

Neuron Mobility in Waterloo

Planning & Works Committee

April 4, 2023



Region of Waterloo

neuron



About us

Neuron's mission is to partner with municipalities to connect people and places in a safe, convenient and fun way.

Neuron operates more than 14,000 e-scooters and e-bikes across Canada, Australia, New Zealand, and United Kingdom.

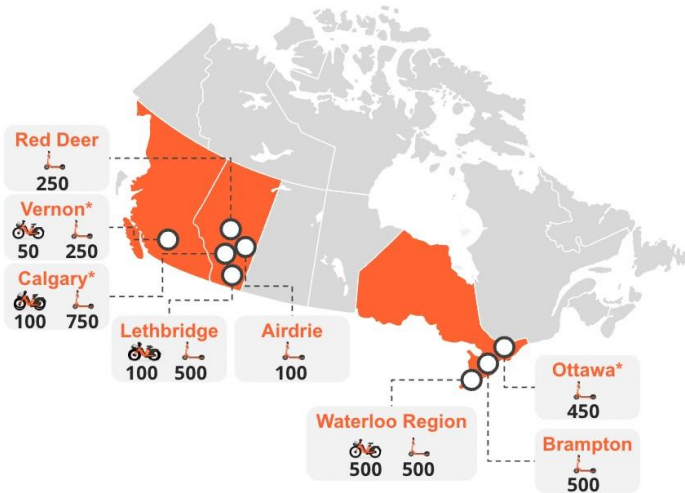
Neuron shares insights on how Neuron e-scooters are used to help cities become better connected, economically prosperous and more liveable.

Innovate hand-in-hand with our local partners, particularly when it comes to safety. The world's first *Helmet Lock*, *Topple Detection*, and geofencing all resulted from genuine collaborations with city councils.



Neuron Experience in Canada

Neuron has licenses to operate more than **4,000 devices in Canada**, spanning eight cities.



An asterisk (*) indicates that our original operating permit has been renewed on at least one occasion.



245,000+
Unique Users



3,356,000+
KM Travelled



40+
ScootSafe Event Held



70%
Of trips result in a purchase



45%
Of rides replace a car trip



1,465,000+
Unique Users



77%
Trips rated 5/5



\$26M
Spent at local business

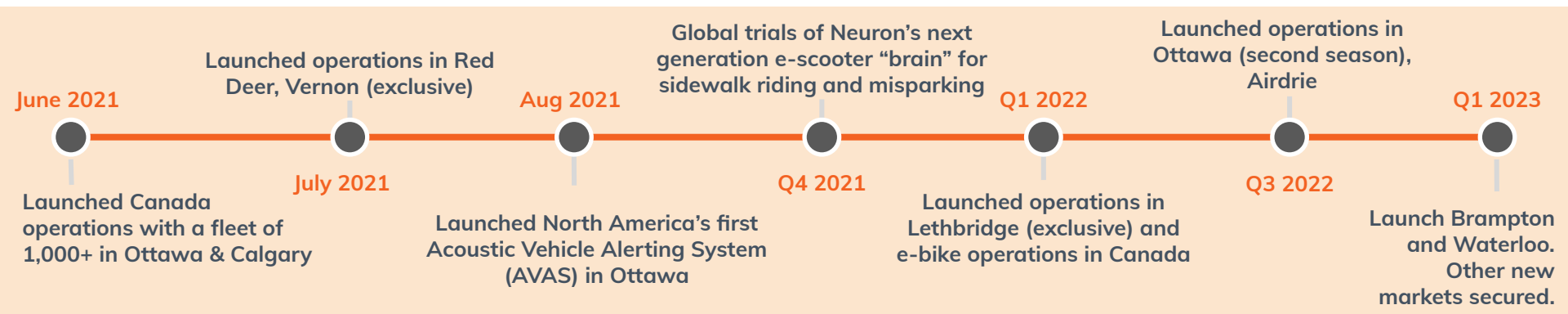


250+
Jobs created



221,000
KG of CO2 averted

98% of users believe Neuron has created a positive in their cities



Shared Rides, Shared Wealth in Canada

Partnering with cities to build a more prosperous and sustainable future

Neuron Impact in Canada



Accelerating the local economy



Expanding affordable transport options



Supporting sustainable Urban living



Investing in future growth

Impact in Figures

12% of trips would not have happened if a Neuron e-scooter was unavailable

70% of trips result in a direct purchase from a local business

\$27 spent at local businesses by Neuron riders per e-scooter trip

\$11,300 spent at local businesses each year by Neuron riders per e-scooter deployed

\$26M spent at local businesses each year by Neuron riders in our six Canadian cities

\$13M spent at local businesses each year by Neuron riders in Calgary

24% of trips support the night-time economy (10pm to 6am)

45% of trips replace a car journey

98% of users believe Neuron has created a positive impact on their city

According to our rider survey:

70%

of e-scooter trips resulted in a direct purchase from a local business

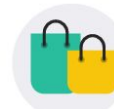
12%

of trips wouldn't have happened at all if an e-scooter hadn't been an option

57%

of riders spent more than \$10 during their most recent trip

Where our riders spend their money*:



31%
General shopping



33%
Restaurants, bars and cafes



18%
Entertainment and recreational venues

Why our riders use our e-scooters*:



35%
Commuting to work or study



15%
Connecting to public transport



26%
Running errands such as shopping



81%
Leisure and recreation

* Respondents could select more than one option

Region of Waterloo Rates

- \$1.15 to unlock - 0.35c a minute
- 3- Day Pass: \$24
- Weekly Pass: \$33
- Monthly Pass: \$89

Concession Passes



Low Income Individuals

50% off Monthly Pass for Affordable Transit Program members



Seniors Pass

50% off Monthly Pass for seniors aged 65+, Veterans Transit Pass, recipients of OAS/ GIS Allowances
























Student Pass

30% off Monthly Pass for university & college students, UPass, ONE Card, GRT Term and College Pass holders

Safety: Neuron's Leadership in Technology

Neuron has led the way in safety innovation and continues to develop technology that will solve key industry challenges

2018	Swappable battery	2019	World's First Helmet Lock	Helmet Selfie	Geofencing Technology			World's First Voice Guidance	Scooter ID
									
					No parking zones	Dynamic speed restrictions	No riding boundary		
2020	Upright Parking Enforcement	Topple Device Alert	Downhill Assistive Braking	Follow My Ride	Emergency Dial (911)	Dynamic Geofences	Cognitive Reaction Game	Two Speed Selection	
									
2021	High Accuracy Location Technology (HALT)	Rapid Geofence Detection	Scoot Safe Academy	Parking Photo Audit	Acoustic Vehicle Alert System (AVAS)				
									

Neuron N3 E-scooter

Scan to Report using QR-code

Features pioneered by Neuron that allows the public to scan N3's QR code to quickly lodge a report (no app required)

Always-On LED Lights & 360° Reflectors

All-round reflectors and always-on front and rear LED lights enhance visibility. Rear light flashes during braking

World's First Helmet Lock

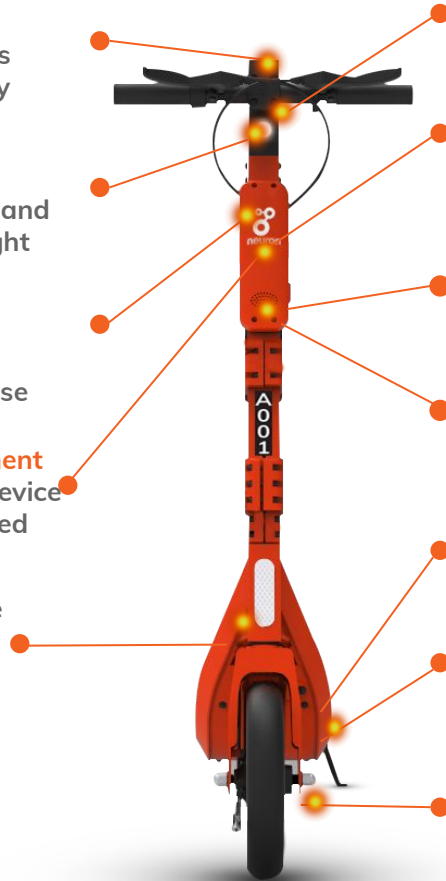
All N3s come with an integrated helmet locking mechanism to maximize helmet use

Topple Alert & Upright Parking Enforcement

Alert our operations team of a toppled device and ensures device is upright when parked

Safety Orange

The N3 is coated with Safety Orange, the colour of traffic cones to ensure conspicuousness on the road



Raised Lettering Stickers

Assists individuals with impaired vision in contacting our customer support team

IoT Box

Houses Neuron's industry-leading technologies such as the 10cm accuracy locational technology (HALT) and the <1s rapid geofence detection (RGD)

Scooter Speaker

Used for customised voice guidance and to emit continuous sounds for the Acoustic Vehicle Alert System (AVAS)

Multilingual Voice Guidance System

Provides 'Just-in-Time' safety instructions to the rider via an on-board speaker in multiple languages.

High-Grip 8.3" Footboard & 11" Wheels

Enhance stability and accommodate side-by-side foot positioning for improved safety

Swappable Battery

Allows a depleted battery to be changed within seconds

3-independent Brakes

Independent mechanical brakes in the front and rear wheel hubs paired with a regenerative brake in the motor hub which is automatically applied to avoid excessive downhill speed

Neuron E-bike

Smooth Acceleration

The electric motor accelerates smoothly and safely.

Voice Guidance System

Provides contextual safety messages to users during the ride that do not surprise or distract them.

Headlight

A bright headlight enhances visibility and low-light navigation.

Bell

Equipped with a bell to alert fellow road users and pedestrians.

App-Controlled

Integrated Helmet Lock

Equipped with an integrated helmet locking mechanism to maximise helmet use.

26" (660mm) Solid Wheels

Large, shock-absorbing wheels allow riders to navigate road imperfections with ease.

Kickstand

Enhances stability by ensuring both wheels remain on the ground at all times when parked

Swappable Battery

The battery on the EB-1 is field-swappable, allowing a depleted battery to be changed within minutes.

Adjustable Padded Seat

An easy-to-use mechanism allows riders to adjust the seat height to their preference.

Always-On Red LED Rear Light

Visibility is enhanced by an always-on rear light which flashes during braking.

360° Reflectors

Night visibility is enhanced by all-round reflectors.

Mechanical & Regenerative Brakes

Independently controlled dual mechanical braking system capable of safely bringing the device to a complete stop
A regenerative brake in the rear wheel provides additional stopping power

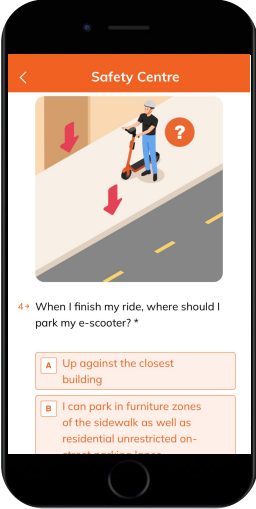
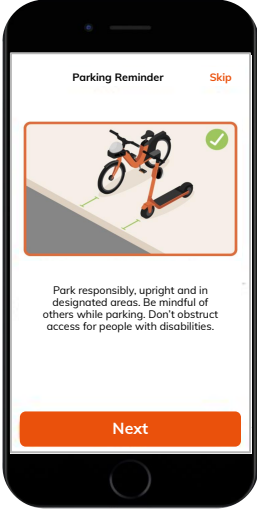


Getting Ready to Ride

User sees device

User starts trip

User ends trip



Hang tag

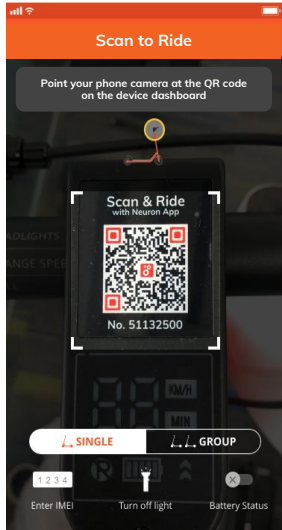
On-boarding video - how to park

In app reminders

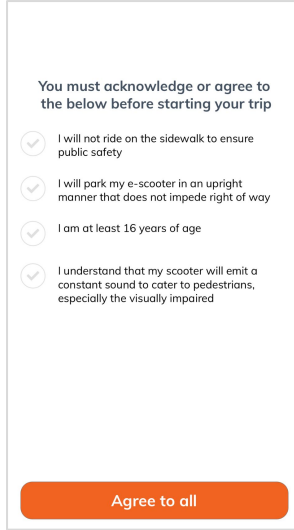
Quizzes

End trip parking guide & User Incentivisation & Penalization (if applicable)

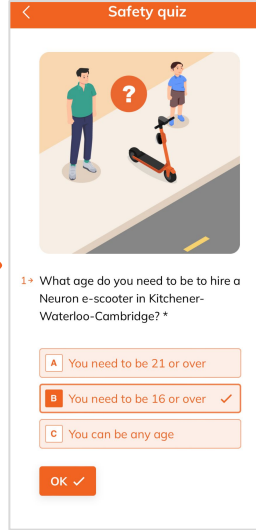
Renting a Neuron device



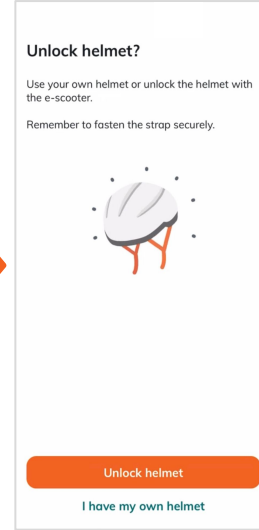
Users scan a device to start riding



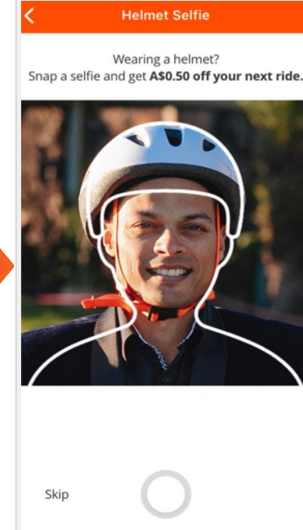
Users must acknowledge and agree to abide by the local riding rules



Users must complete pre-ride pop quiz

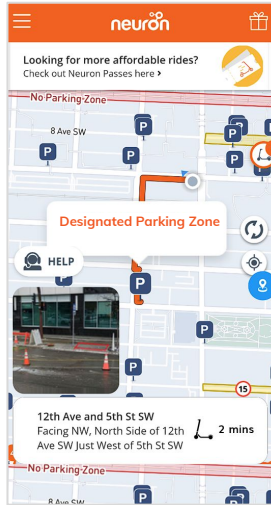


Prompt for helmet unlock

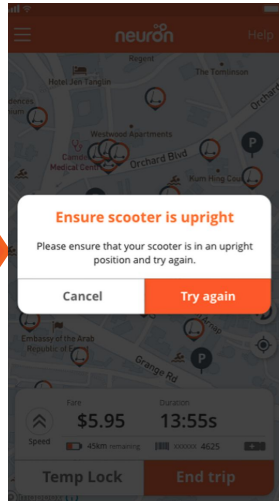


Incentivized Helmet Selfie

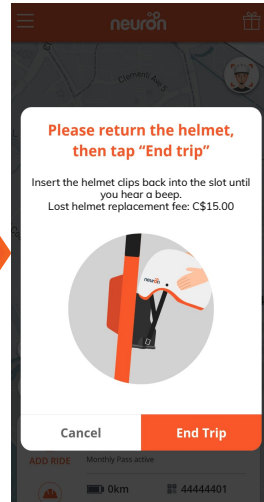
Ending a trip



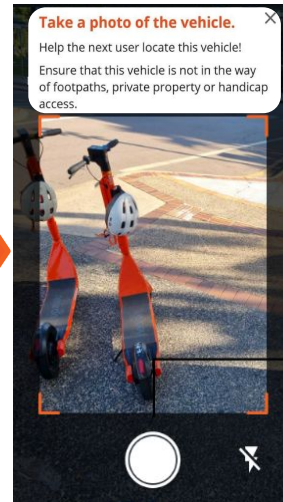
In-app navigation routing user to the closest parking station



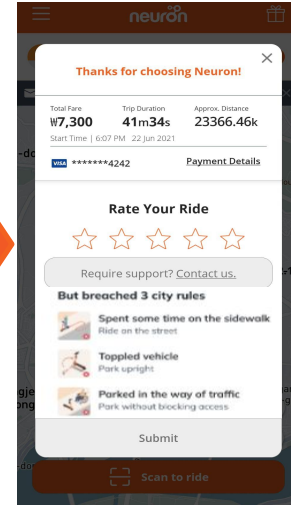
Upright parking enforcement ensures scooter is upright while parking



Users are prompted to return the helmet at the end of the trip in order to ensure helmet availability at all times



Request for End Trip photo



End of Trip Summary and Report

Canada's First Acoustic Vehicle Alerting System (AVAS)

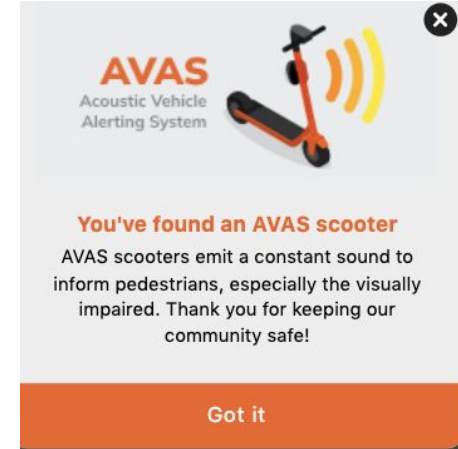
Neuron is the **first operator to have deployed** this feature on the streets of Canada

An industry innovation pioneered by Neuron, AVAS was designed and trialled in collaboration with the City of Ottawa in 2021 operating season, which became a standard for all operators in 2022.

Trial survey showed that **85% of the community noticing the AVAS sound and agreeing that enhances safety for the community.**

AVAS will be deployed on 100% on Neuron's e-scooter fleet upon launch.

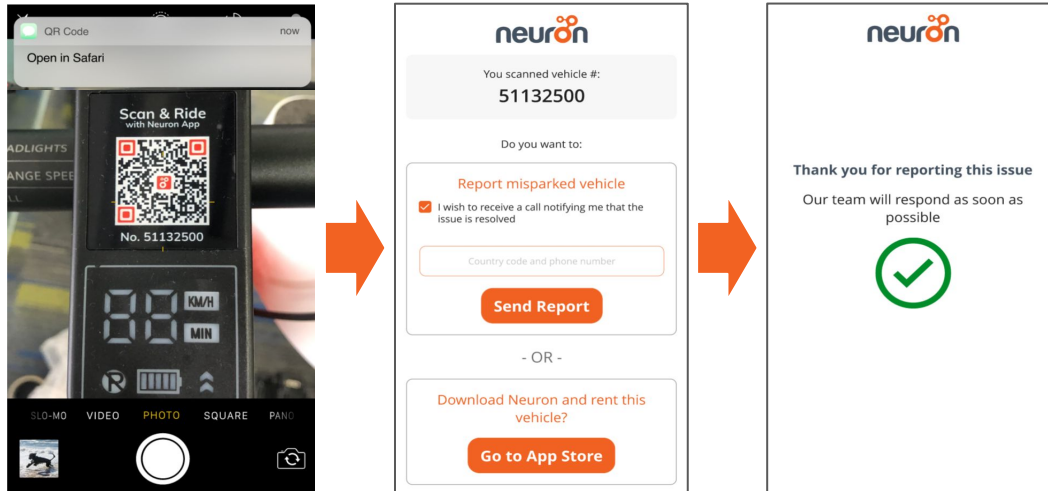
AVAS pop-up



North America's first accessible QR code reporting for the general public

A scannable QR code prominently and consistently placed on the device, and marked using high contrast lettering

Neuron's Scan to Report for General Public



Rider rules

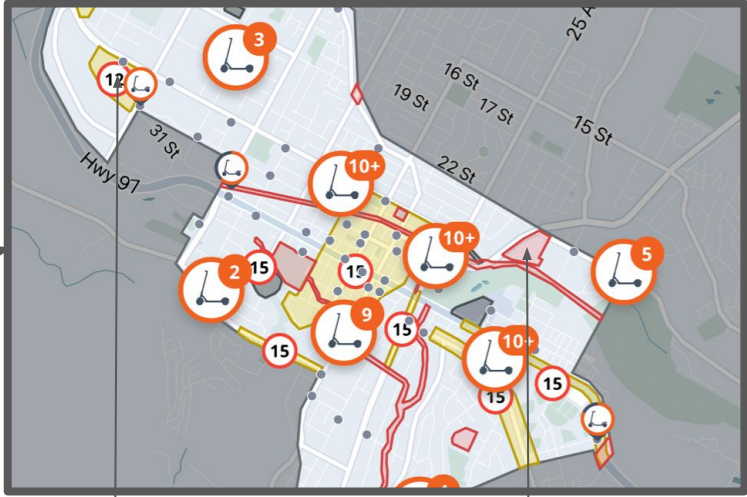
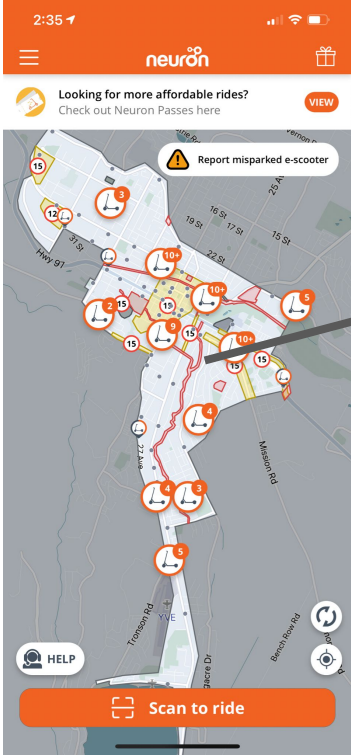
- Framework to educate and encourage good riding behaviour
- If a rider breaches local regulations, terms of service or other agreed conditions, penalties can be imposed
- Provide customized warnings based on violations and can employ account suspensions or have users go through online education or attend ScootSafe events before suspensions lifted
- Three strike policy, which can lead to account termination after three violations

Sidewalk detection



- Neuron's High Accuracy Location Technology (HALT) can detect an e-scooter's location to within centimetres, making it at least 50 times more accurate than the average GPS-based location system currently available
- Rapid Geofence Detection (RGD) triggers the e-scooter to respond to a geofence almost immediately

Utilizing geofence technology to control speed, parking and riding areas



Slow riding zone

No parking & No riding zone

Thank you.

Questions +
Further Discussion

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