

Summary

In Montréal, widespread popular interest in cycling and the development cycling networks and infrastructure are a relatively recent phenomenon compared to many European cities where cycling is a long-standing cultural tradition and has played an important part in shaping the urban landscape. Today, the City of Montréal's decision to invest in sustainable mobility goes a long way in explaining cycling's ever-increasing popularity throughout the City.

Between 1978 and 1985, the City of Montréal built its first bicycle facilities, a network of bikeways covering close to 100 kilometres. The completion of this project was marked by the City's cycling community in 1985 by way of the inaugural *Tour de l'Île de Montréal* in 1985, a major public participation cycling event.

Twenty-five years later and with the direction provided by the City of Montréal Transportation Plan, the Island of Montréal cycling network now encompasses over 500 kilometres of bikeways spread out across the City, and at the first signs of Spring, the City's 552,000 cycling enthusiasts flock to the bikeways en masse.

The year 2009 was a major turning point for active transportation in the City of Montréal. Over a few short months, 50 kilometres of new bikeways were added to the network, including the much-anticipated Chemin de la Côte-Ste-Catherine path, which had generated a lot of interest and media attention because of its immense potential for use. In addition, the newly implemented BIXI bikesharing program, a veritable revolution in sustainable mobility, proved to be an instant success. Large numbers of cycling enthusiasts rented a bike from the fleet of 5,000 units from one of 400 stations located throughout the City. Already in the first year of operation, the BIXI Program had 10,000 subscribers and 100,000 daily users. This resounding success has caught the eye of municipal authorities across Europe, North America and beyond, as the BIXI Program is being used as a development model for similar active transportation initiatives in cities such as Boston, Minneapolis, London (Great-Britain) and Melbourne (Australia).

The development of the 50 kilometres of new bikeways and the implementation of the BIXI Program required an investment of close to 30 million dollars in 2009. For the City of Montréal, this expenditure will without a doubt prove extremely profitable, given the many benefits it will generate, including improved quality of life for its citizens, a more equitable sharing of the road network among all types of users and the redefinition of public space to enhance sustainable mobility.

Sustainable mobility: creating the solution to a growing problem

Daily traffic jams on arterial roadways, public transit functioning at or near capacity and yet insufficient, worsening air quality, cars everywhere, even in residential neighbourhood. These are all signs of a transportation system headed in the wrong direction contributing to climate change and the rapid deterioration of living conditions on a planetary scale. This state of affairs runs completely contrary to the City of Montréal's goal of providing a beautiful, safe and liveable urban environment.

In adopting its Transportation Master Plan in 2008, the City of Montréal affirmed its commitment to transform, improve, rethink, redeploy and reorganise its transportation system. To do so, a series of measures and courses of action were laid out with the stated objective of meeting citizens' transportation needs with solutions based on sustainable development, environmental protection and a better quality of life.

One of these measures deals specifically with developing alternative modes of transportation other than the automobile:

“Further develop the cycling-based infrastructure and implement new measures to increase cycling as a mode of transportation throughout the City” [translation]

Cycling is gaining in popularity citywide, notably as a means of transportation, as more and more people are discovering its many advantages. The bicycle is a fast and efficient vehicle, it's not cumbersome, it's non-polluting and uses very little space. Plus, it's a healthy alternative.

Implementing measures to increase the use of cycling as a means of transportation has many advantages, including a healthier population and improved overall quality of life in the urban environment. When travelling short or medium-length distances, the bicycle is often a better choice than the automobile or even public transit.

2009 – a banner year for active transportation

In keeping with the direction provided by its Transportation Master Plan, the City of Montréal has made active transportation a municipal priority. In 2009, large sums were invested to improve and expand the City's bikeway network and to implement the BIXI self-serve bikesharing system, which is accessible to one and all. Together, the bikeway network and BIXI form an integrated transportation system based on active transportation and sustainable mobility.

The bikeway network: another way to go

The days when cyclists used their bicycles almost exclusively for recreation are long since past. Today, decisions on the type of cycling facilities to build and choosing the roadways on which to build them are increasingly based on assisting cyclists in their day to day activities, whether it be commuting from home to work or school and back again or providing access to institutional, commercial and industrial centres. Bikeway travel needs to be fast, safe and efficient.

With this new reality in mind, the City of Montréal went about adding 50 kilometres of new bikeways to its' citywide network in 2009, at a cost of over 10 million dollars. Major bikeway projects were implemented on the following streets:

- Rachel;
- Fielding;
- Edouard-Montpetit / Lacombe;
- Vincent d'Indy;
- Chemin de la Côte-Ste-Catherine;
- University.

The Côte-Ste-Catherine Bikeway – providing access to the Université de Montréal campus

As the centrepiece of the 2009 bikeway network expansion, construction of the Côte-Ste-Catherine Bikeway and the Vincent d'Indy and Édouard-Montpetit bike lanes generated a great deal of interest and significantly increased the bikeway network's visibility.

Every detail was carefully thought out, and nothing was left to chance. The amount of space available to automobiles was reduced, making it possible to create a roadway that truly contributes to sustainable mobility. In addition, all intersections were redeveloped using new, pedestrian-focused standards. Furthermore, all these changes were made with a view to protect the special character of the existing roadway, one of Montréal's oldest thoroughfares, and to assure adjacent landowners that this new configuration would not become a source of conflict for them or for other local residents.

As the project was taking shape, several specific improvements and new features were developed in cooperation with Outremont precinct authorities in order to create a safe and vibrant cycling thoroughfare. They include:

- Addition of a concrete border to provide a maximum of comfort and safety to cyclists;
- Complete resurfacing of the bikeway;
- Special improvements at bus stops to provide safe and easy access to mobility impaired persons;
- Redesign of intersections using new, pedestrian-focused standards;
- Reconfiguration of intersections to slow down turning vehicles and reduce pedestrian and cyclist crossing distances;
- Removal of 140 on-street parking spaces on the bikeway side to provide better visibility to cyclists;
- Addition of three new speed limit signs;
- Inserting the bikeway into the existing roadway right-of-way resulted in a narrowing of vehicle lanes, which is an effective traffic speed-limiting technique;
- Addition of 60 new flower planters, which improved the appearance of the bikeway and enhances the urban environment.

Taking into account other bikeway improvements in the surrounding area, including those completed on Edouard-Montpetit Boulevard, Lacombe Avenue and Vincent-d'Indy Avenue, Montréal citizens now have excellent access to a major institutional node, which includes Université de Montréal, Sainte-Justine Hospital, Collège Jean-de-Brébeuf and HEC Montréal, among others. In order to maximize active transportation opportunities in this area, ten or so BIXI stations were installed along Chemin de la Côte-Ste-Catherine or nearby.

BIXI – Bicycles for everyone

The implementation of the BIXI self-serve bikesharing program in 2009 is a reflection of Montréal's bikeway network's ever-increasing popularity and will only serve to reinforce Montrealers' strong commitment to active transportation. Together, the BIXI program and the bikeway network form an integrated system that promotes a safe and enjoyable cycling experience for all.

It took less than two years upon being retained by the City of Montréal, *Stationnement de Montréal*, a limited partnership, was able to develop a new urban bike specially designed for use by numerous users, beginner to expert, for short and long trips through the City, day in, day out.

Imagination begets innovation

Michel Dallaire, the renowned Montréal-based industrial designer, has played an important role in BIXI's burgeoning success. His design team created the BIXI bike from top to bottom, even inventing a state-of-the-art electro-magnetic bike locking system. Numerous other companies, including Devinci Cycles, 8D Technologies, Althus Géocom, Artmetco, B3CG, CIF Métal, Les Industries

Fournier, Rio Tinto Alcan, Fonderie Lemoltech, Kamek and Groupe Poitras, all of them Quebec-based, were involved at various steps in the development process.

BIXI's originality stems from the system's modular aspect and extreme flexibility. Drawing its energy from solar panels, the BIXI station's wireless communication system is energy self-sufficient, and having no special infrastructure requirements, BIXI stations can be moved quickly and easily. BIXI bike frames and most components are made of aluminium, a "local" material, and are light, sturdy and recyclable. In order to reduce the risk of mechanical breakdowns, cables and wires are located inside the frame and front fork tubing.

In total, some 5,000 bicycles located at 400 BIXI stations were made available in 2009. Almost immediately, large numbers of Montrealers purchased their BIXI key, gaining access to this immense pool of bikes 24 hours a day, 7 days a week. Without a doubt, this initiative has succeeded in reconciling citizens' transportation needs and environmental concerns by providing a sustainable mobility solution.

The statistics for the first year of operations speak for themselves:

- Over 10,000 members;
- Over 100,000 single day users;
- Over 1.1 million trips made;
- Over 11 million kilometres travelled;
- Approximately 80,000 litres of fuel saved.

BIXI-Auto-Bus: sustainable transportation's three stars

Early on, the Société de transport de Montréal (Montréal's transit authority - STM) saw the advantages of partnering with the Société de vélo en libre-service (BIXI), especially for those who have made a conscious decision to seek alternative modes of transportation, as opposed to owning a car.

For example, persons who subscribe to all three services obtain a credit on their Communauto account equivalent to 50% of the cost of their BIXI subscription fees. This is in addition to the DUO auto + bus combined subscription program jointly developed and launched by the STM and Communauto in January 2008, which allows persons purchasing 12 consecutive monthly STM passes to have access to the Communauto vehicle pool for only \$8 per month. In essence, DUO auto + bus subscribers do not have to pay the \$500 refundable membership fee normally required by Communauto as well as the \$35 annual fee for its most popular car-sharing package.

For Montrealers, these great deals just make choosing active transportation and public transit an even more appealing and viable solution!

BIXI's social dimension

Daily maintenance and repair services for BIXI's fleet of 5,000 bicycles are provided by CycloChrome, a social economy enterprise developed for this specific purpose in cooperation with the Montréal Association of Community Economic Corporations (CDEC) and Père-Marquette High School.

This initiative has a stated social objective of giving 15 to 18 year-olds at-risk of dropping out of school valuable work experience as they prepare to enter the adult workforce, while providing incentives to stay in school and complete their high-school education.

Since December 2008, the job of bike repair attendant has been recognised as a semi-specialised trade by the Quebec Ministry of Education, Recreation and Sport (MELS). As the 2009 cycling season drew to an end, all the young bike repair attendants employed by CycloChrome to maintain and repair the BIXI fleet chose to go stay in school. For all involved, this development was a pleasant surprise.

BIXI achieves broad recognition

After only one year of operation, BIXI's innovative design, reliable and original operating system and adaptability has drawn attention at the national and international level. It has already received several important awards (listed below) recognizing its uniqueness, flexibility and potential for implementation in other cities.

- BIXI was designated as one of the best new inventions of 2008 by TIME Magazine;
- GOLD Award for the best product in 2009 in the Energy & Sustainability category of the prestigious Edison Best New Products Awards;
- International design award: BRONZE Award in the Transportation category of the International Design Excellence Awards (IDEA), for the BIXI bike design;
- GOLD Award in the Leadership category of the Institute of Public Administration of Canada Awards, which recognises instances where vision and leadership played a crucial role in the exceptional success achieved by agencies having undertaken major organisational transformations.

BIXI's success is now the envy of many major European and American cities. In fact, the Société de vélo en libre-service, the agency that manages the BIXI program on behalf of the City of Montréal, has already signed business agreements with city authorities in Boston, London (Great-Britain), Minneapolis

and Melbourne to develop and implement self-serve bikesharing systems based on Montréal's BIXI model.

Increased demand pressure on the cycling infrastructure

In combination with the launching of the BIXI self-service bikesharing program, the addition of new cycling facilities has resulted in a significant increase in use of Montréal's bikeway network.

For example, in July 2009, the average daily number of cyclists using the Berri and De Maisonneuve bike paths, the two main bikeways serving downtown Montréal, was 4,250 and 4,100 cyclists, respectively. Just outside the Core Area, the average daily number of cyclists using the De Brébeuf bikeway crossing the Plateau Mont-Royal neighbourhood was 5,100.

Colossal investments

Few cities comparable in size to Montréal can claim to have invested as much money and energy over a one-year period in support of active transportation. In Toronto, for instance, only 24 kilometres of new bikeways were added in the last year.

In 2009, 30 million dollars were spent implementing the BIXI self-serve bikesharing system and adding 50 kilometres of new bikeways. For the City of Montréal, this was a major investment with obvious and immediate benefits for cyclists, drivers and the general population.