Driving a Better Future

Impact Report 2023/24

neuron

Contents

Introduction

As cities continue to prioritise sustainability and smart mobility solutions, micromobility has played an increasingly vital role in shaping urban transportation.

In 2023 and 2024, our safety-orange e-scooters facilitated nearly 15 million trips, delivering substantial environmental, economic, and social benefits to the communities we serve. Our commitment to accessibility and inclusion has fostered a diverse ridership, and an increasing number of cities have embraced micromobility in order to achieve their sustainable development goals and net-zero ambitions.

Building on momentum from previous years, we have solidified our operations, focusing on highly regulated regions where cities prioritise safety, innovation, and sustainability. This approach has reinforced our position as Australia's leading and Canada's fastest-growing rental e-scooter operator. At the same time, we have remained focused on maximising the positive impact of our operations—driving sustainability, enhancing urban mobility, and delivering meaningful economic benefits.

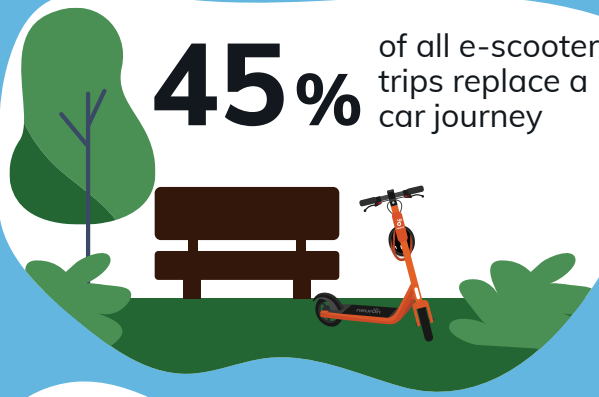
2023 & 2024 in Numbers

34 cities with e-scooters

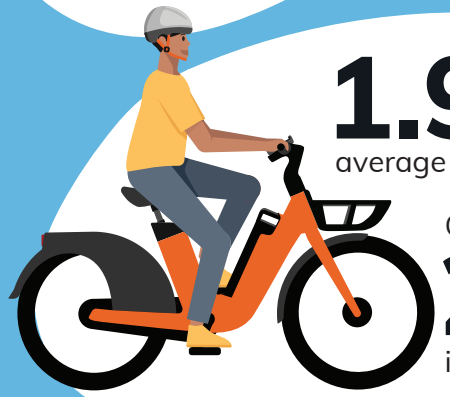
11 cities with e-bikes

14.9M rides

Over **27M** KM travelled



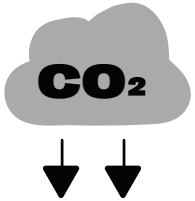
45% of all e-scooter trips replace a car journey



1.9KM average trip length

Over **2.2M** individual users

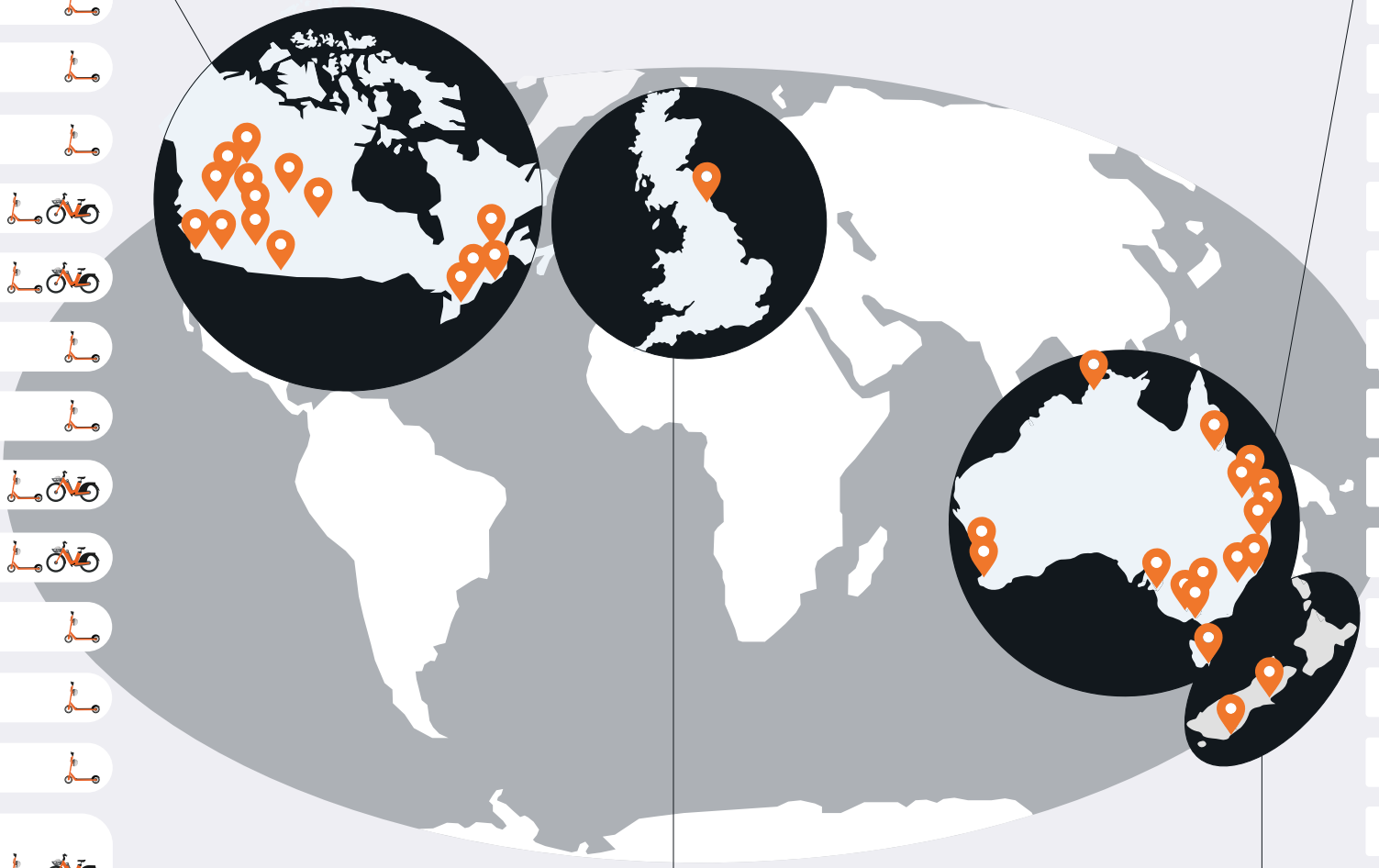
66% of rides resulted in a purchase



2,000 tonnes of CO_2 avoided by reducing car use

5% of users have a disability or mobility impairment

Neuron's Markets 2023 / 2024



Canada

- Airdrie
- Blackfalds
- Brampton
- Calgary
- Coquitlam
- Edmonton
- Lacombe
- Lethbridge
- Oshawa
- Ottawa
- Red Deer
- Regina
- Region of Waterloo
  Kitchener, Cambridge, Waterloo
- Saskatoon
- St. Albert
- Sylvan Lake
- Vernon

United Kingdom

- Newcastle

New Zealand

- Dunedin
- Christchurch

Australia

- Adelaide
- Ballarat
- Brisbane
- Busselton
- Bundaberg
- Canberra
- Darwin
- Frankston
- Hobart
- Melbourne
- Perth
- Rockhampton
- Sunshine Coast
- Townsville
- Wollongong
- Yeppoon

Our 2023 and 2024 Highlights

Sustainability

- Launched our new N4 e-scooter with 80% recycled aluminium, an industry first
- Recycled and reused more than 500 battery cells in 2023 and 2024 through our expanded second-life battery program
- Enhanced our recycling efforts with new initiatives and strategic partnerships
- Extended the life of our N3 e-scooters with a refreshed exterior, upgraded controller, pneumatic tyres and new phone holder

Safety

- Launched ScootSafe Vision, an AI-powered camera system to detect and tackle footpath riding
- Introduced Augmented Reality (AR) Parking Assistant to improve parking compliance
- Our online education platform ScootSafe Academy continues to grow with over 230,000 online sessions completed
- Hosted regular in-person ScootSafe events and ran global safety campaigns to educate riders and reinforce safe riding practices

Inclusivity

- Extended the Neuron Access program to all cities, offering low-cost concession passes to over 15,000 riders
- Partnered with universities to enable convenient, affordable commutes for students
- Conducted research to identify and remove barriers to micromobility, fostering more inclusive transport solutions for a wide range of demographics
- Collaborated with community groups and charities, raising awareness for important causes and providing free and discounted rides

Sustainability in Motion

Our Sustainability Strategy continues to help reduce Neuron's overall emissions across our manufacturing, operations, end-of-life and business functions. Our approach has always been to collaborate with cities and adapt to their evolving needs while, helping them achieve their environmental goals.

In 2023 we launched our latest vehicle, the N4 e-scooter, which is constructed using 80% recycled aluminium. We also refurbished and upgraded our N3 e-scooter and continued to focus on responsible recycling and second-life processes. We remain certified Carbon Neutral and are on our way to becoming Carbon Negative.

The Lifecycle of our E-scooter

For each of our vehicles, we conduct Life Cycle Assessments (LCAs), they give us and our riders a clear picture of the average grams of CO_2e emissions per kilometre ridden. In 2023 we launched our N4 e-scooter and conducted an LCA finding the N4 e-scooter has a total carbon impact per passenger of just 22.54 g CO_2e per kilometre. This includes use phase emissions1. The N4 e-scooter contains 11.8% less embodied carbon than the N3 e-scooter. The reduction is due to the frame and body of the N4 being constructed using certified 80% recycled aluminium, which is an industry first. This significantly reduces the manufacturing footprint of the vehicle.

Repurposing and Recycling

Neuron responsibly handles and recycles end-of-life devices and its components through partnerships with a range of organisations, including LiCycle in Canada and EcoCycle in Australia. We keep 99% of our retired devices out of landfills. This is accomplished through our recycling partnerships and by salvaging all usable parts from e-scooters that are beyond repair.

Our Cells Have a Bright Future

Our lithium-ion batteries continue to be an important element of our Sustainability Strategy, and we are committed to ensuring that healthy cells from retired batteries are reused in a second-life application. We continue our partnership with Sustainable Lithium Cells Australia, in 2023 and 2024 they collected and salvaged more than 500 batteries.

Our recovered cells have been used as off-grid storage for rural properties, for repairing and upgrading old power tool batteries, for prototyping hobbyist Electric Vehicle and Plug-in Electric Vehicle projects such as solar chargers, building power banks and for use in robotics classes.

E-Scooter Refurbishment Project

To extend the lifespan of our devices, we launched a wide-ranging refurbishment initiative that upgrades our N3 e-scooters.

The N3 Plus e-scooter has a refreshed exterior, an upgraded controller, and pneumatic tyres for an improved riding experience. It also includes a new phone holder. Our N3 and N4 e-scooters have been designed to set the standard when it comes to water resistance, with IPX7-rated batteries designed to reduce any environmental harm in the unlikely event they are dumped in a waterway.

Global Sustainability in Numbers 2023 & 2024

45% of all trips replace a car journey

Our rides replaced **6.6 million** potential car journeys

Over **27 million kms** of vehicle trips replaced

2007 tonnes carbon emissions avoided globally equivalent to **2.4 million litres** of fuel

***2097 kg** NOx avoided

***123 kg** particulate matter (PM10 Emissions) pollution avoided

More than **500 battery cells** in second-life applications

*This is based on EURO 5 method which provides a global perspective

Expanding Access and Inclusivity in Micromobility

Neuron is dedicated to making micromobility more accessible and inclusive, ensuring that shared e-scooters and e-bikes serve a diverse range of riders. By offering targeted programs, forging community partnerships, and leveraging research, we help remove barriers to transportation and support greater mobility for all.

Neuron Access

In each city we identify community groups and organisations that could benefit from concession passes, offering free or discounted rides through our Neuron Access program. From veterans, front-line workers, jobseekers, to those with mobility issues and disabilities, our vehicles help more people move around their city.

In 2023 and 2024, the Neuron Access program featured in all our operational cities, supporting over 15,000 riders, representing hundreds of thousands of kilometres on Neuron vehicles.

Student Commute

Students, who are increasingly environmentally conscious, continue to embrace e-scooters for their convenience and affordability. Neuron partners with universities to facilitate commutes directly into campus grounds. Geofencing is implemented to ensure e-scooters are ridden and parked correctly while regularly incentivising riders to learn about the riding rules through Neuron's online ScootSafe Academy and in-person ScootSafe events, which are held throughout the year, including during student orientation weeks.

Enabling student commutes in the Region of Waterloo

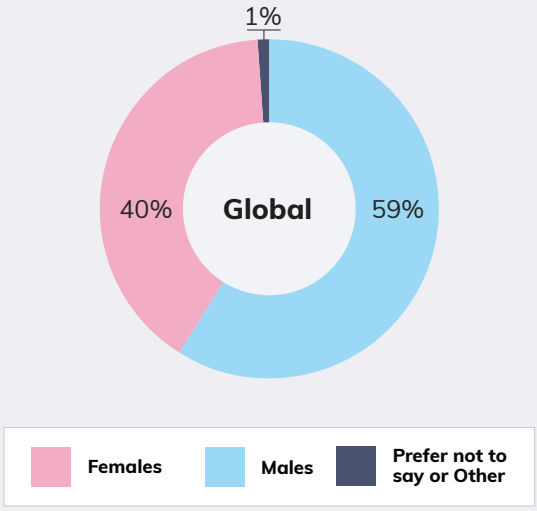
In August 2023, Neuron expanded its service area in the Region of Waterloo to include the University of Waterloo, Wilfrid Laurier University and Conestoga College. Over half of our riders in the region are aged between 16-24 and many trips start and end at one of the universities. It is clear the thriving student community is becoming significantly reliant on e-scooters for their daily commute.

Bridging the Gender Gap

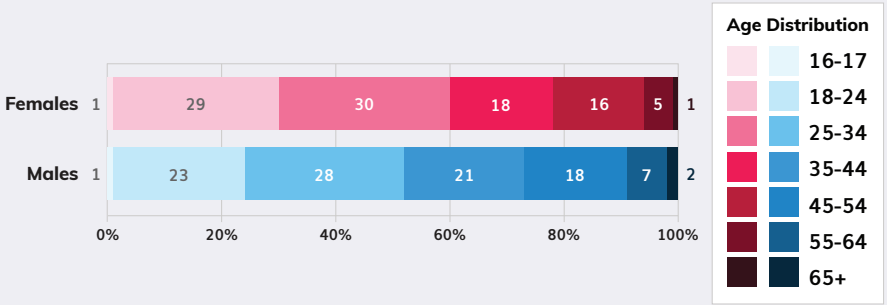
Across all our cities worldwide, we remain committed to providing an inclusive and accessible transportation solution, with a strong focus on removing barriers to adoption. Our 2023 report, Bridging the E-Scooter Gender Gap, analysed how e-scooter adoption, usage, and perception differ between men and women.

Survey data highlights a consistent gender gap across our markets, with riders split 59% male, 40% female, and 1% other or preferring not to say. Advancements in e-scooter design and regulation in recent years have helped shift perceptions, challenging the notion that e-scooters are just "boys' toys." Notably, a greater proportion of young women (16–34 years) are now actively choosing to ride e-scooters compared to their male counterparts (60% vs. 52%). This research offers valuable insights into how cities can create safer, more inclusive micromobility programs for everyone.

Gender breakdown of Neuron's riders



Age distribution of female riders



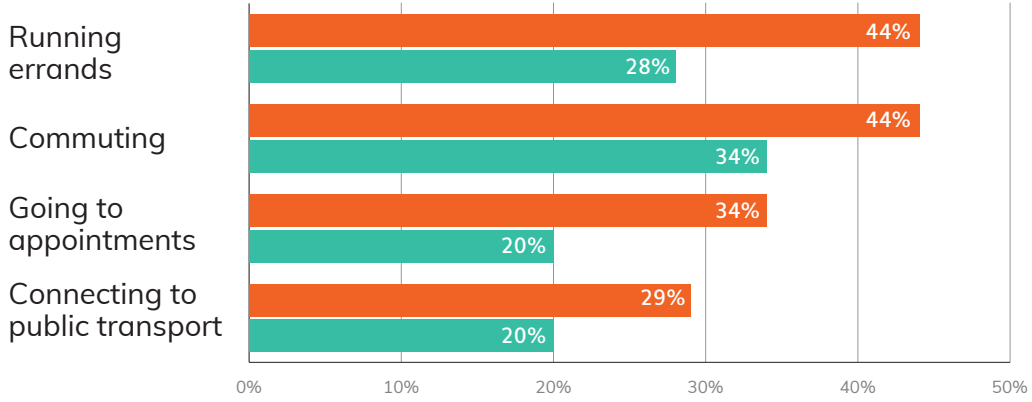
Supporting Those with a Disability or Mobility Impairment

Our e-scooters play a valuable role by providing a reliable transport option for daily commutes, particularly for the 5%-8% of Neuron riders who have a disability or mobility impairment. Our research, which includes findings from Neuron's global rider surveys, highlighted how rental e-scooters have significantly improved their urban accessibility, helping them make trips they would not otherwise have made (22%).

Riders with a disability or mobility impairment were more reliant on e-scooters than the average of all riders for purposeful journeys like running errands, commuting, going to appointments, and connecting to public transport.

To further support a wide range of demographics, Neuron also offers cities the ability to introduce a seated e-scooter variant which comes with a luxuriously padded seat and a shortened handlebar stem for added comfort and ergonomics. The seated e-scooter can further support those with reduced physical mobility, as well as older, less mobile riders who sometimes steer away from using the city's rental e-scooter service.

Riders with a disability or mobility impairment are more reliant on e-scooters:



Charity and Community Partnerships

Neuron partners with a range of community groups and charities in cities around the world. Through these partnerships, we help bring awareness to their causes and also provide support through free and discounted e-scooter and e-bike rides for their staff and the people they support.

Supporting neurodivergent communities in Canada

Neuron partners with Lake Ridge Community Support Services (LRCSS), a highly respected not-for-profit that supports people with autism and intellectual disabilities. Part of this involves Neuron providing free passes to LRCSS and its clients.

The partnership also aims to gain insight from LRCSS to help make shared e-scooters more accessible to neurodivergent communities. some of whom may face challenges with traditional mobility. This ensures more people can benefit from e-scooters, which are a sustainable and convenient mode of transport.

Helping to eradicate homelessness

Neuron partnered with Launch Housing to provide free e-scooter trips for its workforce of over 400 caseworkers and staff across 15 locations in metropolitan Melbourne. In addition to providing complimentary transport for their outreach efforts, Neuron also helped raise awareness and funds to tackle the problem of homelessness in the city.

In July 2024, Neuron teamed up with Launch Housing for a series of guided e-scooter tours during the Open House Melbourne weekend to highlight the cause.

Enhancing E-Scooter Programs Through Technology

Neuron is leveraging technology and data-driven insights to enhance safety, improve parking compliance, and support the integration of micromobility into city transport networks. By continuously refining our technology and collaborating with city planners, we are driving smarter, more sustainable, and more accessible micromobility solutions for the future.

Tech-Driven Solutions for Safety

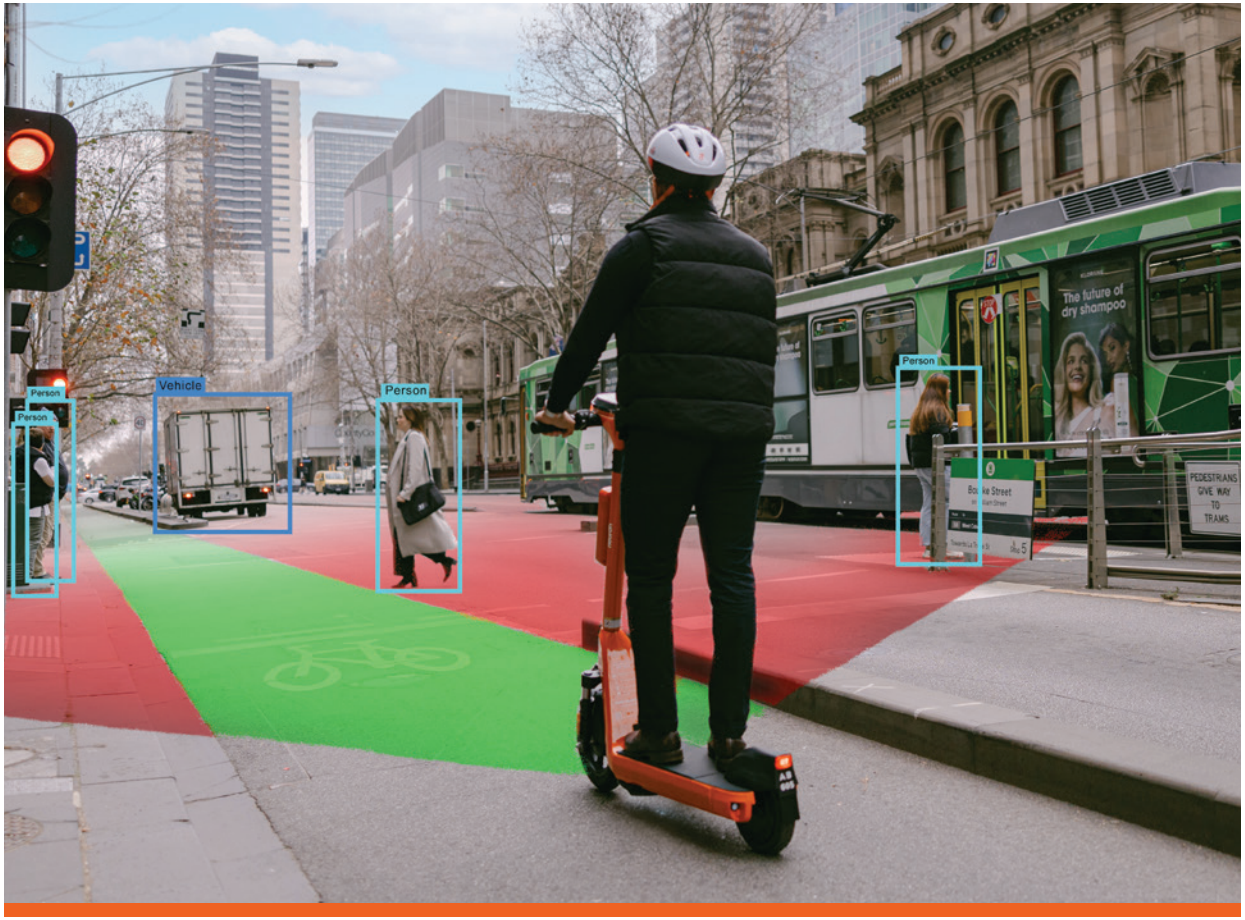
Improving parking etiquette

Neuron has invested in a number of technologies to control and improve parking, including the use of precise geofencing. An end-of-trip photo is also required to verify that e-scooters are parked in the correct manner.

In many cities the company launched a designated parking model to ensure that riders are only able to end their trips in approved parking stations. Parking compliance has also been improved by the introduction of clearly marked e-scooter parking bays. To support both of these initiatives we launched our Augmented Reality (AR) Parking Assistant system which uses augmented reality with Google's street view database to accurately locate the e-scooter. The system then directs the rider to the nearest designated parking station.

Addressing footpath riding

In some cities, riding on the footpath or sidewalk is illegal. To help address this, Neuron launched ScootSafe Vision. It is a proprietary system that uses AI-powered camera technology to detect and correct footpath riding. Offending riders receive a real-time audio alert, a reduction in power, as well as follow-up warnings, educational material, and suspensions for repeat offenders after their trip. It can also be configured to detect pedestrians in the path.



Camera data from a trial in Melbourne showed:

- Neuron riders followed the rules and travelling on roads, shared paths, and bike lanes 95% of the time.
- Most incidences of footpath riding (55%) were detected within the first or last minute of the trip, when riders were either leaving or arriving at an on-footpath parking station.

Data, Technology and Research Strengthen City Transport Systems

We continue to provide data and research to our city partners to assist in city planning and to help improve existing transport systems. Our data-driven approach helps cities optimise transport infrastructure by identifying demand patterns and public transport gaps. Neuron's e-scooters are frequently moved to areas where the community most needs them, providing a convenient, affordable, car-free transportation option for more people.

Infrastructure and adoption

Our research shows that city infrastructure plays a crucial role in e-scooter adoption rates. When we asked our users what would improve ridership:

73% called for cities to provide more protected lanes

89% would like more parking stations with physical identifiers like painted bays

Making Streets Safer for All

Safety is a cornerstone of our business and we have continued to invest significantly in educating our riders. To deliver our world-class rider education, Neuron continued to work alongside leading safety organisations and disability advocacy groups including Canada's Traffic Injury Research Foundation (TIRF), the Australian Road Safety Foundation (ARSF), Brake New Zealand, as well as the Royal Society for the Prevention of Accidents (RoSPA), the Royal National Institute of Blind People (RNIB) and Thomas Pocklington Trust (TPT) in the UK.

Rider Education and Safety Campaigns

Neuron's operations teams regularly host in-person ScootSafe events in all our cities to promote safety. In 2023 and 2024, we also held Helmet Safety Awareness Week, Road Safety Week, a Festive ScootSafe campaign, and university events to further reinforce our safety messages.

Helmet Safety Awareness Week

In September 2024, Neuron held its fourth annual Helmet Safety Awareness Week, utilising online and in-person rider education, incentives, and providing free trips for those who rode e-scooters fitted with special edition golden helmets, which were added to the fleet for the duration of the week.

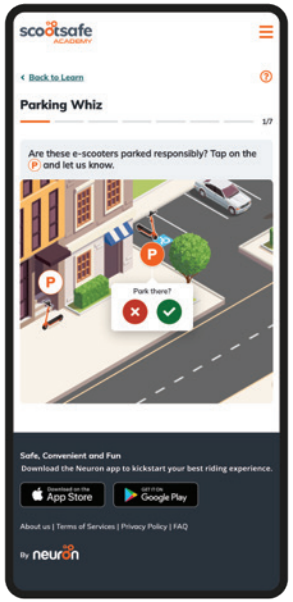
Key metrics from the 2024 campaign, also referred to as Golden Helmet Week:

- **80,000 riders** received safety messages via the app, rider emails and through social media
- **710,000 unique individuals were reached** through a paid social media campaign
- **20% more riders** used the 'helmet selfie' feature over the course of the campaign

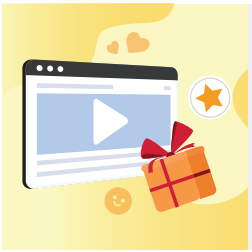
ScootSafe Academy

We continue to grow ScootSafe Academy, an interactive, online riding school with city-specific, training content that helps to educate riders. In a first for the industry, it also delivers targeted training modules to those who have broken the rules. The platform provides riders in all our markets access to educational videos, quizzes, and games to help improve rider behaviour, and in turn, improve e-scooter and e-bike safety.

Developed in consultation with our national road safety partners, ScootSafe Academy serves as an important digital extension of Neuron's popular in-person ScootSafe events.



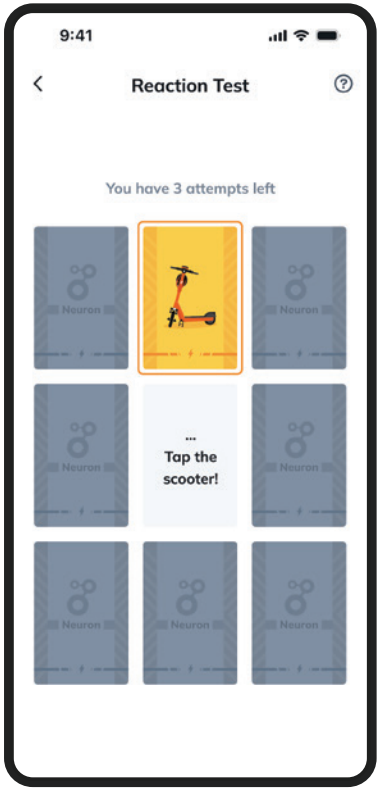
Site sessions on ScootSafe Academy
237,142

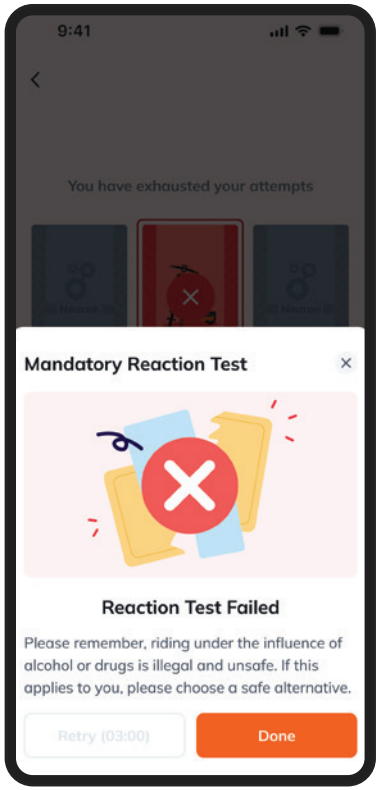


Incentives issued to users
94,827

Combating Intoxicated Riding

Neuron launched Australia's first in-app cognitive reaction test for e-scooter riders in August 2020. In 2024, we enhanced the test and expanded its use at key locations during peak times in cities worldwide. Designed to promote self-reflection, the test helps riders assess their fitness to ride. Those who fail are temporarily restricted from accessing the service.





Prosperity Through Micromobility

Neuron remains committed to supporting the economic development of our cities. Research demonstrates we play an important role in boosting local economies, which particularly benefits small and medium-sized enterprises, while also supporting local communities.

Helping City Centres and Hospitality Districts Thrive

In 2023 and 2024 Neuron released localised versions of our comprehensive reports 'Unlocking the Potential of Rental E-scooters' for Canada and New Zealand. These reports follow the release of our first-of-its-kind Australian report released in 2022. These explore best practices for running an e-scooter program, offering insights into rider demographics, technological innovations, and the social, economic and environmental benefits of e-scooters.

In Canada, riders spend $12,100 a year per e-scooter deployed, at an average of $37 per trip at a local business. Two in every three rides result in a purchase, and collectively $56.9 million is spent at shopping, dining and entertainment venues annually by Neuron riders.

Spotlight on Canada

According to our rider survey:

12%
of trips wouldn't have happened at all if an e-scooter hadn't been an option

64%
of e-scooter trips resulted in a purchase from a local business

Where our riders spend their money*:

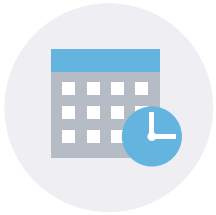
28% Restaurants, bars and cafes

31% General shopping

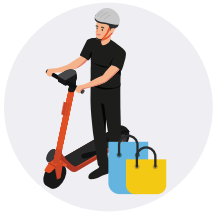
18% Leisure and recreational venues

Why our riders use e-scooters*:

35% Commuting to work or study



29% Getting to appointments



17% Running errands such as shopping

71% Exploring the city

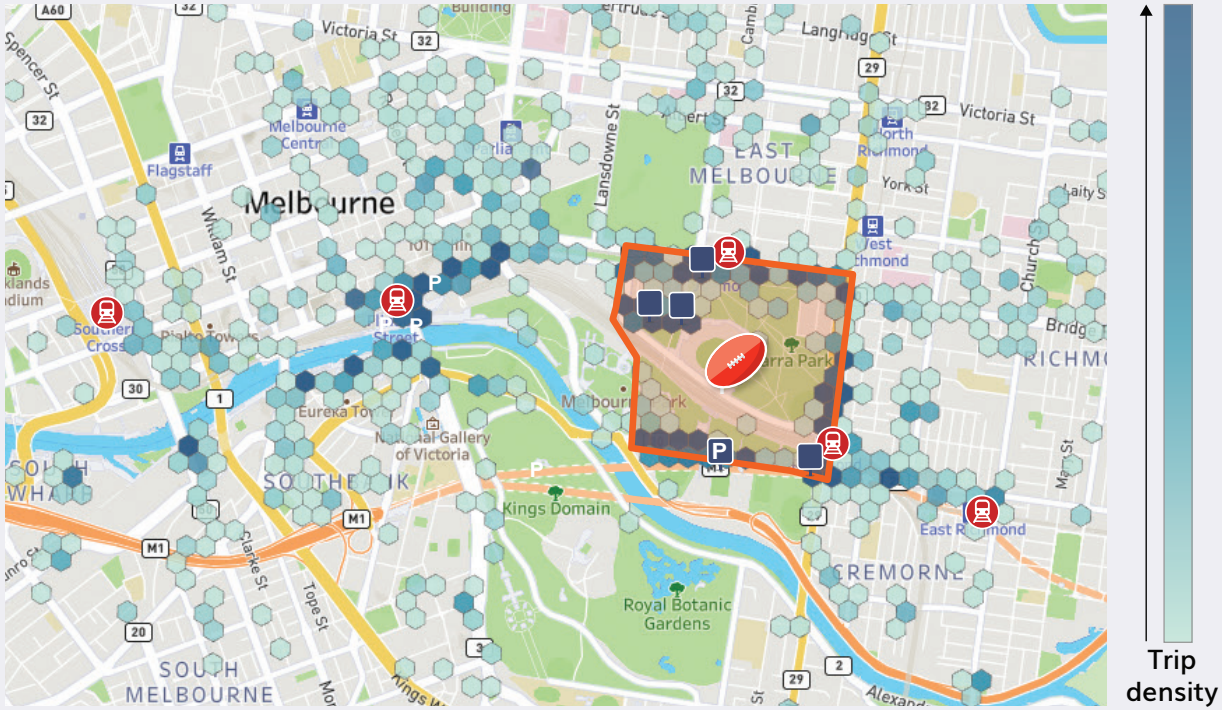
Enhancing Tourism and Local Events

Neuron partners with major events, councils and tourism bodies to elevate event experiences, boost tourism offerings, and provide a safe and sustainable way to travel to and from events. Our e-scooters and e-bikes also provide a valuable transport option for out-of-town event goers to explore the city.

Successes include major events like, Melbourne Grand Prix, North Australian Festival of Arts (NAFA) in Townsville, Adelaide Fringe, the Calgary Stampede, Westerner Days in Red Deer and The Whoop-Up Days in Lethbridge, amongst others.

Keeping Melbourne moving

During the AFL Grand Final and Footy Festival in late September 2023, a massive 9,100 Neuron trips were taken. There were also more than twice as many e-scooter trips taken in the two hours before and after the game, compared with an average Saturday.



Nearby major transport hub | **Designated event parking station** | **Australian Football League Grand Final 2023**

Heat map of trips taken to and from the AFL Grand Final and Footy Festival at the MCG precinct from 27 to 30 September 2023

Impactful Leadership

In 2024 Neuron's co-founder and Chief Executive Officer, Zachary Wang, was named EY Entrepreneur of the Year 2024 Singapore.

"At Neuron, the mission is clear: to partner with cities to connect people and places in a safe, convenient, and fun way. This purpose drives everything from product design to community engagement."

Guided by this vision, Zach made the bold decision to focus on highly regulated regions where cities prioritise safety, innovation, and sustainability. This led Neuron to become the leading operator in Australia and Canada, with a footprint spanning over 30 cities around the world.

Under Zach's leadership, the company has introduced groundbreaking innovations, partnered with cities to run responsible and reliable micromobility programs and is continuing to set new industry standards.

Zach's journey exemplifies the power of purpose-driven entrepreneurship. EY's recognition is a testament to his leadership, work ethic, and Neuron's mission.

neuron

We are driven to help the world build a more prosperous and sustainable future through new ways of moving and connecting.

www.rideneuron.com