



Transport Canberra and City Services (TCCS)

Review of Shared Micromobility

July 2021

Prepared by:



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Acknowledgement

We acknowledge the diverse Countries, languages and cultures of Aboriginal and Torres Strait Islander Peoples, the First Peoples and custodians of the lands and waters across our continent Australia. We acknowledge some of the shared experiences nationally, however, celebrate the diversity and uniqueness of every First Nation community and the importance of listening to priorities and needs locally.

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1. Executive Summary

1.1 Introduction

In 2020, Transport Canberra and City Services (TCCS) engaged two micromobility operators to provide shared micromobility services to Canberra City and two surrounding areas. These services are provided in the form of micromobility devices including e-scooters available for hire by the public. As of April 2021, these services have been running for six months; and this review was initiated to inform future policy, operations, and compliance and enforcement decisions of the services.

Although the review is focussed on the two commercial operators engaged by TCCS, this review comments on broader issues pertaining to the Shared Micromobility Program. Such issues primarily concern the operations and compliance and enforcement of micromobility devices that are privately owned. Data utilised in this review concerning accidents, infringements or crashes involving these devices does not allow for the disaggregation of private users. The YourSay Community survey indicated an increase in private ownership (from one in ten to three in ten over the next twelve months). Compliance and enforcement approaches to micromobility devices use may need revision to address improved overall safety of these devices that are privately owned.

1.2 Approach

To address the aim of the review, the methodology utilised was a rapid desktop review of available data sets (see Appendix B), a brief literature review and a commercial operator questionnaire, that identified common themes. This analysis may be used to inform future policy and regulatory frameworks for micromobility devices in the ACT.

One of the key data sets used was the YourSay community panel. This panel is representative of the broader community as participants are registered in line with ABS population statistics such as geographical location, gender and age. This survey was supported with other more open surveys such as operator surveys, as well as information provided by ACT Directorates and agencies such as ACT Policing and the ACT Ambulance Service, as well as the commercial operators.

1.3 Data Limitations

As this review used a rapid desktop research approach, existing data sets were relied upon as the key source of information (please see Appendix B for details). Gaps and omissions in the available data allowed limited analysis. This includes:

- accurately identifying whether trips are made in conjunction with other transport modes (car, bus, light rail) or device only trips;
- allowing deeper factor analysis of hospital, accident and complaint data to draw a solid correlation to road safety. This includes:
 - whether the incident was caused by a private or shared device;
 - the nature of the incident;
 - what injury was caused; and

- to what extent, as well as more detailed reasons about why incidents happen such as lack of training or education, user behaviours, speed, rule non-compliance, faulty device, intoxication, or poor path condition.
- independently verifies impact on carbon emissions;
- reliably demonstrates the number of privately owned micromobility devices;
- validates economic impacts such as increased spending;
- provides insight into whether micromobility devices are displacing existing transport services and/or providing additional foot traffic in certain areas; and
- measures the impact of introducing micromobility devices on traffic, car parking utilisation or revenue variances to business income or other economic indicators.

There are practical limitations to obtaining more granular data to support analysis of such issues, as described above; essentially this is a cost-benefit decision relating to the costs of increasing data capture versus the ability to demonstrate the success of these measures. Specific data limitations are further detailed in Section 3 below under each section where applicable.

1.4 Conclusions and Recommendations

Transport Policy and Planning

The Shared Micromobility program including micromobility devices is an attractive travel choice, particularly for short trips involving social evening activities and to a lesser extent getting to and from work. There is a demand to expand the program from commercially run operators.

Community feedback through survey and complaints data showed that not all residents, particularly the senior demographic, are supportive of the program reflecting their experiences of poor rider behaviours and inappropriate parking. Conversely younger people are supportive of the operation of e-scooters as an alternative to walking or driving. The analysis of the complaint data and survey data showed anecdotal reports of poor behaviour including alleged intoxicated users. More information is required to understand such claims.

Further study of the impacts of micromobility use on number of cars in an operating zone is also required to identify changes in commuter behaviours following the introduction of the devices.

The current Micromobility Program aligns with the vision of the ACT Government's Transport Strategy 2020. There exists an opportunity to strengthen the alignment by encouraging their broader use for commuting to and from work, as part of the transport network. Application of the new 3 Strike Compliance framework¹ to e scooter riders might also strengthen current compliance and enforcement activities. Consideration of infrastructure initiatives such as satellite car park-scooter-work options, like Park/Ride solutions and bike/scooter only pathways in high traffic areas are examples that could also potentially strengthen the alignment with the strategy.

¹ The 3 strike compliance model is an escalating rider sanction model deployed on number and severity of incidents.

Recommendations - Transport Policy and Planning

1	To strengthen the current package of performance indicators, consider adding questions to relevant surveys to enable measures that clearly indicate trip reason, trip connection and trip impact (such as replacement of car) for all Micromobility devices.
2	To assist the commercial operators better meet unmet demand the ACT Government should consider implementing operating zones in major centres and increasing the cap on devices for major events.
3	Increase the frequency of reporting and actions taken by operators to remediate complaints and incidents to the Licencing and Compliance section of TCCS.
4	To further align efficient movement according to place TCCS may consider expanding connection points such as park/ride solutions.
5	To inform the further take-up of micromobility devices in the ACT, TCCS should consider undertaking a cross-modal usage study.
6	To further align the micromobility program to maintain safe, efficient paths and road related areas the ACT Government could review alternatives or additions to infrastructure. For example, this might include designated pathways, parking, signage and appropriately designated routes and areas for use.
7	To understand the impact on carbon emissions TCCS may consider strengthening the available data, including for example, changes to vehicle use in operator zones.

Road Safety

The ACT Government's commitment to Road Safety in the ACT is set out in the *ACT Road Safety Strategy 2020-2025* and the *ACT Road Safety Action Plan 2020-2023*. The ACT's road transport legislation establishes the framework for enforcing road safety in the community, including the regulatory settings for the use of micromobility devices, whether personally owned or hired. When riding an e-scooter, users should wear a helmet, abide by the speed limit, not operate under the influence of alcohol or drugs, only have one person per e-scooter, supervise children and use a path (unless there is no path, or it is not practical to use the path).

From a rider perspective, the use of e-scooters is a relatively safe form of travel, at least consistent with bicycles. For pedestrians, appropriate use of the devices including correct behaviour and lower speeds when approaching, particularly from behind, would increase the sense of safety. Most incidents occur at night-time (58%) consistent with peak usage data. The reasons stated for use also indicate that peak usage is for getting to and from entertainment/food venues on a Friday and Saturday night. At the time of this review, there is no available data that supports sufficiently accurate granular analysis of the causes of e scooter related injury of riders or that caused by e scooter riders to other road users.

Recommendations – Road and Path Safety

8	To assist with maintaining safe, efficient paths and road related areas the ACT Government could review additions to parking infrastructure. As example, this might include footpath decals.
9	To assist riders of micromobility devices the ACT government should review the legislation, policies and guidance to enable a better and clearer understanding of what is a micromobility device and the behaviours and enforcement actions applicable when riding on different infrastructures. For example, road, bike path connected to road, separated paths, footpaths and shared paths.
10	To assist enforcement activities and to respond systemically to community feedback and complaints the ACT Government could consider options for lower speeds, or no go zones in high traffic areas and peak times (i.e., Friday and Saturday nights).
11	To further understand the impacts of micromobility injuries the ACT Government should establish a position on whether this data will influence policy decisions; and if so, establish an appropriate data collection framework to draw out the factors contributing to safety incidents. For example, this could be through a specific research project.

Public Land Use

The regulatory framework is appropriate to control and monitor the commercial operation of the Micromobility Program. Commercial operators are bound by permit conditions, rules and guidance set out in legislation and policy. Much of the burden to educate, train and communicate with community rests with the providers. Although campaigns are established by the ACT Government, these could be strengthened to focus on rider behaviour and enforcement activities.

There are limited options to improve safety and rider behaviour of individuals using privately owned micromobility devices. There is no present method to capture data about the numbers and or use of these privately owned devices. As indicated in the Your Say community survey, it is a possibility that privately owned devices will increase from one in ten to three in ten within twelve months. Although the regulatory settings are set equally, activities by the operators through the permit system target the hired devices only. The permit framework is a land use issue and is not applicable to privately owned devices. The reliance of the overall regulatory framework creates a control gap between these cohorts. The risk of harm also may not be mitigated effectively for privately owned devices and this issue is further explored in the Road safety section below. The control gap may also lead to a greater take up of privately owned devices and less reliance on commercial devices. Options to provide a better understanding of the numbers of privately owned micromobility devices and how they are used could be explored.

Recommendations – Public Land Use

12	To support efficient operation and deployment of operator devices, whether in an expanded operating zone or not, agree an appropriate utilisation/idle time benchmark or KPI and add the proposed KPI to the proposed monthly compliance report. This data should also be tested for accuracy prior to any decision making.
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13	To support efficient operation and deployment of operator devices, fully implement the Micromobility Three Strike Self-Regulatory Compliance Enforcement Escalation Framework.
14	To better understand the potential impacts of an increasing ownership of privately owned micromobility devices on the current regulatory approach, options to obtain this data could be explored.

Submission to Government

Community concerns are responded to appropriately. However, whether the response is adequate for the person concerned is difficult to measure. On one occasion only, was there follow up correspondence in relation to the Ministerial response, broadly indicating that responses are adequate.

No recommendation is made for this section.

Economic Impact

The introduction of the Micromobility Program in the ACT has led to increased employment and additional services provision to support the commercial business operations. Although unable to verify the extent to fees payable by operators offset the full cost of managing the program, it does not appear to be a material burden on the ACT taxpayer. No data is available to accurately confirm that the introduction of this program has led to an overall increase in retail spending, a reduction in car related services, or whether car traffic has reduced in the operating zones. The micromobility operators include within their user surveys, a question on trip use and economic impact. One operator reported their data suggests that in 10.15% of trips, an incremental purchase was made at the start, or end of the most recent trip.

Recommendations – Economic Impact

15	In conjunction with utilisation data consider an increase to the cap on operator devices.
16	To strengthen the understanding of economic impact consider developing indicators to measure the economic benefit of the Micromobility program.

1.5 Overall Conclusion

The review found that the regulatory framework is currently appropriate. However, to improve the effectiveness of the framework strengthening the language in both policy and communication of the policy including appropriate behaviour is required. The program elements are operating well, given the timeframe of operation implementation.

The program is aligned to the ACT Government's Transport Strategy 2020. Some operational and infrastructure improvements could be made to strengthen that alignment. Consideration might be given to the core benefit of providing this program, so that strategies could be better aligned to that purpose.

This work was undertaken as a rapid desktop review using available data sets. Some data supported limited analysis especially of overall safety and economic impact. The recommendations are presented recognising these limitations. Overall, based on the available data, the community is supportive of the program.

2. Background

In 2020 Transport Canberra and City Services engaged two micromobility operators to provide micromobility services to Canberra City and two surrounding areas. As of April 2021, the services have been running for six months and a review was initiated to inform policy, operations, and compliance enforcement of the e-scooters.

2.1 Purpose

Curijo was engaged to provide expertise in a rapid review of Micromobility, and its operations, usage, and impact on the Canberra Community. The review is supported by data analysis, commentary, and insights, addressing the research questions provided by Transport Canberra and City Services (TCCS). The rapid review aimed to highlight key focus areas in conjunction with the measures of success demonstrated at Appendix A.

2.2 Overview of Micromobility

2.2.1 What is Micromobility?

Micromobility is defined as ‘transportation using lightweight vehicles such as bicycles, personal mobility devices, including devices that may be borrowed as part of a self-service scheme in which people hire vehicles for short-term use within a town or city’. Electronic transportation includes electric scooters (e-scooters), electric bikes (e-bikes), electric skateboard, hoverboard and Segway-like devices. In 2019 the definition of a personal mobility device, and supporting regulatory framework was expanded by the ACT Government to include a broader range of devices such as the e-scooters and e-skateboards and to provide a robust framework for their safe use on the ACT road network. This review specifically focusses on the commercial operators of e-scooters.

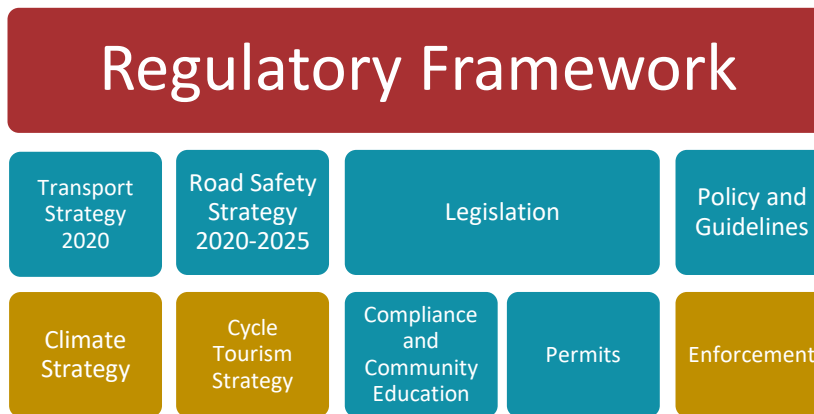
A Personal Mobility Device (PMD) is defined as a device that is:

- propelled by an electric motor;
- designed for use by only 1 person;
- weighing not more than 60kg unladen;
- with 1 or more wheels;
- with a brake system;
- that cannot travel faster than 25km/h on level ground; and
- with dimensions not more than:
 - o 1250mm in length;
 - o 700mm in width; and
 - o 1350mm in height.

Examples of PMD’s include; e-scooters, and e-skateboards. A PMD does not include motorised wheelchairs or mobility scooters commonly used by individuals with a disability, electric bicycles and scooters, skateboards, rollerblades and/or other wheeled recreational devices or wheeled toys that are not propelled by electric motors.

2.2.2 Regulatory Framework

Figure 1: Regulatory Framework



The regulatory framework includes the above components. The blue components are managed by TCCS. Details of the above are provided in Appendix E.

2.2.3 ACT Micromobility Policy Drivers

The ACT Government's policy for Micromobility centres around Micromobility schemes that are of high quality and deliver genuine transport choices to the ACT. Canberra's ambition is to be considered the cycling capital of Australia and the ACT Government is supportive of active avenues for public and private transport options. Shared Micromobility is designed to provide benefits to the citizens of Canberra by offering fast, well maintained, and reliable transportation options. The policy also ensures that the ACT Government is committed to a safe, vibrant, and attractive environment for locals and tourists.

The requirements and expectations of operators are that devices do not clutter streets or public areas and do not block shared areas or pedestrians from walking or moving, including people with prams or mobility aids. Operators are also required to obtain a permit, manage their fleet, and educate their customers to responsibly use devices.

The policy also specifies the management of parking to allow for minimal disruption. Parking sites have been identified in the permit documentation and the user apps and are to comply with accessibility standards. Operators are required to promote and educate users to use these locations, including providing incentives.

2.2.4 General rules of operation



Commercial Micromobility schemes and the use and operation of the Micromobility devices are carried out under permit conditions. These conditions include rules that micromobility devices are of sound quality and that users are supplied with everything needed to act in accordance with rules when riding. This references helmets, which are required by law to be worn when riding a bike or personal mobility device. PMD users and cyclists must wear a helmet unless a religious exemption applies. Other rules include bicycles must be fitted with a warning device, and PMDs must be fitted with a warning device or users must have access to a warning device if its impractical for one to be fitted. The rules also state that

when travelling at night or in hazardous weather conditions causing reduced visibility, users must display on themselves or the PMD a:

- flashing or steady white light that is clearly visible for at least 200m from the front;
- flashing or steady red light that is clearly visible for at least 200m from the rear; and
- red reflector visible for at least 50m from the rear when head-lighted.

There are general rules provided in the policy on where to not park e-scooters and devices:

- on roads or road related areas;
- across tactile marks on pavements (for visually impaired people)
- within 10m of the hold-line at any road intersection, roundabout, traffic island or median strip, and pedestrian crossings;
- within 5m of a bus stop shelter (except where designated), marker post, steps, ramps, public toilets, building access points etc;
- within bus interchanges (except where designated) or where light rail operations take place;
- within 1.5m any building line / wall that is within a public place;
- closer than 1.5m from the road kerb unless it within a designated parking bay;
- in a public thoroughfare unless there is 2m clearance so people can move through the space; and
- in contravention of street signs and line markings.

The Micromobility policy also references safe user behaviour which is to be encouraged by operators and is the responsibility of the user. The practices around safe micromobility behaviour are communicated to users through operators' respective software applications (apps). This allows users to accessibly understand the rules and reduce conflict between road users including people riding PMDs and bikes, as well as pedestrians using the ACT's various paths. Additionally, operators should have liability insurance, adhere to the *Information Privacy Act 1988 (ACT)*, maintain software and devices, and not display third party advertising.

E-scooter operators utilise age limits (minimum 18 years for Neuron and 16 years for Beam) as a term of service and is therefore a matter between the operator and the user. While it is not illegal for people under the age limit to use the shared schemes from a Government perspective, they may be in breach of the terms of service from the operator.

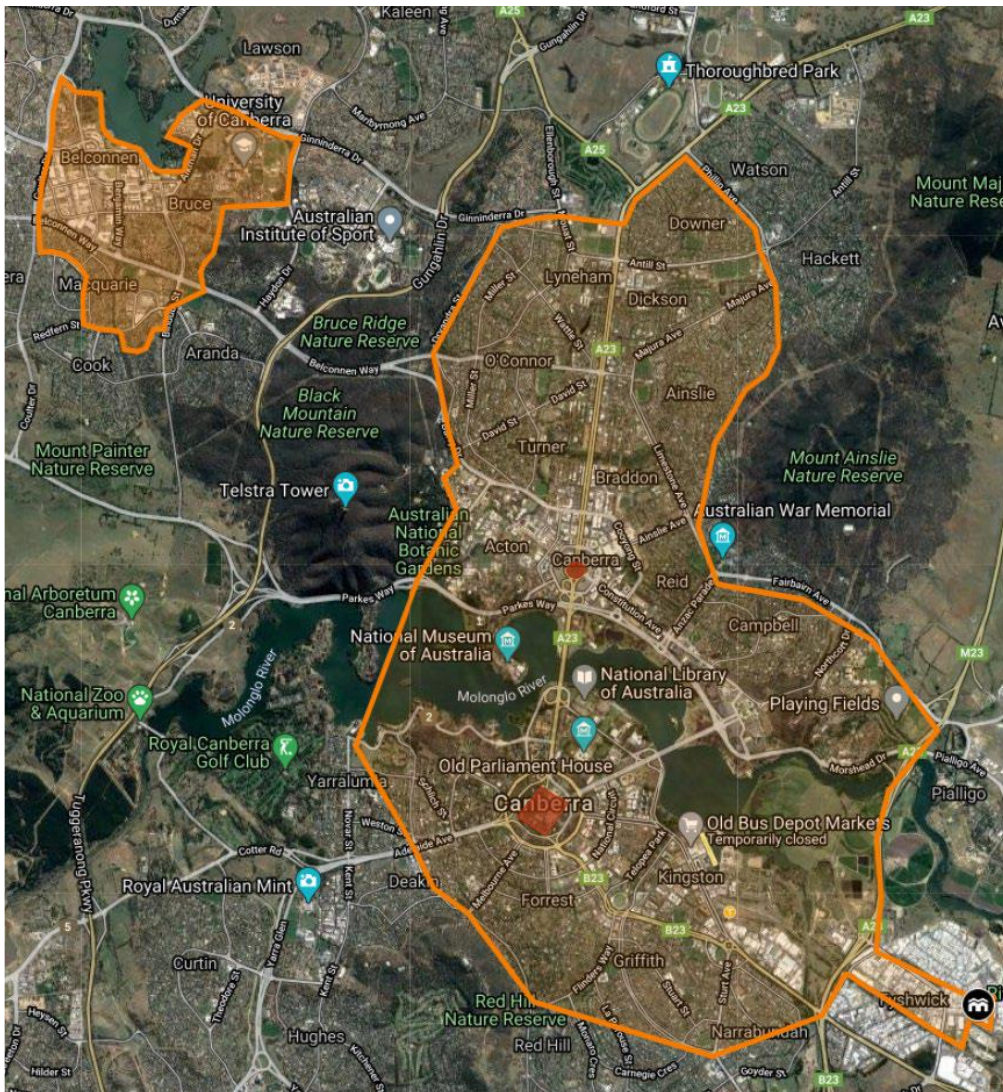
2.2.5 Who is operating e-Scooters in the ACT?

Canberra currently has two commercial e-scooter companies servicing the inner north and south of Canberra, as well as Belconnen. The two providers being Beam and Neuron. Notably, unlike other jurisdictions, the Australian Capital Territory introduced personal use prior to the introduction of commercial e-scooters.

2.2.6 Operating Zones

Permit holders are permitted to operate in specified zones. These zones include areas of restrictions including parking and no go or slow zones. Figure 2 on the next page represents the current permit operating area.

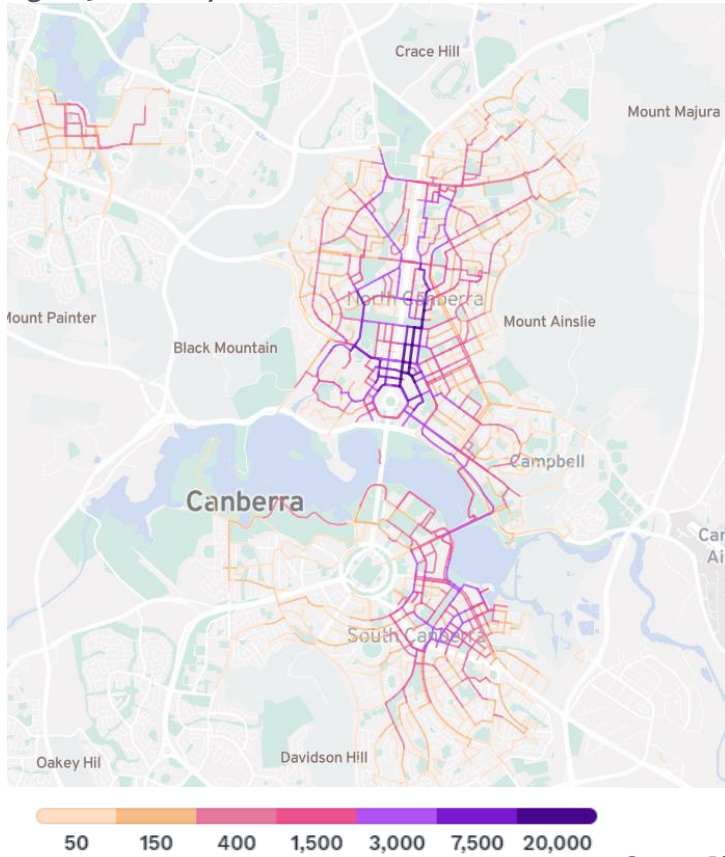
Figure 2: Operational Area



2.2.7 Operating Usage

Micromobility devices are commercially operating in the inner north and south of Canberra, and Belconnen. A review of the data provided by Ride Report shows a map of e-scooters 'hotspots' usage. Within the current areas of operation, a total of 815,324 trips was undertaken in the review period. With the average number of trips being undertaken a day being 4,479 between October 2020 and March 2021. Out of the total trips nearly 30,000 trips were taken in Mort and Lonsdale Street respectively, making central inner Canberra the most popular location for riding e-scooters. When comparing the two areas a median of 3,955 trips was completed in central Canberra per day and 149 for Belconnen. Belconnen had fewer trips recorded possibly indicating the unmet demand and low availability of devices in that area. Further exploration of the data is required to understand the factors of the lower numbers.

Figure 3: Heat Map – Canberra Central and Belconnen



Source: Ride Report, viewed 13 May 2021

The heat map above shows how many trips were taken during the period of 1 October 2020 to 31 March 2021. Please note that the mapping software indicates corridors of travel rather than exact routes.

2.3 Approach

2.3.1 Scope of the Review

The scope of this Review included the following objectives:

- assess implications of policy;
- diagnose program elements that are operating effectively;
- comment on ideas of merit and worth;
- factor analysis around the data to attain themes;
- identify improvements and elements that are working well; and
- adapt existing questions surrounding Micromobility to add value.

2.3.2 Methodology

The methodology utilised was a rapid desktop review of available data sets (see Appendix B), a brief literature review and an operator questionnaire, that was then triangulated for common themes. This

approach allowed Curijo to develop recommendations that may inform the future policy and regulatory framework for the Micromobility Program in the ACT.

2.3.3 Review Questions

The review of the current ACT Micromobility Program requires an assessment of the current frameworks and policies and comparison with the stated measures of Program success. The regulatory framework currently in place to support Micromobility in the ACT is detailed in section 2.2.2. The framework was used in the review to help understand the current climate of Micromobility in the ACT.

There are five areas of review focus – Transport, Policy and Planning, Road Safety, Public Land Use, Submissions to Government and Economic. These areas of focus in turn lead to the deliverables and measuring the success of the current scheme. The following statements are addressed to measure overall success:

- Micromobility is an attractive travel choice, connecting people to the places they wish to visit on their own or in conjunction with public transport;
- Micromobility services support the objectives of the ACT Government’s Transport Strategy 2020 and future strategic goals;
- Micromobility services are safe for users and other path and road users;
- Micromobility services are operated in accordance with permit requirements to ensure a high level of visual and accessible amenity on public land;
- Community sentiment and concerns are being adequately addressed or responded to by operators and government; and
- Micromobility services do not create a cost burden for the ACT Government or community.

3. Findings

3.1 Overview of Analysis

A foundational component of Curijo’s analysis of the Micromobility Program was data sourced from the Ride Report portal, operator user surveys, ACT Government Panel Community Surveys, media and other data provided by the ACT Government including hospital admissions, complaints, and traffic infringement data.

Consistent with the desktop review, critical issues investigated were:

- transport policy and planning;
- road safety;
- public land use;
- submissions to Government; and
- economic burden

3.2 Transport Policy and Planning

3.2.1 Attractive Travel Choice

This section analyses whether Micromobility is an attractive travel choice, connecting people to the place they wish to visit on their own, or in conjunction with public transport. To test the success of the current Micromobility schemes operating in Canberra, the review assessed rider data and various recent surveys.

The data revealed patterns in rider usage and when e-scooters were most used. An analysis of ride data from the 1 October 2020 to 31 March 2021 revealed that more total rides were taken on weekdays with an average of 3,918, whilst the number of trips on a weekend increased to an average of 5,883. The data also shown that Monday through to Friday, trips per day increased. Public Holiday data also showed an increase in usage when compared to the average weekday.

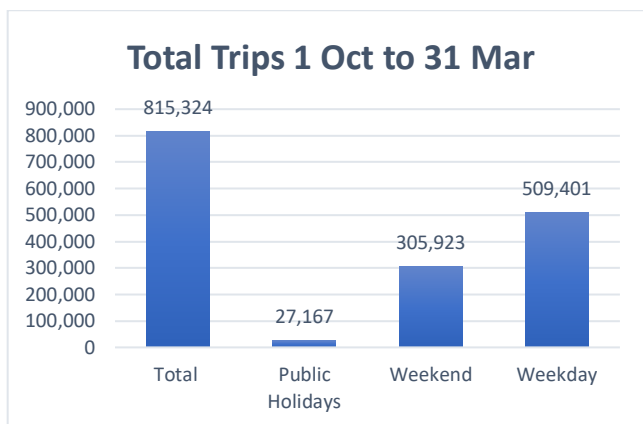


Figure 4: Total Trips

Source: Ride Report

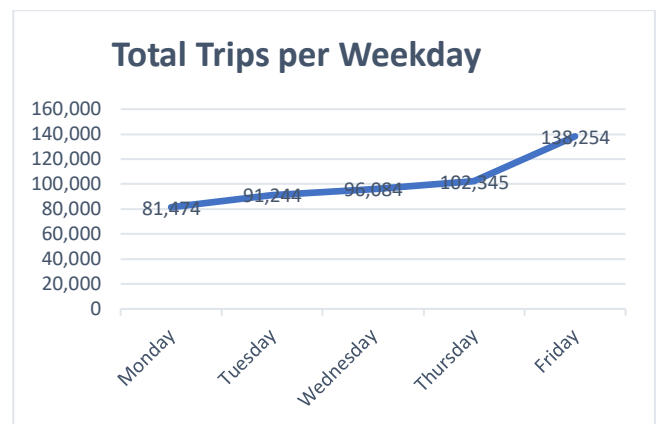


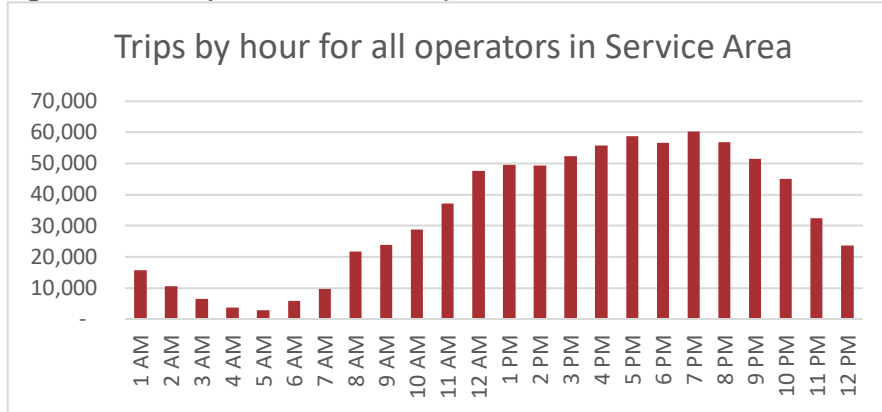
Figure 5: Trips per Weekday

Source: Ride Report

The Ride Report data is for commercially run micromobility vehicles only. The Your Say Community Panel survey was conducted through 1,202 Canberrans, out of this sample about 1 in 10 respondents said they had owned an e-scooter and 30% of the total participants said they were interested in buying their own e-scooter. Outside of this survey, data for privately owned private micromobility devices is unavailable.

The following Figure 6 indicated the usage by time of day for the period 1 October 2020 to 31 March 2021.

Figure 6: Most Popular times of the day

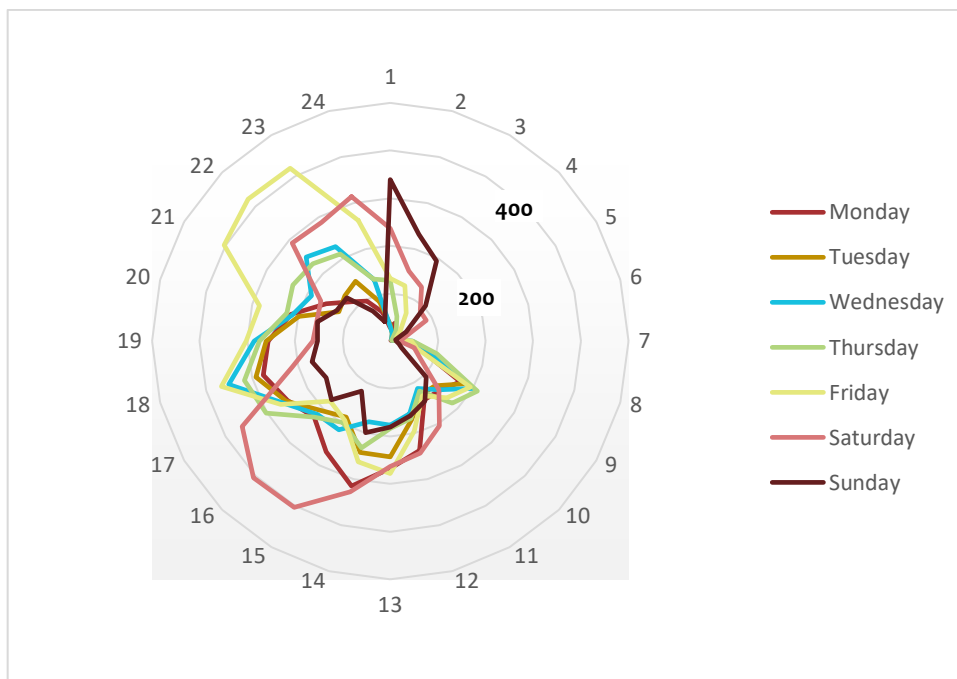


Source: Ride Report

Figure 7 indicates usage times for the week of 15 March to 21 March 2021.

Figure 7: Days of the week usage

24 Hour clock view



Source: Ride Report

Connection

Over the six months 1 October 2020 to 31 March 2021 there has been an increase in shorter trips and a decrease in longer trips. Table 1 summarises the total number of trips by month.

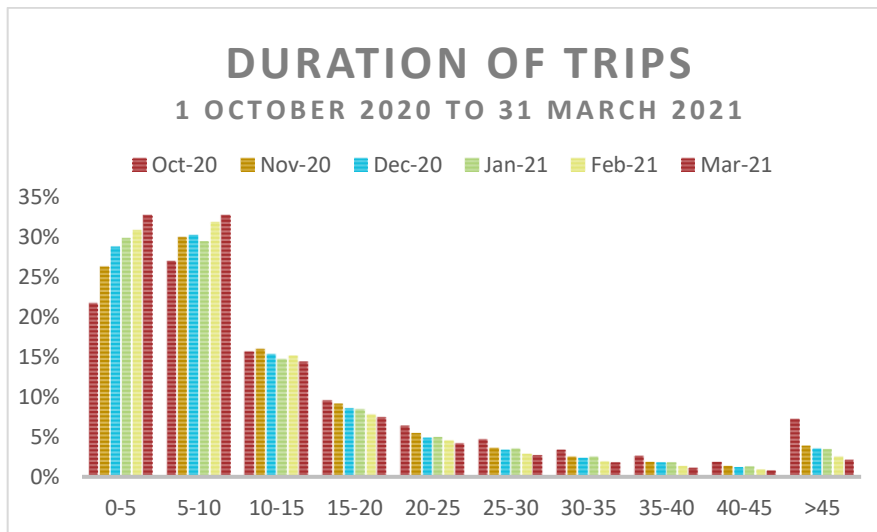
Table 1: Number of Trips by Month

Month	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
Number of Trips	105,596	148,917	155,413	135,916	130,881	129,099

Source: Ride Report

Figure 8 summarises the trends by trip duration (minutes) for the six months 1 October 2020 to 31 March 2021.

Figure 8: Duration of Trips by Month



Source: Ride Report

Where micromobility devices are available, up to 60 percent of trips are for a short duration (0-10 minutes). Data sets do not accurately explain whether these trips are made in conjunction with other transport (car, bus, light rail) or for device only trips. For example, it is unknown whether riders are driving their car into the city, parking and then using the device, or whether residents from nearby suburbs use the device only. However, given a maximum speed of 25km per hour, a 10-minute trip would equate to a maximum of 4.16km, and therefore it is only destinations within this radius that are applicable.

Almost one third of trips were to and from 10 locations. These included:

- Bunda Street
- Mort Street
- Canberra Centre
- Lonsdale Street
- Kingston Foreshore
- Marcus Clarke Street
- London Circuit

- Australian National University
- King Edward Terrace
- University of Canberra

Recommendation 1

To strengthen the current package of performance indicators, consider adding questions to relevant surveys to enable measures that clearly indicate trip reason, trip connection and trip impact (such as replacement of car) for all micromobility devices.

Requirements of Users

The Your Say Community Panel undertaken between 9 – 23 April 2021 revealed the following ownership and use of e-scooters themes:

- Around 6 in 10 respondents have used an e-scooter at some point, with usage highest among younger residents and decreasing steadily with age.
- Around one in ten respondents report that they own an e-scooter; among those who don't currently own one, three in ten (30%) are considering purchasing one in the next twelve months.
- By far the most common reason for using e-scooters has been for recreation or fun, though almost half (46%) of users travel by e-scooter to and from work / work meetings.
- As with e-scooters in general, usage of the Scheme is strongly related to age and is higher among those who are working, as well as among residents living in Central Canberra.
- The majority of usage is occasional, although around three in ten users are taking e-scooter trips through the Scheme on a weekly or more frequent basis.
- The main motivators for use are enjoyment and convenience, supported by little difficulty reported in locating a shared e-scooter to use.
- Non-usage of the Scheme is driven by several factors – although safety, including the behaviour of other e-scooter users, was the most common concern for all age groups.
- In all, around half of all non-users say there is nothing that would encourage them to use a shared e-scooter, while approximately two in ten report that they would be motivated by incentives for correct use.

Source: YourSay Panel Survey Report - April 2021.

Some survey respondents indicated that using the e-scooters to go out to dinner and to get around the city was their main use. This data was supported by commercial operator data that confirmed the main use by actual users was going to bars and restaurants, getting to or from work or riding for fun.

A previous survey revealed suggestions by respondents to encourage further use including having designated areas where there was no need to use a helmet, notably raised due to the perception of poor hygiene issues on shared helmets. A further suggestion to have e-scooter paths only, better training on use and rules of use, cheaper pricing and alternate methods of payment would all encourage use.

Reasons for not using the devices included perceptions of helmet and device hygiene, travel with kids, ride a bike, generally not interested or prefer to walk short distances.

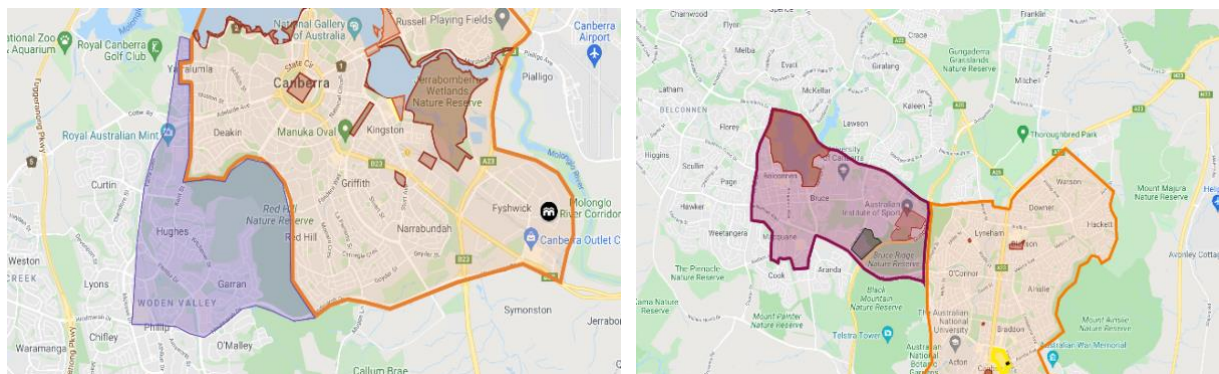
Unmet demand

Both operators agree that the current zones maximise the number of use cases available for the e-scooters allowing a high number of origin / destination pairs. They also agree that applying geofencing aimed to limit the impacts to riders and decrease risks has not impacted unmet demand. This might include no ride zones and no parking zones in specific locations.

Operators are concerned that user whole trip requirements are not yet fully met. They want to be able to provide an e-scooter for the whole of a user journey. Operators are encouraging the adoption of a moderately larger area to connect major service centres.

The area marked in red is the proposed and requested change by one operator; it would connect Belconnen, Bruce, AIS and Calvary hospital to the main service area. In this operators’ opinion this would allow natural flow of scooters between the two service areas currently. The area marked in purple is the proposed expansion on the south side, which will connect Deakin Hospital, Deakin Offices and Woden town centre and Canberra Hospital to the main service area. The service areas would be refined to ensure that devices are not discarded in the adjacent reserves.

Figure 9: Maps of operator suggested expansion



Data provided by operators indicated that user surveys identified the need for a larger riding zone. Areas identified included the major town centres (including Gungahlin) as well as Dickson, Manuka, Griffith and Campbell. This was supported through the Community Survey where the key demand for additional services included the full light rail route, Canberra Airport including Brindabella Park, and generally anywhere in the ACT. However, noting the above discussion on the trends for trip duration, further information is required from users about intent to travel further, if devices become more generally available.

In addition, one operator suggests that the level of demand in the current operating area often creates a position of undersupply. They request that some flexibility is provided to exceed the permit cap on e-scooter numbers from time-to-time to better meet short-term needs such as events.

Recommendation 2

To assist the commercial operators better meet unmet demand the ACT Government should consider implementing operating zones in major centres and increasing the cap on devices for major events.

Sanctions and enforcement

Both operators indicated that operating sanctions, such as speed limitations and parking restrictions were appropriate to the current operating zones. They also confirmed that queries received about the restrictions from users were minor and did not present a widely concerning issue. This view was supported through the YourSay and previous community surveys.

Complaints received by other mechanisms tended to focus on three areas. These included rider behaviour, e-scooters left in inappropriate places and fears of pedestrians that speed may cause a collision, and as a result, injury. Problem areas and times are being monitored by operators.

Recommendation 3

Increase the frequency of reporting and actions taken by operators to remediate complaints and incidents to the Licencing and Compliance section of TCCS.

Conclusion

The Shared Micromobility program including micromobility devices is an attractive travel choice, particularly for short trips involving social evening activities and to a lesser extent getting to and from work. There is a demand to expand the program from commercially run operators. However, there is very little data for privately owned devices to form a broader conclusion about these devices.

Based on community feedback through survey and complaints data, not all residents, particularly older people are supportive of the program. This is due to observations of poor rider behaviour and inappropriate parking. Younger people are supportive however, given the busy times are pre and post dinner activities of a Friday and Saturday night. This supports the notion that the devices are primarily being used for fun, and as an alternative to walking or driving. Complaint and survey data anecdotally suggested that poor behaviour of individuals included intoxicated users. No data was received that indicated intoxication of users. Current evidence does not allow sufficient insight into whether this is the case.

To improve understanding, further study on the impacts of e-scooter use on number of cars in an operating zone is required. Further, before-and-after surveys of users to identify how they travelled before micromobility devices versus how they travel following introduction of micromobility may be useful.

3.2.2 Alignment with ACT Government's Transport Strategy 2020

This section analyses whether Micromobility is aligned with the ACT Government's Transport Strategy 2020. To test the alignment of the current Micromobility schemes operating in Canberra, the review assessed a small literature review, rider data and various recent surveys.

The ACT Government's Transport Strategy 2020 aims to provide a world class transport system that supports a compact sustainable vibrant city that are based on several principles. These principles include people focused, safe, city shaping, future focused, connected, flexible, reliable, efficient, sustainable and healthy. These principles are supported by various pathways as discussed below.

Providing greater transport choice

The ACT Government undertook to develop a Micromobility market that commenced in October 2020 with the two commercial operators. Development of the market is consistent with ACT Government strategies including transport, climate change, road safety and economic development (cycle tourism). These strategies support the introduction of innovative, flexible, safe and low emission forms of transport.

Trip usage and survey results indicate that early take up of the use of shared e-scooters, particularly in the city zone is for entertainment and enjoyment. This is particularly so for travelling between entertainment venues at and after dinner times.

Building a network that focuses on efficient movement according to place

Consistent with the above, operator data provided indicates that approximately 10% of trips for the initial six-month period to 31 March 2021 were to or from the Civic, Belconnen and Dickson bus interchanges, indicating that this is not a priority of current users.

Recommendation 4

To further align efficient movement according to place TCCS may consider expanding connection points such as park/ride solutions.

Rebalancing investment

The ACT Government's investment framework pillars include a whole-of-system approach, matching investment decisions with priorities, improved management and better use, non-infrastructure solutions, future ready, and sustainable procurement and delivery. The Micromobility solution is consistent with these pillars as it is meeting community needs, provides an innovative, affordable transport approach that does not need large public investment to operate.

Growing public transport, cycling and walking

The commencement of the micromobility solution is an extension of public transport options. Operators have lobbied for further Public Transport Integration Trials and would welcome discussions with TCCS to discuss ways to further integrate e-scooters with the ACT Public Transport network and ways to study cross-modal usage.

Recommendation 5

To inform the further take-up of micromobility devices in the ACT, TCCS should consider undertaking a cross-modal usage study.

Maintaining safe, efficient paths and road related areas

No evidence currently exists to determine whether the micromobility solution is enhancing or decreasing safe and efficient paths and roadways. Key performance indicators such as reduced motor vehicle traffic in e-scooter zones is an example of what could be developed.

Operators also suggested that the introduction of footpath parking decals would assist users and members of the public to clearly identify the location of preferred parking. Other jurisdictions, such as Canada, have implemented, roads with cordoned off pathways for bike and scooter use, in high traffic

areas. Paths for walking are separate again. An example of this is in Vancouver², where the City of Vancouver reports nearly 9% of all trips and over 13% of commute trips in Vancouver are by bike, exceeding the City's 2020 target of 7% and on track to achieve the 2040 target of 12%. Protected bicycle lanes are dedicated bike lanes with concrete medians and planters, bicycle parking corrals, or vehicle parking lanes that divide them from vehicle traffic. The City of Vancouver also report that separation increases feelings of safety and comfort, which makes cycling an attractive commuting option for those who are not used to riding their bikes regularly. Pedestrians feel more comfortable in the knowledge that cyclists won't be riding on sidewalks.

Recommendation 6

To further align the micromobility program to maintaining safe, efficient paths and road related areas the ACT Government could review alternatives or additions to infrastructure. For example, this might include designated pathways, parking, signage and appropriately designated routes and areas for use.

Reducing carbon emissions

One operator indicated that they received a global carbon neutral status two years ago, suggesting that they are not adding to greenhouse gas emissions in the ACT. There is no data to independently verify the impact on greenhouse gas emissions in the ACT.

Recommendation 7

To understand the impact on carbon emissions TCCS may consider strengthening the available data, including for example, changes to vehicle use in operator zones.

Managing a sustainable and healthy, COVID-19 transport transition.

Operators indicated that their solutions are sustainable, healthy and Covid Safe. Some user feedback has indicated a concern on the re-use of helmets. As a suggestion and if safe to do so, the provision of a helmet liner that might be permanently carried by a user might be a way to mitigate the use of helmets hygiene issue.

One operator commented that their vision is to become part of a community and provide a sustainable, economically and socially viable service that has a positive impact on how people move in and interact with their city. A total of 85% of the respondents to their customer survey agreed that they had made a positive impact on Canberra, and that if given the opportunity to grow they can ensure that everyone in Canberra can have access to a transport service that is making a real positive difference to travel.

Conclusion

The Micromobility Program aligns with the ACT Government's Transport Strategy 2020. Table 2 indicates how the current micromobility program aligns with the current strategy. Note, as no indicators of performance are available to assess the degree of alignment, only an indication of broad alignment to the strategy (or not) is indicated.

² vancouver.ca/streets-transportation/protected-bicycle-lanes.aspx

Table 2: Alignment with Transport Strategy

Pathway	Aligned
Providing greater transport choice	✓
Building a network that focuses on efficient movement according to place	✓
Rebalancing investment	✓
Growing public transport, cycling and walking	✓
Maintaining safe, efficient roads	✓
Reducing carbon emissions	✓
Managing a sustainable and healthy, COVID-19 transport transition.	✓

Opportunity to strengthen the alignment primarily relates to stronger rules enforcement, behavioural change, and enhancing the program to shift the use from entertainment to increased travel reasons such as getting to and from work, within the broader transport network.

Considerations of infrastructure solutions such as satellite car park-scooter-work options, like that of Park/Ride solutions and bike/scooter only pathways in high traffic areas are practical examples to strengthen the alignment with the strategy. A further example is a new 3 Strike Compliance framework that means all people are officers and can report compliance issues for action to be taken.

3.3 Road and Path Safety

This section analyses whether Micromobility is considered safe for users, shared path users and other road users. To test the perception of the impacts of the Micromobility program on road safety in Canberra, the review assessed rider data relating to safety, as well as other data such as police and hospital data.

The recent YourSay survey results indicated the following themes:

- Safety concerns are resonant for many respondents – around one third disagree that e-scooters are being used safely and responsibly around the ACT, and around four in ten feel unsafe around them as a pedestrian or shared path user
- Concerns with safety differ according to whether a current user of shared e-scooters or not and – related to this – age, with older participants and non-users much more concerned about them
- Despite this, there is strong and consistent desire for e-scooter safety education across the population, with two-thirds of respondents believing there should be more of this
- Priority topics identified for safety education were road rules for users (60%), behaviour of other path users (48%) and unsafe riding (45%)

Source: YourSay Panel Survey Report - April 2021.

Further to the general observations above, general themes emerged from community feedback and are summarised below.

Parked Devices

Devices parked inappropriately or abandoned cause some safety concerns for other footpath users such as pedestrians, particularly for people with mobility issues, or bike riders. A fallen device may be difficult to see.

Operators are active in mitigating inappropriate parking behaviour including virtual preferred parking stations within their software, end of trip photos and parking checklists. A preferred parking geofence incentivises users to end their ride in a designated parking area. Neuron, for example, has over 100 of these stations within their Canberra operating zone.

Recommendation 8

To assist with maintaining safe, efficient paths and road related areas the ACT Government could review additions to parking infrastructure. For example, this might include footpath decals.

Speed on Shared Pathways and Bike paths

In relation to the ‘shared’ Neuron and Beam micromobility devices that are available for people to hire in some areas of Canberra and similar devices that may be owned by individuals, there are different rules for different infrastructure types such as roads or shared paths. The ACT has very few bicycle paths that are limited to use solely by cyclists; with most paths in the ACT being shared paths. Rules and guidance are available. However, this guidance is difficult to find and in various documents. The following summarises the rules.

TCCS advises that in the ACT a vehicle includes a bicycle but not a Micromobility device. Under the road rules a driver means the person who is driving a vehicle (except a motorbike, bicycle, animal, or animal drawn vehicle) and a rider means a person riding a motorbike, bicycle, animal, or animal drawn vehicle. A reference to a driver in the regulation includes a reference to a rider. The rider of a PMD is a pedestrian, as is the rider of a wheeled recreational device or wheeled toy. TCCS also advises that the relevant provisions in the road transport law cut across a number of Acts and Regulations. These are not presented here. Instead, a summary of the different applications of speed limits is provided in Table 3 below for bicycles, PMD’s and PMD like devices as a comparison.

Table 3: Summary Comparison of Speed Rules

Device	Bicycles	PMD
Road Includes footpath and bicycles lanes adjacent to a road.	<ul style="list-style-type: none"> • posted Speed Limit • where no posted Speed limit <ul style="list-style-type: none"> ○ Built up – 50 km/h ○ Other – 100 km/h 	<ul style="list-style-type: none"> • not allowed to be used on roads, including bicycle lanes on roads unless: <ul style="list-style-type: none"> ○ there is no footpath, shared path or nature strip adjacent ○ it is impracticable to travel on the footpath, shared path or nature strip

Device	Bicycles	PMD
		<ul style="list-style-type: none"> speed limit is 25km/h unless a lower speed is sign posted
Shared Zone	<ul style="list-style-type: none"> speed limit indicated by the shared zone sign 	<ul style="list-style-type: none"> speed limit indicated by the shared zone sign
Shared Path See Note 1 below	<ul style="list-style-type: none"> default speed limit Approaching road crossing and road crossing – 10km/h 	<ul style="list-style-type: none"> 25 km/h Approaching road crossing and road crossing – 10km/h
Footpath not adjacent to a road See Note 2 below	<ul style="list-style-type: none"> default speed limit 	<ul style="list-style-type: none"> 15 km/h

Source: TCCS

Note 1: Shared paths begin at a shared path sign and end at an end shared path sign or a road (this is the same for separated and bicycle paths).

Note 2: Footpaths are areas open to the public designated for, or has one of their main uses, use by pedestrians. Footpaths are not signed to indicate they are footpaths.

Bicycles

The speed limit for a cyclist on the road, including in a bicycle lane on a road, is the posted speed limit for that road and if there is no posted speed limit – the default speed limit applicable to that road being 50km/h in a built-up area and 100km/h on any other length of road. A built-up area in relation to a road is an area where there are buildings or streetlights less than 100m apart for a distance of at least 500m or, if the length of road is shorter than 500m, the whole road. A reference to a road in the road rules regulation includes a reference to a road related area and includes a footpath adjacent to the road. As such, where there are speed limit signs the speed limit for a cyclist on the road or a footpath adjacent to the road is the speed limit that applies to the adjacent road.

In shared zones the speed limit applicable to a bicycle rider on the road or the footpath adjacent to it is the speed limit indicated by the shared zone sign on the road, or the road into the zone. On shared paths, unless there was a sign applicable to the path, or another law applicable to cyclist, the speed limit for a cyclist would be the default speed limit (50km/h). Where a shared path approaches a road at a crossing, the speed limit applicable to a cyclist is 10km/h. It is also 10km/h when crossing a road on a crossing. The crossing is part of the road, not the path.

Micromobility Devices

Micromobility devices are not permitted to be used on roads, including bicycle lanes on roads, unless there is no footpath, shared path or nature strip adjacent to the road or it is impracticable to travel on the footpath, shared path or nature strip.

PMDs are limited to 15km/h on footpaths and 25km/h in other places. They are also restricted to approaching crossings and crossing roads on crossings at not more than 10km/h. In the limited

circumstances they are allowed to be used on roads, the speed limit would be 25km/h. If there was a lower posted speed limit applicable to a road or length of road the PMD user should not exceed that speed limit. On shared paths, the speed limit would be 25km/h except when approaching a crossing where the limit is 10km/h. On footpaths, including footpaths adjacent to shared zones, the speed limit would be 15km/h.

A device capable of travelling at more than 25km/h on level ground it is not regarded as a PMD. It is a motor vehicle and subject to all the rules applicable to motor vehicles such as registration, MAI insurance, requirement to hold a licence etc.

The YourSay community survey suggests the perception of some pedestrians, that anything moving above walking pace does not belong on a footpath. As a pedestrian, they feel vulnerable to any fast moving object and the serious injury resulting from a potential crash whilst they are out walking. This is particularly so for PMDs approaching pedestrians from behind. Although pedestrians encounter the same issue from non-powered bicycles, possibly travelling much faster along bike paths than e-scooters, it remains of concern. It is also asserted that people are riding fast near pedestrians and not alerting pedestrians to their proximity. Older citizens who prefer to walk can be startled by the sudden passing of a device who has not made any early signal (such as using a bell).

Recommendation 9

To assist riders of micromobility devices the ACT government should review the legislation, policies and guidance to enable a better and clearer understanding of what is a micromobility device and the behaviours and enforcement actions applicable when riding on different infrastructures. For example, road, bike path connected to road, separated paths, footpaths and shared paths.

Riding erratically and/or unsafely



A common feeling of 'unsafe' comes from other path users. There are perceptions of inappropriate rider behaviour such as riding without helmets or with more than one person on board. There are also claims about groups of riders, late at night, creating noise, and sometimes 'where they should not be'. Delinquent behaviour is difficult to police and other strategies are required including education. Sharing of footpaths requires continued attention, awareness of the rules and compliance with those rules by riders. A positive observation included the unintended benefit of these devices, in the perceived sense of being 'more safe' if riding alone

or at night, particularly for younger women. The Justice and Community safety Directorate has indicated some concerns about the safe use of e-scooters.

ACT Policing have anecdotal concerns about the usage of e-scooters by persons appearing or behaving as if they are intoxicated. ACT Policing suggests limiting the hours that e-scooters are used especially during the late and early hours over the weekends to ensure both riders and pedestrians remain safe. If considered this could be limited to key high-risk zones. Police have encountered issues with the targeting of intoxicated members of the public on e-scooters, noting they are able to escape foot pursuit and travel where vehicles often cannot.

Several cautions have been issued for other non-compliant behaviours and ACT Policing continue to urge riders to consider their own and other people’s safety. ACT Policing have issued 54 Traffic Infringement Notices (TINs) and 24 Cautions relating to e-scooter riders from 1 September 2020 to 30 April 2021. A high proportion of the TINs and Cautions that ACT Policing have issued are from not wearing an appropriate helmet.

Appropriate enforcement actions are essential to providing a safe road environment for the community, with shared responsibility by all road users. A robust regulatory and enforcement framework is essential to establishing safe people and safe behaviours on our roads, with benefits for both the community and individuals.

Under the Three Strike Compliance model, dangerous or illegal behaviour by individuals can be reported directly to the operators for their action.

Where systemic issues are identified, geo-speed limitations or exclusions zones could be applied consistent with the road rules (ie. 10km/hr on pedestrian crossings, 15km/hr on footpaths and 25km/hr on shared/cycle paths). This action has already been undertaken in some areas such as the Light Rail corridor and around some schools.

Recommendation 10

To assist enforcement activities and to respond systemically to community feedback and complaints the ACT Government could consider options for lower speeds, or no-go zones in high traffic areas and peak times (i.e., Friday and Saturday nights).

Hospital Admissions

Despite the above community feedback, hospital admissions data related only to device users as opposed to other shared path and road users who may have been involved in an incident with a micromobility device. Hospital data for a fall involving other and unspecified pedestrian conveyance recorded 117 incidents for the period of November 2020 to March 2021 (representing less than 0.02% of trips). This hospital data is not robust enough to draw a solid correlation to road safety as more factors about the incident are required to be extracted from the records. This includes whether the incident was caused by a private or shared device, the nature of the incident, what injury was caused and to what extent.

ACT Ambulance Service (ACTAS) recently commenced the option of interrogating ACTAS data for e-scooters and recorded 38 cases involving e-scooters in the first 10 weeks of the data being available. ACTAS are continuing to monitor these numbers, but this initial analysis indicates there may be a need to further communicate with users about the safe operation of e-scooters. Of these incidents, 22 occurred between 7pm and 6am, suggesting 58% of the recorded incidents occurred at night-time. ACTAS cannot reliably identify cases where alcohol or drugs were involved, nor whether the device was commercially or privately owned.

Accidents reported to the Operator

Both operators have recorded a low number of incidents and reported that these numbers and type are broadly consistent with similar data across Australia and New Zealand (being 2 incidents observed for every 100,000 kilometres travelled). Combined, operators reported four severe and four serious injuries to riders. Two examples include the rupture of an ACL from an incorrect dismount or a riding surface

transition issue, and a fall after swerving to avoid a stick (thought at the time to be a lizard). All injuries are assessed and referred to insurance providers where appropriate. One provider also has additional insurance to cover for liability to third parties during rider's journeys. One provider has suggested due to a larger proportion of incidents occurring in the Civic area, that a slow speed zone (15 km/h) be introduced.

Data Limitations

The data utilised for this section (For example hospital admissions, accident data, complaints etc) are data that should be strengthened for future reviews. To strengthen the interpretation and use of this data underlying incident data needs to be gathered such as more detailed reasons why an incident occurred (for example lack of training or education, behaviour, speed, rule non-compliance, faulty device, intoxication, poor ride way, etc).

There are practical limitations to obtaining more granular data, for example collecting data at the time of admission, essentially a cost-benefit decision. A detailed examination may be possible only through a specific research assignment with appropriate ethics approval.

Recommendation 11

To further understand the impacts of micromobility injuries the ACT Government should establish a position on whether this data will influence policy decisions and if so, establish an appropriate data collection framework to draw out the factors contributing to safety incidents. For example, this could be through a specific research project.

Conclusion

Road Safety in the ACT is primarily addressed through the *ACT Road Safety Strategy 2020-2025*. Micromobility devices when used on a road generally are subject to the same rules as when driving a car. Additional rules apply when using an e-scooter or bicycle, and include wearing a helmet, abiding by the speed limit, not riding under the influence, having one person per scooter, supervising children and using the path unless there is no path, or it is not practical to use the path.

From a rider perspective, the use of e-scooters is a relatively safe form of travel, at least consistent with bicycles. For pedestrians, appropriate use of the devices including correct behaviour and lower speeds when approaching, particularly from behind, would increase the sense of safety. More incidents occur at night-time (58%), consistent with peak usage data. The reasons for use also indicate that peak usage is for getting to and from entertainment/food venues on a Friday and Saturday night. There is, however, no current data available that accurately indicates the reasons for scooter related injury of riders or that of other path users.

3.4 Public Land Use

This section analyses whether Micromobility services are operated in accordance with permit requirements for operators to ensure a high level of visual and accessible amenity on public land. The review assessed rider data and various recent surveys, as well as other data such as operator feedback, complaints, and other submissions.

Regulatory Framework

The regulatory framework includes legislation, strategies, policies, and guidelines along with Permit Conditions as set out in the introduction section. This allows risks to be effectively managed. A dedicated Compliance team within TCCS monitors compliance. Operator self-assessment indicates compliance with the permit conditions. At the time of the review compliance reports are not yet due to TCCS. Early indicators such as complaints data and community survey data do not reveal any issues of permit condition non-compliance.

Both operators indicated comfort with the regulatory framework and are willing to strongly support the underpinning policy intent. They also believe the current rules are appropriate and do not see any gaps in the current framework.

In terms of future enhancement operators believe the number of e-scooters for use and the geographical areas available are key drivers of program take-up. Suggestions to enhance the framework include expansion into connected areas and increasing the e-scooter deployment cap of six in specific and agreed to locations. This would assist meet user demand and improve operational efficiency. Operators believe a higher density of e-scooters is important for driving a consistent transport service when in a city and a key factor for sustained mode change and car replacement. However, as Table 4 summarises idle times for both operators for the period of April 2021 is greater than 18 hours per day, except for Rapid Services 1-10 (high use inter-modal stops), where idle time significantly decreases. This suggests that redeployment of devices, may be a more immediate solution.

Table 4: Scooter Idle Time

Zone	Beam Median Idle Time Hours	Beam Median Available Devices	Neuron Median Idle Time Hours	Neuron Median Available Devices
Belconnen	22.7	7.2	18.6	35
Central Canberra	22.7	705.3	21.8	645.5
Rapid Services 1 -10	4.8	16.9	3.0	13.8

Source: Ride Report

Operators were asked to confirm the Ride Report data. One operator has concerns over the accuracy and anecdotally believe that the idle time appears high. They suggested that their e-scooters in Canberra have been averaging around 3 to 6 rides per scooter, per day (prior to Winter when seasonality does impact demand). They assume that on average a scooter will do a ride every four to eight hours and suggest that there will be periods, that is from midnight to 9am of lower demand. More scooters are idle over this period. This does not suggest there is data integrity issues with Ride Report data, however using and sharing the data on a regular basis may assist consistency of views by all parties.

Recommendation 12

To support efficient operation and deployment of operator devices, whether in an expanded operating zone or not, agree an appropriate utilisation/idle time benchmark or KPI and add the proposed KPI to the proposed monthly compliance report. This data should also be tested for accuracy prior to any decision making.

The shared micro-mobility reference group was established to provide oversight to facilitate the successful implementation of shared micro-mobility operations in the ACT. The group takes a whole of government, risk-based approach to meeting the ACT Government's transport goals and ensuring public safety and amenity. The standing membership includes subject matter experts in transport and land management and their executive or director level colleagues. Occasional members include subject matter experts in related areas such as other transport modes and city operations. The group is co-chaired by the Executive Branch Managers of City Presentation and Strategic Policy and Customer. This reference group appears to be appropriate.

Permit Conditions

Application to use a public place for E-Scooters is made under Section 45, Public Unleased Land Act 2013. The applicant is to abide by all operational requirements and conditions within the 'Dockless Shared Micromobility for the ACT' policy. The conditions within the permit are to be read in conjunction with the policy. The conditions set out in the policy include applicant responsibilities, legal compliance, damage to Territory property, public safety and insurance, public amenity, deployment, compliance, and other requirements such as to have in place a safety plan, geofencing, and contribute to an education and awareness program.

Regarding safety, the operator is required to provide a safety plan that sets out how the devices will comply with applicable laws, has a repair and maintenance schedule of devices and associated software, plans for devices to be sufficiently charged, and has a cleaning schedule for devices and associated equipment which takes account of the current COVID-19 environment.

Both operators have in place policies that include internal sanctions for their respective services. These are tailored to the ACT and sets out principles and guidelines for identifying, investigating, assessing, and registering breaches of the riding rules.

Police carry out enforcement activities for riders breaking applicable road transport laws when devices are being used on the ACT road network.

At the time of this review operators are considering further permit conditions that strengthen the Micromobility Three Strike Self-Regulatory Compliance Enforcement Escalation Framework. This includes a telephone and online reporting system to receive and manage customer and compliance complaints and enhanced monthly reporting.

Recommendation 13

To support efficient operation and deployment of operator devices, fully implement the Micromobility Three Strike Self-Regulatory Compliance Enforcement Escalation Framework.

Complaints

Complaints are received through various channels. These include through Access Canberra, City Rangers, Operators and Ministerial complaints. All complaints are reviewed by the TCCS Licencing and Compliance team. Since October 2020 to 31 March 2021 Table 5 summarises the types of complaints received.

Table 5: Complaints

Type of Complaint	TCCS Number	Operator Number
Illegal Parking or abandoned	47	85
Rider Behaviour	-	35
Pricing, Account or Overcharge	-	21
Helmet issue	-	13
Policy	7	15
Minor incidents	-	9
Noise	1	-
No Go Zone	1	-
Hygiene	1	-
Not an issue	1	-
Other	-	5
Total	58	183

Source: TCCS and Operator data

Operator data suggests that whilst there was a peak in the first three months, the numbers over time have declined in a month-by-month basis. TCCS complaints data over time is presented in table 6.

Table 6: TCCS Complaints over time

Month	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Total
Number	10	15	13	9	9	2	58

Source: TCCS

Operator compliance activities

Operators are working with the ACT Government and taking actions themselves to ensure riders are complying with ride conditions. Table 7 summarises the key initiatives and summarises the information provided by the operators (where applicable).

Table 7: Key compliance activities

Initiative	Details
Remediation of Abandoned Scooters on Light Rail Stops	<p>CMET has been proactively working with both e-scooter operators to improve the issues experienced around the light rail corridor that has seen a considerable decrease in the number of scooters left at light rail stops, since January 2021.</p> <p>Alinga Terminus and Dickson Interchange are the two stops with the highest abandonment of scooters. Noticeably more scooters are left on stops at weekend and school holidays. One operator has developed a 'google docs' form</p>

Initiative	Details
	for CMET to complete when scooters are abandoned, simplifying the process of reporting.
Remediation of safety incidents on rail alignment	CMET met with both operators separately to discuss scooters being used illegally to travel on light rail alignment. One operator subsequently changed their geofencing around the light rail alignment to include a message played on scooter after 45 seconds ‘you are in a no ride zone’ that has reduced their scooters abandoned on stops, whereas the other operator is yet to do so seeing no change to abandonments for those scooters.
Education (BEAM)	New riders are incentivised to complete the Beam Safety Quiz. The quiz presents new riders with several example parking and scooter operation scenarios and asks the rider to select the correct action for the scenario. If the user answers incorrectly, the interactive quiz will correct the new rider and educate them on how to correctly park or otherwise operate Beam scooters.
Parking Fines & Incentives (BEAM)	Before beginning a trip, the Beam app will prompt riders with guidance on where they can park their scooters to receive a discount on future trips. If a rider ends their trip at a specified Virtual Parking Spot in the Beam app they will receive a \$0.50 credit on their next trip. On the other hand, if a rider attempts to end their trip not within a Virtual Parking Spot, the Beam app will notify them that if they still choose to end their trip at this location, they will be charged a \$1.00 parking fine. This approach to encouraging good parking behaviour incentivises riders to actively consider where they intend on parking the scooters.
Geofences	For specific areas, operators have established Geofences (virtual barriers) where riders will not be able to end their trip at all. In Canberra, ‘No Parking Zones’ around the Light Rail, Lake Burley Griffin and throughout the majority of the Parliamentary Triangle operate. No Parking Zones and No Ride Zones on school grounds and several apartment complexes have been implemented.
Preferred parking stations (Neuron)	<div data-bbox="440 1559 687 1977" data-label="Image"> </div> <p data-bbox="703 1559 1442 1899">A preferred parking geofence incentivises users to end their ride in a designated parking area. Neuron has over 100 of these stations within their Canberra operating zone. As with other geofence types, designated parking zones may be permanent or temporary. For example, additional parking zones may be activated for the duration of major events. These areas will be clearly marked both in-map and physically.</p> <p data-bbox="703 1921 1442 2045">Designated parking zones are carefully selected and co-developed with input from stakeholder groups to avoid potential accessibility issues – particularly for those with disabilities.</p>

Initiative	Details
	Users are actively incentivized to end their ride in designated parking areas, earning a \$0.50 credit each time. Designated parking zones are clearly marked on the in-app map for journey planning purposes.
Helmet Selfie (Neuron)	Discounts are provided if riders upload a selfie with a helmet correctly worn. Neuron advises that ‘Users indicate that it is a ‘good carrot’ for wearing the helmet effectively’.
Active Intervention (BEAM)	In some cases, additional action is taken to correct poor rider behaviour. This process involves directly reaching out to a rider and engaging in a conversation about appropriate behaviour in the context of their specific conduct. In rare cases this has involved a warning that future misbehaviour will result in an in-app sanction or ban.
End of trip photos and parking checklist (Neuron)	<p>Once a user's trip has ended, users are reminded about local parking requirements and prompted to take a photo of the e-scooter to encourage proper parking behaviour.</p> <p>User taps “End trip” Rider receive \$0.50 credit for parking at designated parking locations</p> <p>Parking requirements displayed upon ending the trip</p> <p>User takes photo of end trip location</p> <p>End trip screen with trip cost and details User is invited to rate ride and leave feedback</p>
Redeployment	Operators have indicated they commit to around the clock operations teams that monitor and assess demand patterns to optimise the number of scooters on the ground and redeploy scooters to meet demand and mitigate bunching.
Three Strike Compliance Model	The models identifies core unwanted behaviours and outlines actions to be taken by the operators on riders first, second and third offences.

Education and Training

Both operators provide education and training. Table 8 identifies the current training from both providers and is a summary of information provided by the operators.

Table 8: Training and Education

Neuron

Features	Description
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Mandatory User onboarding tutorial



Before Neuron users are allowed to commence their first ride on a Neuron e-scooter, they are required to go through a series of in-app riding, helmet use and parking best-practice lessons. This onboarding process has been built into the mobile app to ensure that all users are fully informed of the do’s and don’ts of e-scooter-sharing before commencing their first ride.

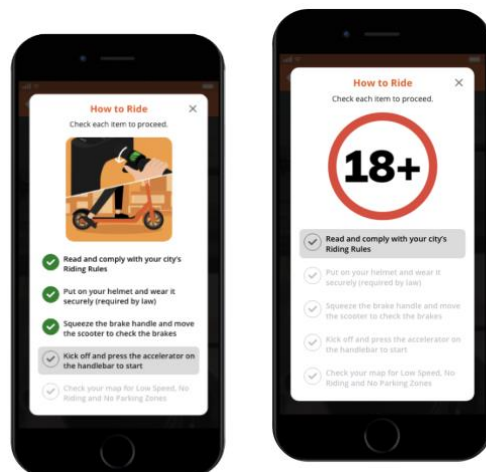
The training, which has to be completed by all first-time users before they are allowed to operate a Neuron N3, includes, but is not limited to:

- How to start the e-scooter
- How to operate safety features including brakes, lights and bell
- Minimum age restriction of 18 and licence requirements
- Safe riding best practices through a GIF guide
- Awareness of applicable laws when riding and parking
- Speed limits
- Mandatory helmet usage
- Parking responsibly in parking areas
- Avoid use of cycling infrastructure or roads

Other safety reminders including one user per scooter, and to not ride under the influence of drugs or alcohol.

From time to time, Neuron also pushes notifications to users (who have enabled notifications on their phone) and emails to remind them of some of the above. Neuron can perform push notifications, in-app overlay (illustrated messages which require users to dismiss before going forward) to relay safety information.



Users get the notifications when they open the Neuron app generally, that is assisting in educating people right before they ride for maximum impact. 100% of users opening the app will get the notification.

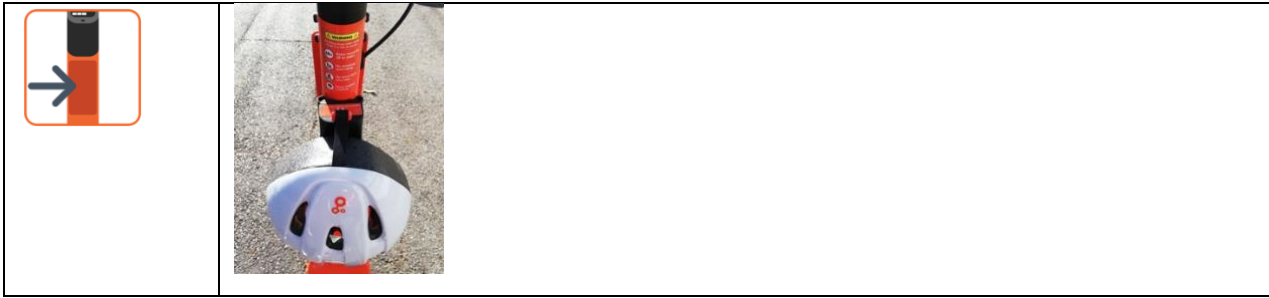


Start trip reminders



Before a user starts a trip, they are presented with simple and concise messaging on ‘do’s and don’ts’ which can be changed periodically to reflect more recent city specific issues. This provides users with just-in-time and concise information on responsible riding and parking, increasing the likelihood of compliance.

<p>Digital campaigns (website, social media, email)</p> 	<p>Neuron has built and will continue to build a publicly available online repository of knowledge to constantly educate the public on responsible riding including applicable laws. This repository is available on Neuron’s website at https://www.rideneuron.com/ride-safely/</p> <p>Neuron also continually runs digital campaigns on safety, reaching users even before they take their first ride as well as after they have become accustomed to commuting by e-scooter. Channels include social media, e-mail, website content, blogs, and other digital content sites, enabling a sustained conversation with the broader community on safety and riding experiences. Neuron’s digital campaigns over the various channels make use of a multitude of interactive formats such as photos, videos, GIFs, articles, posts, games, quizzes and mini competitions.</p>
<p>Neuron Education Web-platform (NEW)</p> 	<p>NEW is a web browser-based training that is gamified to maximise engagement. It features content co-created with Australian Road Safety Foundation (ARSF) and various disability groups across ANZ. Modules include helmet usage, proper riding/parking behaviour, what to expect from geofences and the impact of actions on others such as the disabled community.</p>
<p>Australia Road Safety Foundation (ARSF) Neuron ScootSafe Programme</p>	<p>Partnership announcement by ARSF on LinkedIn:</p> <div data-bbox="376 1106 970 1301" style="border: 1px solid black; padding: 5px;"> <p>Australian Road Safety Foundation 458 followers 5d · 🌐</p> <p>Neuron's safety-leading e-scooters have an impressive range of world firsts and pioneering safety features including: geofencing control, integrated helmets, a 000 emergency button, voice guidance, topple detection and "Follow my Ride" #scootsafe #chooseroadsafety Neuron Mobility Russell White</p> </div> <p>Neuron has also designed the Neuron ScootSafe programme in partnership with ARSF, a safe-riding campaign to educate the public on safe riding practices. The ScootSafe programme included in-person training and simulations in public areas.</p> <p>Neuron ambassadors at ScootSafe events will showcase responsible riding behaviour in various riding scenarios. Upon completion of all content, attendees may be awarded with incentives such as promotion codes or free passes. Content may also include but are not limited to:</p> <ul style="list-style-type: none"> • Explanations on applicable laws for e-scooters • Instructions on responsible do's and don'ts • Trivia questions on best practices • Designated riding and parking zones, as well as restricted areas • Live demo on responsible e-scooter riding and parking behaviour
<p>Signage on scooters</p>	<p>On each scooter, Neuron deploys attention catching stickers which show users do's and don'ts on how to ride and park. These stickers are customised based on applicable laws and local city requirements.</p>



Beam

Features	Description
<p>Beam Safety Quiz</p>	<p>Beam are the first e-scooter operator in APAC to have developed an interactive safety quiz. Within their first three rides, Beam invite their user to take the quiz and incentivise them to do so with the offer of a \$5 free credit if they achieve the pass mark (80%).</p> <p>The quiz is a 14 question multiple choice online test which presents the rider with a number of scenarios they will encounter in real-life, and asks them to choose from 3-4 potential answers.</p> <p>Every time they get an answer wrong, they are immediately told why they got it wrong and what the correct answer should have been - this ensures that riders are educated about their misperceptions or lack of knowledge immediately.</p> <p>At the end of the quiz, they are told their score. If the score is 80% or higher, they are automatically awarded the free credit and receive the “Three Star Pilot” badge in an in-app notification.</p> <p>To date, we have had 10,000 users complete the quiz.</p>
<p>Beam Safety Academy</p>	<p>Beam’s flagship real-world training program commenced in November last year with an event at Queen Elizabeth Terrace. Beam partnered with Ascent Training Services, who specialise in various elements of road safety.</p> <p>The team from Ascent have delivered a series of free sessions taking attendees through five separate courses, providing riders of all levels with the confidence to ride in a safe and reliable manner. Riders who completed the course received \$25 Beam Credit, a free helmet and some safe and enjoyable memories to take home with them.</p> <p>Our latest session was held on the 27th of February where over 150 attendees learnt how to ride safely. Given the overwhelming success of these events, we are now looking to roll out similar activities across schools, businesses and other community groups.</p>

Communication

Regular communications are planned and deployed through various providers and channels. Table 9 indicates some of the recent communications.

Table 9: Communication

Provider	Details
ACT Government	<p>To promote awareness and appropriate rider behaviour a communications campaign is run using multiple channels including the TCCS Website, ACT GOV website latest news, monthly email, 63 ATN spots in January 2021, and TC Social posts (2 boosted, 7 organic) from November 2020 to January 2021, as well as well as other ACT Government services social posts. Messaging has included top tips for e-scooting safely, the rules, cleaning and maintenance, safety courses and programs and how to report accidents and poorly parked devices. There is also an education campaign funded with \$20,000 from each operator that commenced in May 2021.</p>
Neuron	<p>Neuron runs a range of National and Localised Campaigns focused on rider education, promoting the riding rules and responsible riding behaviour. These campaigns include:</p> <p>National ScootSafe Campaigns:</p> <p>Frequency: Approximately 3 times per year</p> <p>Timing: Festive Season (December), Start of the University Year (Feb) and Road Safety Week (May 17 - 23)</p> <p>Localised ScootSafe Campaigns:</p> <p>Frequency: Minimum of one activation per month</p> <p>Timing: These are proactively organised on a monthly basis and can be in conjunction with key dates in the ACT. They can also be organised in response to community concerns around incidents and e-scooter riding.</p> <p>The type of activity included in a ScootSafe Campaign includes:</p> <ul style="list-style-type: none"> • In person ScootSafe activation: <p>This involves Neuron’s Safety Ambassadors on the ground at various popular e-scooter locations reminding people of the rules and talking through the top safety tips and guidelines. At the end of the brief, people pledge to become a ‘safe rider’ and receive free credits for trips.</p> <ul style="list-style-type: none"> • Rider EDM: <p>EDM’s are sent to riders with rules and safety tips, in Canberra there are 94,000 people on our database.</p> <ul style="list-style-type: none"> • Social Media:

	<p>The Neuron AU Facebook, Linked In and Instagram pages are used to promote ScootSafe campaigns and the riding rules. Neuron partners with other organisations and ambassadors to speak to their audiences about e-scooter safety.</p> <p>In-app messaging:</p> <p>Neuron has an In-app safety messaging running continually. The messages highlight the riding rules, how to park responsibly and other responsible riding guidelines. Neuron also run special incentives for their users including:</p> <ul style="list-style-type: none"> • Helmet Selfie- Anyone who takes a ‘helmet selfie’ before starting their trip will be awarded with a 50c credit. • Safe Rider Quiz - People who complete the in-app safe rider quiz will receive a \$5 credit towards their next ride. • Preferred Parking - The Neuron App has over 100 clear preferred parking locations that provides users a \$0.50 coupon for parking within them. <p>Media Engagement:</p> <p>For National campaigns and events, Neuron engage with local media to help promote responsible riding, examples include:</p> <ul style="list-style-type: none"> • Road Safety Week: Canberra Weekly, City News, WIN News Canberra (video) and WIN News Canberra • Student Scoot Safe • Festive Season Scoot Safe <p>While their Monthly ScootSafe Activations mainly focus on face-to-face engagement, there have been times when Neuron have also engaged media and third parties for events. This is particularly important when there is rising community concern about e-scooters. For example, in November 2020 the ACT police supported the Safety Messaging.</p> <ul style="list-style-type: none"> • Canberra Times ScootSafe Story • Canberra Riot ACT ScootSafe Story
BEAM	<p>Throughout their period of operations in Canberra, Beam have undertaken multiple marketing campaigns to communicate the benefits of E-Scooter usage to the public.</p> <p>The most notable of this was the second anniversary of the Beam Carbon Neutral status. Beam advised they were the first Micromobility Provider who was awarded this status globally, Beam also advised they were thrilled to share with their riders how many carbon emissions they have saved.</p>

Privately Owned Devices

In contrast to the enforcement options available to and through the commercial operators (such as the 3 strike compliance framework) there are limited options to improve safety and rider behaviour for

privately owned micromobility devices at an individual level. For example, complaints of poor rider behaviour from the public after the event cannot generally be actioned, due to difficulties in identifying the specific rider. Data collected by the operators will not include private use devices and there is no present method to capture ownership data of these devices. As indicated in the Your Say community survey, it is a possibility that privately owned devices will increase from one in ten to three in ten within twelve months. Although the regulatory settings are set equally, activities by the operators through the permit system target the hired devices only. The permit framework is a land use issue and is not applicable to privately owned devices. The reliance of the overall regulatory framework creates a control gap between these cohorts. The risk of harm also may not be mitigated effectively for privately owned devices and this issue is further explored in the Road safety section below. The control gap may also lead to a greater take up of privately owned devices and less reliance on commercial devices. Options to provide a better understanding of the numbers of privately owned micromobility devices and how they are used could be explored.

Recommendation 14

To better understand the potential impacts of an increasing ownership of privately owned micromobility devices on the current regulatory approach, options to obtain this data could be explored.

Conclusion

The regulatory framework is appropriate to control and monitor the commercial operation of the Shared Micromobility Program. Commercial operators are bound by permit conditions, rules and guidance set out in legislation and policy. Much of the responsibility to educate, train and communicate with community rests with the providers. Although campaigns are established from the Government, these could be strengthened to focus on rider behaviour and enforcement activities.

3.5 Submissions to Government

This section analyses whether submissions to government about Micromobility services and related issues are being adequately addressed or responded to by operators and government. The review assessed Ministerial correspondence from the community.

21 Ministerial correspondences were received relating to e-scooter issues between 18 December 2019 and 22 April 2021. Table 10 summarises the issues raised.

Table 10: Ministerial Complaints

Submission Topic	Number
Complaint – Inappropriate Behaviour – Campaign regarding a specific incident in the Campbell area	5
Complaint – Inappropriate Behaviour including speed - Braddon area	2
Complaint – Footpath quality and access	2
Complaint – Inappropriate behaviour – no specific area identified	2
Complaint – Inappropriate behaviour – Private device	2

Submission Topic	Number
Complaint – Abandoned or illegal parking	2
Complaint – Lack of available connection infrastructure (car parking)	1
Complaint – Lack of parking site consultation with residents	1
Complaint – Perceived increase in hospital emergency congestion	1
Query – Company looking to sell tech micromobility solution	1
Query – Legal liability for 3 rd parties (resulting from an injury from e-scooters)	2

Source: TCCS

All submissions were appropriately responded to through Ministerial correspondence. However, some responses indicated that more work needed to be done and that the Minister was either working with directorates or the operators themselves to further progress the issues raised.

Conclusion

Community concerns are responded to appropriately. However, whether the response is adequate for the person concerned is difficult to measure. On one occasion only was there follow up correspondence in relation to the Ministerial response, broadly indicating that responses are adequate.

No recommendation is made for this section.

3.6 Economic

This section analyses whether Micromobility services are creating an economic benefit. The review assessed rider data and various recent surveys, as well as other data such as operator feedback, complaints, and other submissions.

E-scooters provide economic opportunities for Canberra in terms of jobs, increasing visitation to commercial districts and making Canberra more attractive as a visitor destination.

The recent YourSay survey results indicated the following themes:

- Overall, 65% of respondents said they support the Shared E-scooter Scheme in the ACT, 26% said they oppose this and 10% said that they neither support nor oppose
- Overall support for expanding the Scheme into other areas was 63%, with 28% opposing such expansion, and 8% saying that they neither support nor oppose it
- Preferred areas for expansion were broadly similar across regions of Canberra and strongly related to the locale in which people live (e.g. those in Woden supporting expansion to Woden)
- Opposition to the Scheme and / or its expansion principally came back to concerns with safe and responsible use, along with the visual impact of e-scooters left in the streets and other areas
- Reflecting a common theme, non-users and older participants were more likely to oppose the Scheme and / or its expansion

Source: YourSay Panel Survey Report - April 2021.

The economic benefits of e-scooters attributed by operators include direct employment, use of local businesses to provide services and indirect economic benefits such as an increased spending by riders. For example, one operator has employed over 110 team members since commencing operations in Canberra. This includes:

- a local full time dedicated full time city management team, consisting of a City Operations Manager, Deputy Operations Manager, and Warehouse Manager;
- three full time operations supervisors, responsible for leading patroller, driver and warehouse mechanic team members;
- a team of 90 casual drivers and patrollers who work shifts across 24/7 ground operations, swapping batteries, rebalancing e-scooters, carrying out safety inspections, and tending to the fleet on the street; and
- a team of 20 casual mechanics who work shifts to repair and perform maintenance.

The providers local operational costs are supported by other local businesses that provide services such as recycling and waste services, office and van cleaning services, rental of fleet vans, office and warehouse supplies, office catering, staff uniforms and other incidental business expenses.

In-direct economic benefits from operator surveys infer that on average, 10.15% of trips will have an incremental purchase made because of the use of an e-scooter, either at the start or the end of their most recent trip. Currently there is insufficient evidence or data available to validate that these purchases have increased or decreased buying behaviour or spend at these locations or as a whole of ACT impact.

Cost Recovery - Fees payable by operators

TCCS has established costs to manage the regulatory framework and monitor compliance. Table 11 summarises the Fees Payable that are established and current.

Table 11 - Fees Payable

Timeframe from operation commencement	Fees Payable to TCCS
0 - 1 Month	No fees payable
1-6 Months	\$0.50 per personal mobility device/ per day
6 months to 2 years	\$1 per personal mobility/ device/ per day

TCCS advised that the activities and dedicated resources to establish and oversight the program include:

- policy development and transport planning;
- selection of operators through a competitive process;
- administration of permits including additional agreements;
- compliance oversight/ activities including community education;
- governance and reporting;
- community policing;

- responding to community enquiries; and
- (potential future) infrastructure supports (physical parking stations and/ or contribution to path infrastructure).

TCCS advised that there is no program establishment budget as it was absorbed within operating budget. Costs are off set against self-generated revenue, and the associated land use fees applied to e-Scooters. In the 2020-21 financial year revenues received totalled \$227,250. A further \$44,000 was also received (\$22K from each provider) for the community education campaign as detailed in the tender requirements. Multiple areas within TCCS have undertaken work on the program, and as the function was absorbed into current business practices, the associated program costs are unknown.

Communication of benefits to the users and the public

Without direct evidence and data that enables the broader community to understand whether the continued micromobility program has an economic benefit, communication is an important mechanism to support positive perceptions. Throughout the six months from October 2020 to March 2021, various communications have occurred. This includes operator marketing campaigns to communicate the benefits of e-scooter usage to the public, that e-scooters provide a safe transport option, and general environmental benefits.

Communication includes messaging on key events such as an operator's carbon neutral status, engaging face-to-face with the community with an aim to teach them about e-scooter safety, and speaking with the community about the benefits of e-scooters for individuals and the city. Local organisations are also engaged with to communicate how e-scooters can help boost their business.

Increasing economic impact

One provider suggested that based on trip data and customer survey results, that a further 350 e-scooters in circulation would lead to the following impacts:

- facilitation of a further 638,000 e-scooter trips in Canberra per annum;
- removal of 268,000 car trips per annum, and over 893,000km of additional car travel in Canberra that is expected to be replaced by e-scooters resulting in a reduction of CO₂ emissions by 142 tonnes over a 12-month period in Canberra;
- an additional 83,000 carbon neutral trips that would not have occurred if these additional e-scooters were not in Canberra, resulting in over \$4.8m in additional economic benefit to local shops and venues as a result of e-scooters; and
- creation of a further 15-20 local jobs within Canberra to manage the increased e-scooter fleet.

An increase in the cap will ensure that the e-scooter fleet is able to both address current and future demand, as well as ensure accessibility and serviceability to the whole of Canberra.

Recommendation 15

In conjunction with utilisation/idle time data consider an increase to the cap on operator devices.

Data Limitations

E-scooter data itself does not offer an insight into whether e-scooters are displacing existing transport services and/or providing additional foot traffic in certain areas. The data does not allow any practical findings in relation to the economic impacts or business turnover in high traffic areas.

There are no other indicators that provide meaningful data, apart from an indicative pre and post trip spend question in the operator use survey, that may be used to measure the impact of introducing mobility devices on reduced traffic, reduced car parking utilisation or revenues, variances to business income or any other economic indicator.

Recommendation 16

To strengthen the understanding of economic impact, consider developing indicators to measure the economic benefit of the Micromobility program.

Conclusion

The introduction of the Micromobility Program in the ACT has led to increased employment and additional services provision to support the commercial business operations. Although unable to verify the extent to fees payable by operators offset the full cost of managing the program, it does not appear to be a material burden on the ACT taxpayer.

No data is available to accurately confirm that the introduction of this program has led to an overall increase in retail spending, other government revenues or a reduction in car related services, or whether car traffic has reduced, in the operating zones. The operators do include within their survey's a question on trip use and whether there is an economic impact. One operator reported their data infers that in 10.15% of trips an incremental purchase was made at the start, or end of their most recent trip.

Appendix A – Review Questions

Transport policy and planning

Measures of success	Category specific review questions	Data sources to be used to produce evidence-base
<p>Micromobility is an attractive travel choice, connecting people to the places they wish to visit on their own or in conjunction with public transport</p>	<p>How many trips people are making?</p>	<p>Operator user surveys</p>
	<p>What is the trip purpose?</p> <p>Are the trips connecting major destinations (work, education, shopping, PT stations)?</p> <p>Do the operating zones meet the operators’ and public’s requirements?</p> <p>Are the operating sanctions, such as speed limited and restricted zones correct and effective?</p>	<p>Operator user surveys</p>
	<p>Where is there unmet demand in other areas?</p>	<p>Operator user surveys</p> <p>YourSay Community Panel</p> <p>Ride Report</p>
<p>Micromobility services support the objectives of the ACT Government’s Transport Strategy 2020 and future strategic goals.</p>	<p>Are they replacing other trips (e.g. if an e-scooter was not available, would the user still have travelled today and by what mode)?</p> <p>Are they connecting with other services to make complete journeys (PT)?</p>	<p>Operator user surveys</p> <p>Ride Report</p>
	<p>Are trips connecting to public transport?</p>	<p>Operator user surveys</p>
	<p>What share of trips starts/ends at a PT station?</p>	<p>Ride Report</p>
	<p>What impact are e-scooters having on carbon emissions?</p>	<p>Ride Report</p> <p>Operator user surveys</p>

Road safety

Micromobility services are safe for users and other path and road users	Are pedestrians being seriously injured? Are riders being seriously injured?	Admissions Operator insurance claims Crash database Anecdotal – ED doctors/ walk in clinics
	Where are accidents occurring?	Crash database
	Do users, pedestrians and other path users feel safe?	Operator user surveys Complaints YourSay Community Panel
	Are crashes similar to crashes for other vulnerable road user categories?	Crash database
	Are operators applying sanctions to customers? How many infringements have been issued?	ACT Policing Complaints

Public land use

Measures of success	Category specific review questions	Data sources to be used to produce evidence-base
Micromobility services are operated in accordance with permit requirements to ensure a high level of visual and accessible amenity on public land	Are operators acting in accordance with their permit conditions? Is the regulatory framework and associated processes thorough and robust, and manage the program and risks effectively? Are the permit conditions thorough and robust, and manage the program and risks effectively?	Ride Report Audited compliance reports from operators Feedback from the operators L&C CRM Ministerial Complaints Access Canberra Complaints
	Are complaints going down over time?	Operator feedback L&C CRM

Submissions to Government

Economic

Micromobility services do not create a cost burden for the ACT Government or community.		

Appendix B – Data Sets

Data Set	Description
Stakeholder Feedback	ACT Government Directorate feedback
Operator user surveys	Surveys conducted by the Commercial operators of their riders
YourSay Community Panel	The survey was created to research the awareness and use of e-scooters in the ACT, as well as identifying the scooter scheme drivers and barriers, and the participants perception on the safety and education needs, and views on potential expansion into other areas of the ACT.
Ride Report	Ride Report contains data and reports on the scooter scheme and companies. The data provided by the app comprises of vehicle metrics, trip metrics as well as area of interest metrics. The app is designed to analyse real-time data, as well as heat maps and producing reports.
Admissions	This data comprises of Calvary and Canberra hospital admissions related to and involving e-scooters, as well as the type of accident/injury that occurred.
Complaints	Complaints data held by TCCS and Access Canberra
ACT Policing	Data provided through JACS
Feedback from the operators	Written responses
Licencing & Compliance - CRM	Data re compliance activities
Ministerial Complaints	Submissions to Ministers

Appendix C - References

Hitchings. J, Weekley. J, Beard G, W (2019), Review of current practice and safety implications of electric personal mobility devices. Published Project Report PPR912, TRL. The Future of Transport.

Appendix D - Operator Questionnaire

Micromobility Review – Operator Questionnaire

Data should be for the period of operation between 1 October 2020 and 31 March 2021.

#	Questions
1	Please provide trip purpose by category and where possible, percentage for each category.
2	Please provide number of trips that connected to major destinations (e.g., workplaces, education, shopping, PT stations). Please use agreed list of destinations.
3	Please provide whether operating zones meet: <ul style="list-style-type: none"> the operators' requirement. public's requirement.
4	Please indicate whether there was operating sanctions, such as speed limitations, and restricted zones that were problems for users
5	Please indicate if there is demand for area expansion and to what extent for each area?
6	Please indicate what percentage of trips connected with other services to make complete journeys (public transport) e.g. <ul style="list-style-type: none"> Tram Bus Other Please use agreed list of destinations.
7	Please indicate any information regarding pedestrian complaints and type.
8	Please indicate any information regarding rider injury. <ul style="list-style-type: none"> How many incidents What type of injury Serious/Not serious Where have accidents occurred?
9	Please indicate any information relating to perceptions of safety for: <ul style="list-style-type: none"> Users Pedestrians Other path users e.g., cyclists
10	Please indicate how many customers sanctions and infringements have been applied/issued from 1 October 2020 to 31 March 2021.
12	Have you been able to fully comply with the permit conditions, if not, why not?

#	Questions
13	Is the regulatory framework and associated processes causing any barriers, impediments, or risks to your operations? Please describe why.
14	Please indicate if there is any data that suggests additional spending occurred arising as a result of e-scooter use (i.e., the spend would not have otherwise occurred)
15	Please indicate what factors you believe have assisted the adoption of e-scooters: <ul style="list-style-type: none"> • Legislation • Policy • Program guidelines • Regulations (permit conditions) • Effective first and last km travel solution • Parking and charging facilities • Other (Please describe)
16	What are you doing to ensure riders are using appropriate parking facilities and pathways to allow the safe use of e-scooters without creating conflicts with other path users?
17	Are there any areas or zones that are more problematic in terms of safety?
18	How understandable do you believe the rules are for shared path users and is the publicly available information clear on who has the right to operate on shared pathways? Do these rules also cover different device types? i.e., e-bike
21	Would a class system be useful for different powered device types?
22	Does the legislation and other guidance address actual issues/problems that exist, if not what doesn't it deal with?
23	Do current policies promote responsible and appropriate behaviour?
24	Please describe what user training is provided by your company?
25	Please describe what information campaigns have been carried out.
26	How have the benefits of the e-scooter been communicated to the users and the public?
27	What economic benefits do you see from the use of e-scooters?
28	What future enhancements or connections do you see for the future?
29	What would you like to see different for the current e-scooter arrangements?
30	Is there anything else you would like to share re this review?

List of Areas

Canberra Centre	City Interchanges
Mort Street	Belconnen Interchange
Lonsdale Street	Dickson Interchange
Bunda Street	
Marcus Clarke Street	
London Circuit	
King Edward Terrace	
Kingston Foreshore	
Australian National University	
University of Canberra	

Appendix E – Regulatory Framework Summary

Framework Component	Summary Information
Public Unleased Land Act 2013 (PULA)	The main objects of this Act are to protect the amenity and natural value of public unleased land and facilitate the use of public unleased land.
Road Transport (Road Rules) Regulation 2017	The objects of this regulation are to provide rules for all road users in the ACT that are substantially uniform with rules for road users elsewhere in Australia and specify behaviour for all road users that supports the safe and efficient use of roads in Australia.
Road Transport legislation	The ACT's road transport laws that consist of a number of Acts, regulations and instruments that support the safe and efficient use of the ACT's road network.
ACT Climate Change Strategy 2019-25	Outlines the next steps the community, business and Government will take to reduce emissions by 50–60% (below 1990 levels) by 2025 and establish a pathway for achieving net zero emissions by 2045.
Road Safety Strategy 2020-2025	The Strategy outlines the ACT Government's commitment to addressing road safety. It describes the key goals and guiding principles for achieving Vision Zero, the safe systems approach and ensuring everyone in the community is safe when using our road network.
Road Safety Action Plan 2020-2023	The key focus areas of the Action Plan are distraction, drink and drug driving, vulnerable road users and speeding. Each focus area has specific actions including investigate mobile phone detection cameras, review the ACT's drink and drug driving scheme, reform the motorcycle licensing scheme and explore innovative approaches to reducing speeding.
Transport Strategy 2020	Sets the ACT Government vision for transport to be a world class system that supports a compact, sustainable and vibrant city.
Cycle Tourism Strategy	<p>The Strategy provides a 10 year roadmap for how government, private sector and the cycling community sector can work together to place Canberra firmly on the cycle tourism map.</p> <p>The Strategy covers all aspects of tourism cycling – from urban cycle ways and road cycling, through to off-road cycling and bike paths and from novice to experienced cyclists. It builds on our active travel network promoting a healthy lifestyle for our vibrant city.</p>

Framework Component	Summary Information
Dockless shared micromobility for the ACT Policy	This policy outlines the ACT Government’s general expectations for the operation of high quality micromobility schemes that deliver a genuine transport choice on ACT public unleased land.
Compliance	Three Strike Self-Regulatory Compliance Enforcement Escalation Framework
Community Education	Multiple campaigns from ACT Government Continuous campaigns from commercial operators
Operator Permits	Required under Public Unleased Land Act 2013 (PULA) and sets out the specific terms and conditions for each operator.
Enforcement	ACT Police Operator rider exclusions and suspensions

Source: ACT Government Website, 24 June 2021app