Document 1 - E-Scooter Pilot Evaluation Results

Background

On January 1, 2020, the Province of Ontario initiated a 5-year pilot for electric kick scooters (e-scooters), allowing municipalities to opt in. On June 10, 2020, Council approved the Electric Kick Scooter Strategy and Pilot Project (ACS2020-TSD-PLN-0003) as well as conditions and fees related to Bike Sharing and Electric Kick Scooter Sharing Agreements with Service Providers (ACS2020-PIE-RHU-0007). On June 24, 2020, Council enacted the Electric Kick Scooter By-law No. 2020-174, authorizing the use of e-scooters on roads, pathways, parks, and other property under the control of the City, subject to certain conditions.

In July 2020, the City entered into agreements with three qualified e-scooter operators – Bird Canada, Lime, and Roll – to provide a total fleet of 600 e-scooters. The associated fee structure was designed to ensure cost recovery as per the City's User Fees and Charges Policy. The agreements regulated fleet size, fees, vehicle speed, in-app functionality, insurance and security requirements, geofencing, time of use, COVID-19 safety protocols, and parking. Results of the initial 2020 season were presented to Transportation Committee and Council and a second season was approved (ACS2021-TSD-PLN-0002).

For the 2021 season, the City undertook a competitive selection process that included a Request for Proposal (RFP). Following from this process, the City entered into agreements with three companies (Neuron Mobility, Bird Canada, and Lime) to provide a combined fleet size of 1,200 e-scooters. Following the results of the 2021 season, Council approved changes to the fee structure and amendments to the City's Electric Kick Scooter By-law (ACS2022-PIE-TP-0001).

For the 2022 season, the City undertook another competitive selection process which included additional requirements to address on-going concerns with sidewalk riding and parking. The City entered into agreements with two companies (Bird Canada and Neuron Mobility) to provide a combined maximum fleet size of 900 e-scooters. After the successful completion of the third season in 2022, Council received the season results (ACS2023-PRE-TP-0003), and approved the continuance of a fourth season in 2023 with an update to the fee structure. At the same time, Council delegated authority to the General Manager of Planning, Real Estate and Economic Development to approve the fifth (and final) year of the pilot – should the results of the 2023 season be

satisfactory – and to enter into a follow-on contract with the same service providers who were awarded the 2022 and 2023 contracts.

Given the results of the 2023 season, the General Manager approved the continuation of the pilot in 2024. On April 2, 2024, a memo (2024 Electric Kick Scooter Season) was released to update the Mayor and Members of Council on the 2023 season results and proposed changes for the 2024 season, including an extension of the hours of operation.

The 2024 season was the fifth and final year of the five-year pilot opt-in window, however, on October 28, 2024 the Ontario Ministry of Transportation (MTO) extended the Electric Kick Scooter (E-Scooter) Pilot Program for an additional five years, until November 2029. The program will continue to operate on a municipal opt-in basis, which requires the enactment of local by-laws.

This report summarizes the results of the initial five-year pilot. Detailed results for the 2024 season are available in the '2024 Shared E-Scooter Season Data Analysis' report on the Project Webpage.

Sources of Data

Throughout the 5-year pilot, staff have monitored the shared e-scooter program to assess its effectiveness and identify opportunities for improvement. A rigorous data collection program has been developed and refined. Key sources of data include:

- Sidewalk riding video detection and manual parking surveys
- Complaints and issues reported by the public via 3-1-1
- Number of warnings, fines and impoundments issued by By-law Services
- Number of warnings, fines and account bans issued by the providers
- Collision reports from Ottawa Police Services
- Emergency department visits related to e-scooters from Ottawa Public Health
- Annual end-of-season survey. In 2024, the survey was conducted between October 8 and November 30 and had 493 respondents. 32 per cent of respondents were shared e-scooters users while 68 per cent were not.

The above data sources have been used to evaluate the pilot with key findings highlighted in the sections below.

Overview of the 2024 Program

The 2024 shared e-scooter season ran from April 18 to November 15, 2024 (29 more days than the 2023 season). Shared e-scooters were available to rent from 5 AM to 1 AM each day, 3 hours longer than previous seasons which operated from 6 AM to 11 PM. The providers (Bird Canada and Neuron Mobility) initially operated with a combined fleet size of 900 scooters (450 for each provider), with a maximum combined fleet of 1200 scooters permitted if requested and justified by the providers. In September, upon request, the City allowed each provider to expand their fleet by 50, for a combined fleet size of 1000 scooters. Both providers took a measured approach and started the season slowly, operating in smaller deployment areas centered around Downtown, the ByWard Market and the Glebe neighborhoods and gradually increased their fleet size as they ensured sufficient staffing and functionality of the required technologies. Extensive work was required by each provider to implement and test the necessary geofences to operate in their deployment areas. Figure 1 illustrates the permitted deployment zone in 2024, as well as the actual deployment zone implemented by the providers.

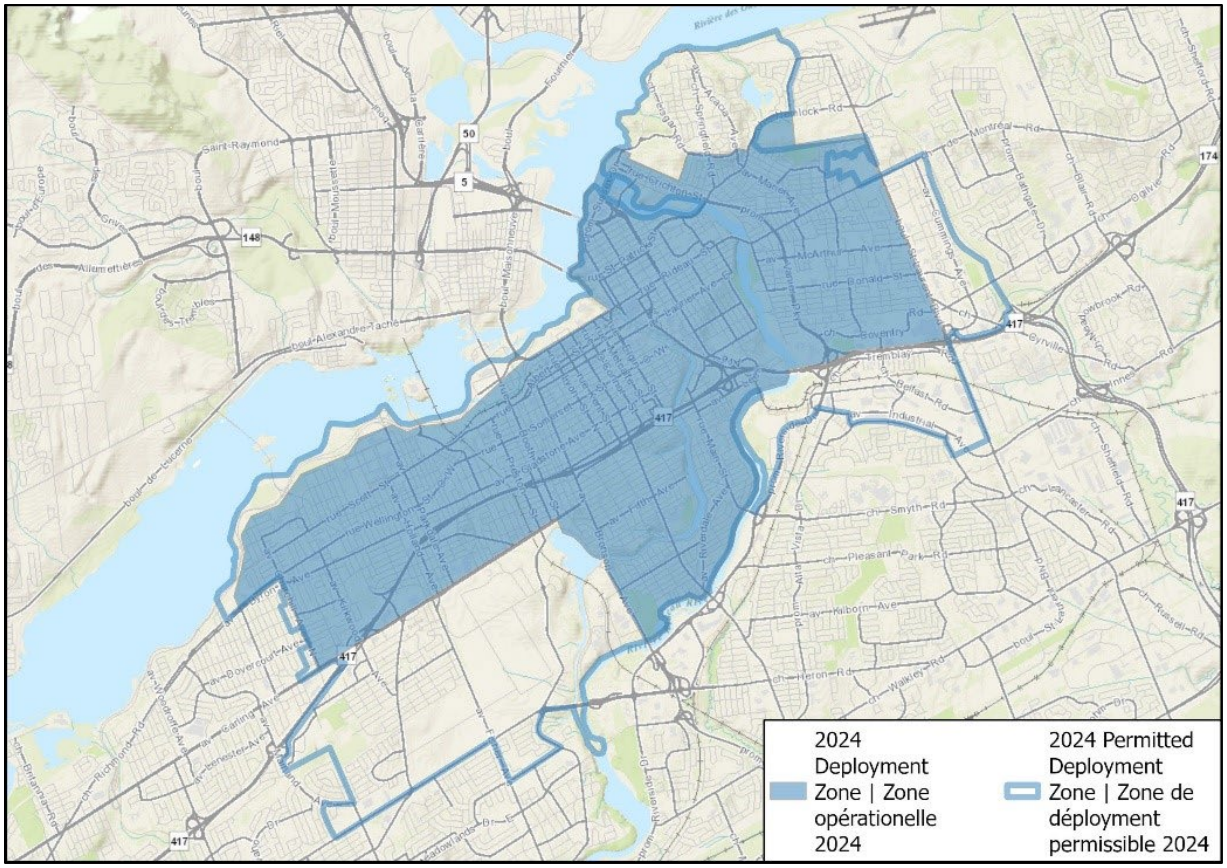

Figure 1: 2024 Shared E-Scooter Deployment Area

Through geofencing technologies, shared e-scooters are prevented from riding on streets with a posted speed limit over 50 kilometres per hour (km/hr) (unless using a dedicated cycling facility), on National Capital Commission (NCC) pathways and roadways, within transit stations (except on certain multi-use paths), City parkades and pedestrian malls, and selected streets within the ByWard Market. Temporary 'no ride' geofences were also established on various streets as required to accommodate special events such as Canada Day and Remembrance Day.

As in previous seasons, each provider was required to implement technologies that prohibit riding on sidewalks. This was done using geofencing technologies and artificial intelligence to detect when an e-scooter enters a sidewalk. These technologies inform the rider and safely bring the e-scooter to a stop if sidewalk riding is detected.

The operating speed of the shared e-scooters is limited to 20 km/hr, less than the 24 km/hr limit imposed by the Province and the City's By-law. Shared e-scooters are

limited to a maximum of 12 km/hr on multi-use pathways through transit stations to ensure the comfort and safety of other transit customers.

All shared e-scooters are outfitted with mandatory bells, kickstands, front/rear lights, and brakes in accordance with the provincial pilot regulation. Since the 2022 season, all e-scooters are also required to emit continuous sounds when in use to alert other road users of their approach.

E-Scooter Trip Characteristics

Number and Distribution of Trips

In 2024, almost 55,000 unique riders took approximately 252,000 rides. A total of 493,000 km was travelled throughout the deployment area.

On average, approximately 1,200 trips were completed daily. In July, the busiest month of the season, daily e-scooter trips averaged approximately 1,500 on weekdays and 1,900 on weekends, with some weekends seeing as many as 2,600 daily trips. The busiest day of the season was July 1 (Canada Day) with approximately 3,600 trips. Table 1 provides the breakdown of the average number of trips per month for the 2024 season.

Table 1: Shared E-Scooter Average Daily Trips by Month

Month	Average E-Scooter Trips per Day	Average E-Scooter Weekday Trips per Day	Average E-Scooter Weekend Trips per Day
April 2024	508	471	590
May 2024	1,099	961	1,497
June 2024	1,379	1,247	1,641
July 2024	1,606	1,490	1,941
August 2024	1,252	1,152	1,497
September 2024	1,325	1,253	1,493
October 2024	1,024	996	1,104
November 2024	643	640	652
All Season	1,188	1,100	1,410

Overall, the 2024 season was 16 per cent longer than the 2023 season and had approximately 41 per cent more trips. Additionally, the operating hours in 2024 were approximately 18 per cent longer than the 2023 season.

Table 2 provides a summary of the total trips per season over the five-year pilot, along with information on the season length, operating hours, fleet size and other trip characteristics. The highest number of trips occurred in 2021, during the pandemic. Following a significant decline in 2022, e-scooter usage has been steadily increasing.

Table 2: Five Year Trip Summary

	2024	2023	2022	2021	2020
Season Dates	Apr 18 to Nov 15	May 17 to Nov 15	Jul 6 to Nov 15	May 28 to Nov 30	Jul 16 to Oct 31
Season Length (days)	212	183	133	187	108
Operating Hours	5 AM to 1 AM	6 AM to 11 PM[#]	6 AM to 11 PM	6 AM to 11 PM	6 AM to 11 PM
Fleet Size	1,000	900	900	1,200	600
# of Trips	252,000	179,000	80,000	492,000	238,000
Average Trips Per Day	1,189	978	602	2,631	2,204
# of Unique Riders	55,000	50,000	33,000	127,000	73,000
Distance Travelled (km)	493,000	368,000	166,000	985,000	426,000

[#]Piloted extended operating hours from 5 AM to 1 AM at two locations

The heat map in Figure 2 illustrates the most popular trip origins and destinations for the 2024 season. It shows a concentration of trips starting and ending in the ByWard Market and along commercial streets such as Elgin, Bank and Wellington. Centretown, Sandy Hill, Lowertown West, Glebe/Dows Lake and West Centretown were the top five neighbourhoods both in terms of trip origins and destinations. A review of the most popular parking locations throughout the season showed a similar trend, with the busiest parking areas located in the ByWard Market and along commercial streets in Centretown such as Elgin, Bank and Wellington.

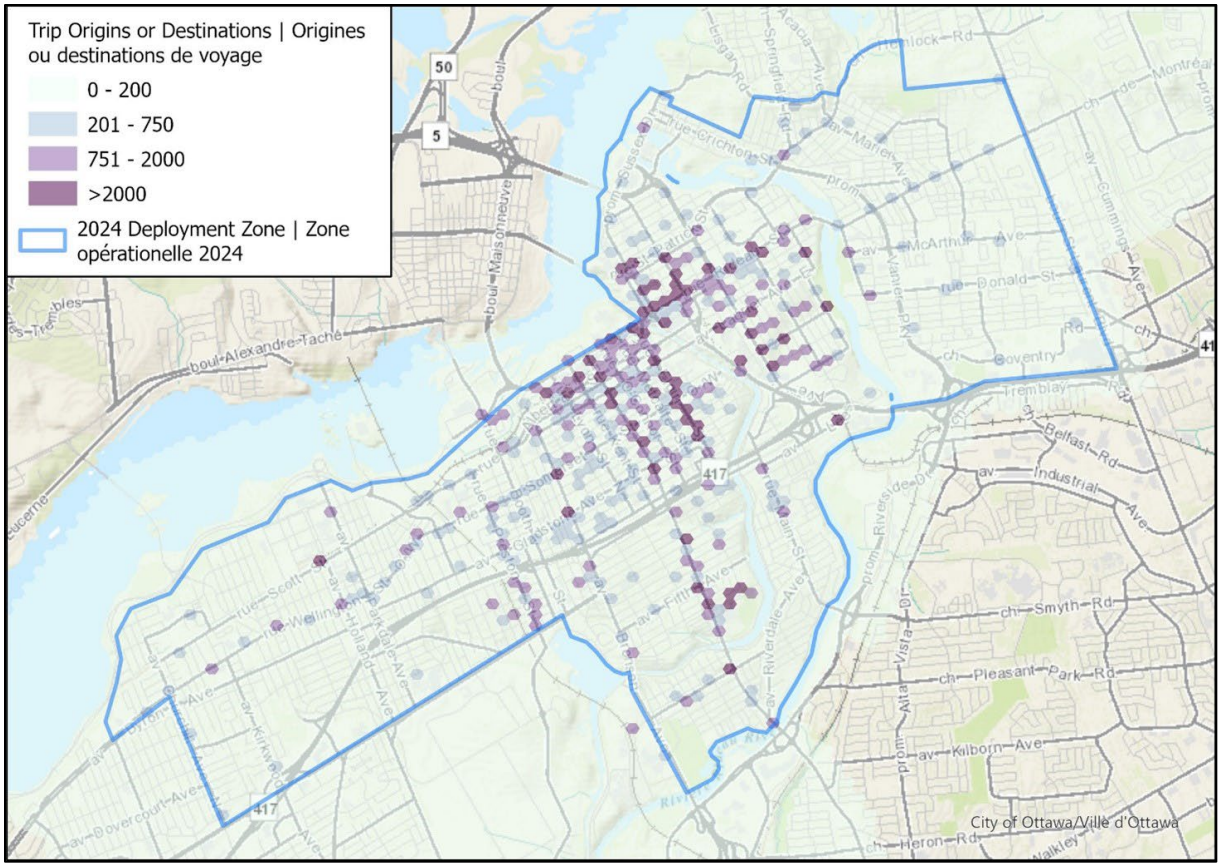

Figure 2: 2024 Trip Origins and Destinations

Trip Distance and Duration

During the 2024 season, shared e-scooter trips ranged in distance from less than a kilometer to more than 10 km, with an average trip distance of approximately 2.0 km. The average trip duration was 13.2 minutes. These figures are generally similar to data from previous seasons. Figure 3 illustrates the trip distance distribution for 2024.

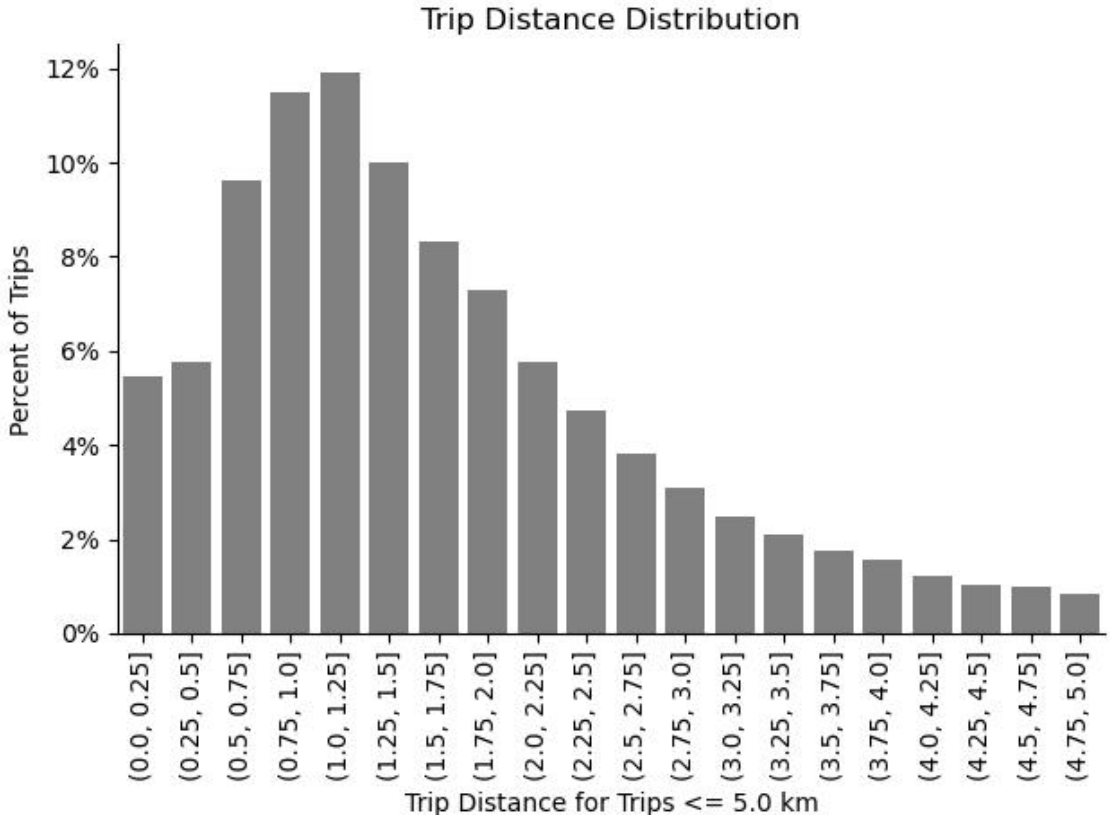

Figure 3: 2024 Trip Distance Distribution

Usage by Time of Day

Figure 4 illustrates the time of day when e-scooters were used, based on data for the 2024 season. As shown, the most popular time to start a trip was between 4:00 PM and 10 PM.

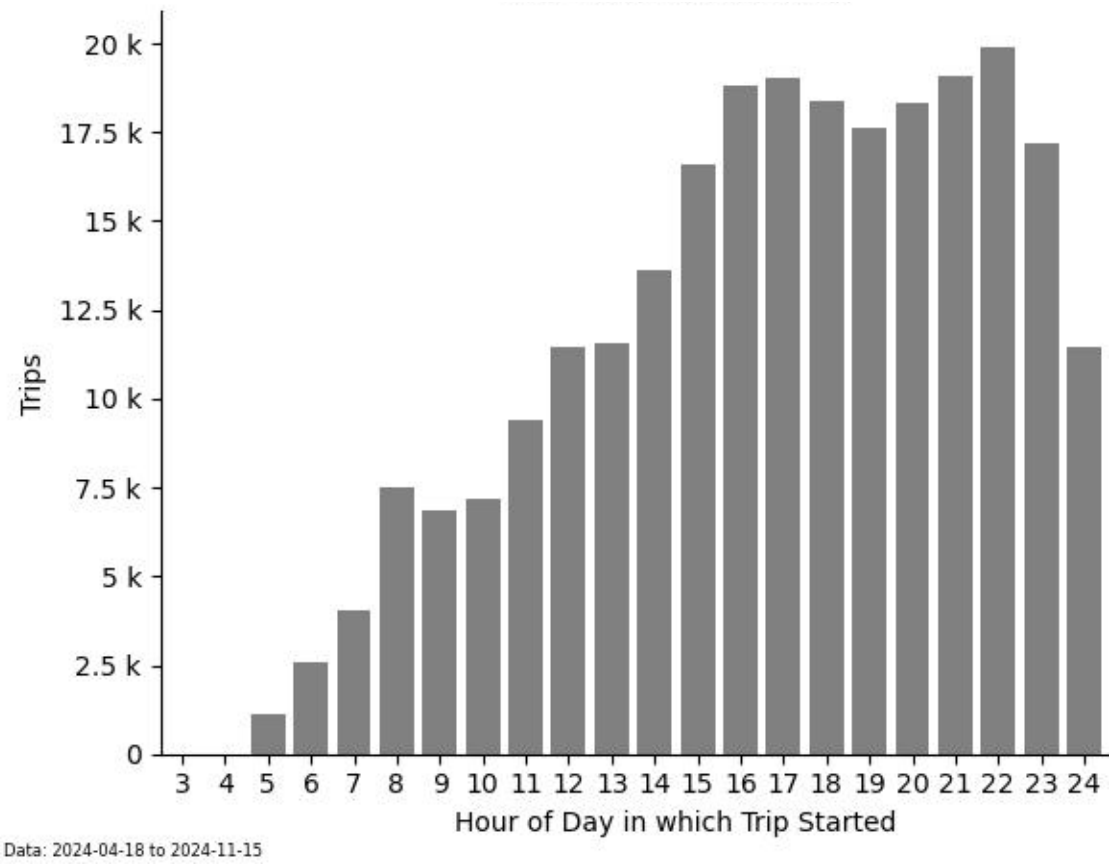

Figure 4: Shared E-Scooter Trips by Time of Day

In the previous seasons (2020 to 2023), e-scooters were available to rent from 6 AM to 11 PM, a total of 17 hours. In 2024, the operating hours were extended by one hour in the morning and two hours in the evening, with scooters available to rent from 5 AM to 1 AM, a total of 20 hours. These extended hours proved to be popular and accounted for 11.8 per cent of total trips during the 2024 season. Overall, 0.4 per cent of trips occurred between 5 AM and 6 AM, and 11.4 per cent occurred between 11 PM and 1 AM.

Trip Purpose

Table 3 provides a summary of the most common reasons for riding a shared e-scooter, based on the 2024 end-of-season survey. Respondents use e-scooters for a variety of trip purposes, most notably for work and participating in social activities. There is also evidence that e-scooters support local shops and restaurants, as well as tourism. The full results of the 2024 end-of-season survey are detailed in the 'Public Engagement Feedback Report' which is available on the Project Webpage.

Table 3: Reasons for E-scooter Usage in 2024

What were the most common reasons why you used a shared e-scooter?	% of Respondents
Get to/from work	53%
Get to/from school	10%
Run errands/appointments	41%
Get to/from social activities	59%
Get to/from dining	35%
Get to/from shopping/local business	36%
For fun/leisure	41%
To try out the service	22%
Sightseeing/tourism	22%
To get to/from another mode of transportation	28%

Alignment with Mobility Objectives

Table 4 below shows how e-scooters impacted residents' travel behaviour based on the results of the 2024 end-of-season survey.

Table 4: Effect on Transportation Choices in 2024

How did the introduction of shared e-scooters change the way you travel?	Increased	Decreased	No Change
Passenger in a private vehicle	2%	40%	32%
Driving a vehicle	3%	47%	25%
Public transit	13%	26%	42%
Walking	16%	23%	52%
Cycling	3%	15%	55%
Shared e-scooters	62%	4%	16%
Private e-scooters	7%	3%	30%
Carpool/taxi/rideshare	2%	47%	28%

Overall, roughly 40 to 50 per cent of e-scooter riders responding to the survey noted a decrease in their use of personal vehicles whether as a driver or passenger, supporting the City's sustainable transportation objectives. In a follow-up question, respondents were asked why they chose to use an e-scooter rather than another mode of transportation. The most common responses included that e-scooters were more fun (60 per cent), convenient (69 per cent), faster (63 per cent), and easier (47 per cent). 44 per cent of respondents reported taking an e-scooter to avoid the cost and inconvenience of parking a car while 33 per cent cited greenhouse gas emissions as a reason for using e-scooters.

Facilitating Transit and Multimodal Trips

One of the goals of the e-scooter program is to facilitate access to transit. Based on data for individual e-scooter rides, it was found that approximately 20 per cent of all e-scooter trips in the city started or ended within 150 meters of a transit station in 2024, up from roughly 18 per cent in 2023. In earlier years of the pilot, this figure was much lower, in the order of 5 per cent or less, likely due to the impact of the pandemic. This indicates a rising trend of integrating e-scooters with transit trips, serving as either the

initial or final leg of the commute. To support/encourage these sustainable multimodal trips, the City extended e-scooter operating hours in 2024 to better match with core transit operating hours (i.e. 5 AM to 1 AM).

Trips to and from transit stations averaged between 1.5 km and 3.5 km, with longer distance trips tending to occur at Westboro Station, outside the downtown core.

Overall, 28 per cent of survey respondents indicated that one of the most common reasons they use shared e-scooters is to connect with another mode of transportation, as shown on Table 3. Of these, 82 per cent reported connecting to transit (bus or train). A similar percentage indicated that having access to shared e-scooters made them more likely to use the other mode.

Enhancing Mobility Choices

Feedback from riders shows that e-scooters continue to provide greater mobility for residents by increasing the options available. Similar to responses from previous seasons, riders who would have otherwise walked were able to travel further with e-scooters to access shops and services. Riders also reported being able to accomplish their daily tasks more efficiently and conveniently, using e-scooters to reach destinations that may not be convenient by transit, and feeling more comfortable with evening travel options.

Support for Local Businesses

Similar to previous years, trip data for 2024 shows a high percentage of e-scooter trips starting or ending in a Business Improvement Area (BIA), representing 44 per cent and 40 per cent of trips respectively. This indicates that shared e-scooters continue to bring residents, visitors and tourists throughout the core area, supporting Ottawa's economy.

Of the survey respondents who used e-scooters to access dining and local businesses, 16 per cent indicated that they spent $20 or less on average, 41 per cent spent between $21 and $50, 20 per cent spent between $51 and $100, and 23 per cent spent over $100. Neuron's year end report showed an average purchase of $57 for each trip to a local business, injecting an estimated $6.6 million into Ottawa's economy over the past year. Of the 731 residents who responded to Bird's rider survey, 71 per cent indicated that they had made a purchase from a local store on their last ride with Bird. The average reported purchase price was $32.87, contributing approximately $3.1 million to

the local Ottawa economy beyond the jobs and ride revenue generated directly by the service.

Feedback / Issue Reporting

The City received feedback throughout the 2024 season through a variety of means including 3-1-1, the end-of-season survey, from ward Councillors, direct inquiries to City staff as well as through social media and traditional media. The City also received valuable input through engagement with an Accessibility Stakeholder group established specifically for this pilot project, the City's Accessibility Advisory Committee as well as from staff in the City's Accessibility Office. A summary of the feedback collected through these consultations is described further below.

A streamlined process to collect inquiries and/or complaints and to track all data associated with this feedback was introduced in 2022. With the new process, residents can submit their inquiries or complaints directly to the City, whereas in previous years (2020 and 2021) they were encouraged to contact the e-scooter providers directly. This new process is accommodated through 3-1-1 by phone and through a new dedicated 'self-serve' e-form specific to e-scooters. Access to the e-form is available on Ottawa.ca or through the City's app. Residents can also access the e-form through each of the e-scooter providers' apps or through a QR code located on each e-scooter. The providers also added stickers (in an accessible format) to the e-scooters providing a mechanism for citizens to report issues. In 2024, 80 per cent of the complaints received by 3-1-1 were through the self-serve e-form.

All Service Requests generated by the complaints received by 3-1-1 (by phone and/or the e-form) are directed to By-law and Regulatory Services who follow up with the appropriate e-scooter provider to address as required. If the providers do not respond and/or address issues within an appropriate time, By-law and Regulatory Services can provide warnings, fines and even impound e-scooters.

Figure 5 provides a breakdown of the Service Requests received from 3-1-1 for the 2024 e-scooter season, while Table 5 shows the requests by year. As shown, most of the requests (89 per cent) are related to mis-parked scooters. In total, 460 e-scooter related inquiries were received. This represents an increase of 38 per cent compared to the 333 inquires received during the 2023 season. However, it is important to note that the 2024 season was 16 per cent longer than 2023, had extended operating hours, and saw approximately 41 per cent more trips. Additionally, in 2024, 62 per cent of the

service requests created by 3-1-1 were requested by By-Law staff when they noticed issues during proactive audits/site visits. In the previous season, these requests were not sent to 3-1-1 and were instead tracked separately.

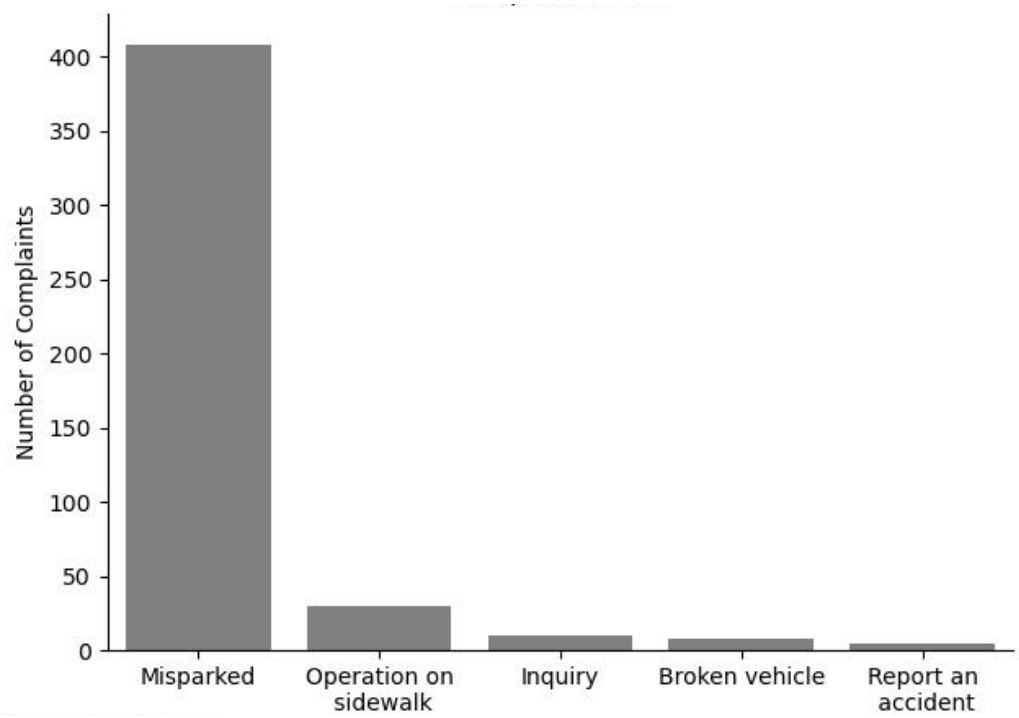

Figure 5: Breakdown of 2024 Service Requests Received by 3-1-1

Table 5: Summary of 3-1-1 Service Requests by Year, 2022 to 2024

	2024	**2023**	**2022**
# of Shared E-Scooter Trips	252,000	179,000	80,000
Season Length	212	183	133
# of Inquiries to 3-1-1	460	333	295
Average # of 3-1-1 Inquiries Per Day	2.17	1.82	2.22
% Inquires related to Mis-Parking	89%	81%	67%
% Inquiries related to Sidewalk Riding	7%	8%	13%

Although residents were encouraged to contact the City directly, a small number of complaints were directed to the service providers. Each provider shared weekly data

with City staff regarding complaints. For the 2024 season, Bird Canada reported a total of 79 complaints issued to them directly and Neuron Mobility reported 70 complaints. Additional details about the data collected by the providers are included in their end of season reports, available on the Project Webpage.

The heat map in Figure 6 shows the location of 3-1-1 service requests. New for 2024, this map was developed based on feedback from an accessibility stakeholder and was used to inform education and enforcement activities by By-Law and Regulatory Services, Ottawa Police Service (OPS) and the e-scooter providers. Based on this data, the areas with the highest number of complaints include Centretown, the Glebe and Sandy Hill.

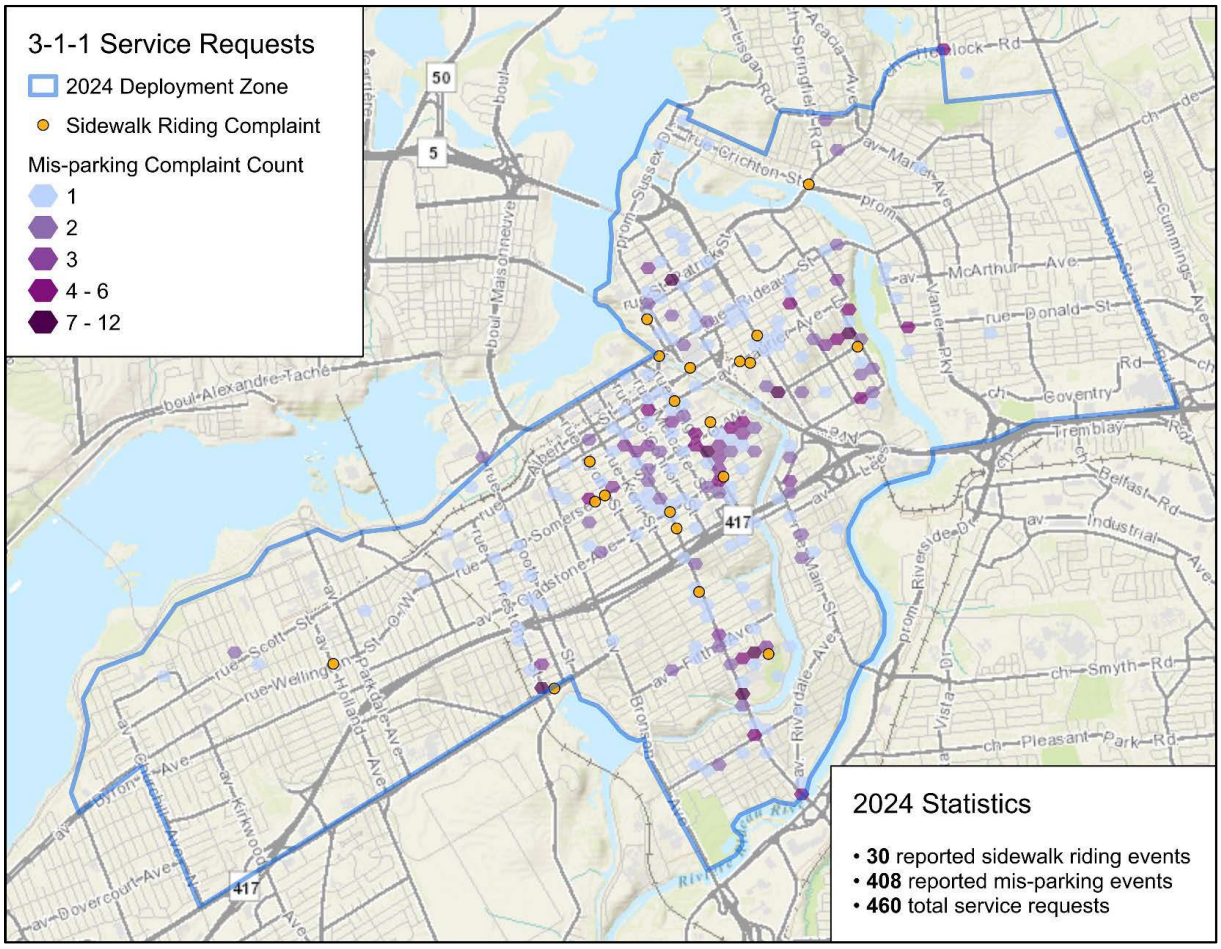

Figure 6: 2024 Service Request Heat Map

E-scooter Audits

In 2024, staff conducted randomized audits of the e-scooters to confirm the geofencing technology was correctly enforcing restrictions for parking and sidewalk riding. The audits generally targeted locations with a high number of complaints. In total, 300 e-scooter sidewalk riding audits were conducted; in 42 per cent of cases, the geofencing was found to be functioning properly. Similarly, 122 e-scooter parking audits were completed, with 57 per cent found to be functioning correctly. These results illustrate the challenges that persist with the geofencing technology. However, research in this field continues to advance and it is anticipated that further innovations will improve compliance rates over time.

Following the audits, the providers were notified and asked to develop localized solutions such as adjusting the app, recalibrating the geofencing, and/or replacing the units. As the season progressed, sidewalk riding and parking compliance improved as evidenced through on-site observations.

Issues Management

Throughout the five-year pilot, staff have collaborated with a multi-departmental working group, an external Accessibility Stakeholder working group and with e-scooter providers to improve practices, address issues, innovate, and improve the delivery of the e-scooter program to better serve residents.

The following sections describe the key issues encountered and actions taken to address them, with a focus on the results for the final 2024 season.

Mis-parked E-scooters

E-scooters that obstruct sidewalks, bus stops, or pedestrian crossings are a safety concern for all pedestrians, and in particular people with low vision or who are blind, older adults, people who use wheelchairs or mobility devices, and pedestrians pushing strollers. In response to concerns, the City has continued to review and implement measures to address mis-parked scooters throughout the five-year pilot, with new measures introduced each season to build on previous initiatives and incorporate lessons learned. Improvements include mandating the use of geofencing technology and a fully restrictive parking model, streamlining service requests, requiring 15-minute response times from service providers, undertaking parking studies, and other initiatives.

For the 2024 season, the fully restrictive parking model originally introduced in 2022 was maintained with permitted parking spaces identified virtually within the providers' apps. These 'digital parking corrals' prohibit rides from ending outside of pre-approved areas in the City's right-of-way to ensure sidewalks remain clear for pedestrians. Parking was also allowed in physically demarcated parking locations that the City installed on-street and/or within furniture zones adjacent to sidewalks. Individual parking zones were assessed and rearranged as necessary based on feedback from residents, providers, and community groups. Approximately 600 virtual and 22 physically signed parking areas were identified where users were required to park. E-scooters are not allowed anywhere other than these designated parking locations and if improperly parked, the rider continues to be charged a fee until the scooter is properly parked or retrieved by the provider.

Throughout the 2024 season, parking zones were reviewed based on resident and stakeholder feedback and adjustments were made at several locations to address concerns. For example, overparking near the intersection of Bank and Nepean was observed to be creating difficulties for pedestrians and guide dogs. The location was reviewed, and the parking zone was adjusted immediately.

The limitations of the geofencing technologies continue to create challenges such as discrepancies between the actual location of e-scooters and parking zones and their position in the app. As a result, some e-scooters were allowed to be parked just outside permitted locations, and some riders were prevented from ending their rides despite having parked correctly.

Mis-parked e-scooters were monitored by City staff during the 2024 season through on-site surveys. Staff surveyed retail and commercial corridors in the ByWard Market, Downtown, Glebe, Chinatown, and Wellington West. Approximately 3200 e-scooters were observed during these visits. Table 6 below summarizes the percentage of e-scooters that were mis-parked, as well as the breakdown between e-scooters that were slightly mis-parked versus severely mis-parked. Slightly mis-parked refers to e-scooters that are parked incorrectly or outside of the designated parking spots but are not blocking the area from pedestrian access. Severely mis-parked refers to e-scooters that are blocking the pedestrian path of travel, requiring movement of the e-scooter.

The data indicates a reduction in mis-parked scooters in 2024 compared to 2023 and 2022, although the proportion of severely mis-parked scooters increased slightly.

Table 6: Parking Survey Results

Parking Observations	2024	2023	2022
Total # of E-Scooters Observed	3200	3100	1430
% Total Mis-parked	4.7%	6.4%	6.3%
% Slightly Mis-parked	3.3%	6.1%	6.2%
% Severely Mis-parked	1.3%	0.3%	0.1%

According to the year-end survey, 61 per cent of respondents encountered mis-parked e-scooters in 2024 (compared to 56 per cent in 2023). Of those respondents, 72 per cent did nothing when they encountered a mis-parked e-scooter, 27 per cent moved the scooter themself, 10 per cent reported the scooter to the City or e-scooter providers and 9 per cent changed their path of travel. These findings suggest that incidents of mis-parking reported to 3-1-1 are likely under-represented.

Most survey respondents indicated that e-scooter parking improved when compared to previous seasons, with 51 per cent agreeing, 24 per cent remaining neutral and 26 per cent disagreeing. However, while parking violations have improved, mis-parked scooters continue to be one of the primary concerns reported during the 2024 season.

Sidewalk Riding

The City does not permit e-scooters to be ridden on sidewalks. Sidewalk detection technology, first implemented in the 2022 season, is mandatory for all service providers. All City sidewalks within the deployment zone are geofenced as ‘no ride zones’. Geofencing technologies and artificial intelligence are used to detect if an e-scooter enters a sidewalk. Where sidewalk riding is detected, the rider is informed, and the e-scooter is safely brought to a stop by disengaging the throttle. Since e-scooters continue to coast along the sidewalk (without power) until they come to a halt, this behaviour may generate complaints of sidewalk riding even though the technology is working as intended.

While geofencing technologies represent a significant step forward in the effort to eliminate sidewalk riding, the technology has certain limitations and its accuracy is impacted by factors such as weather, height and density of surrounding buildings, software and mechanical issues. Not all sidewalk riding is detected. In other instances, some riders may be incorrectly flagged as riding on the sidewalk while properly riding adjacent to the sidewalk, causing the e-scooter motor to be disengaged.

Throughout the five-year pilot, efforts have been made to increase public awareness of the rules. Messaging is provided in large print near or at the footboard of each e-scooter indicating *"NO SIDEWALK RIDING"*. Provider-led initiatives include in-app messaging, education events, and foot patrols.

The City monitors sidewalk riding using automated sidewalk counts (Miovision cameras) deployed at various locations throughout the city. Counts were completed between 3 PM and 9 PM on a Friday and Saturday every month during the 2024 season. The same ten locations that were monitored in 2023 were monitored in 2024. The number of e-scooters observed riding on the sidewalk per 6-hour interval for all counts combined averaged 3.5 in 2024, 18 per cent less than 2023 which had an average of 4.3.

To confirm the accuracy of the Miovision counts, staff conducted manual verification checks in 2024. This exercise provided a clearer, more accurate depiction of sidewalk riding behaviors, including frequency, and contextual factors. Crucially, this approach enabled staff to distinguish between sidewalk riding incidents involving privately owned e-scooters, shared e-scooters, non-motorized vehicles such as hover boards, segways, e-bikes, and bicycles. These insights provide a nuanced understanding of sidewalk riding behavior to inform targeted strategies to improve compliance. The verification exercise suggests that, within the shared e-scooter deployment zone, roughly 56 per cent of sidewalk riding may be from shared e-scooters while 44 per cent may be from privately owned e-scooters. The verification exercise also suggests that the Miovision counts may be marginally over-stating the incidents of sidewalk riding by e-scooters.

Based on the end-of-season survey, 64 per cent of respondents encountered sidewalk riding in 2024 (from both privately owned and shared e-scooters) - a slight increase compared to the 2023 survey at 61 per cent. Of those respondents, 58 per cent did not change how they travelled, 27 per cent changed their walking route or travel plans, 17 per cent interacted with the e-scooter rider and 3 per cent reported them to the City or shared e-scooter providers. Again, these results suggest that many incidents of sidewalk riding are not being reported to 3-1-1.

Survey respondents generally agreed that e-scooter riding behaviour has improved compared to previous seasons, with 51 per cent agreeing, 22 per cent remaining neutral and 27 per cent disagreeing.

Although the number of observations and complaints of sidewalk riding have shown a declining trend compared to previous seasons, sidewalk riding remains an issue; residents and stakeholders continue to voice concerns about safety and discomfort when encountering e-scooters operating on sidewalks.

Sound Emissions

Throughout the five-year pilot, accessibility stakeholders have expressed concerns around interactions with e-scooters that do not have any sound emissions to notify pedestrians, cyclists, or others that a motorized e-scooter is approaching or is in the vicinity. Initiated in 2022, Ottawa may be the first city in North America (if not worldwide) to require that all shared e-scooters emit a continuous sound when in use. There are no standards for micromobility device sound emissions. In developing this new feature, there were many issues to work through including the sound, pitch, tone, frequency, amplitude, and volume of the sound with different e-scooter operating speeds and street contexts. Both providers implemented continuous sounds, meeting the requirements of their agreements, which consisted of two distinct components: 1) a baseline sound emitted whenever an e-scooter is in rental mode; and 2) an alert sound emitted whenever the e-scooter is in motion.

Results from the 2024 survey revealed that 73 per cent of the respondents always or sometimes heard the sound that the shared e-scooters were emitting. However, roughly a third of the survey respondents did not know why the e-scooters were emitting a continuous sound. Several e-scooter riders found the sound distracting or were confused as to what it was for, thinking there was a problem with the scooter. Finding the right intensity of sound that balances the need to warn vulnerable road users of an approaching scooter without annoying or distracting road users has proven to be a challenge. In 2023, City staff engaged the accessibility stakeholder group to assess the sound emissions. Although no consensus was reached with respect to the most appropriate sound, feedback was shared with the providers and staff are committed to working with stakeholders and the providers on this issue, should the City opt to continue with the pilot.

Public Outreach and Education

A key focus of the five-year pilot has been education to increase awareness about safe and courteous e-scooter riding and parking. One of the goals of the 2024 season was to expand the City's education/outreach campaign to ensure riders – including those using private e-scooters – and other residents understand e-scooter rules and reporting mechanisms. Activities included four rounds of social media/promotional campaigns and live rotation in digital bus shelter ads.

In addition, staff handed out over 1400 e-scooter informational buckslips to individual residents, groups, and local businesses. Similarly, the providers conducted their own educational campaigns throughout the season.

Both providers had staff patrol teams on the streets during peak times and in high demand areas such as Elgin, Bank, Rideau, Lansdowne, University of Ottawa, Carleton University, Centretown, and the ByWard Market. In addition to relocating and rebalancing their fleet, the patrol teams also took the opportunity to speak to members of the public and inform them of local e-scooter riding rules. One of the providers had between 3,000 to 3,500 interactions with residents and riders. The providers also sent out several educational emails to all riders, targeted warning e-mails to specific riders, and posted educational information on their social media channels reminding riders of the rules of the road. The providers hosted a total of 27 public education events in 2024 to provide information on safe and courteous e-scooter use. Free helmets were distributed at these events. One provider also included helmets on each e-scooter. Each provider also employed mandatory in-app tutorials and reminder pop-up messaging to educate their customers about appropriate riding behaviour.

Enforcement

The City's E-scooters By-law (No. 2020-174) regulates the operation and use of electric kick scooters in the city, both private and shared. It establishes riding and parking requirements and includes set fines for various infractions like riding on the sidewalk or parking where not permitted. Officers with By-law and Regulatory Services are appointed to warn/ticket riders if they are found to be violating the regulations in the E-scooter By-law (No. 2020 - 174). However, Ottawa Police Service (OPS) are responsible for the enforcement of moving violations. By-law Officers can issue warnings and fines to individuals for moving violations (such as sidewalk riding of e-Scooters) by those who stop when asked by the officer or by following up after the

violation has taken place.

Ontario regulation 389/19 under the *Highway Traffic Act* (HTA) allows cities to pilot the use of e-scooters in Ontario. Provincial regulations specific to pilot projects prohibit the use of simplified offence notices for moving violations (such as a speeding ticket) under the HTA. Charges related to the misuse of e-scooters under the HTA would require significantly more administrative effort and time than a typical traffic offence notice. The City's By-law has been the best enforcement avenue as it allows OPS to issue fines for violations such as sidewalk riding, which is a $150 fine.

By-law and Regulatory Services

Throughout the five-year pilot, the shared e-scooter providers were responsible for monitoring and relocating mis-parked e-scooters. Beginning in 2022, resources in By-law and Regulatory Services (BLRS) have been dedicated to undertaking proactive enforcement activities, funded by fees paid by the e-scooter providers. By-law staff receive all e-scooter related Service Requests generated through 3-1-1, monitor the providers' response times, and follow up with the providers as required.

In the 2024 season, 30 per cent more funding was provided to support By-law enforcement activities compared to 2023. This funding was used to proactively address mis-parking and improper e-scooter use as well as to monitor the service providers' response times, resulting in citations and e-scooter impoundments in instances where the response times were not being upheld. In 2024, 3 e-scooters were impounded, each incurring a $75 impound fee and 5 additional citations were issued over mis-parked scooters with charges totaling $825. Overall, the providers were fined $1,015 during the 2024 season; there were no impounded vehicles or citations in 2023. Additionally, By-law staff proactively relocated mis-parked e-scooters if/where required, responded to 438 Service Requests, and contacted the providers 194 times to rectify mis-parked e-scooters. BLRS also initiated 284 Service Requests directed to the providers to address and track.

Ottawa Police Service

The Ottawa Police Service (OPS) does not have the resources to allocate officers to daily e-scooter enforcement. However, e-scooter staff were able to partner with Safer Roads Ottawa (SRO) and the OPS traffic unit to conduct two safety blitzes and two targeted enforcement events in 2024, with locations chosen based on complaints recorded through 3-1-1 and staff observations. During these safety blitzes, residents

were engaged in discussions regarding proper e-scooter riding. During the targeted enforcement, OPS staff issued 7 warnings and 3 moving violations, an increase compared to previous seasons as shown in Table 7.

Service Providers

The service providers issue fines and/or suspensions to riders for improper parking, improper riding, and/or repeat infractions. There were 262 warnings and 12 suspensions/account bans issued by the providers in 2024, an increase compared to previous seasons as shown in Table 7.

Table 7: Number of Fines, Warnings and Account Bans by Year, 2022 to 2024

	2024	**2023**	**2022**
# of impounded e-scooters / fines issued to e-scooter providers by By-Law Services	3/5	0/0	1/0
# of warnings / account bans issued to riders by e-scooter providers	262/12	23/4	75/30
# of warnings / tickets issued to riders by OPS	7/3	0/3	0/0

Reported Injuries

Information on e-scooter related collisions and injuries is available from different sources.

The City of Ottawa releases collision data based on records provided by the Ottawa Police Service (OPS). This data does not distinguish between shared or privately owned e-scooters. Table 8 summarizes the number of e-scooter related collisions reported to OPS for each year since the beginning of the pilot in 2020. The data suggests that the collision rate per 100,000 shared e-scooter trips has generally been constant since 2022.

Table 8: Summary of E-Scooter Related Collision Data Reported to OPS

	2024	2023	2022	2021	2020
Shared E-Scooter Trips	252,000	179,000	80,000	492,000	238,000
Total # of Collisions	12	9	3	6	4
# of Collisions Per 100,000 Trips*	5	5	4	1	2
# Property Damage Only Collisions	5	1	0	3	1
# Non-Fatal Injury Collisions	7	8	3	3	3

* Excludes trips by private e-scooters which have increased over time

Incidents that are made known to the providers are summarized in their end of season reports. For each incident reported, the provider follows up with the rider to obtain additional information; if the rider responds, the incident is 'verified', otherwise, it is classified as 'unverified'. Table 9 summarizes the number of verified incidents reported to providers for each year since 2021. The data indicates that incidents reported to providers per 100,000 shared e-scooter trips increased slightly in 2024 compared to the previous two seasons.

Table 9: Number of Verified Incidents Reported to Providers

	2024	2023	2022	2021
Shared E-Scooter Trips	252,000	179,000	80,000	492,000
# of Verified Incidents Reported to Providers	21	13	5	44
# of Incidents Requiring Medical Attention	8	3	3	16
# of Verified Incidents per 100,000 Trips*	8.3	7.3	6.3	8.9

* Excludes trips by private e-scooters which have increased over time

Ottawa Public Health has completed a detailed summary of emergency department visits at Ottawa Hospitals that may be associated with kick-type e-scooters from 2019 to June 2024, the most recent data available. The 2019 data provides context for e-scooter emergency department visits prior to the start of the e-scooter program in 2020. It is important to note that not all emergency department visits for e-scooters are connected to the shared e-scooter program; both shared and privately owned scooters are captured in the data.

The data shows that emergency department visits associated with kick-type e-scooters increased in 2023 (118 visits) compared to 2022 (67 visits); however, on a per trip basis, the number of visits declined, with 66 visits per 100,000 trips in 2023 versus 84 in 2022. Comparing data from April to June, the number of emergency department visits was 34 in 2023 and 16 in 2024. Data for the balance of the 2024 season will not be available until summer 2025. Across all years since the start of the e-scooter pilot, injuries were most common among young adults aged 20 to 29. Additional details are provided in 'Ottawa Public Health - Summary of E-scooter Relevant Emergency Department Visits at Ottawa Hospitals' which is available on the Project Webpage.

The end-of-season survey also includes a question about collisions and injuries. Of the 379 individuals who responded to this question (including both riders and non-riders), 10 indicated they were involved in a collision with an e-scooter in 2024 and 4 required medical attention. This response is similar to previous seasons.

Incidents Associated with Late-Night Riding

The extended hours of operation in 2024 proved popular with e-scooter riders, with trips between 11 PM and 1 AM accounting for over 11 per cent of trips throughout the season. There were 3 safety incidents reported during these extended hours, which represent 14 per cent of the total verified incidents reported to providers. Of the 3 incidents, one required hospital care.

To deter impaired riding, Bird Canada activates the SAFE start feature on its scooters after 11 PM, which requires riders to pass a series of questions in-app before the e-scooter can be operated. Neuron scooters detect erratic swerving and provide a verbal warning to the rider that dangerous riding is detected, and that the e-scooter will shut down if swerving continues. Three warnings are given and then the e-scooter motor will cut out.

Safety Initiatives by the Ontario Ministry of Transportation

The Ontario Ministry of Transportation (MTO) has initiated a study to evaluate the safety impact of e-scooters and provide a framework to support decision making. All data collected as part of the Ottawa pilot has been shared with the Ministry and will support a greater understanding of e-scooter injury factors, causes, and characteristics.

On August 14, 2024, MTO issued an All-Chiefs Memo detailing changes to Ontario's Collision Reporting Threshold and Collision Coding Standards for Micromobility Vehicles. These new codes aim to enhance the accuracy of collision data, identifying various micromobility devices—such as e-scooters, e-bikes, and other personal transportation devices. These new coding standards also include a separate code for personal e-scooters and shared e-scooters. This update reflects MTO's commitment to improving data collection and safety analysis in the rapidly evolving micromobility sector.

Other Issues

Partnerships with Other Organizations

E-scooter service providers may enter into agreements with other Ottawa organizations to operate e-scooters on private property. The terms of these agreements are negotiated directly with the organizations involved and may give providers exclusive operating rights. For the 2024 season, agreements were in place for Lansdowne and Carleton University.

Private E-scooters

Private e-scooters (either personally owned or rented though a private company) have grown in number. Consistent with the provincial pilot, the City permits the use of private e-scooters in Ottawa subject to the E-scooters By-law. Users who violate the provisions of the By-law (for example, by riding on the sidewalk) may be fined for infractions. While the City has the authority to either permit or not permit the use of e-scooters and may impose certain rules for the operation and parking of e-scooters, the City does not have the authority to establish a licensing scheme for private e-scooters. Further, the City is not able to impose requirements for private e-scooters to emit a continuous sound or adopt geofencing technologies to prevent sidewalk riding.

Claims and Liability

The City has received 15 claims related to e-scooters since July 2020. Five of the claims are related to shared e-scooters while the remainder involve privately owned e-scooters or other types of scooters such as mobility devices.

The finding of liability is typically fact specific and determined by the courts. In the event of a collision involving a shared or private e-scooter, the users of the road may have claims against one another. If they wish to involve the municipality in those claims, the City, through its claims unit, will review each claim and respond accordingly. With respect to shared e-scooter providers, the agreement between the providers and the City contains provisions aimed at transferring risk arising from the operation of shared e-scooters on to the providers.

Regional Partners

Since the inception of the e-scooter pilot in 2020, the National Capital Commission (NCC) and the Ville de Gatineau have not participated. Through geofencing, shared e-scooters are prevented from operating on NCC pathways and roadways and are also restricted from operating in Gatineau. Based on conversations with staff at the NCC and Ville de Gatineau, there are no plans to remove these restrictions in 2025.

The pathway networks of the City of Ottawa and the NCC are closely integrated, and there several NCC facilities that are important for network connectivity, for example NCC pathways connecting to the Corkstown Bridge, Pretoria Bridge and Adawe Bridge. City staff continue to engage with the NCC highlighting the need for cooperative usage of these pathways for pedestrians, cyclists and other micromobility users. Regardless of current regulations, these networks are being used by many types of motorized devices (including private e-scooters) and Ottawa's shared e-scooter program offers unique opportunities to inform proper riding and quell misuse of these shared systems.

Conclusions from the Initial Five-Year Pilot

E-scooters provide several benefits for residents. They offer a new, convenient mobility option. They provide residents with increased choice, support local businesses, enhance connectivity to transit, provide an alternative to driving, and reduce greenhouse gas emissions. Over the initial five-year pilot, Ottawa residents have embraced the use of both private and shared e-scooters, and resident feedback demonstrates continued support for the pilot. From the 2024 end-of-season survey, 58

per cent of respondents agreed that shared e-scooters should continue to be offered in Ottawa, while 31 per cent disagreed (the remaining 11 per cent were neutral). E-scooters were viewed as a convenient, cost effective and fun way to travel.

Over the five years of the pilot, the shared e-scooter program saw significant growth, reflecting the increasing popularity of e-scooters as a micro-mobility option. While there continue to be issues around sidewalk riding and improper parking, City data and resident feedback have shown consistent improvement year over year and staff have been committed to working with the service providers and other stakeholders to continuously improve the program. The aggressive measures and restrictions that were implemented since 2022 such as the restrictive parking model, geofencing, and streamlined reporting appear to have made significant improvements to address these concerns as compared to initial seasons.

Although the number of complaints relative to the total number of rides is low (less than 1 per cent), the end-of-season survey suggests that not all incidents of mis-parking or improper riding are reported. Maintaining the strict restrictions that were implemented in previous seasons to minimize the accessibility impacts and hold the providers to a high level of scrutiny and responsibility continues to be required to ensure the program respects and supports a safe environment for pedestrians and other road users.