

Ottawa 2022 End of Season Report

November 30, 2022

Neuron Mobility (Canada) Limited

Neuron is grateful for the opportunity to partner with the City of Ottawa to connect people and places in a safe, convenient and fun way. We are proud to report that residents and visitors to the City of Ottawa have taken more than 30,000 trips since launching in July 2022, covering more than 64,000 kilometers.

Neuron, as leaders in safety and innovation, are proud to have worked closely with the City of Ottawa throughout the 2022 season to pioneer global initiatives such as High Accuracy Location Technology (HALT) technology for sidewalk detection, AVAS sound emission, fully restricted parking and 15 minute mispark resolution to meet the City's requirements.

Attached below is a full report as requested by the city.

1. User profiles (age, gender – if available)

Neuron does not collect this information due to privacy reasons. However, as part of our year end user survey, we provide our riders the opportunity to anonymously self-report this type of demographic information. As per the survey results, the majority of our riders were **males (63.3%)** between the **ages of 25-34 (32.1%)**.

Fig 1. Age distribution of Neuron riders

18-24	28.2%
25-34	32.1%
35-44	20.1%
45-54	12.0%
55-64	6.6%
65+	1.2%

Fig 2. Gender distribution of Neuron riders

Male	63.3%
Female	35.5%

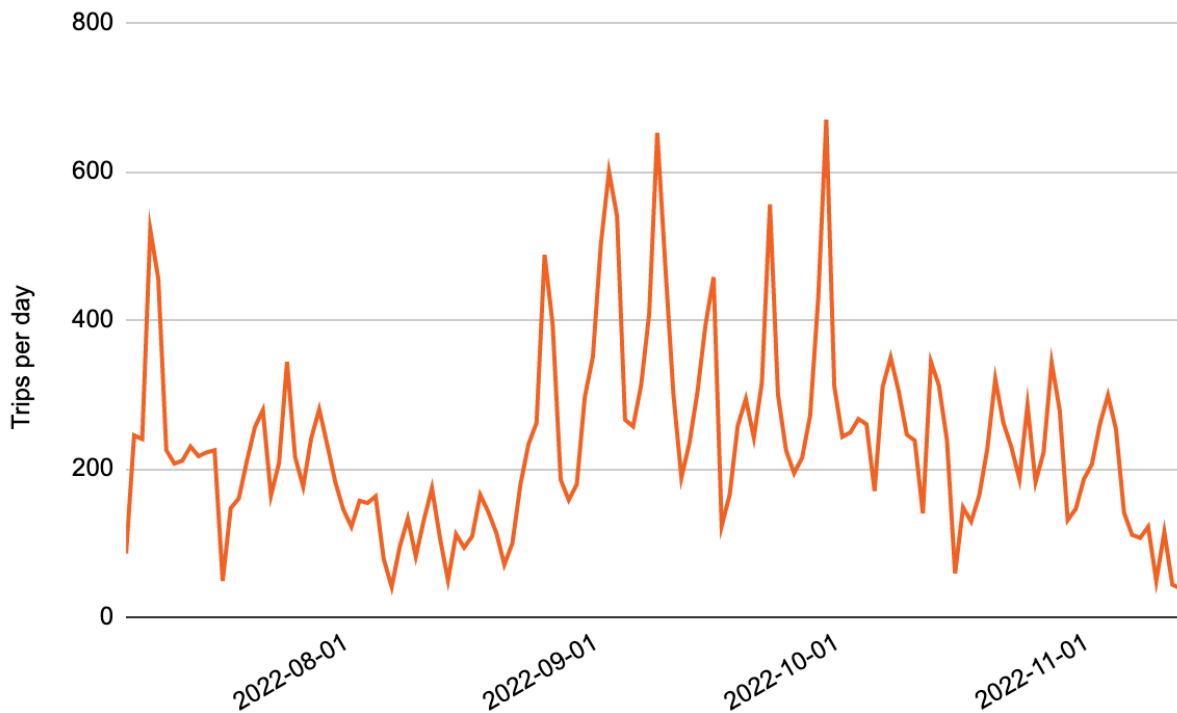
Non-Binary	1.2%
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2. E-scooter availability, utilization, turnover, parking duration, and charge, by location (including specific neighbourhoods and in close proximity to transit stations)

Utilization

The average trips per day for the 2022 season was **234**, with the most trips per day (**670**) occurring on **Oct 1st**.

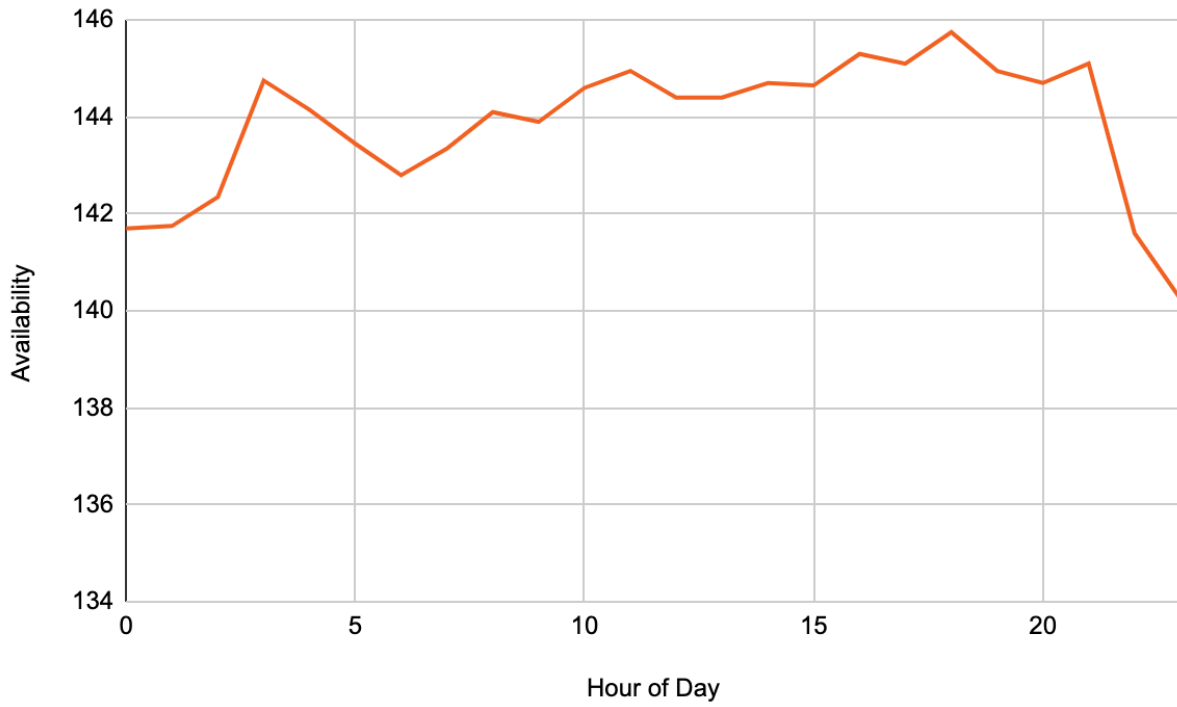
Fig 3a. Daily trips for 2022 season



Availability

Scooter availability on an hourly basis can be viewed in the table below. On average, **6pm** was when availability was the highest.

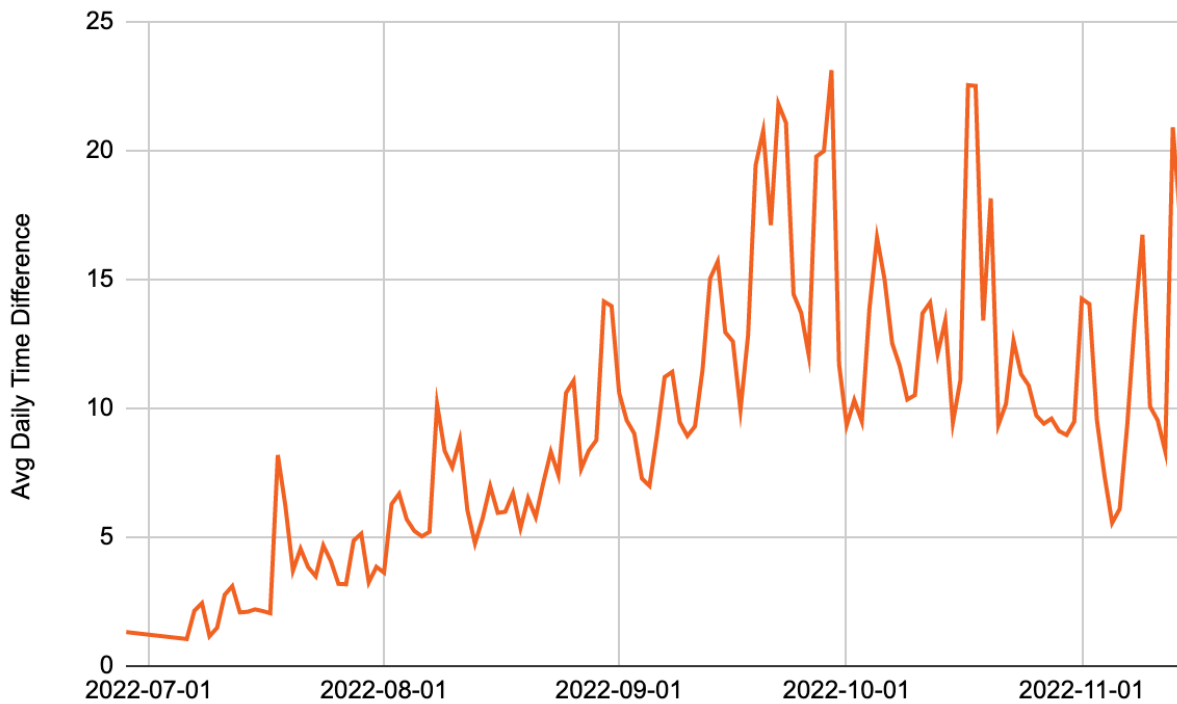
Fig 3b. Average Hourly Scooter Availability



Parking duration

This has been defined as the time between the scooter being IN_STATION to IN_TRIP. Parking duration broken down by day can be seen in the table below.

Fig 3c. Daily Average Parking Duration



Charge & Turnover

No data available

3. Trip origins and destinations by neighborhood

Centretown is the most popular neighbourhood both in terms of trip origins (**42.2%**) and trip destinations (**42.3%**).

Fig 4. Trip origins by neighbourhood

Neighbourhood	Trip count	% of Trips
Centretown	13,126	42.20%
Byward Market	7,985	25.67%
Sandy Hill	5,501	17.69%
Glebe - Dows Lake	2,798	9.00%
Lowertown	587	1.89%
West Centretown	528	1.70%
Old Ottawa South	288	0.93%
Old Ottawa East	276	0.89%

Hintonburg - Mechanicsville	10	0.03%
Carleton University	1	0.00%
Lebreton Development	1	0.00%

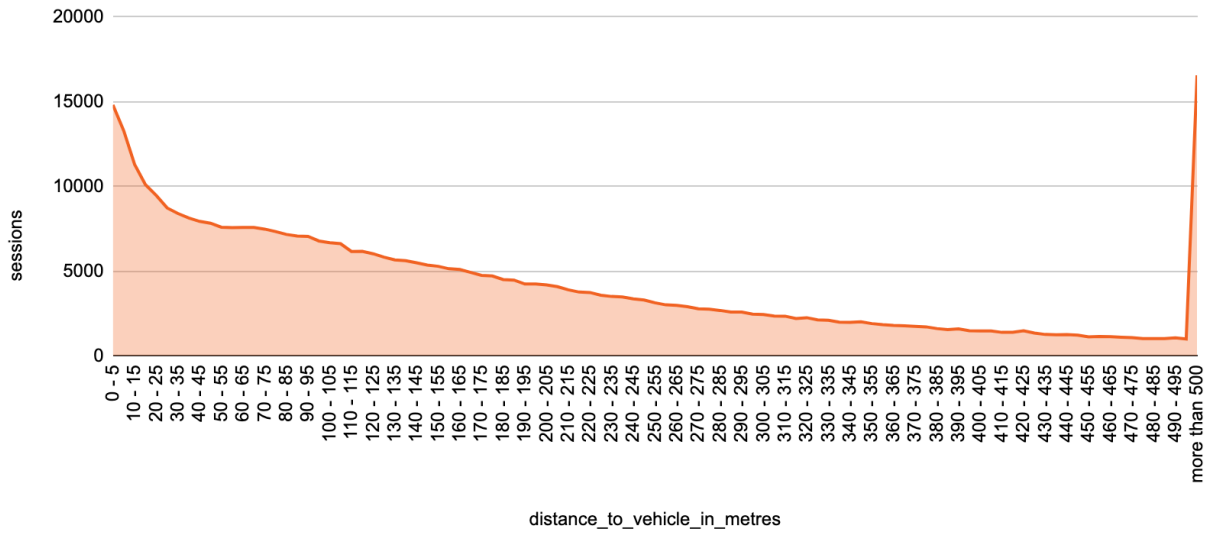
Fig 5. Trip destinations by neighbourhood

Neighbourhood	Trip count	% of Trips
Centretown	13,162	42.34%
Byward Market	8,044	25.87%
Sandy Hill	5,248	16.88%
Glebe - Dows Lake	2,857	9.19%
Lowertown	618	1.99%
West Centretown	540	1.74%
Old Ottawa South	310	1.00%
Old Ottawa East	276	0.89%
Hintonburg - Mechanicsville	11	0.04%
Carleton University	4	0.01%
Lebreton Development	4	0.01%
Vanier North	4	0.01%
Billings Bridge - Alta Vista	3	0.01%
Vanier South	3	0.01%
East Industrial	2	0.01%
Riverview	2	0.01%
Overbrook - McArthur	1	0.00%

4. Distance travelled from the initial e-scooter “find query” to the e-scooter (if available)

In **50%** of user sessions, riders had to walk no more than **130m** from the point where they opened the Neuron app to the location of the e-scooter.

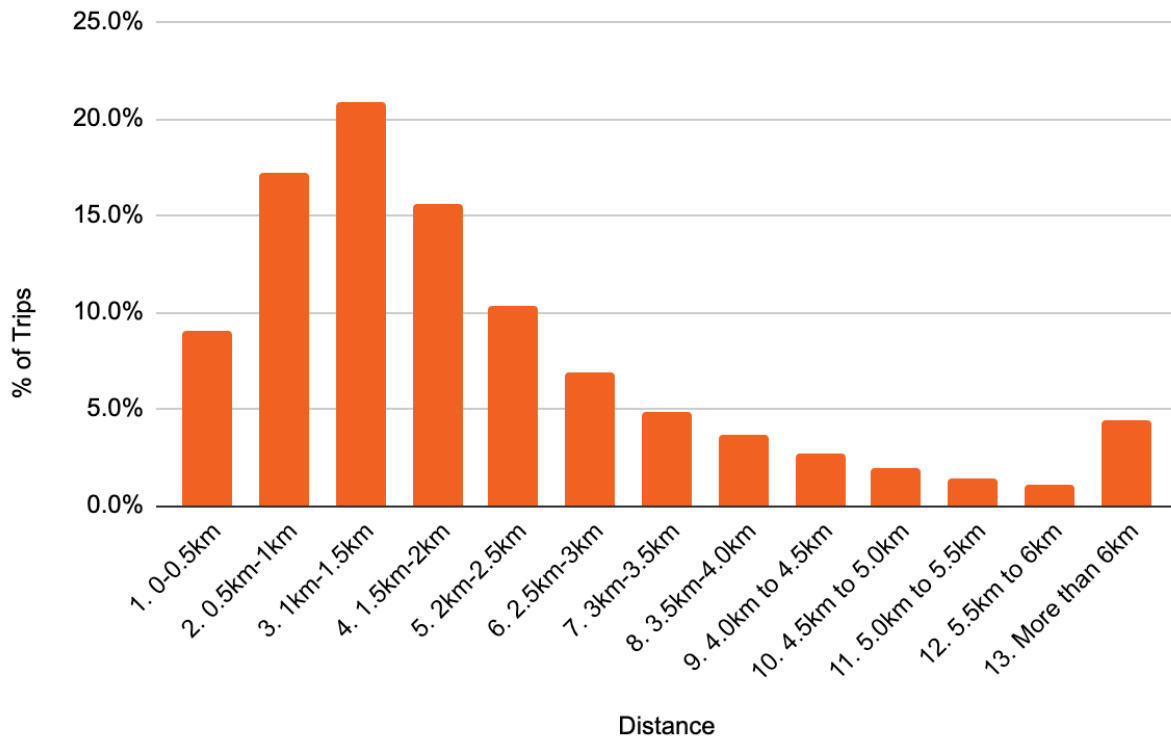
Fig 6. Distance to vehicle in metres for user sessions



5. Trip distance (average and distribution)

The average trip distance was **2.11 km**. Almost **21%** of trips were for journeys between **1-1.5 km** long.

Fig 7. Distribution of trip distance



6. Total trips for the reporting period

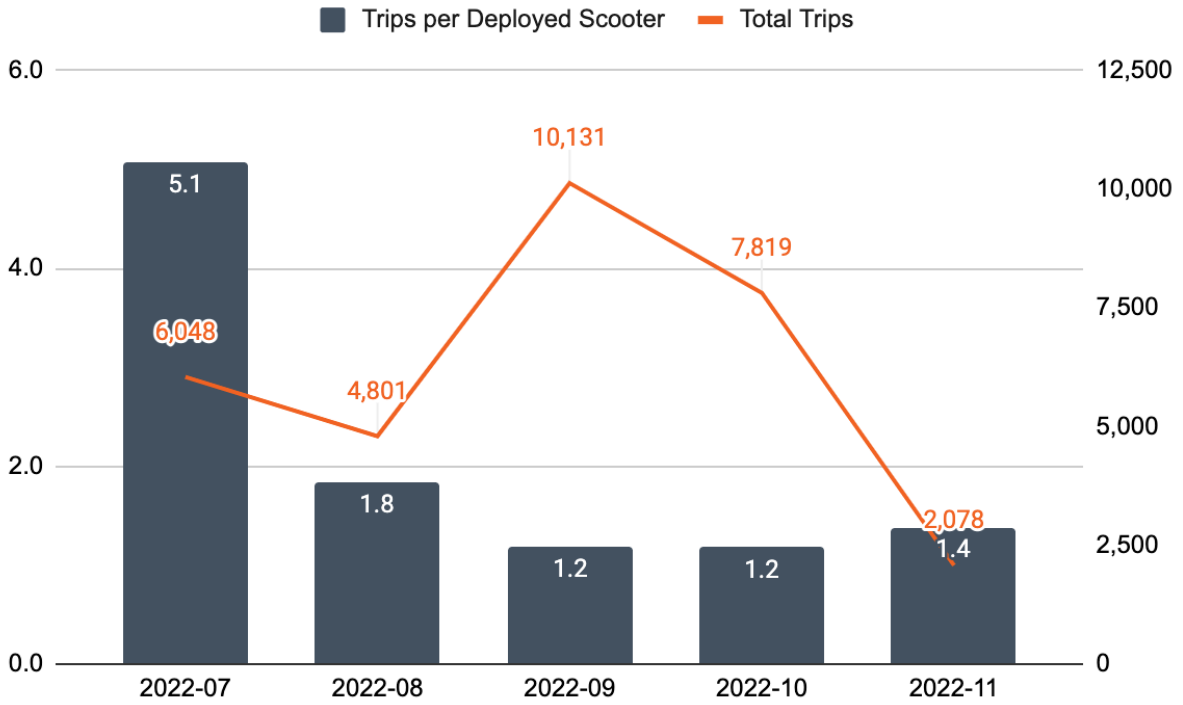
The total number of trips for the 2022 season was **30,878**.

7. Trip profile by month, day of week, time of day (total trips, trips per e-scooter)

Trip Profile by Month

September saw the most trips (**10,131**) accounting for roughly a third of all trips in 2022. Due to the relatively slow ramp up in fleet size, July had the highest ratio of trips per deployed scooter at **5.1**.

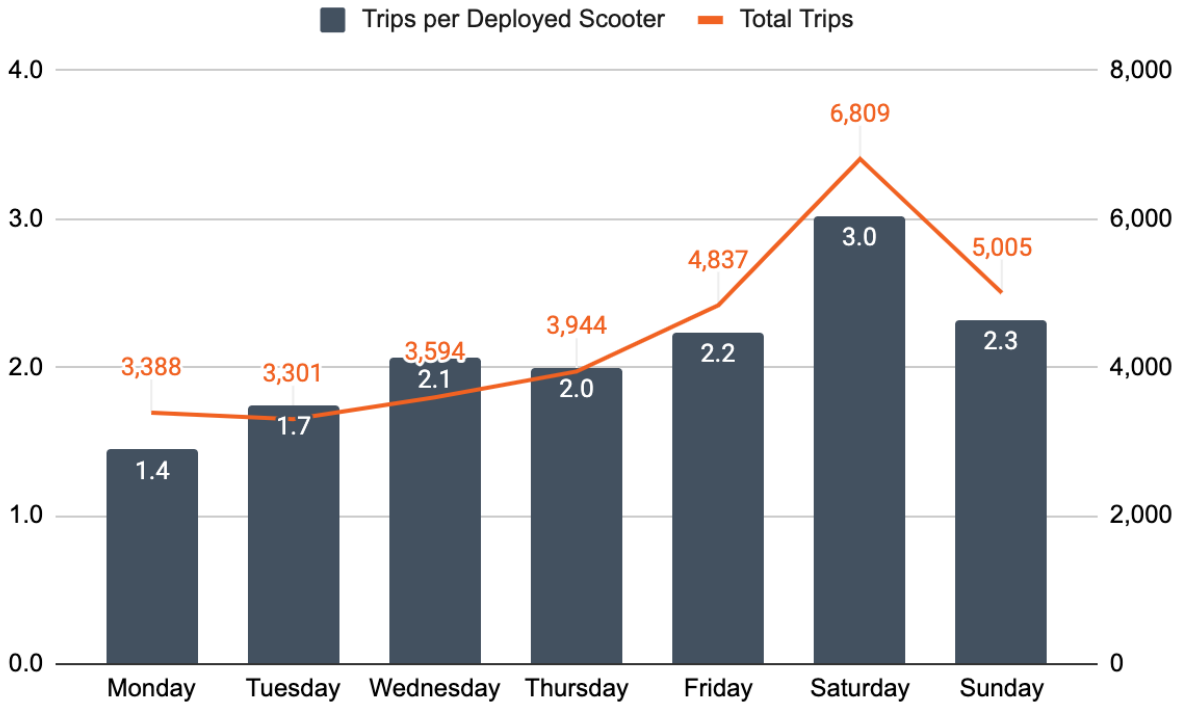
Fig 8. Total Trips & Trips per Deployed Scooter by Month



Trip Profile by Day of Week

Saturday was the best performing day, making up 22% of total trips along with having the most trips per deployed scooter at 3.0.

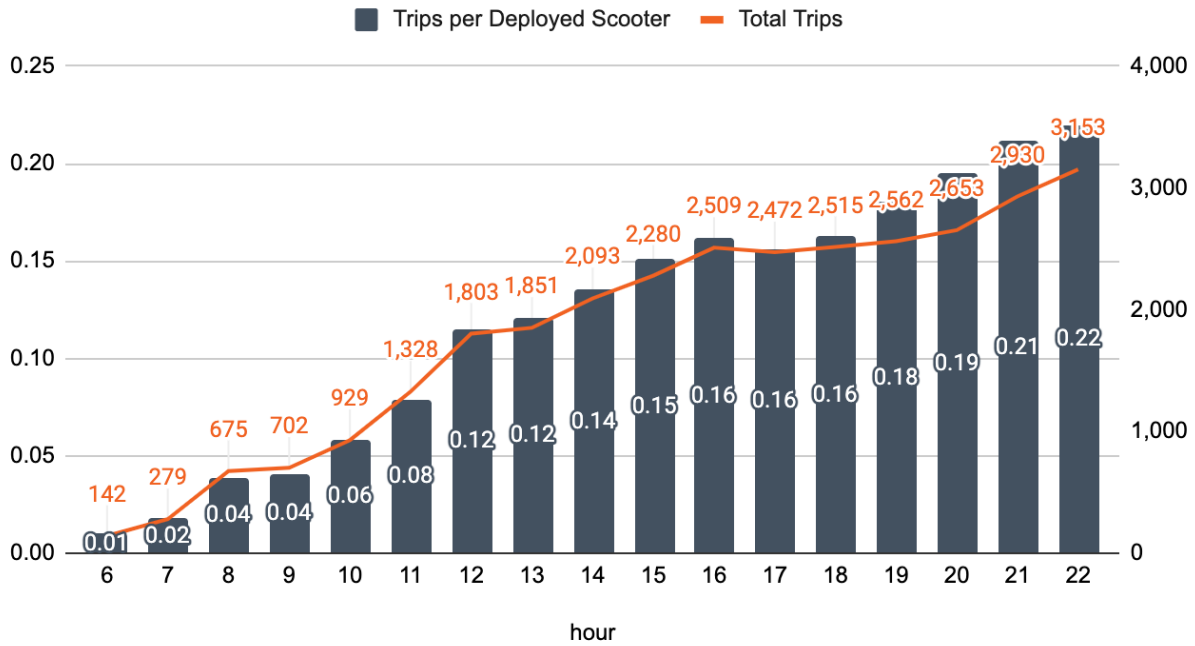
Fig 9. Total Trips & Trips per Deployed Scooter by Day of Week



Trip Profile by Time of Day

Trips steadily increased throughout the day with the lowest number occurring at 6am (**142 total**) and the peak occurring at 10pm (**3,153 total**) representing slightly more than **10%** of all trips.

Fig 10. Total Trips & Trips per Deployed Scooter by Time of Day



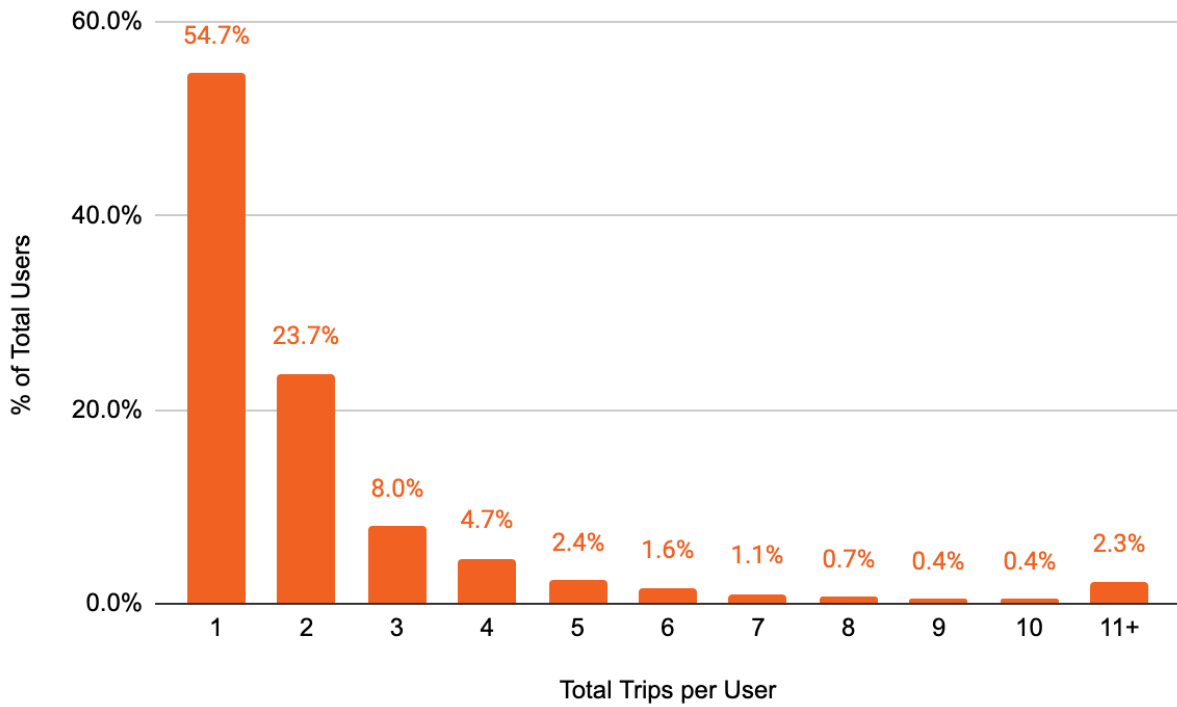
8. Number of unique riders for the reporting period

There were a total of **12,960 unique riders** who took at least one trip.

9. Number of trips per rider (average and distribution)

The average number of trips per rider was **2.0**. Below is a distribution of trips per rider where it is visible that almost half of all riders took more than one trip.

Fig 11. Distribution of Number of Trips per Rider



10. Number of riders using monthly passes

There were a total of **8 unique riders** who took at least one trip using a monthly pass.

11. Number of riders who paid on a per-trip basis

There were a total of **12,820 unique riders** who took at least one trip that was paid on a per-trip basis.

12. Number of reported comments and complaints (broken down by topic/reason)

This riding season saw **184** reported complaints, of which **98%** were due to misparked e-scooters. Below is a breakdown by reason.

Fig 12. Breakdown of Complaints by Reason

Bad Parking	Sidewalk Riding	Unsafe Riding	Riding in a Prohibited Zone
180	2	1	1

13. Number of reported injuries (broken down by verified/unverified and those requiring medical attention)

There were a total of **15 incidents** this season, **10** of which were unverified. Of the **5** verified cases, **3** of them required medical attention.

14. Daily average response times to address mis-parked e-scooters

The daily average response time to address misparked e-scooters was **8 mins**. A detailed breakdown can be found in the figure below.

Fig 13. Categorization of Source of Misparked E-Scooters & Median Resolution Time

Notes	# of Mispark Reported	Median Time to Resolve (min)
Bylaw Resolved	58	0:00
Impounded	1	1:00
Misparked	61	0:12
Not Reported through 311	49	0:05
Not Reported through 311- Resolved	29	0:00
Sent to wrong email	6	0:13
Grand Total	204	0:00

Bylaw Resolved & Not Reported through 311-Resolved	We never got a chance to fix
Misparked	We fixed in under 15 mins
Not Reported through 311	We fixed in 5 mins
Sent to wrong email	Even though the process wasn't followed, we still achieved 12 mins

15. Number of fines and/or suspensions issued

No riders were fined or suspended this season as there were no repeat offenders. However, Neuron did send out **75** educational emails in response to complaints educating and warning users on proper riding etiquette.

16. Incidents of theft and vandalism

Throughout the 2022 season, there were a total of **18** vehicles that went missing and **21** that were vandalized.

17. Summary of education and outreach activities – including the number of people reached throughout the various education activities

Throughout the 2022 season, Neuron conducted **3 ScootSafe events** where we interacted with the public (100+ individuals total) educating them about the program and safe riding habits. Free helmets are given away at these events along with coupon codes for individuals who complete our safety quizzes.

Additionally, Neuron scheduled ScootSafe ambassadors during peak times in high demand areas. These individuals are there to interact with the public and riders, answering any questions individuals may have as well as to look out for unsafe riding behaviour.

Lastly, throughout the riding season, we sent out several educational emails to our riders reminding them of the rules of the road as well as highlighting proper riding etiquette (see example below). The number of people reached with these emails exceeds **40,000**.



We've teamed up with our national safety partner, the **Traffic Injury Research Foundation (TIRF)**, to remind all riders to #ScootSafe with pedestrians and vulnerable road and path users in mind.

You'll notice some new device features this year. Our e-scooters are now equipped with our cutting-edge sidewalk riding detection technology as well as a 'warning noise' to alert pedestrians, especially those with vision loss, of an incoming vehicle. These innovations are designed to help improve overall safety for everyone, but please also do your part by riding responsibly!



Slow down & ring your bell when approaching or overtaking

Give way to pedestrians & mobility devices (such as wheelchairs)

Park responsibly, don't block the path or obstruct access areas

Watch our safer streets for all video series:



Ring your bell when you pass! Let others know you're near

Don't block the path! Please end your trip with care

18. GHG reporting (and how it is assessed)

Neuron estimates that **4,227 kg of CO₂e** were avoided through use of our devices in Ottawa. This is estimated by looking at (1) the total kms traveled on our devices, (2) the percentage of car trips replaced with Neuron, and (3) the normal emissions rate of a car.

19. Data evaluating any innovations piloted during the season

In 2022, Neuron implemented a restrictive parking model across Ottawa. This is an industry first initiative within Canada. As a direct result, we saw a **24% decrease** in reported “bad parkings” in 2022 compared to 2021’s free floating model (from **0.91%** of trips down to **0.69%** of trips).

Through collaboration with the City we identified over 300 compliant parking stations across our service area that met requirements. Neuron uses High Accuracy Location Technology (HALT) which requires users to end their trip within an approved parking zone. When a user attempts to end a trip outside of these approved parking zones, they receive an in-app notification and voice prompt from the E-Scooter which will redirect them to the approved zone so they can complete their trip.

Additionally, Neuron implemented sidewalk geofences across the entire operating area. This innovation cuts the engine as well as verbally and visually informs riders that sidewalk riding is against the riding rules whenever riders enter a sidewalk. As a result, this year, Neuron only received **2** sidewalk riding complaints, which equates to **0.006%** of total trips.

20. Any additional data which the City may request to assess the pilot program

Not applicable. The City did not request any additional data.

Conclusion

In summary, Neuron has completed a successful 2022 season. This was demonstrated by our ability to mitigate sidewalk riding through High Accuracy Location Technology (HALT), a reduction in overall mispark complaints through a fully restrictive parking model, and operationally achieved an 8 minute resolution time. Neuron is appreciative of the opportunity to have collaborated with the City of Ottawa on the implementation of another E-scooter season and is looking forward to a potential 2023 season.