

neuron



Prepared for Mississauga City Council

June 2022

About Us

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

We currently operate more than 15,000 e-scooters and e-bikes across Canada, Australia, New Zealand, United Kingdom and South Korea. In Canada, we are currently present in Ottawa, Lethbridge, Calgary, Red Deer and Vernon.

We 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.

We share insight on how our e-scooters are used to help make cities better connected and more liveable.

7.8



How we work with cities to enhance connectivity while ensuring safety is a priority

- Neuron works closely with City staff and community stakeholders to assess connectivity points that align with transit stops/stations and active transportation pain points (e.g. long walking distances from residential areas to a grocery store)
- Neuron's commitment to safety is demonstrated through our innovative technologies such as geofencing, slow-start riding, training requirements for first-time users, helmet lock, as well as the overall design of our devices
- Neuron services come at no cost to a municipality

7.8



Neuron national impact for 2021

1.2 million km

Total trip distance over the past season

88%

of users believe Neuron has created a positive impact for the city

62%

of users made a purchase at either the start and/or the end of their most recent trip

80%

of users said they use e-scooters to visit restaurants/cafes and explore the city

44%

of users use e-scooters to commute

46%

of all Neuron trips replaced a car trip

7.8



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	
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		Dangerous Riding Detection		Safety Center		Parking Photo Audit		Acoustic Vehicle Alert System (AVAS)		ID verification				



Helmet Innovation

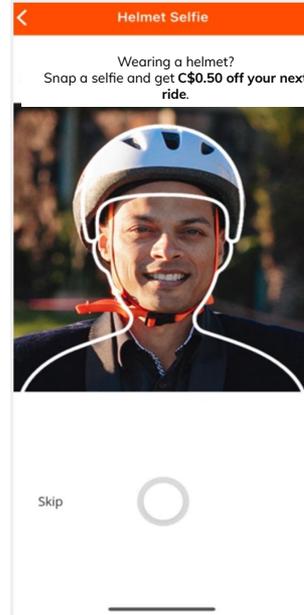
World's First Helmet Lock (2019)

Bluetooth integrated and tested over 100,000 trips in Canada alone



Helmet Education & Helmet Selfie

Reminders across user journey & integrated helmet selfie prompt to improve compliance



Helmet Safety Awareness Week

A national inaugural multi-channel campaign launched across our cities



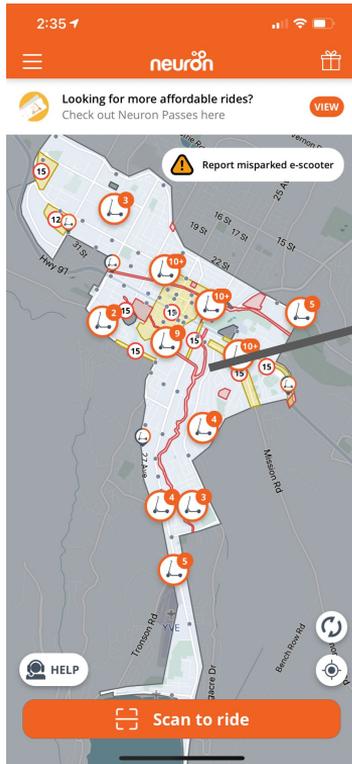
Over **50,000** helmet selfies submitted since the launch of our operations in Canada in 2021

#ScootSafe events

- Held across our cities, #ScootSafe events are staffed by Safety Ambassadors that help to educate riders and the general public about safe e-scooter riding and local riding rules
- All events include interactive one-on-one safety briefings and quizzes



Utilizing geofence technology to control speed, parking and riding areas



Slow riding zone No parking & No riding zone

The N3 Neuron e-scooter

Restricted parking

Can be selectively deployed in high-risk areas

Always-on front light

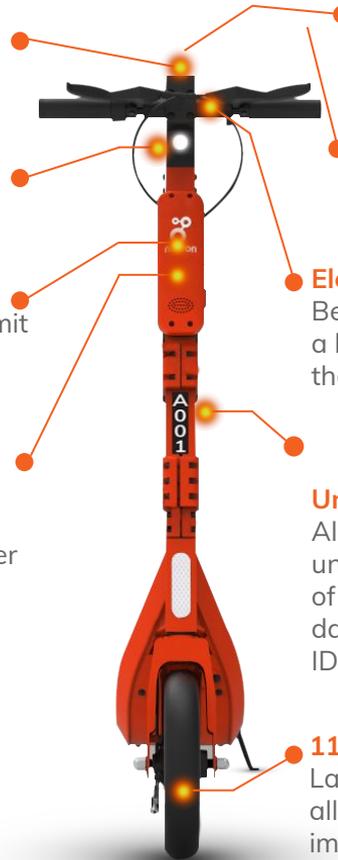
White front light visible at 200 candela from 10m distance

Real-time tracking

N3's proprietary IoT box transmit data in real-time

Live scooter self-diagnosis

Cutting edge sensors on N3 is able to identify some issues instantly and take the e-scooter out of operations



Remote locking

N3 can be remotely locked to prevent further rental instantly if required.

Geofencing

N3 features no-go zone, go-slow zone, and other geo-capabilities

Electronic bell

Bell that can be activated by pressing a button without requiring users to lift their hands off the handlebar.

Unique Identification number

All Neuron scooters feature font 100 unique identification number in front of and at the back of the scooter. All data collected is tracked using this ID.

11.5" wheels

Largest wheels in the market allowing users to navigate road imperfections with ease

The N3 Neuron e-scooter

Slower acceleration

Gradual pick-up in speed rather than the sudden jerk to acceleration that is typical with electric motors

Talking scooter

Built-in speakers to deliver just-in-time safety messages. When a user breaches a no-go zone, the user is notified immediately without the need to haphazardly check their phones. The voice also reminds users to check their brakes, wear helmets, and more.

3-independent brakes

N3 features 2 mechanical drum-brakes in the front (right lever) and back wheel (left lever) that is capable of stopping the scooter even when the battery is drained and 1 electronic brake located at the back wheel. When either brake-levers are squeezed, the back electronic brake is activated as well.

2-speed modes (slower speed for first time rider)

N3 has 2 built-in speed modes and will always start at a lower speed mode at the start of a ride

World's first helmet lock

All N3 comes with an integrated helmet locking mechanism that detects if a user has removed or returned a helmet, ensuring up to 95% safety equipment availability on our scooters at all times.

8.3" wide foot board

Allows side-by-side foot positioning which centralises user's centre of gravity and provides superior control and comfort

Always-on back light & 360% reflectors

Red rear light which blinks during braking. Visible from 10m distance. N3 has reflectors in all directions for night-time usage.



The Neuron EB1

7.8

Slower acceleration

Gradual pick-up in speed rather than the sudden jerk to acceleration that is typical with electric motors

Acoustic warning system

Built-in bell that can be easily operated during a ride

Front light

Front-light for added visibility and low-light navigation

Helmet lock

All Neuron e-bike comes with an integrated helmet locking mechanism that ensures up to 95% safety equipment availability on our bikes at all times.

26" pneumatic wheels

Large, shock absorbing wheels allowing users to navigate road imperfections with ease

Battery swapping

Enables bikes to be recharged on the ground with light electric vehicles rather than relying on an army of heavy vehicles to haul bikes back for recharging

Padded adjustable seat

Allows users to set the optimal height when riding thus improving overall stability and handling

Rear lights

Always on rear-lights that doubles as a brake light (blinks when braking)

Side reflectors

Front and back high-visibility side reflectors for improved illumination

Double elevated kick-stand

Kickstand design that ensures maximum stability during parking

Dual drum brakes

2 mechanical drum-brakes in the front (right lever) and back wheel (left lever)



Neuron has delivered a fully customised, safety-first programs 7.8 across Canada

World's first English/ French bilingual e-scooter

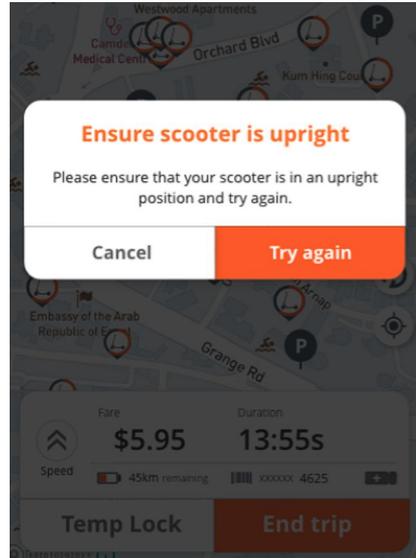


Thanks! Your trip has ended. See you soon! Remember to sanitise your hands



Si cette trottinette n'est pas stationnée correctement, veuillez nous appeler au 866-995-8770 ou numériser le code QR.

Canada's first upright parking enforcement



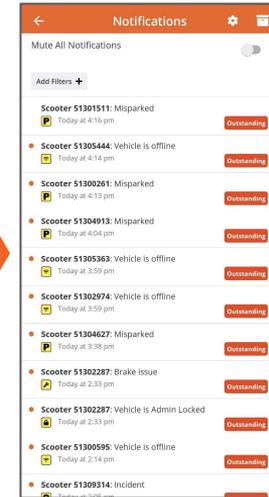
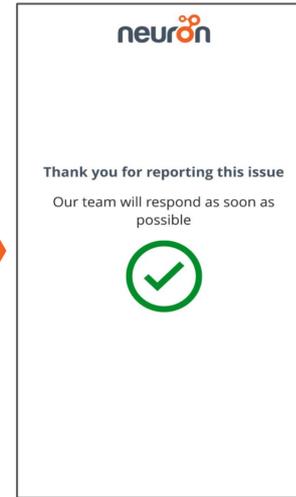
Canada's first integrated helmet lock



North America's first and only accessible QR code reporting for the general public 7.8

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

A screenshot of the Neuron app's report form. The form is titled "neuron" and displays "You scanned vehicle #: 51132500". It asks "Do you want to:" and provides two options: "Report misparked vehicle" (selected with a checkmark) and "Download Neuron and rent this vehicle?". The "Report misparked vehicle" option includes a checkbox "I wish to receive a call notifying me that the issue is resolved" and a "Send Report" button. The "Download Neuron and rent this vehicle?" option includes a "Go to App Store" button. There is also a field for "Country code and phone number".

Canada's first large scale sidewalk detection trial

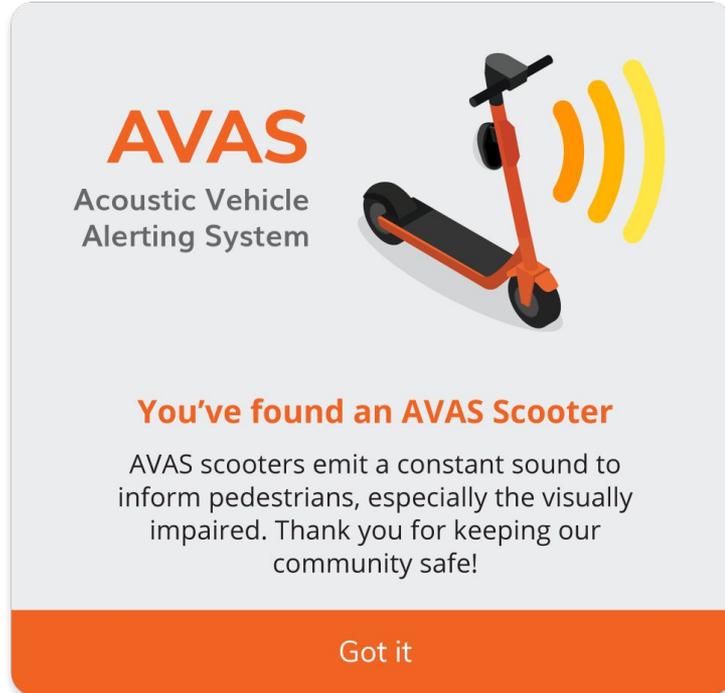
7.8



- 100% of Fleet; 100% city coverage in Ottawa
- Neuron's High Accuracy Location Technology (HALT) can detect an e-scooter's location at least 50 times more accurately than the average GPS-based location system currently available
- Rapid Geofence Detection (RGD) triggers the e-scooter to respond to a geofence almost immediately

North America's first and only Acoustic Vehicle Alerting System (AVAS)

7.8



AVAS
Acoustic Vehicle
Alerting System



You've found an AVAS Scooter

AVAS scooters emit a constant sound to inform pedestrians, especially the visually impaired. Thank you for keeping our community safe!

Got it

- Three month trial on 100 e-scooters in Ottawa
- Developed a dozen sounds and tested four on e-scooters throughout the three month period
- Neuron's AVAS project was the only large scale trial in Canada and that was 'always-on' and not restricted to a small geographic location

Introduction of Braille

Braille stickers on scooters with company name, email and phone number



Making riding rules clear

No Sidewalk riding stickers on scooters



Neuron's commitment to **sustainable operations** has driven a **range of industry-leading innovations**



- Neuron's proprietary N3 Scooters are designed to have a **24 month lifespan**; that is 2-5x longer than commercially available models (effectively **50%-70% lower supply chain carbon emission** compared to other operators)
- Neuron scooters employ a **modular design** which significantly reduces **wastage from operations & maintenance**
- **Battery swapping** operation rather than return and recharge. Neuron is operating a **100% battery-swapping fleet** which significantly reduces the reliance on heavy vehicles

Neuron climate pledge

Supporting municipal sustainability goals

- Committed to achieving net zero carbon emissions by 2040 by joining [The Climate Pledge](#), which is co-founded by Amazon and Global Optimism. This announcement builds on our sustainability commitments and certification of [global carbon neutral status](#).
- As part of the initiative, we will be regularly measuring and reporting our greenhouse gas emissions as well as implementing a range of decarbonisation strategies.
- Across our global operations, our rider surveys revealed that around 45% of journeys made on Neuron e-scooters have directly replaced trips that would otherwise have been made in a car. Since launching in 2016, an estimated 1,500 tonnes of CO2 have been saved from entering the atmosphere.
- Our distinctive orange e-scooters are designed and purpose-built for safe and sustainable operations, this includes the world's first battery swappable e-scooter, introduced in 2018. Their modular design allows them to be upgraded and refurbished throughout their life and last 2-5 times longer than many other e-scooters. At the end of their operational life the parts are reclaimed and recycled.

Thank you.

Questions +
Further Discussion

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neuron
Safe, convenient and fun

