- Street art-art competitions
- Transit, cycling, pedestrian safety and awareness campaigns
- No parking or stopping within one block of schools.
- Active school bus
- More frequent and improved bus routes

4. (Years 2-5) higher cost, longer-term. List at least two actions that could be taken in the long term that would have the biggest impact to make The City of Kingston more:

Cycle-friendly

- More bike lanes: maybe include Gardiner's road, Princess St. beyond the down-town core, Division St., other major roads. I like the idea of cyclist facilities every 15 km or 10 km (Washrooms/change rooms even if it needs a loonie per use!), water fountains, rest station/bench, etc.
- Full-time planner/ engineer (1 in each) planning for pedestrians/ bikes
- Widen sidewalks
- Higher Density Development and infill emphasis
- Enforce density restrictions
- Connect destinations with bike lanes
- Networks, connectivity suburbs- downtown
- Kiss n' ride on east side of causeway; bike dedicated lane
- Permanent facilities
- Designated, separate bike lanes
- Dedicated bike path (ex: Victoria/ Ottawa)
- Wellington St. extension- pedestrian and cyclists first.
- Require new subdivisions to have bike lanes, fully connected waterfront trail from Confederation Park.
- Focus on putting bike lanes and better/wider sidewalks along Upper Princess (Division to Bath).
- Ensure that third Cataraqui River crossing has a good bike/pedestrian are the causeway one is too narrow.
- Separated bike lanes
- Bike lockers
- Better bike routes and connections
- water stations
- Bike festival-"tour de Kingston"
- Building with shower facilities for workers (workplace integration)
- Bike rental automated air pumps
- Separated bike lanes
- More bike racks
- Create separated bike path on Front Rd. to Invista/Le Moines point
- Separated bike lanes on all major routes
- More right of way for cyclists
- Tax incentives for cycling
- Education about being cycling friendly
- Well separated bicycle routes that lead from all areas to the downtown. Separated by colour, barrier, etc.
- Waterfront walkway with separate bicycle and pedestrian lanes and with improvement to cycle parking.
- Connect KP trail to Market square
- More education about cycling safety and rules.
- Bike lanes on causeway.

Appendix A Group Activity Sheets

Pedestrian-friendly

- Maybe we can close off some of our downtown streets entirely to cars, or at least on weekends (can use facilities mentioned above).
- Sidewalk on both sides of LaSalle cause way
- improve Kingston centre facility
- segregation on arterials to boulevard
- less on street parking
- bike storage, bike lockers, parking just across cause way
- Sidewalk at least one side of the street
- Bus shelters
- Rio-can a pathway connecting the two sides of the stores.
- Do something with the old police station
- Disband sidewalk ramps that cut
- Cut out D/T McDonalds drive through
- Fix crumbling sidewalks make them wider, more sheltered from traffic (concession from Princess to Division then Steven down to Montreal is an example of a really bad stretch for pedestrians-awful lighting, deteriorating sidewalks).
- Public washrooms
- Widened sidewalks especially on Princess St.
- More street furniture
- Separation between cycle lanes and other traffic
- Traffic calming
- Flexible boulevards/parking
- Traffic calming pedestrian crosswalk (as in front of Pam's flower garden)
- Social marketing/better signage of respect for pedestrians/cyclists
- Make lights longer at crosswalks
- Mixed use land (cornerstones every blocks, parks)
- Sidewalk on both sides if street-especially streets on bus routes, improved bus shelter
- Establish self-guided heritage walking trails
- Very clearly marked cross-walks
- Connect KP trail to Market square

A Great Place

- No more clear cutting for development. We fought hard for our tree by-law- we need to enforce it. Need to help the Northern section of Kingston to reduce poverty, drug use, prostitution and improve the 'walkability' and aesthetics of streets. This helps instill 'neighbourhood' pride and improved up keep especially if landlords are encouraged to rent clean and well-maintained properties. (i.e. safer and more pleasant environment leads to more 'walking'!)
- Like in Munich, the downtown shopping area and Princess St. could be made pedestrian only-add cafes, plant trees etc great for locals and tourists.
- Improving waterfront-wider, continuous, more space for activities
- Use heritage to our advantage in tourism sector-bike paths throughout, create opportunity for heritage cycle tours.
- Change driver habits-better place to walk a bike
- Make it possible to walk/bike to all destinations indicated on map
- Better transit
- Better pedestrian routes will encourage more transit use
- More trees-maintain neighbourhood schools
- Sports and related infrastructure more integrated into neighbourhood.
- Encourage "complete streets"
- Market square type place in the west end
- Indoor market square for winter
- More centralized parking (less spread out)
- Street trees planted and maintained
- Increase public transit
- Remove on street parking on Princess, Johnson, Brock, Ontario
- Keep Lake Ontario Park for recreation
- Linkages between neighbourhoods/parks/places
- Education about alternate routes
- By law to limit distance between pedestrian crosswalks
- Improve waterfront trail and extend 1-to grass creek park, 2-to Le Moin Point and Collins Bay, 3-to Kingston Hills a public market that thrives in the winter as well as spring, summer and fall.

5. List any barriers or obstacles that must be overcome in order to implement your suggested actions within the following areas (Please be as specific as possible):

a. Urban

- Main one: Our politicians need to consider public opinion especially issues supported by a majority (e.g. Block D).
- We may need to promote a cultural change and provide the 'infrastructure' first to encourage the growth and future funding of these projects.
- Need to convert parking spaces to pedestrian areas
- Lack of physical/poor use of space
- Princess street is primarily for cars
- Remove parking for added space
- Degrading street quality
- Adverse political climate-lack of fusion
- Densification/redevelopment
- Desire to also accommodate vehicles (ex. Downtown merchants will not like sacrificing parking for bike lanes, etc)
- Political will
- Public education
- Fear of change
- Weather
- Council must be on board
- Time
- Money
- Space

b. Suburban

- Bike trails will be very important to be safe, maybe even with a few lights and emergency phones/ facilities.
- No facilities in some areas/no connections to downtown
- Better development of neighbourhoods
- major arteries a challenge
- Major arteries need to incorporate cycling access
- Question big box vs. neighbourhood commercial
- Increased public transit/frequency of stops
- Commercial interests (ex. Why does Home Depot care about bike parking?)
- Political will
- Car culture
- transit integration
- Fear of change
- Weather
- Layout
- Distance to services

c. Rural

- For rural, a bit harder but as above if distances are large, people often love these but they need to be very safe as cars go very fast here.
- 401 is trick, no access to lighting and safety
- High speeds
- Links to pedestrian/bike areas
- Lack of retail opportunities.
- Political will
- Low user density of transit
- Speeding (traffic)
- Weather
- Distance
- Lack of opportunities

6. What local partnerships or local talent can you identify that could help implement some of your proposed improvements? Please be as specific as possible.

- We have so many artists in Kingston! (poets, artists, musicians, glass blowers, and blacksmiths!) What about a venue for them to attract outdoor and indoor crowds in a pedestrian only street and venue/ park somewhere downtown? Environmental groups (society for Conservation Biology, etc) and lots of groups working on health, promotion of physical activity, etc are present here and can team up on these initiatives!
- Queen's University and City of Kingston
- St. Lawrence college RMC
- Sports Associations
- Not for profits
- Grassroots
- Conservationists
- Public participation
- Kingston gets Active.
- Cycle Kingston
- KCAT
- Queen's School of Urban and Regional Planning
- Downtown BIA
- RMC
- St. Lawrence college
- KEDCO
- Developers
- OPIRG
- Yellow bikes
- Queen's Surp
- City planners
- Queen's
- St. Lawrence
- School boards
- KCAT
- business/chamber
- KEDCO
- Tourism Kingston
- MP/MPP
- Public Health
- Social Justice groups

Appendix B Environmental and Health Impact Calculations

Canadian GHG Emissions 2006		
	Absolute (in Megatons)	% Share
Total	721000	100.00
Transport	190000	26.35
Light Duty Gas Vehicles (LDGV)	38900	5.40
Light Duty Gas Trucks (LDGT)	44800	6.21
Passenger Total	83700	11.61

Source: Environment Canada (2006) Canada's 2006 Greenhouse Gas Inventory - A Summary of Trends.
Accessed online 11/16/08 www.ec.gc.ca/pdb/ghg/inventory_report/2006_report/td

Canada GHG Emission Baselines	
GHG Factors (carbon equivalent kg/L)	
LDGV	2.479
LDGT	2.556
Fuel Efficiency (L/100km)	
LDGV	9.8
LDGT	12.6

Source: Transport Canada. Urban Transportation Emission Calculator.
Accessed online 11/16/08 www.tc.gc.ca/programs/environment/UTEC/menu-eng.htm

GHG Emission Factors for Kingston	
Assumptions:	
Fleet Split	
LDPV	60%
LDPT	40%
Annual Workdays (50 weeks x 5 days)	250
Annual Worktrips (250 x There N Back)	500
Therefore:	
Fleet Fuel Efficiency	
L/100km	10.92
L/km	0.1092
Fleet Emmissions	
Carbon equivalent (CO2e)	
kg/L	2.5098
Kingston GHG Emission Factor	
Carbon equivalent (CO2e)	
kg/km	**0.274**

Appendix B

Environmental and Health Impact Calculations

Kingston Background Information		
Population	117,217	
Labour Force Participants	61,235	
Journey to Work by Mode		
	Number	%
Total Commuting Population	53,135	100.00
1% of Commuting Population	531.35	1.00
Car, truck van as driver	36,720	69.11
Car, truck, van as passenger	5125	9.65
Public transit	2685	5.05
Walked or biked	7715	14.52
Other	885	1.67
Kingston Trip Statistics		
Median Trip Length by Mode (km)		
C, t, v, as driver	5.2	
C, t, v, as passenger	3.8	

Source:Statistics Canada (2006) 2006 Census: Community Profile for Kingston, Ontario (Town) Accessed online 1/23/2009 http://www12.statcan.ca/census-recensement/2006/dp-pd/prof/92-591/details/Page.cfm?Lang=E&Geo1=CSD&Code1=3518005&Geo2=PR&Code2=35&Data=Count&SearchText=Kingston&SearchType=Begins&SearchPR=01&B1=All&Custom=

Source:Transportation Tomorrow Survey: Summary Date for entire Survey Area Accessed online 11/16/08 http://www.dmg.utoronto.ca/transportationtomorrowsurvey/2001/2001surveysummary.html

Potential GHG Emissions Reductions in Kingston (CO2e)		
Annually, for each driver that switches to active modes kg/km x km/trip x Annual worktrips	Kg	712.58
Annually, for each 1% of trips shifted from driving to active modes kg/km x km/trip x worktrips x 1% of commuting population	Kg	378630.67
	Tonnes	378.63
Annually, if each driver biked or walked to work one week a year kg/km x km/trip x 10 trips x total drivers	Kg	523320.53
	Tonnes	523.32

Potential Weight Loss in Kingston		
Assumptions:		
Calories per pound of body fat	3500	
Average cycling speed	km/h	17
	km/minute	0.28
Calories burned by cycling	per hour	500
	per minute	8.33
Therefore:		
Average duration of work trip (minutes)	18	
Calories burned during average worktrip	153	
Pounds burned per trip	0.044	
Annually, each driver that switches to cycling		
Lbs. burned per trip x Annual worktrips		21.85
Annually, for each 1% of population that switches from driving to biking		
Annual worktrips x 1% of commuters x Lbs./trip		11609.33
Annually, if each driver biked one week per year		
Total drivers x 10 trips x Lbs./trip		16045.71