Bike Share in Ottawa-Gatineau:

A Missing Piece of the Local Transportation Puzzle



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Acknowledgements

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EXECUTIVE SUMMARY

With 250 bike share systems operating in a wide variety of North American cities and communities, there's overwhelming evidence that they are an essential piece of a local transportation puzzle. For Ottawa-Gatineau today, bike share is a missing piece of that puzzle.

Successful bike share systems deliver multiple returns to the communities that invest in them. From easier, more affordable mobility for citizens who need it most, to healthier modes of travel. From new or increased ridership for local transit systems, to contributing to the local economy.

And of course, bike share delivers direct and indirect reductions in the greenhouse gas emissions that cause climate change. Bike share is part of a menu of neighbourhood intensification efforts that could contribute to reduced reliance on owning a (or a second) personal vehicle.

Ottawa-Gatineau has had mixed experience with bike share to date, but each past effort has produced valuable lessons learned about what a local system would need to succeed. Those insights match up with a growing body of research, in Canada and beyond, that show what it takes for bike share systems to sustain themselves financially, deliver benefits to the communities they serve, and survive over the longer haul. In addition, the region has seen:

- hundreds of kilometres of new cycling infrastructure added since 2013;
- major expansions of Ottawa's rapid transit network and Gatineau's Rapibus bus rapid transit system;
- climate and transportation plans that call for sustainable transportation modes to account for as much as 50% of individual trips by 2046, along with new Official Plan targets to densify land use.

Across a wide variety of studies and pilot projects, the key ingredients of a successful bike share start-up include the number and placement of bikes, connections to transit, proximity to neighbourhoods and services, having enough bikes available to meet demand, and the durability of the bikes themselves.



This report was commissioned by EnviroCentre and the Ottawa Climate Action Fund with the goal of sharing local opinions on a renewed bike share system and to share current research and best practices from other successful systems. Interviews and conversations were had with various sectors and interest groups to understand how they see a future bike share system fitting into the transportation landscape in the region.

Across Ottawa-Gatineau we heard that people are excited about bike share and the role it could play in our regional transportation system. Some of what we heard includes that bike share (including regular bikes and electric assist bikes) would make life easier and more affordable, especially for households and neighbourhoods on the front lines of the affordability crisis.

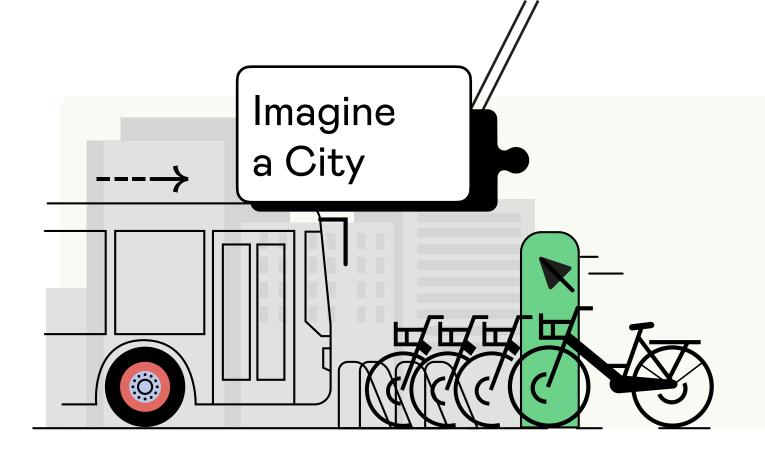
People we spoke to envision that bike share would contribute to an affordable, equitable, 24/7 transportation system that connects easily to existing transit and car sharing services, giving a diversity of neighbourhoods better access to everyday services. They saw a bike share system as an essential part of the winning formula to deliver on Ottawa-Gatineau's commitments to affordable housing and increased density.

We heard that a local bike share system should be considered a public service and an extension of transit, therefore seen as an investment and public good.

The objective of this report is to present an updated understanding of the key considerations, success factors, and rationale for a renewed local bike share system in Ottawa-Gatineau and to understand the key elements to be considered and further explored. The immediate next step is a detailed feasibility study, so this isn't the end - we're just getting going.







Where you can get where you need to go, and get there on time, using a wider mix of transportation services.

Where you have a fast, affordable option to connect with major transit lines in Ottawa and Gatineau.

Where you can enjoy a faster trip to work or school that includes a safe, energizing bike ride for the first or last kilometres between home and transit, or from transit to your destination.

Where people living on low incomes get better access to more economic opportunities thanks to a more affordable daily commute.

Where residents and visitors to the region no longer need a car to reach regional attractions like Lansdowne Park or enjoy the Gatineau Hills, Hog's Back Falls, or all the other natural beauty along the National **Capital Commission's Capital Pathway** network.

Where we have reduced transportation related emissions and have more options to include active transportation into our daily routines.

Imagine that you're looking back and wondering how the safe, affordable, reliable, multi-modal transportation system came to be. If you asked around, you'd find that...

It started with the buzz of excitement that started to build when stakeholders were engaged and the conversation about bike share began to change in the region.

They looked at how to set up a bike share authority or build it into an existing local agency, to make sure the service survived over the long haul.

They calculated the public investment that would be needed to get a bike share system off the ground and maintained so that it was an affordable option for all.

They quantified what the public would get back in return – the health, social, environmental and economic benefits.

They reached out and listened closely to each other, to learn what it would take for people to get excited about bike share and make it a part of their daily routine.

They thought through how to monitor system performance in the areas that mattered most for potential users: saving time and money on a reliable commute, making our roads safer, getting more daily exercise, improving air quality, making more bike share stations available to more people across the region, and cutting down on greenhouse gas emissions by driving less.

They planned it carefully.

They built the system that people in Ottawa and Gatineau needed. It worked.

It might sound too good to be true. But it's already happening in dozens of other cities, across North America and around the world. It can happen in Ottawa-Gatineau if we start now to bring bike share into the fold of a coordinated, integrated public transportation network.



1. Ottawa-Gatineau's history with bike share

In 2009, Montreal launched North America's first bike share offering - Bixi.

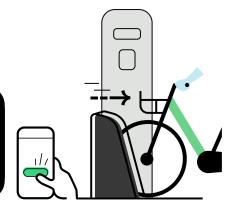
That same year, the National Capital Commission (NCC), in partnership with the City of Ottawa and the City of Gatineau, launched Capital Bixi bike share as a pilot. In 2011, they officially launched Capital Bixi as a service reaching a peak of 250 bikes and 25 stations in downtown Ottawa and a few in Gatineau. In 2014, the NCC sold Capital Bixi to Florida-based CycleHop, which ran VeloGO, an app-based rental service with up to 300 bikes. This service ran until 2018. The first bike share systems in the region were small, centered in the downtown core, and meant primarily for tourists.

In 2011, the Causeway Work Centre set up RightBike, and offered a community bike share system as a social enterprise with 16

hub locations whose core mission was to create meaningful jobs for people facing barriers to employment. RightBike eventually moved out of bike share while keeping its focus on bike repairs and local job opportunities. Vélo Vanier continues to operate a free recycled bike lending program for Vanier residents during the summer months.

Each of these start-ups produced valuable lessons learned about the financial models. service areas, and fleet sizes that bike share systems need to succeed. Those insights match up with a growing body of research, in Canada and beyond, that show what it takes for bike share systems to deliver benefits to the communities they serve and survive over the longer haul.

Experience elsewhere also shows how a bike share network in Ottawa-Gatineau could develop and succeed. Hamilton's bike share system launched in 2015 with 750 bikes and 75 stations. ÀVélo in Quebec City launched in 2021 with 780 e-bikes and 74 stations and in 2023 saw over 650,000 trips. In 2024, the system will expand to 1,300 bikes and over 100 stations.



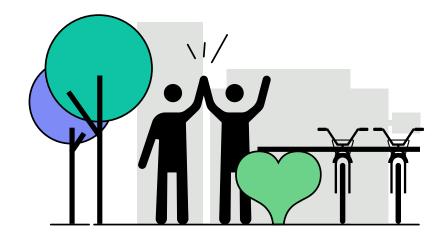
Across a wide variety of studies and pilot projects, the key ingredients of a successful bike share start-up include the number and placement of bikes, connections to transit, proximity to neighbourhoods and services, having enough bikes available to meet demand, and the durability of the bikes themselves. For each of these factors, the specifics and details are extremely important. While this report lays out the potential of bike share for Ottawa-Gatineau, the success of an eventual program will depend on a more detailed feasibility study, including modeling to discover the right density and system placement to meet the community's needs.

"A low-carbon city needs all the elements of a reliable transportation system, so that everyone knows they can get where they need to go, efficiently and affordably. In Ottawa-Gatineau, bike share is a missing piece of the transportation puzzle. That makes the detailed design work on a local bike share network one of the most important next steps we can take to reduce our climate pollution and build a safe, healthy, prosperous future for all."

Sharon Coward,
 Executive Director, EnviroCentre



2. The Benefits of Bike Share



Cities with successful bike share programs find that everyone stands to benefit. Governments, businesses, neighbourhoods, and households can get many of the things they need and want, faster and better, when cycling becomes an easier, more convenient option for getting around town.

How Communities Can Benefit

With more than 200 bike share systems in operation across a wide mix of North American communities, no two programs are exactly alike, so no two communities have had exactly the same experience. But by learning from what others have done, Ottawa-Gatineau can design and deliver a system that maximizes benefits for all.

Here are some of the key ways that communities can gain:

• Living Better and Healthier Lives: The best reason to consider bike share is that it makes everyday life easier and better. It can shorten the daily commute to and from work or school, gives users more freedom of movement, and even makes it easier to travel short distances between errands. People who sign up for bike shares get more exercise, which helps them live healthier lives. Electric assist bikes help people of different ages and abilities bike

farther, and faster, without worrying about hills or distance.

• A Thriving Local Economy: The convenience and popularity of a successful bike share network can deliver a boost to the local economy, including:

Workers, including people who were previously left out of the workforce because of a lack of affordable transportation options, get easier access to jobs.

Businesses get easier access to employees because they have diverse and affordable mobility options, as well as better walk-in traffic from customers who can drop in between destinations, without worrying about where to park their cars.

Transit revenues rise: in 2022, according to the North American Bikeshare and Scootershare Association (NABSA), 64% of riders reported that they used shared micromobility to connect to transit, and a 2015 study in Washington, DC calculated that a 10% increase in bike share trips would directly contribute to a 2.8% increase in transit ridership.

Attracts tourists and provides an affordable and low-carbon mobility option to move around our city and visit key tourist destinations.

A shift from heavier cars and trucks toward lighter bikes also means less wear and tear on roads, fewer potholes, and a bit of a break on roadway maintenance costs.

- Contributes to positive social health outcomes: An economic impact study in Europe found that the aggregated socioeconomic value of the effect of each euro invested in the 13 bike-sharing programs studied has an average effect that ranges from €1.37 to €1.72.
- Increasing Social Equity: Anything that delivers more affordable transportation makes it easier for everyone to participate in the community where they live, work, learn, and play.
- Cleaner Air, Lower Emissions: By giving people the option to drive less often, bike share helps improve local air quality, reduces the greenhouse gas (GHG) emissions that cause climate change, and even reduces noise pollution. In 2022, according to the NABSA State of the Industry report, micromobility trips in North America offset approximately 74 million pounds of CO2 (or 34 million kg) by replacing vehicle trips. Bike share also supports densification efforts, which can bring major GHG reductions.

Benefits of Bike Sharing

People	Business	Government
↑ Physical activity ↑ Air quality ↑ Mental health	Worker health & safety	↑ Transit ridership & revenues ↑ Trips served outside of cars Community well being
↑ Access to jobs ↓ Cost of fuel, parking, insurance	Access for employees Access to customers	↑ Transit revenues ↓ Less health care costs ↓ Wear & tear on roads
↑ Transportation affordability ↑ Access to jobs and services	Access to workers	Help meet social equity goals
↑ Air quality ↓ Less driving	↓ Less GHGs from transportation	↓ Less GHGs from transportation
	↑ Physical activity ↑ Air quality ↑ Mental health ↑ Access to jobs ↓ Cost of fuel, parking, insurance ↑ Transportation affordability ↑ Access to jobs and services ↑ Air quality	↑ Physical activity ↑ Air quality ↑ Mental health Access to jobs ↓ Cost of fuel, parking, insurance ↑ Transportation affordability ↑ Access to jobs and services ↑ Air quality ↓ Less GHGs

Initial Insights from our interviews:

For this report, we conducted 20 interviews with people representing various sectors, interests, and backgrounds to understand the local needs and success factors for our region.

Here's who we spoke to:

































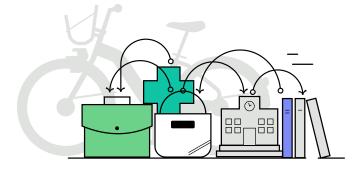


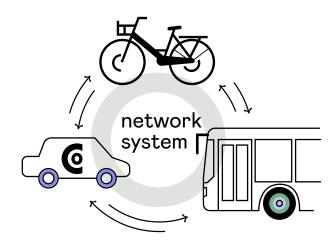


While many more conversations will be had prior to launching a regional bike share system, the people we spoke to expressed overwhelming interest in a bike share **network** as a central part of an effective, equitable, flexible, and sustainable transportation system.

Here are some of the key things we heard:

- Bike share would provide an affordable, equitable, 24/7 addition to our transportation system that connects people to neighbourhoods and everyday services like transit, shopping, work, school, health care, and libraries.
- The network of bikes and stations needs to be wide and flexible enough to make cycling a realistic option for people who can't afford to own a bike, don't have space to store one, or prefer not to lock their own bike at their destination.
- It is an important mobility option for households with one car, or no car at all, and an essential part of a winning formula to deliver on Ottawa-Gatineau's commitments to affordable housing and increased density.
- An Ottawa-Gatineau bike share system should be a public service, not a forprofit enterprise, and contribute to the return on investment in public transit by increasing access to major transit hubs and serving as an extension to transit services.





- People envisioned bike share as a year-round system, with a preference for seeing bicycles over e-scooters, noting that bikes are more stable, can cover longer distances, and allow riders to carry shopping or personal belongings.
- The bikes should be parked at docking stations and feature front baskets and rear panniers for greater carrying capacity.
- We heard that a bike share system should connect easily to existing transit and car sharing services, including Ottawa's rapid transit network and Gatineau's Rapibus and potential future Tramway systems. Once the second stage of Ottawa's LRT system is complete, 77% of the city's population will live within five kilometres from light rail— which is only 20 minutes on an electric assist bike.
- An integrated, regional bike share system would benefit from the six bike crossings along the Ottawa River and provide another option for the thousands easy of people who cross the river access each day for school or work. It would also facilitate connectivity between the STO and OC Transpo transit systems (example: Rapibus Taché station and Bayview Station using the new William Commanda Bridge).

• A bike share system should be set up to deliver first kilometre/last kilometre service, fill gaps between transit routes, improve connections between stations, and make more mobility options available during off-peak hours.



- Participants saw bike share as an important part of our low-carbon future.
- Bike share would contribute to attracting and retaining employees in parts of the city with limited or infrequent transit service, and provide another mobility option for people who do not own a car and even youth.
- For easy access, and to cement the connection between bike share and transit, we heard that a bike share network should integrate with existing transit payment methods.

 Everyone agreed that the system should include (or consist entirely of) electric assist bikes to draw in a larger population of users, offer longer travel distances, and make cycling realistic and appealing for more types of trips.



• Bike share would make Ottawa's most popular tourist destinations more accessible to visitors.

"Bike share programs can form part of a suite of complementary interventions in the built environment that contribute to improved health and well-being. Combined with increased density, mixed uses, and complete streets, they can make it easier to use active transportation and get all of the accompanying health co-benefits. These include more physical activity, which is a protective factor against chronic diseases and positive mental health."

 Inge Roosendaal, Senior Planner, Healthy Communities, Ottawa Public Health



"Reliable and affordable transportation helps improve access to jobs, shopping, and services. That makes bike share an important addition in Ottawa that would help break down mobility barriers and maximize access to transit for first- and last-mile trips. World-class cities everywhere offer bike share as part of their transportation systems, and it's time for Canada's capital city to do the same."

 Michelle Groulx. former Executive Director, Ottawa Coalition for Business Improvement Associations (OCOBIA)

"An equitable, year-round bike share system that includes bicycles (and ideally tricycles) with the capacity to carry goods and children should be a critical part of our transportation system in Ottawa. Residents need an affordable, reliable means of moving about where they live and to conveniently access public transit."

- Florence Lehmann, President of Bike Ottawa

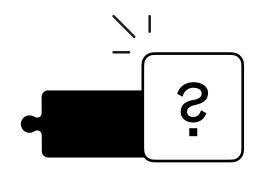
"Ottawa Community Housing would love to see bike share return to the region in order to have more low-carbon, affordable transportation options. Access to affordable transportation options like bike share means that our residents have more choices for getting around the city. We need to look at bike share as a transit service instead of a for-profit business opportunity"

 Dan Dicaire, Manager of Conservation and Sustainability, Ottawa Community Housing

"There's a public benefit to having highefficiency biking in this city. It actually saves you money as a city compared to driving or taking transit, and so this would be really positive for our finances at the end of the day."

Councillor Shawn Menard

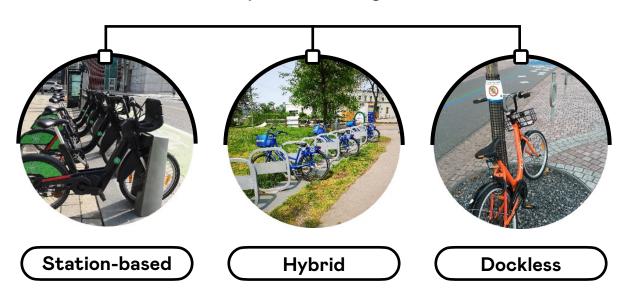
3. Bike share operational considerations



what's needed for it to work

With such a wide base of hands-on experience to draw on, we know what challenges to address to design the best bike share network for Ottawa-Gatineau. The most important considerations include system design, the bikes and infrastructure put in place, the size of the network, the business model, and how bike share connects existing transit systems with the wider community to build a more equitable, accessible regional network.

System Design



There are three types of bike share systems—station-based, dockless, and hybrid. They each require different equipment and technology, and each of them has its own implications for system use, management, efficiency, and cost. While participants in the interviews stated a strong preference for a station-based system, here is a summary of the three models:

A station-based system is considered the most common approach for larger cities, and often draws the highest ridership. It requires riders to begin and end each trip at a bike share station. The approach makes it easier to manage and maintain the bicycle fleet and maximizes system reliability. This model enhances the ability to charge e-bikes when they dock, which reduces the staff time required for battery swaps. But it calls for a bigger up-front investment in station infrastructure, placed in locations that are convenient and accessible for riders—which in turn depends on cooperation with public and private landowners, and with local utilities in both jurisdictions to ensure adequate electrical connections. Montreal, Toronto, and Vancouver all

have station-based systems with a mix of regular and e-bikes, while <u>Quebec City</u> runs a station-based system, comprising exclusively of e-bikes.

- With a dockless system, users can end their trips and drop off their bikes on any public right-of-way. That means they can park right at their final destination, rather than dropping off their bikes at a station. But the system needs continuous monitoring and enforcement to retrieve bikes and make sure they aren't blocking roads or sidewalks. And even then, the bikes might not always be available for riders to pick up where they expect them. The privately-owned and -operated systems in Windsor and Calgary use dockless systems.
- In a hybrid system, riders can either return their bikes to a station or lock them to a regular bike rack, sometimes for an extra fee. Network managers track the bikes via their onboard computers. The approach is meant to maximize flexibility for riders while ensuring that stations always have a supply of bikes for pickup. But a hybrid system can be more confusing for riders until they get used to it, bikes might not always be available at key locations, and the hybrid option can also reduce the availability of public bike parking. Hamilton Bike Share is one example of a hybrid system.

Bike share system types

Dockless Station-based **Hybrid** Bikes can be taken from one station to Bikes can be left anywhere, like how the Bikes must be locked to either a preanother. Users must start and end their e-scooter program was managed in determined station or a "regular" bike rack trip at a station. Stations need to be in Ottawa during its first year. (sometimes for an additional fee). The convenient, accessible locations to bikes have onboard computers that track optimize station use. their location and allow other users to locate where the bike has been locked. Stations have the potential to recharge This system allows users to end trips Provides flexibility, balancing having bikes e-bikes, improving system reliability and anywhere within the public right-of-way, reliably available at stations with the ability operations. Allows for better management with the potential to park a bike right at to park at a destination. of the public realm, including removing their destination instead of at a station. negative impacts to accessibility. The station infrastructure requires higher Dockless systems require a significant The hybrid approach can make the system initial financial investment than what is ongoing investment for monitoring and more confusing for users because there needed for other system types. enforcement to make sure the bicycles do are more options for where a bike can be not pose hazards on sidewalks or locked, and bicycles may be less roadways. Bikes may not be reliably consistently available at key locations. available at key locations because they can Can impact availability of public bike be left anywhere. parking. Montreal, Toronto, and Vancouver all have These are most common in privately Hamilton Bike share is an example of a station-based systems with a mix of e-bike operated systems such as Windsor and hybrid system. and pedal bicycles. Quebec City has a station-based system with a fleet of e-



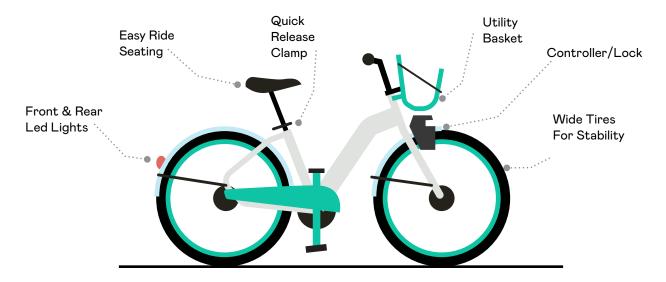
bikes.

Bikes and Infrastructure

Many of us can already identify a bike share bike when we see it, because most manufacturers produce similar equipment. But there are some important features that define the right bike for a bike share fleet.

- Safety and flexibility: Most bike share bikes have a step-through frame and adjustable seat posts to deliver a safe, comfortable ride for many different sizes, shapes, and abilities of users. They usually feature wide tires that provide greater stability and are puncture-resistant to increase rider safety and tire life expectancy. They should have automatic front and rear dynamo lights to keep riders visible, with no need for battery-powered lighting.
- Durability and security: Bike share bikes should be built with highly durable components, including sealed drum brakes and internal gear systems that require less maintenance while providing a smooth, comfortable ride. To discourage theft, bikes should be made of unique components that require proprietary maintenance tools.

- Convenience: Most bike share bikes come with front baskets or carriers, and participants in the Ottawa-Gatineau interviews also expressed interest in rear paniers to carry groceries and belongings. Bike share fleets have also begun offering cargo bikes that can carry children or larger, heavier loads, as well as adaptive designs like trikes and hand bikes to serve riders with a wider range of mobility needs. This can already been seen in Hamilton as part of their Every Rides Program.
- E-bikes: Electric-assist bikes still require riders to pedal, but they make a bike share network more accessible, helping people with a wider range of abilities travel longer distances or up hills. The electric motor on an e-bike can reach speeds of about 25 kilometres per hour, and the battery integrated into the frame can cover 60 to 100 kilometres on a single charge. Bike share systems with both pedal and electric-assist options report that riders choose e-bikes about 56% more often and ride them 35% farther. E-bikes incur higher up-front capital costs but Toronto Bike Share has reported that they are more popular and may generate more operating revenue for bike share networks, per trip and in total.



Right-Sizing the **Network**

Any new product or service must set out to build public buzz and confidence by delivering on customer needs from day one. For a bike share network, that begins with a convenient, reliable system that aims to always have a bike available as promised, when and where a rider expects to find it.

Setting a delivery standard (and keeping it realistic) is supported by good marketing. Meeting the expectation is largely about having enough bikes in service and available to meet initial demand, then expanding the fleet once the operator has established a customer base, refined its operating model, ironed out the day-to-day kinks, and recruited and trained staff.

Experienced bike share operators warn against providing too few bikes across too limited a service area, then drawing the false conclusion that demand is low when the real issues are reliability and access.

According to the Institute for Transportation and Development Policy, the standard metrics for successful bike share systems are:

• 10 to 30 bikes per thousand residents in any service area—a target that would translate, for example, to about 170 bikes with 10 to 15 stations in a neighbourhood the size of Vanier North and South which has approximately 17,000 residents (Ottawa Neighbourhood Study boundaries);

• 10 to 16 stations per square kilometre, with higher-density neighbourhoods coming in at the higher end of the range. At minimum, stations should be no more than 500 metres apart, to give everyone easy access to bikes and docks. An area like Ottawa's Centretown neighbourhood Ottawa Neighbourhood Study boundaries), for example, might need as many as 20 stations.

Supplying too few bikes, too far apart is a common error that could largely explain the difference between Ottawa's early experiences with bike share and the successful systems that have taken root in communities like Quebec City. According to our research, the factors that would influence the sizing of a future bike share system include:

- The prevalence of trips under five to ten kilometres;
- · Population and employment density;
- The number of one- and zero-car households; and
- · The location of retail, service, and mixeduse destinations

In our interviews, we heard that a bike share system would have to extend beyond the downtown core to meet residents' needs and that it should prioritize neighbourhoods with the greatest need for affordable mobility options. There is recognition that both Ottawa and Gatineau are cities that are spread out, with varying degrees of density, transit hubs, and services. All of these factors will need to be further explored to ensure the right approach is taken to rightsize a future bike share system.



Operations and Finance

Bike share systems can be owned and operated by public, private, or non-profit agencies, but they all start from a fundamental principle: that bike share is a public good, like public transit, and an investment that delivers multiple community, economic, social, and environmental returns.

In Ottawa-Gatineau, the choice of operating model will be guided in large part by a strong interest in a regional system that creates an integrated mobility option across the two cities. Some communities, including Quebec City, Hamilton, and Montreal, have set up non-profits to run their systems. While the Toronto Parking Authority owns the assets, they work with an established third-party operator to manage and operate the system. Vancouver is an example of a private system (owner/operator), but they work closely with the municipality to determine expected service level standards and for permitting. Capital Bike Share in Washington, DC is an

example of a successful network that operates across more than one municipality.

According to a 2022 report by the U.S. National Association of City Transportation Officials (NACTO), "systems that see consistent growth and equitable outcomes are typically municipally-owned or managed through long-term partnerships with private operators,"

Regardless of operating model, low fees are the key to an affordable system, especially for users who will be paying transit fares on the same trip, and discount rates are essential to make sure lower-income people can use the system. Bike share and transit are most likely to succeed as a viable mobility option if they cost less than driving or ride-hailing.

Whatever operating model a community chooses, the assets that make up a bike share system—the bikes, docking stations, batteries, chargers, and payment systems can be owned by a municipality or transit agency that outsources operations to a thirdparty operator. The system operator takes

	System	Casual User	Membership	"Cost per 20-minute (5-kilometre) trip"
	ke Share Toronto hird-party operator)	\$1 unlock + \$0.12/minute pedal bike or \$0.20/minute e-bike \$15 for unlimited 90-minute rides on pedal bike for 24 hours	\$105/annually — unlimited 30-minute pedal bike trips \$120/annually— unlimited 45-minute pedal bike \$0.10/minute for e-bike trips	Casual: \$3.40 Membership: No additional cost (included in membership fee)
	Hamilton Bike Share (non-profit) \$0.15/minute	\$0.15/minute	\$20/month for 90-minute use per day \$200/annually for 90-minutes use per day	Casual: \$3 Membership: No additional cost. Included in membership fee
Average Private Bike Share rates \$1 unlock + \$0.35/minute		\$89/month for 90-minutes use per day	Casual: \$8 Membership: No additional cost. Included in membership fee	

responsibility for management, maintenance, service levels, the availability of bicycles, and community engagement and marketing.

Most successful, sustainable programs operate on a mixed revenue model that combines monthly or annual user fees, pertrip charges, private sponsorship and advertising, and public investment and grants.

• User fees, also known as farebox recovery, can cover from 35% to more than 50% of the cost of operating a bike share network, according to a 2019 NABSA report. They often combine a fixed annual or monthly charge for unlimited trips of up to 30 or 45 minutes, or a base cost to unlock the bike plus a per-minute charge.

In 2024, McMaster students voted to add a bike share pass to their annual student fees (they can also opt out) which gives them 90 min of free bike share access per day. Transit to McMaster is reduced on weekends and over the summer and bike share adds affordable, reliable, healthy transportation options for students, and adds farebox revenue for the bike share system.

• **Sponsorship** is a common revenue source for North American bike share networks. Montreal's Bixi network has obtained financial support for nearly a decade, with presenting sponsors Loto-Québec, mobile phone network Fizz, and the Beneva insurance company receiving advertising space on bikes, stations, and the Bixi website in 2023. Last year, Bike Share Toronto announced a new sponsorship deal with the Tangerine online banking system.

While sponsorship is a tempting target for bike share systems, as it is for any other

public or non-profit program, there are risks and limitations to keep in mind. When advertising rights are bundled into sponsorship agreements, they usually cover the most visible station locations and the bikes themselves—so those placements are no longer available to other funding partners. It is important to maintain a focus on station placement being informed by community needs, and not by potential advertising revenue, and take care not to rely too heavily on sponsorships that may not be renewed over the longer haul.

• Public investment in a bike share network can take the form of a line item in a city's budget or an allocation from a revenuegenerating program like parking. Hamilton contributes \$300,000 per year to its local bike share system and uses revenue generated from the e-scooter program to support the operations of the bike share system. Toronto's bike share program is housed within the Toronto Parking Authority, which receives any revenue it generates (from the farebox, sponsorship, or grants) and puts it towards the system's operating costs.

In Quebec City, Los Angeles, and Austin, Texas, bike share systems are part of the local transit authority, with the host agencies providing financial investments to support operating costs. This approach is more common in European cities like Madrid, which relaunched its BiciMAD system in 2023 with 7,500 e-bikes and 611 stations.

Canadian bike share systems have also received their share of government grants to help pay for feasibility studies, acquire infrastructure, or expand existing networks, with their host cities or transit

agencies providing matching funds. Past successes include a \$1.6-million grant from the Metrolinx regional transit network to Hamilton Bike Share in 2013, a \$4-million federal contribution to Bike Share Toronto in 2018, and \$500,000 from the British Columbia government to add 10 e-bike stations westward into the University of British Columbia campus in 2023.

The total revenue generated for a bike share network must be sufficient to cover a mix of capital and operating costs, as well as the one-time expenses incurred to set up the system. At the time of this report, here were the general cost calculations that our research generated:

- Bikes cost \$2,000 \$4,000 each, depending on make, manufacturer, and the quality of components, with e-bikes coming in at the higher end of the range.
- Stations for docked systems cost \$40,000 to \$50,000 each, more if they include kiosks to sell ride passes or charging infrastructure for e-bikes.

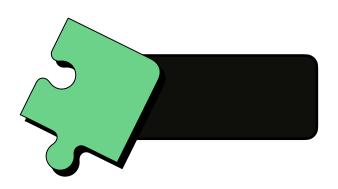
- Operating costs vary depending on if a system operates year-round in winter weather, and local factors including labour and warehousing costs. Based on general research, an estimated operating cost of \$2,000 to \$2,500 per bike per year includes staffing, parts and equipment, vehicles to transport the bikes, and standard administrative, software, and marketing expenses.
- Bike share systems must also cover onetime launch costs in the range of \$1,000 to \$3,000 per bike to acquire a service centre and storage warehouse, buy tools, set up basic business infrastructure, and conduct pre-launch marketing.

The general costing reflected in the following table will be firmed up once an operating model and system characteristics for an Ottawa-Gatineau bike share network are finalized. But on average, this is a breakdown of the average costs:

Typical Bike Share Costs and Revenue Opportunities

Factor	Estimated Variable	
Capital Costs	\$2,000 to 4,000 per bike	
Operating Costs	\$2,000 to 2,500 per bike per year	
Launch Costs	\$1,000 to 3,000 per bike	
Total up front costs	= Capital + Launch	
User Fees	Calculated as % of operating costs to be covered by the user fees (average 35-50%)	
Sponsorship	5-30% of operating costs	
Additional Revenue (other sources i.e. municipality/transit agencies)	= Operating Costs - (User Fees + Sponsorship)	

Building an equitable and accessible system



For bike share to fulfill its potential as a missing piece of Ottawa-Gatineau's local mobility puzzle, it will have to meet two essential challenges. It must serve as a bridge between, and complementary to, transit systems in search of higher passenger volumes and users who need reliable access to affordable mobility. And it must put affordability and equitable access at the centre of its operations.

For the 77% of Ottawa residents who will live within five kilometres of a light rail station once Stage 2 is complete, a bike share system can play a vital role in delivering the "final mile/kilometre" access that can realistically reduce households' reliance on cars. The New York-based Institute for Transportation & Development Policy (ITDP) encourages [pdf] communities to integrate the two services by:

- Locating bike share stations at transit stops, or close enough to make it convenient to connect;
- Combining payment systems, as Montreal has done with its OPUS transit card, to make it easier to transfer between bike share and transit and allow for discounts or fare removals to encourage usage;
- Making it easier for riders to plan their transit trips, and vice versa, by offering clear directions and estimated travel times on wayfinding signage, Google and Apple Maps, and local transit apps; and by

· Maximizing institutional integration and participation by housing bike share systems within transit agencies, or at least involving the agencies with bike share planning, policy, and delivery.



Close integration between transit and bike share systems is an essential part of the commitment to deliver a bike share system for everyone, and especially for the members of our community who need it most.

As recently as 2021, bike share users skewed toward younger, white, male riders with higher incomes, according to the NABSA State of the Industry report.

But that's not the way the story has to go and it isn't the way stakeholders surveyed in the Ottawa-Gatineau want it to go. Local bike share networks can attract and serve an economically and socially diverse user community by:

- Locating stations where diverse, lowincome populations live;
- · Keeping fees affordable;
- Offering payment options for users who don't have credit cards or smartphones and, ideally, for people who don't have bank accounts;
- Creating opportunities for users to learn about the program with marketing materials that cross the barriers of language and culture;
- Offering a mix of bicycle types known as adaptive bikes, for users with a wide range of different abilities;
- Putting diversity at the centre of a bike share system's hiring and HR practices and paying all staff a living wage.

The Boulder, Colorado-based Better Bike Share Partnership has a trove of case studies, one-pagers, and reports that point to successful practices in building accessible, equitable bike share systems. A NACTO practitioners' paper on bike share equity suggests [pdf] a variety of pricing strategies to make systems more accessible, including simple fee structures, price subsidies, different pricing for regular members and casual users, a multi-payment option for membership fees, and incentives for cycling as a practical, convenient mobility option.

Decision-makers in Ottawa-Gatineau will also have to weigh the benefits and challenges of running a year-round bike share system. There will be a lot to learn from the winter network that Bixi piloted in Montreal in 2024 (even in years when the region sees what most of us remember as a normal snowfall). System requirements would include studded tires and anti-slip pedals for the bikes and dedicated maintenance for an expanded winter network of bike lanes and paths.

"Bike share drives Carbon Down by enabling people to drive less and use transit more. It brings Community Up by making it easier and more affordable to get around town, especially for people with low and moderate incomes, and supports more compact, lower-carbon neighbourhoods. It's the missing link in Ottawa-Gatineau's transportation system, and we know it already works well in dozens of other communities. It's time to get on with designing the right bike share system for Ottawa-Gatineau, then get out there and make it happen."

- Steve Winkelman, Executive Director, Ottawa Climate Action Fund





4. Conclusion: The Opportunity for Ottawa-Gatineau

Bike share is a missing piece of the local transportation puzzle in the Ottawa-Gatineau region, and an essential part of any effort to build a thriving, equitable local economy where everyone can live healthier, lowercarbon lives. A reliable, safe, multi-modal transportation network that includes bike share will make Ottawa-Gatineau a better place to live, work, learn, play, and visit, delivering the same access and convenience we've seen in world-class cities like Montréal, Vancouver, Washington, DC, and Paris.

To get a successful bike share program up and running, our region will have to dig into the details and make some informed decisions on system design, the choice of bikes and infrastructure, the size and staging of the network, and the operational and financial models that will best suit local needs. A detailed feasibility study and implementation plan are the logical next steps. After that, successful rollout of a local bike share program will depend on continuing consultation with citizens and engagement with partners to deliver a winning solution for all.

This report was designed to reopen the conversation about bike share in Ottawa-Gatineau, bringing together the full range of opinions and recommendations on what a local system might look like while tapping into a growing body of knowledge on how bike share succeeds. The next step is a feasibility study to address the details of how a local bike share system would work, building on the momentum and helpful lessons learned we've seen in other jurisdictions. It will require the collaboration of municipalities and other partners to determine how the system can operate effectively across the region and support a sustainable transportation network.

Writing this report wasn't the end of the process of planning a bike share system for Ottawa-Gatineau. It was just the end of the beginning. We hope you'll join us to discover what's next as we work to bring our community the bike share system it needs and deserves.



Thank you.

