Micro-Mobility Case Study #3

Battery-Powered Micro-Mobility in Québec

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The government of Québec, following examples set by other international jurisdictions, has committed to building out a robust EV charging network across the province and increasing the number of light electric vehicles on the road to two million units by 2030. They have pledged that by that time 35% of parking spaces in multiple dwelling buildings will be adapted to allow the installation of 6,700 public fast-charging stations and 110,000 Level 2 public charging stations[1].

A growing number of Québec health care organisations are lending their support to the province's forward-looking stance on EVs by introducing their own transportation electrification pilot projects. Read on as we introduce you to a successful employee EV engagement initiative at CISSS de l'Outaouais and share with you how the Institut national de psychiatrie légale Philippe-Pinel improved the health of their staff while reducing their environmental impact thanks to battery-power micro-mobility practices.

Québec health care organisation offers employees free e-bikes test rides

Following the completion of a travel management plan[2] by MOBI-O, Gatineau's travel management centre, the Centre intégré de santé et de services sociaux de l'Outaouais (CISSS de l'Outaouais)[3] was selected to participate in the Équiterre's VéloVolt project during the summer of 2022. From July 11 to November 28, 2022, interested employees were able to test one of six electric bicycles (e-bikes) made available free of charge for a period ranging from a few hours to several weeks.

The project, led by Équiterre[4] was designed to enable employees of selected companies, such as CISSS de l'Outaouais, to test e-bikes with an eye to encouraging them to replace some of their auto-mobile journeys to work with a zero-emission and active mode of transportation.

Of the 20,000 employees at CISSS de l'Outaouais, over 360 employees signed up on the waiting list. With no restriction on the time of use (borrowing could be from a few hours to several weeks), 49 employees were able to actually test an e-bike during 2022.

The e-bikes deployed in this project were three-season bikes that could not be used in winter because they were deemed not strong enough to support the extensive damages associated with winter-use, such as batteries losing their capacity to hold a charge, electrical components deteriorating due to humidity and calcium exposure, or repeated mechanical breakdowns due to road conditions. The four-season bikes are more durable, but heavier and more expensive.

Maintenance costs, approximately $150 for the season, were covered by Équiterre. CISSS de l'Outaouais just had to identify a person to handle the logistics of the bike loans.

A success story

The project was a great success with employees. It had the advantage of enabling them to familiarize themselves with e-bikes and realize that they could replace some of their automobile journeys in spring, summer and autumn with active travel.

The trial enabled them to dispel a number of preconceived ideas, resulting in a better understanding of e-bike potential:

- By using e-bikes with pedal assist, their commute was less strenuous and they wouldn't have to change or access a shower at the office, like they would if commuting with a regular bike.
- By using e-bikes they could travel longer distance in a time comparable to that of a car.

However, a few issues were identified:

- The bike collection point: was located in downtown Hull, QC in the offices of MOBI-O, the Outaouais travel management centre. Many employees mentioned that they would have liked it to have been closer to their workplace.

Employees of CISSS de l'Outaouais testing the e-bikes. Source: CISSS de l'Outaouais

> ***"I've been trying out an EV for 1 week! It's F-A-N-T-A-S-T-I-C!!!!!"***
>
> Emilie Castonguay,
> Physiotherapist in Home Care.

- The bike collection point was also only open during office hours from Monday to Friday, when for practical reasons many employees would have liked to borrow them in the evening or on weekends.
- The cost of acquiring an e-bike is significant for many employees. Some users would have liked to have been able to purchase one of the six bikes at the end of the project. However, for an unknown reason, Équiterre's rules stated that bikes could only be sold to CISSS de l'Outaouais and not directly to employees. Various administrative aspects prevented CISSS de l'Outaouais from buying the bikes and then selling them to interested employees.

What's next?

In the wake of this success, CISSS de l'Outaouais hopes to offer its employees a sustainable e-bike loan system by acquiring eight e-bikes in the fall of 2023. CISSS plans to purchase three four-season bikes and five three-season bikes from Équiterre, thanks to a grant from the Ministère des transports du Québec.

To simplify loans and extend the periods of accessibility to evenings and weekends, CISSS de l'Outaouais will establish an agreement with a bicycle mechanic workshop, open on evenings and weekends. This will also ensure that the bikes are always in good condition.

Équiterre has agreed to let CISSS de l'Outaouais continue to use the VéloVolt name.

Thank you to Eric Ndandji, executive counsellor sustainability and performance at CISSS de l'Outaouais for his participation and collaboration on this project.

Simple user survey results in tremendous support for e-bike users in Montréal

In 2017, the Institut national de psychiatrie légale Philippe-Pinel (the Institute), a psychiatric hospital located in Montréal, Québec, adopted a structured approach to environmental health and sustainable development, in order to reduce their environmental impact and improve the health of their staff and patients.

Following this new approach, in summer 2019, an external company specializing in sustainable mobility (MOVIA), produced a portrait of employee commuting at the Institute that would help their sustainable mobility sub-committee orient its actions.

The portrait of employee commuting:

- The potential for modal transfer from solo car to bicycle (i.e., the number of employees who lived within 10 km of the Institute),
- The various issues limiting the use of bicycles as a commuting mode (e.g., the industrial environment (heavy industry) and the numerous truck trips in the Institute's environment; the absence of bicycle paths to and from the Institute; the Institute's location at the eastern end of the island of Montreal), and
- Improvements that could be made to make life easier for cyclists.

In order to identify the solutions best suited to the needs of the Institute's current cyclists, a survey was carried out, enabling a sustainable mobility sub-committee to focus its energy on actions with real potential. In particular, the survey found that some bike users wanted to have access to protected parking space for their more expensive bikes.

The survey also revealed that several dozen employees come to work by bike between May and October. While these employees have access to a number of bike racks (the Institute has bike parking spaces for at least 5% of its employees) protected from the elements, as well as access to showers and changing rooms, the survey found that what was lacking was secure parking that could reduce incidents of theft.

Many micro-mobility devices, particularly electric bicycles (e-bikes), are very expensive and employees did not feel they could leave their devices in the current parking lots unprotected. They were obliged to store them in their offices or use cheaper bikes to come to work, which lengthened their commute times.

To address the issue and support micro-mobility users, in summer 2023, the Institute set up a fenced-in area around some of the existing bike racks. An electronic locking system using employee cards will be installed in Autumn 2023 to ensure that only registered employees have access to the area for which there will be no user fees.

Theft-protected bike parking lot, adjacent to existing bike parking area in front of the main entrance of the Institute. Electric charging access will soon be available
Source : Institut national de psychiatrie légale Philippe-Pinel

The soon-to-be installed made-in-Canada Biciborne repair station is equipped with an air pump and multiple tools to enhance the classic bike and e-bike user experience and add an element of self-sufficiency.
Source: https://biciborne.com/en/

One advantage of this area is that, if more bike racks are needed, there is space to increase the parking capacity by 10 to 15 bikes. In addition, the Institute plans to set up a repair station as well as install electric recharging stations in order to meet the demand from e-bike users.

E-bike users at the Institute are very pleased with management's response to the user survey's findings which has resulted in enhanced security for the many classic bikes and e-bikes on campus and increased peace of mind on the part of users.

A solid first step in developing your hospital's e-mobility offering is to survey users and develop policies based upon current and future need.

Thank you to Émilie Coderre, Vice-president of environmental health and sustainability committee of Institut national de psychiatrie légale Philippe-Pinel for his participation and collaboration on this project.

References

[1] https://www.quebec.ca/en/government/policies-orientations/quebec-electric-vehicle-charging-strategy#:~:text=Targets%20for%202030&text=By%202030%2C%2035%25%20of%20parking,Level%202%20public%20charging%20stations
[2] A travel management plan allows an employer to establish effective actions to guide its employees towards sustainable transportation choices. This plan aims to carry out a complete diagnosis of accessibility to job sites and to propose alternative solutions to solo driving for travel between home and work.
[3] CISSS de l'Outaouais is regrouping all public health care organizations (hospitals, long-term care facilities, clinics, rehabilitation centres, youth centres) of the Outaouais region, including Gatineau.
[4] Equiterre is one of the major Québec environmental organisations. It was founded 30 years ago by prominent environmentalists in the province of Québec, such as the Honourable Steven Guilbeault, the actual Minister of Environment and Climate Change Canada

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