

SHARED MICROMOBILITY GUIDELINES

A coordinated approach to enabling and managing
shared micromobility services in Metro Vancouver

JULY 2019

*Developed by
TransLink in partnership
with municipalities of
Metro Vancouver*



Foreword

New modes of transportation including electric-assisted bikes and scooters as well as ride-hailing Transport Network Companies (TNCs) have emerged in recent years to supplement public transit, and the pace of innovation is high. The municipalities of Metro Vancouver are increasingly interested to pilot demonstrations of these new modes in order to determine if they show promise in providing residents with more convenient and reliable options to move around. Several of the new modes and service models are shared and electric which could support the region in reaching its sustainability goals. The need for a more unified approach to piloting requirements has led to the recent development of these Shared Micromobility Guidelines by TransLink in close collaboration with local municipalities.

The current piloting, even of similar services, is to a large extent local in nature. Criteria for data sharing, safety, and allowed usage of road-space including parking vary between each responsible municipality. The municipalities' processes to shape sought-after standards for the new transportation modes and operators show overlaps of work and lack of comparing best-practices - which could set up the region for "islands of mobility" rather than "seamless mobility" across modes and municipal borders.

Public agencies have traditionally engaged private sector innovators via a Request for Proposals (RFP) process in which typically one bid is selected to operate under strict contract of conditions. However, perhaps a more progressive approach may be to develop a general framework for operation standards based on policy initiative goals for the region, under which municipalities may distribute licences to private operators with the option of adding on more specific criteria such as fleet sizes, zone-based pricing schemes, curbside management and more. Under this general framework, municipalities could welcome new mobility services with the assurance of regional coordination, while instituting their own local stipulations to more specifically cater to unique contexts and needs – balancing incentives and regulations for new mobility operators which could also hold potential for revenue generation and reallocation to improve services.

We now see an opportunity for increased coordination to ensure proper oversight, while creating a unified and efficient system across a region, that encourages rather than stifles innovation and private investment toward public good. The Micromobility Guideline is a first step toward achieving these goals, and we are looking forward to reviewing the lessons learned from early piloting of micromobility services to better understand how they may be formally incorporated to provide innovative new mobility options for the region.

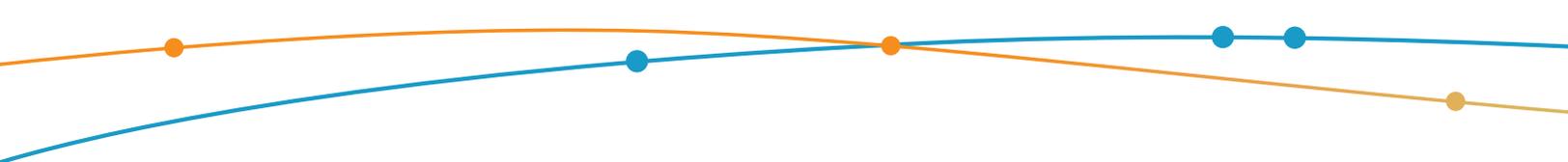
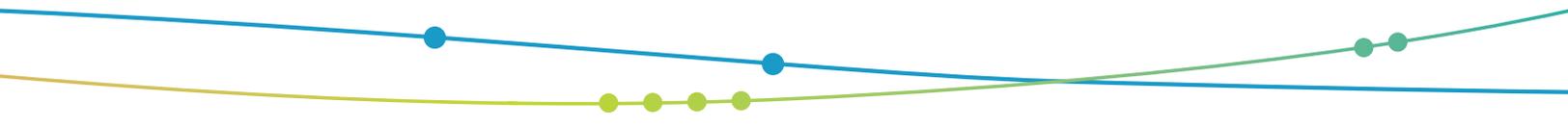


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Executive Summary

The Metro Vancouver municipalities and TransLink have a key role in shaping what life is like in Metro Vancouver. We are committed to creating affordable, sustainable, and seamless transportation as part of our efforts to create a prosperous region. The Regional Transportation Strategy adopted in 2013 sets a target for 50% of all journeys to be made by walking, cycling or using public transport by 2045. To achieve this, Metro Vancouver municipalities and TransLink must work together to make our communities a place where people choose active and sustainable transportation options more often.

Micromobility, such as dockless bike sharing, electric scooters, and on-demand shuttles, is part of a mosaic of new and emerging services that will bring us closer to achieve this vision. Many municipalities in Metro Vancouver are experimenting with these services and micromobility is becoming a growing share of trips in the region. However, this growth is leading to new opportunities and challenges.

The Micromobility industry, their business and operational models, are constantly innovating and adapting; making best practices for regulating, managing and evaluating outcomes an ongoing pursuit.

The constant innovation and adaptation make it difficult to weigh the costs and benefits of new shared-use services that people enjoy. It is also a challenge to provide these services while ensuring an orderly and accessible public right-of-way.

International examples of unregulated rollouts of micromobility devices have exhibited a number of issues, including unsustainable business models and haphazard parking of devices obstructing access on right of ways.

TransLink, in close collaboration with the Metro Vancouver municipalities, has created these guidelines to proactively manage issues of regional significance. It is meant to provide timely information to municipal planning and engineering staff as a consideration during the procurement and licencing of micromobility services.

The Guidelines also provide an initial “roadmap” for the municipalities and TransLink to develop issue-specific actions to be administered and/or coordinated at the local and regional level.

The Guidelines focus on six areas:

1. Data and Data Sharing
2. Payments and Price Structures
3. System Planning and Design
4. Right of Way Management
5. System Operations
6. Permit Structure and Conditions

Each area has several proposed recommendations based on best practices and the interests expressed through consultations by Metro Vancouver municipalities.

These recommendations are further classified into five areas of opportunities for permitting shared micromobility (see table in page 6-7):

1. *A Legislative Framework for Micromobility* to provide consistency across municipalities and standardize procedures
2. *Uniform Data Standards* to facilitate compliance costs and non-compliance enforcement
3. *Interoperability* to improve customer experience and enable seamless integrated travel across municipalities
4. *Build Transportation System Resilience and Sustainability* by increasing transportation options
5. *Performance-based Permit Conditions* to provide flexible permit conditions to operators

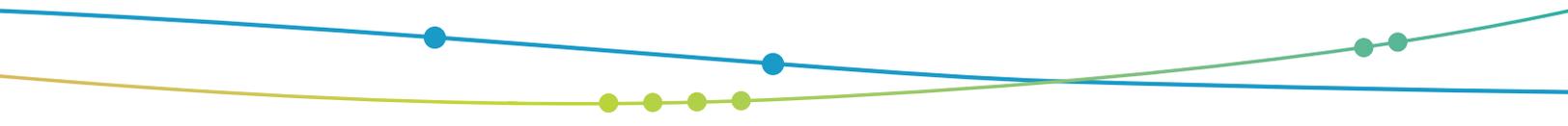
Discussions with the Metro Vancouver municipalities while crafting these guidelines has indicated that further coordination is needed to:

- Create a consistent set of standards across the region for shared mobility services;
- Support municipalities in their decision-making to allow shared mobility service providers to operate through better coordination;
- Support shared mobility service providers by providing guidance through regional standards and helping them through municipal approval processes; and
- In the long term, work towards a regional licence system for shared mobility

As a next step following up on the Guidelines, we propose a joint effort this fall between TransLink and the Metro Vancouver municipalities to implement policy measures on new shared mobility services also including ride-hailing, and car-sharing.

This Regional Shared Mobility Framework could draw from existing as well as new policy levers available to local government in this region to regulate new shared mobility services. As a first step, more applied research is urgently needed including local considerations such as policy mechanisms, regulatory authority, governance framework, compliance and enforcement mechanisms, and staffing and resourcing requirements.

This analysis should be followed by active consultations with key regional stakeholders, including municipalities, impacted industry and user groups or representatives of user groups, to identify existing/anticipated issues as well as objectives and priorities with respect to shared mobility regulation, compliance and enforcement.



Opportunities for Permitting Shared Micromobility in Metro Vancouver

Key Opportunities	Rationale	Guideline Items
<p>A Legislative Framework for Micromobility</p>	<p>A legislative framework with the potential to standardize one or more of the following aspects of micromobility at a regional or provincial level:</p> <ol style="list-style-type: none"> 1. Device operational standards 2. Consumer rights when devices are in use 3. Defining when, where and under what specific circumstances devices can and cannot be used 4. Ensuring third parties have statutory protections against reckless user behaviour 5. Reducing investment risk for operators through clear and uniform ‘rules of engagement’ <p>Key benefits:</p> <ul style="list-style-type: none"> • Consistent operating rules for operating devices across municipal boundaries • Potential for additional statutory consumer protections in relation to payment and liability • Device-based regulations that would apply equally to all devices and not rely as heavily on individual, operator-by-operator, permit-based agreements 	<p>6.4 Long-term Regulatory Framework</p> <p>6.5 Regional Key Performance Indicators (KPIs)</p> <p>6.6 Service Area Expansion and Dynamic Fleet Cap</p>
<p>Uniform Data Standards</p>	<p>Mandate uniform standards at a regional level to:</p> <ol style="list-style-type: none"> 1. Assist operators with compliance costs 2. Allow municipalities to gain useful insights into use and availability including enforcement mechanisms for non-compliance that can be applied across the region 	<p>1.1 Base Uniform Data Standards</p> <p>1.2 Data Format</p> <p>1.3 Data Validation</p> <p>1.4 Real-time Position Data</p> <p>1.5 Data Warehousing and Privacy</p>

Key Opportunities	Rationale	Guideline Items
Interoperability	A cooperative policy framework between Metro Vancouver municipalities offers the best opportunity to increase the potential for interoperability over time	<ul style="list-style-type: none"> 2.1 Payment System(s) 2.2 Product and Service Innovation 2.3 Payment Security Procedures and Processes 2.4 Interoperability Capabilities
Build Transportation System Resilience and Sustainability	Shared micromobility provides municipalities and the region with a chance to increase the number of transportation options, improve transportation equity and build a more sustainable and resilient transportation system. Safety risks to both users and non-users must be identified and addressed	<ul style="list-style-type: none"> 3.1 Long-term Fleet Objectives 3.2 Fleet Information 3.3 Device Technical Specifications (including mandatory hardware) 3.4 Supplementary Technology (optional hardware) 3.5 Parking 3.6 Equitable Distribution and Access 3.7 Safety and Education Program 3.8 Staffing 5.1 Helmet Plan
Performance-based Permit Conditions	There is an opportunity to adopt flexible permit conditions that allow operators into the operating areas, and determine the kind of devices permitted, the number of devices permitted ('device caps') and the length of a permit	<ul style="list-style-type: none"> 4.1 Operating Parking Concept 5.2 Rebalancing Plan 5.3 Rechargeable Electric Devices 5.4 Parking Incentives and Penalties 5.5 Safety Checks 5.6 Complaints Management System 5.7 Compliance Management System 5.8 Bank Guarantee 6.1 Standardized Permit Process and Conditions 6.2 Permit Length Determination 6.3 Administration and Cost Recovery

Introduction

The new mobility landscape incorporates shared mobility as a component that can support regional objectives such as reducing greenhouse gas emissions and vehicle kilometers traveled (VKT).

Cities around the world have observed the emergence of shared micromobility services changing the way people move. These services are an alternative option to complete the first/last-mile to transit stations that also promote safe, healthy, clean and compact communities.

Coordination between TransLink, the municipalities and operators is essential to respond to these trends and ensure the greatest benefit of shared micromobility is captured for the cities and the public.

The ***Shared Micromobility Guidelines*** ('The Guidelines') is a project led by TransLink on behalf of Metro Vancouver municipalities and other organizations currently involved in shared micromobility in the Lower Mainland.

It is meant to act as a reference guide to inform municipalities of the relevant considerations for permitting shared micromobility devices within their jurisdictions.

The objectives of The Guidelines are to:

- Provide a set of recommendations for municipalities and prospective operators interested in conducting a shared micromobility pilot and inform the wider community.
- Provide local governments, and other relevant organizations in Metro Vancouver with a common set of considerations to improve planning, management and operations of shared micromobility devices.

Although municipalities are expected to be the primary users of The Guidelines, prospective shared micromobility operators will also be able to benefit from the potential for increased municipal coordination on permit conditions, reducing the permit compliance burden for operators.

The Guidelines have been drafted with the following principles in mind:

1. **'Device agnostic'**; i.e. they are intended to be applicable to all devices and are not targeted – for the most part – at any specific type of micromobility device.
2. The need to strike a **fair balance** between managing the barriers to enter the shared micromobility market and protecting the public interest for safe, sustainable and efficient transportation through sensible and reasonable permit conditions.
3. Allowing for a degree of **flexibility** for local government to determine the permit conditions that are most appropriate for their municipality.
4. **Future-oriented:** The Guidelines are cognisant of recent shared mobility trends however they are not intended as legal requirements. Instead, they act as a starting point to help municipalities determine the most appropriate arrangements for their jurisdiction.

The Guidelines provide the basis for TransLink and municipalities to implement coordinated permit systems in the absence of a legislative framework with specific statutory requirements for micromobility. The Guidelines also discuss, explore and outline the potential for voluntary incentives and cooperation in the shared micromobility space.



These guidelines are intended to be reviewed and updated on an as-needed basis as the micromobility landscape continues to change. Consistent with other agencies operating in this space, it is anticipated that they will be updated within six to twelve months of being released to include experiences and lessons learned both locally and abroad for Metro Vancouver.

CURRENT STATUS OF ROLLING OUT MICROMOBILITY IN NORTH AMERICAN CITIES

To date, most jurisdictions in North America have elected to regulate at the local government level, and on a case-by-case basis, individual operators. In several locations (e.g. Los Angeles, Washington DC, Seattle), micromobility operators have sought to launch at a regional level. In some instances (e.g. Brisbane, Santa Monica), a few ‘rogue’ operators have sought to launch with no permits and subsequently faced cease and desist notices or fines. These operators either withdrew from service or sought post-deployment permission to operate.

Most permit regimes are short term in nature (1-2 years). Many jurisdictions have informally stated they prefer a short-term permit to periodically revisit and adjust permit requirements. Partnership models remain popular; however, recent experience strongly suggests that the flexibility offered by shared dockless devices, and the relatively short lifespan of many devices, has changed the financial motives of many operators.

There is an emerging consensus that the desire to capture short-term market share, and revenues, makes shared dockless devices less attractive for long term partnerships when compared to conventional docked bikeshare. Generally, docked shared devices require a greater level of commitment and infrastructure on the street to support the docking process.

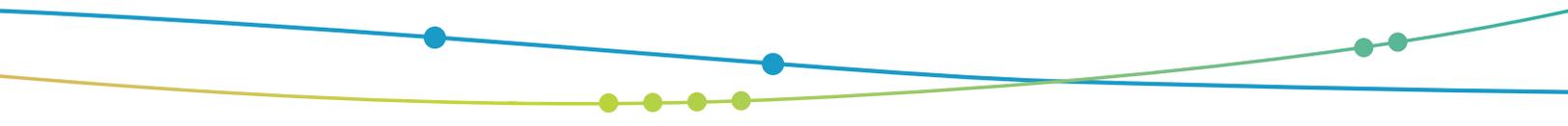
APPLICATION IN METRO VANCOUVER

In Metro Vancouver, many operators have entered into individual agreements with municipalities. To the extent cooperation exists, it has been through a local permit regime with relatively wide discretion on the interpretation of assessment criteria for the awarding of permits.

The Shared Micromobility Guidelines aim to provide local governments and other relevant organizations in Metro Vancouver a common set of considerations to improve planning for, day-to-day management and operations of shared micromobility devices within public rights of way and other public spaces (e.g. UBC).

The Guidelines focus on six areas:

1. The collection of **Data** to measure the success of micromobility providers in the community and Data Sharing to improve short- and long-term planning, research and analysis.
2. **Payments and Price Structures** that are financially sustainable and have the potential to adapt to integrated payment options in a secure manner.
3. **System Planning and Design** to strive for a fair balance between innovation and public interests while providing solutions to transportation needs.
4. **Right-Of-Way (ROW) Management** to identify and manage risks when devices are being used and stored within ROW.
5. **System Operations** to ensure service providers are held accountable for their day-to-day operations and have an appropriate level of risk management for operational risks.
6. **Permit Structure and Conditions** to provide short-term and long-term permit structure recommendations and future considerations.



The Guidelines are intended to help guide individual municipalities based on the currently available technologies and business models.

SHORT NOTE ON TERMINOLOGY

The term ‘shared mobility’ continues to be contested, particularly where it relates to vehicles intended to be legally used by one person at a time. There is currently a wide variety of terminology and vehicle classifications in use.

- Transportation/economic model centric terminology: ‘Shared mobility’.
- Operating model and economic model centric terminology: ‘Dockless on-demand personal mobility’ (LADOT terminology).
- Device-centric terminology: ‘innovative vehicles’ (Australia), ‘scooter share’, ‘bike share’ (‘bike share’ has since become common parlance in the English language in the last 10-15 years).
- User-centric terminology: ‘Personal Mobility Devices’ (Singapore Land Transport Authority).
- Hybrid terminology: ‘Dockless Sharing Vehicles’ (Washington DC DDOT).
- Geographic scale and transportation-based terminology: ‘micromobility’.

There is still a slowly emerging consensus around use of the term ‘shared micromobility’ which will be the preferred choice in these guidelines.

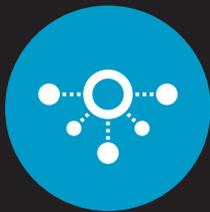
PROCESS

The Guidelines have been developed by WSP and TransLink, with input from the Metro Vancouver municipalities and other organizations within the region responsible for approving the use of shared mobility devices within their local jurisdictions.

- TransLink and WSP hosted two stakeholder workshops (mid-October and late November 2018).
 1. The first workshop was a scoping exercise to generate a list of common stakeholder issues concerning shared micromobility.
 2. The second workshop was developed around five common themes, developed with input from TransLink, that responded to the issues raised in the first workshop.
- The Guidelines were prepared and finalized during winter and spring of 2018/19.



SHARED MICROMOBILITY GUIDELINES



DATA AND
DATA SHARING



PAYMENTS
AND PRICE
STRUCTURES



SYSTEM
PLANNING AND
DESIGN



RIGHT
OF WAY



SYSTEM
OPERATIONS



PERMIT
STRUCTURE AND
CONDITIONS



1.0 DATA AND DATA SHARING

PREMISE FOR TOPIC

- » **Data** is defined as ‘factual information (such as measurements or statistics) used as a basis for reasoning, planning, discussion, or calculation.’
- » **Data sharing** is defined as ‘the practice of making data available to others for planning, research or analysis purposes.’
- » Shared mobility concepts rely on one or more source(s) of data and some degree of data sharing to be able to demonstrate their level of success to the community.
- » Given that shared micromobility providers are expected to operate across the Metro Vancouver region, municipalities and other agencies will require some level of access to data to gauge success, both in terms of understanding historical trends as well as data analysis to identify potential future trends.
- Local municipalities indicated that capturing device usage and location data is of critical importance. Access to data is a key part of evidence-driven policy.
- » In the absence of a regulatory framework mandating uniform data standards across the region, it is assumed that data sharing arrangements will likely initially be governed and enforced at the municipal level.
- » These guidelines are an attempt to outline desirable and consistent data requirements that municipalities can require as part of their individual permit arrangements.
- » The decision to share data with third parties (i.e. the region, the public via open data) is likely to be contractual obligation within the permitting arrangement.

PROPOSED OBJECTIVES

- » Uniform data standards to minimize compliance costs on operators and non-compliance enforcement mechanisms from municipalities.
- » Data sharing is essential to help inform and shape the development of micromobility and achieve regional goals in Metro Vancouver.
- In the short term, data sharing agreements would assist municipalities to gain a better understanding of current-day usage patterns and identification of immediate issues. Low-cost, high impact operational changes that help to optimise the existing network.
- In the long term, the municipalities and the region will have the ability to make more informed decisions about transportation network development, including policy changes and regulatory frameworks (Refer to **6.0 Permit Structure and Conditions**).

RELEVANT PRINCIPLES

- » Government and the community have a reasonable expectation of **quality data** that will be **provided in a timely manner**.
- » Operators need to act as **responsible** custodians of all data generated.
- » Municipalities can use their existing regulatory powers to ensure data is **provided** while still **respecting** commercial sensitivities from operators around sharing data.
- » Balance public appetite for **Open Data** with end-user **privacy concerns**.

RISKS (IF STATUS QUO IS MAINTAINED)

- » Fractured, incomplete data from individual operators which may not be easily accessed by municipalities or comply with open data requirements.
- » More resources required to capture and estimate latent demand for services.
- » Likely to be more difficult to plan for future Shared Micromobility services.

In the current context, there seem to be two competing perspectives on data sharing: non-aggregated, open data (i.e. Mobility Data Specification, or MDS) and pre-aggregated, encrypted data (i.e. SharedStreets platform).

The Open Mobility Foundation (OMF) was founded in support of the MDS, which includes details such as mobility vehicle trips and their routes; as well as the location and status (e.g. ‘available,’ ‘in use,’ or ‘out of service’) of each vehicle. This granular level data could help cities assess equity goals by ensuring micromobility in underprivileged communities, establish caps on the total number of vehicles, and collect specific trip information that could inform transportation improvements. Originating from work at the LADOT, municipal members now include: Austin, Chicago, Los Angeles, Louisville, Miami Dade, Minneapolis, New York City DOT, New York City Taxi and Limo Commission, Philadelphia, Portland, San Francisco, San Jose, Santa Monica, Seattle, and Washington DC.

However, serious user privacy concerns have been raised around this detailed level of information by Transport Network Companies (TNC), as well as the American Civil Liberties Union (ACLU). In California, the state legislature is currently proposing a bill (AB 1112) that could restrict cities from collecting individual trip data, allowing them access only to aggregated data from micromobility companies.

As an alternative, cities and transit agencies may rely on third party platforms developed to warehouse and analyze data, thereby providing the information needed to measure micromobility impacts while maintaining privacy of information. SharedStreets is a non-profit organization that offers such services to cities – founded by NACTO and Bloomberg Philanthropies, and endorsed by Ford, Uber and Lyft. Several city agencies are using this platform including: SFMTA, DDOT, and Toronto. Other third party service providers include Remix (who support MDS), Populus, and Ride Report to name a few.

Coordination of the regional policy framework with local municipalities will be essential for regulating TNCs data sharing agreements, and a balanced approach should be considered to maintain user privacy but also gain the information needed to measure impacts and inform mobility policy and projects moving forward.



1.0 DATA AND DATA SHARING

ID	Topic	Proposed Permit Application Requirement	Details
1.1	Base Uniform Data Standard	<p>The uniform data standards should be:</p> <ul style="list-style-type: none"> • Required as a permit condition of operation • Subject to validation (possibly through a third party) • Contain a combination of real-time and historical data • Performance-based, in terms of: <ul style="list-style-type: none"> • Completeness, as determined by through validation (see Guideline item 1.3); • Compliance with a data provision timeline (see Guideline item 1.4); • Stipulate penalties for non compliance and a mechanism for enforcing these penalties 	<p><i>Operators should be required to retain accredited firms to conduct periodic audits of operators to confirm that data security best practices are being upheld.</i></p> <p><i>Based on informal feedback from stakeholders, it is anticipated that compliance with data standards is likely to emerge as an issue without strict and readily enforceable standards.</i></p> <p><i>NACTO's Guidelines for the Regulation and Management of Shared Active Transportation recommend using the General Bike Share Feed Specification (GBFS) for real-time, read-only data, as adopted by North American Bikeshare Association (NABSA) in 2015.</i></p> <p><i>There are existing guidelines on what data to publish and its format.</i></p>
1.2	Data Format	<p>The most recent DDOT data reporting format consists of three tables with data categories and fields</p> <ol style="list-style-type: none"> 1. Summary Table <ol style="list-style-type: none"> a. Operator b. Date c. Trips d. Bicycles (Devices) e. Reports f. Maintenance 2. Trip Table <ol style="list-style-type: none"> a. Identification b. Date c. Location 3. Event Table <ol style="list-style-type: none"> a. Identification b. Date c. Location 	<p><i>The DDOT data format has evolved out of technologies and data capabilities that form part of the latest generation of shared micromobility devices. Furthermore, DDOT is one of the few agencies that has been able to publicly demonstrate how this data can be analysed to respond to both short-term and long term planning needs.</i></p> <p><i>Mandating compliance with this interim standard should increase the overall level of compliance with permit requirements until new emerging standards such as MDS have been given an opportunity to prove themselves in the marketplace.</i></p>

1.0 DATA AND DATA SHARING

ID	Topic	Proposed Permit Application Requirement	Details
1.3	Data Validation	Validation Accreditation (e.g. from a Regionally-endorsed third party) firm: <ul style="list-style-type: none"> • Data security standards 	<i>Validation accreditation to operate in the Region subject to privacy requirements and house the data exclusively within Canada without needing to transfer it outside of Canada.</i>
1.4	Real-time Device Position Data	Key Requirements: <ul style="list-style-type: none"> • Real-time GBFS stream when devices not in use • Provision of GBFS-stream to consumers when devices not in use • Provision of GBFS-stream to municipalities when devices not in use 	<p><i>NACTO's Guidelines for the Regulation and Management of Shared Active Transportation recommend using the General Bike Share Feed Specification (GBFS) for real-time, read-only data. The GBFS was adopted by North American Bikeshare Association (NABSA) in 2015 and appears to be the most common standard among shared micromobility operators / regulators for real time device data.</i></p> <p><i>The GBFS specification is not intended for historical or archival data such as trip records. The spec is used to publish public information intended for bikeshare users. It has since been expanded to other devices.</i></p>
1.5	Data Warehousing and Privacy	Operators should be required to provide: <ul style="list-style-type: none"> • A commitment to archive historical trip data within Canada for a defined time period as part of data warehousing arrangements (e.g. three years) • Demonstrate ongoing compliance with Canadian and provincial privacy laws 	<p><i>Canadian Privacy Law requires employers to train employees and other staff about the management of Personal Information as defined in The Personal Information Protection and Electronic Documents Act, (SC 2000, c 5). The permit application process should require demonstrable evidence of how an operator proposes to comply with existing privacy law as well as how they propose to warehouse data.</i></p>



2.0 PAYMENTS AND PRICING STRUCTURE

PREMISE FOR TOPIC

- » Shared micromobility services require an ongoing source of revenue to be financially sustainable and operate successfully.
- » To the extent that these services rely on user fees to generate revenue for their day-to-day operations, it is in the public interest to ensure that the fees paid by users can be clearly understood, set and collected in a fair and transparent manner.
- » Existing provincial consumer protections, administered by Consumer Protection BC, may not be enough to deal with the full range of consumer issues that micromobility devices are likely to present.
- » Payment and pricing issues are likely to be further complicated by the bundled nature of Mobility-as-a-Service (MaaS) style services underlying price structures that accompany many of these shared economy services. The nature of shared micromobility service and the way they are used is likely to change and evolve over time.
- » It has been assumed that operators rely on robust and secure payment systems to capture and process payments and secure their revenue streams, however there are several precedents that warrant additional attention to this focus area.
- » While existing operators already use a wide range of payment systems, common payment platforms for services are still only gradually emerging.
- » There will be a need to continually assess what kind of other regulatory interventions may be necessary once a permit system is in place (Refer to **6.0 Permit Structure and Conditions**).

PROPOSED OBJECTIVES

- » Payments and pricing structures planned for fare integration with transit and interoperability with other devices and services.
- » Consistency in payments and pricing structures in the absence of formal regulation.

RELEVANT PRINCIPLES

- » Encourage adoption of **payment system** core attributes: reliable, innovative, secure and interoperable with other mobility services.

RISKS (IF STATUS QUO IS MAINTAINED)

- » Unreliable payment systems: both municipalities and operators are likely to receive a higher level of complaints about access to services.
- » Without a comprehensive, integrated payment system and fare structure in place, the full potential of integrated mobility will either not be realised or take much longer to be realised.

2.0 PAYMENTS AND PRICING STRUCTURE

ID	Topic	Proposed Permit Application Requirement	Details
2.1	Payment system(s)	<p>Operators to demonstrate evidence of:</p> <ol style="list-style-type: none"> 1. A payment system that offers a greater level of options for users (e.g. low income) 2. A payment option that includes cash/ non-credit card option 	<p><i>Municipalities should recognise in the permit development process that cash handling costs have the potential to create higher transaction and operating costs and give consideration as to how those higher costs are likely to be spread across all users.</i></p> <p><i>A price structure with service options that include a low-income payment option.</i></p>
2.2	Product and Service Innovation	<p>Operators to demonstrate evidence of:</p> <ol style="list-style-type: none"> 1. Support for established payment technologies: does the service offering leverage existing technologies or lower existing barriers to access devices by making use of existing consumer devices (such as mobile phones) 2. Support for and encouragement of new payment systems and technologies, including how these systems increase convenience of payment and offer lower transaction costs for users when compared to existing offerings 3. Rewards and incentives the operator is prepared to offer to increase feeder trips to transit 	<p><i>Application requirements based on preferences expressed at the stakeholder sessions, including level of voluntary regional cooperation.</i></p>
2.3	Payment Security Procedures and Processes	<p>Operators to demonstrate evidence of:</p> <ol style="list-style-type: none"> 1. Level of compliance with the Payment Card Industry Data Security Standard (PCI DSS) 2. Demonstrate consumer protections with respect to cash transactions and ensuring any fees paid are tracked and not lost to fraud 	<p><i>Application requirements based on outcomes from the stakeholder sessions and existing industry norms.</i></p>
2.4	Interoperability Capabilities	<p>Operators to demonstrate evidence of:</p> <ol style="list-style-type: none"> 1. Current and future level of interoperability capabilities with TransLink Compass Payment System and/or a MaaS payment platform <p>Operators to demonstrate their willingness to be part of:</p> <ol style="list-style-type: none"> 2. Future Compass System program expansions for MaaS services 	<p><i>Application requirements based on outcomes from the stakeholder sessions and the findings of Dutch bikeshare interoperability study including Amsterdam, The Hague, Rotterdam, Utrecht in The Netherlands.</i></p>



3.0 SYSTEM PLANNING AND DESIGN

PREMISE FOR TOPIC

- » This section describes considerations for the licensing authority and the service provider as they work together to plan, design and permit the proposed service. Transparency and consistency is important to ensure a level playing field for all potential service providers and ensure that the proposed service meets public objectives.
- » This section is intended to assist the licensing authority and the shared micromobility providers:
 1. Determine the commercial feasibility of the proposed deployment during the permit period.
 2. Identify potential pathways for scaling up their operations over time.
 3. Streamline pre-implementation planning and design considerations across the Region.
- » Notwithstanding the considerations outlined here which are intended to build a common baseline across the Metro Vancouver region, individual municipalities may elect to impose additional requirements, both in terms of one-off pre-implementation requirements and/or ongoing long-term (operational) requirements. Micromobility providers will need to acquaint themselves with these arrangements prior to applying for the necessary permit(s).
- » Some of the key system planning and design topics of high interest within the Metro Vancouver region include clarifying the public objectives for the service, specifying fleet sizes and a plan for scaling that fleet over time, requirements or incentives around locking and securing the micromobility device, solutions for improved safety and environmental performance, and opportunities for interoperability between services and across jurisdictional boundaries.
- » There are important legislative compliance aspects to System Planning and Design: Micromobility devices will be required to demonstrate ongoing compliance with the Motor Vehicle Act, Motor Vehicle Regulations (BC), Motor Assisted Cycle Regulation, BC Reg 151/2002 and any applicable local by-laws.

PROPOSED OBJECTIVES

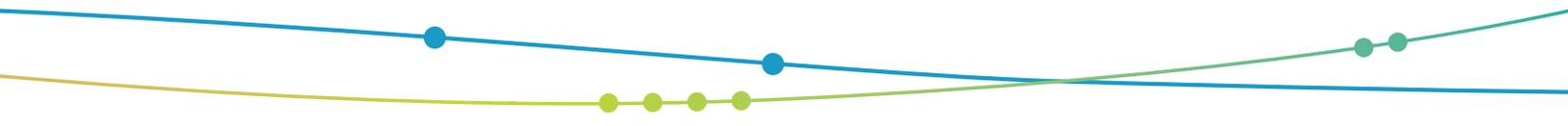
- » System planning and design that strikes a **fair balance** between encouraging innovation, mobility opportunity and protecting public safety.
- » Encouragement of **win-win solutions** where a micromobility provider can demonstrate their proposed solution fills an existing gap in current regional or local transportation needs.

RELEVANT PRINCIPLES

- » Implementation of micromobility services with **equitable distribution, access, safety and environmental sustainability**.
- » **Interoperability** and ability to incorporate new technologies.

RISKS (IF STATUS QUO IS MAINTAINED)

- » System planning and design that is fractured and uncoordinated.
- » System planning and design that does not take account of risks or unfairly apportions level of risk.
- » More frequent complaints are likely and increased municipal administrative burden.
- » Potential for regulatory burden/compliance issues that prevent operators from launching devices.



3.0 SYSTEM PLANNING AND DESIGN

ID	Topic	Proposed Permit Application Requirement	Details																																		
3.1	Long-term Fleet Objectives	<p>Demonstrated ability to:</p> <ol style="list-style-type: none"> 1. Appropriately plan for an initial deployment and outline a clear plan for sustainably scaling up operations over time 2. Contribute to Metro Vancouver urban transportation and sustainability goals over the life of the permit 	<p><i>Operators to demonstrate:</i></p> <ol style="list-style-type: none"> 1. Evidence of their ability to plan and implement an initial deployment of devices, including clear long-term goals and objectives. 2. A proposed pathway to achieving those goals and objectives based on unambiguous performance metrics and triggers. 3. Evidence of how their proposed deployment of devices (particularly the location and number of devices) contribute to achieving Metro Vancouver sustainable mobility goals. 																																		
3.2	Fleet Information	<ol style="list-style-type: none"> 1. Types of devices 2. Minimum and maximum number of devices proposed for initial deployment by municipality 3. Proposed rides per device per day trigger points commencing within the municipality for expanding fleet size at 3 months, 6 months and 12 months (assuming permit were to be extended beyond 12 months) 	<p><i>A summary table indicating the minimum and maximum number of each type of devices that are proposed to be part of the operator’s fleet at opening day, 3, 6 and 12 months.</i></p> <table border="1"> <thead> <tr> <th rowspan="2">For rides originating in a Metro Van municipality</th> <th rowspan="2">Proposed Trigger (rides per device per day)</th> <th colspan="2">Device 1</th> <th colspan="2">Device 2, etc.</th> </tr> <tr> <th>Min</th> <th>Max</th> <th>Min</th> <th>Max</th> </tr> </thead> <tbody> <tr> <td>Opening Day</td> <td>E.g.: 1.7</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Three months</td> <td>3.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Six months</td> <td>3.3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>12+ months (assuming permit is extended)</td> <td>>4</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	For rides originating in a Metro Van municipality	Proposed Trigger (rides per device per day)	Device 1		Device 2, etc.		Min	Max	Min	Max	Opening Day	E.g.: 1.7					Three months	3.0					Six months	3.3					12+ months (assuming permit is extended)	>4				
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Six months	3.3																																				
12+ months (assuming permit is extended)	>4																																				
3.3	Device Technical Specifications (including mandatory hardware)	<ol style="list-style-type: none"> 1. Demonstrate statutory compliance with Motor Assisted Cycle Regulation (BC) 151/2002 2. Speed regulator 3. Tethering mechanism 4. Speedometer 	<p><i>Outline statutory compliance with existing regulations as well as proposed device characteristics that will form part of an operator’s permit to operate</i></p>																																		



3.0 SYSTEM PLANNING AND DESIGN

ID	Topic	Proposed Permit Application Requirement	Details
3.4	Supplementary Technology (optional hardware)	<ol style="list-style-type: none"> 1. Lock to requirement 2. On board GPS 3. GPS Accuracy 4. GPS sample rate 5. Vehicle Display information 6. Tip over alert technology 	<p><i>Providers to demonstrate how the 'lock to requirement' forms part of their parking concept (refer to Guideline item 3.5) and operations (refer to 5.0 System Operations).</i></p> <p><i>Outline the level of GPS accuracy as well as any proposed future improvements and a timeline for implementing improvements.</i></p> <p><i>Outline what information will be displayed on the vehicle display (speed in km/h, battery charge, length of rental).</i></p> <p><i>Outline any tip over technologies and the process for notifying operators when a device has tipped over (refer to 5.0 System Operations).</i></p>
3.5	Parking	<ol style="list-style-type: none"> 1. Parking Concept* (refer to Guideline item 4.1) 2. Statutory compliance with local parking rules 3. Details of proposed agreements with private land holders for parking 	<p><i>Outline the proposed parking concept for the devices. Demonstrate how the proposed parking concept is either:</i></p> <ol style="list-style-type: none"> <i>1. Compatible with existing parking by-laws of municipalities in which devices are intended to operate.</i> <i>2. By-law or other regulatory exemptions that would be needed to operate under the proposed parking concept.</i> <p><i>Outline the term of proposed agreements with private landholders and mechanism for extending and ending arrangements.</i></p>

3.0 SYSTEM PLANNING AND DESIGN

ID	Topic	Proposed Permit Application Requirement	Details
3.6	Equitable Distribution and Access	<ol style="list-style-type: none"> 1. Rental fee structure, including changes to fees 2. Proposed Area of Operation (within individual municipalities) 3. BC Social Income Pass offerings 4. Support for other languages 5. Additional Features for Persons with Disabilities 	<p><i>Outline the rental fee structure in terms of starting fee, cost per minute, per 15 mins, per 30 mins per 60 mins.</i></p> <p><i>Outline proposed notification process and timeline for changing fees.</i></p> <p><i>Outline how (which medium) and at what points in time during rental that fees will be indicated to users.</i></p> <p><i>Outline any volume or any proposed membership discounts.</i></p> <p><i>Outline proposed area of operation within the municipality (refer to 5.0 System Operations for any proposed geofencing technologies to be used).</i></p> <p><i>Outline proposed offerings for holders of the BC Social Income Pass and any other proposed low-income initiatives and eligibility criteria.</i></p> <p><i>Outline support for languages other than English during signup process and when using devices.</i></p> <p><i>Outline any additional accessibility features for persons with disabilities.</i></p>

3.0 SYSTEM PLANNING AND DESIGN

ID	Topic	Proposed Permit Application Requirement	Details
3.7	Safety and Education Program	<ol style="list-style-type: none"> 1. Delivery method (in person, online, both) 2. Proposed provider 3. Program content 4. Cost recovery 5. Quarterly Reporting 	<p><i>Municipalities are encouraged to require that operators commit to a safety and education program as a condition of their municipal permit to operate. This is considered especially relevant for emerging devices with new operating characteristics.</i></p> <p><i>It is recommended that municipalities consider requesting operators submit details of:</i></p> <ol style="list-style-type: none"> <i>1. Delivery method of the program.</i> <i>2. Who is proposed to provide the program?</i> <i>3. Incentives for taking part (discounts to rides for example or ride credit).</i> <i>4. Program content, including key road safety messages from the Motor Vehicle Act, Criminal Code of Canada and other RoadSafetyBC, ICBC and local road safety messages.</i> <i>5. Any cost recovery mechanisms to ensure costs of a program delivery are fairly apportioned.</i> <i>6. Quarterly Reporting of results in terms of number of users who have attempted the program and successfully completed it.</i> <i>7. How they believe a successful safety and education program should be considered as part of any future permit application(s) after the end of the current permit period.</i>

3.0 SYSTEM PLANNING AND DESIGN

ID	Topic	Proposed Permit Application Requirement	Details
3.8	Staffing	<ol style="list-style-type: none"> 1. Staffing plan 2. Staff and contractor skills training 3. Local workforce 	<p><i>It is recommended that municipalities require as part of their permit process:</i></p> <ol style="list-style-type: none"> <i>1. A staffing plan in terms of day-to-day management of all devices residing within the municipality at any point in time, including 24-hour contacts.</i> <i>2. Any proposed staff and contractor skills training pre and post-deployment.</i> <i>3. An organizational hierarchy, including a contractual obligation for these plans to be updated within 10 business days of any changes during the permit period.</i> <i>4. The number of persons proposed to be employed within the local and non-local workforce, included subcontractors.</i> <i>5. If there are no proposed staff to be based within the municipality, details of the location of those staff within the region should be outlined.</i>



4.0 RIGHT OF WAY MANAGEMENT

PREMISE FOR TOPIC

- » There are existing restrictions on the types of micromobility devices that can legally be used within the ROW in BC and in Canada at present.
- » A key issue for any shared micromobility service is the question of how to identify and manage risks when devices are being used and stored within the ROW.
- » Effective and enforced management of shared micromobility devices within the public ROW and public spaces are key to positive public buy-in and long-term acceptance of devices within the community.
- » The lack of regulation for dockless shared micromobility devices in many jurisdictions around the world is negatively affecting public perception and acceptance of these devices.
- » The permit process is an opportunity to:
 1. Identify desirable user behaviours, particularly with respect to parking devices.
 2. Ensure that operators are obliged to communicate desirable behaviours to users in an understandable manner, including promoting the responsible use of devices within the ROW.
 3. Require operators to consider rewarding desirable behaviours as well as penalizing undesirable behaviours as part of their business model.
 4. Seek formal commitments from operators to proactively manage public safety risks and nuisance impacts from improperly parked devices.
- » There is a trend toward municipalities only granting ROW access to commercial operators with legally binding commitments to a formal compliance framework to address issues in a timely manner as they arise.
- » International experience to date demonstrates that there are two key bargaining chips for municipalities to improve ROW management within a permit system:
 1. The granting of an initial ‘level of access’ to the ROW through the granting of a permit.
 2. Ensuring that any subsequent increases in the ‘level of access’ to the ROW during the permit period is conditional on ongoing compliance with permit conditions.
- » Where devices are proposed to be stored on private property, there is also a need to consider limitations of how permit system interact with private property rights.
- » **6.0 Permit Structure and Conditions** examines the limitations of what can be expected to be achieved under current arrangements and profiles several different regulatory models for future consideration.

PROPOSED OBJECTIVES

- » **Clear identification** of issues that can be expected to be managed, as well as those issues that are best dealt with outside of the permitting process (refer to **6.0 Permit Structure and Conditions**).
- » ROW management that makes access and storage of devices in the ROW conditional on **implementation of and ongoing compliance** with a **responsible parking concept** (Refer to **5.0 System Operations** for details).
- » Communication strategy to assist with educating the public on **ROW responsibilities** and to help build confidence in the role of shared micromobility in the transportation system over time.

RELEVANT PRINCIPLES

- » Implement regulation for dockless shared micromobility devices to influence positively public perception and acceptance of these services while maximizing safety in a mixed environment.

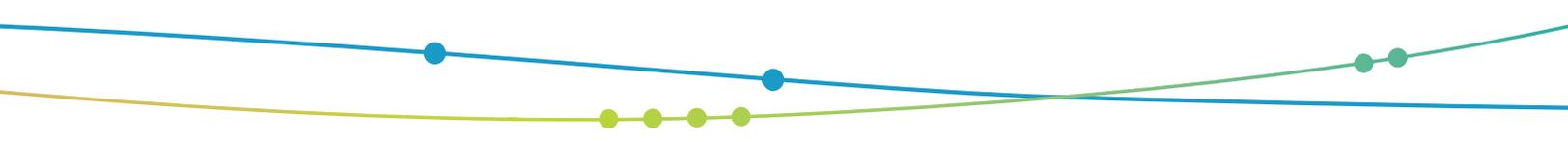
RISKS (IF STATUS QUO IS MAINTAINED)

- » Potential for unauthorized rogue operators and private persons to use public ROWs and private property to operate and store devices.
- » Uncoordinated response to complaints.
- » Limited ability to identify improper behaviours, hold operators (and users) to account and take enforcement action.
- » Without deliberate and effective ROW management, the public perception of shared micromobility in the Metro Vancouver area may quickly become a negative one, reducing future opportunities to implement new technologies.



4.0 RIGHT OF WAY MANAGEMENT

ID	Topic	Proposed Permit Application Requirement	Details
4.1	Operator Parking Concept	<p>Proactive ROW management:</p> <ol style="list-style-type: none"> 1. Confirmation of the proposed operating model and basic parking needs: <ol style="list-style-type: none"> a. Station-based b. Dockless <ol style="list-style-type: none"> i. Lock To ii. Wheel-Lock c. Hybrid (e.g. combination of physical stations and/or geofenced hubs) 2. Proposed areas to park and store devices within the ROW when not in use <ol style="list-style-type: none"> a. The use of visual markings to designate parking within the ROW: <ol style="list-style-type: none"> i. Street Painting ii. Signage provisions b. Non-visual <ol style="list-style-type: none"> i. Location within the ROW <ol style="list-style-type: none"> 1. Curb Zone 2. Buffer Zone 3. Roadbed/Parking Lane ii. Use of technology such as GPS to designate appropriate parking locations, including any geofencing provisions 	<p><i>Refer Guideline Item 3.5 for proposed planning requirements for parking.</i></p> <p><i>The Parking Concept should place onus on the operator to develop a coherent and comprehensive plan. In addition, it should define clear responsibilities for operators and users.</i></p> <p><i>The Parking Concept has three components. Operators should detail each component and show the relationships between the components:</i></p> <ol style="list-style-type: none"> 1. <i>System planning and design (Guideline item 3.5)</i> <ol style="list-style-type: none"> a. <i>Statutory Compliance</i> b. <i>Innovation</i> 2. <i>Proactive ROW Management (Guideline item 4.1)</i> <ol style="list-style-type: none"> a. <i>Parking Needs for the chosen Operating Model</i> b. <i>Areas within ROW to park/store devices</i> 3. <i>Responsive System Operations for Parking (Guideline items 5.2, 5.3, 5.4 and 5.7)</i> <ol style="list-style-type: none"> a. <i>Rebalancing Plan</i> b. <i>Timeline for daily removal of devices from the street</i> c. <i>Parking Incentives and Penalties</i> d. <i>Compliance Management Framework</i>





5.0 SYSTEM OPERATIONS

PREMISE FOR TOPIC

- » Stakeholders are looking for operators to demonstrate a high level of accountability for their day-to-day operations.
- » Key issues raised by municipalities included:
 1. Ongoing provision of helmets
 2. Rebalancing
 3. Interoperability
- » Multiple actors (such as dockless). Whoever is operating in Vancouver or Burnaby – could potentially operate in the other.
- » Further discussion of this topic as it related to specific permit conditions of operation **are discussed further in 6.0 Permit Structure and Conditions.**

PROPOSED OBJECTIVES

- » A high level of **ongoing compliance** with the storage/parking concept advanced in **4.0 ROW Management** with this being a central feature of any permit to operate.
- » **Appropriate level of risk management for operational risks**, including system failure/unexpected withdrawal.

RELEVANT PRINCIPLES

- » Shared micromobility operators should be held **accountable** for their day-to-day operations through the permit process.
- » **Operational efficiency** including rebalancing and interoperability.
- » **Long term financial viability** and contingency planning for failure.
- » Effectively managed services to improve **customer experience** and enable **integrated travel** in Metro Vancouver.

RISKS (IF STATUS QUO IS MAINTAINED)

- » Operators may seek to pursue a ‘minimal operational resourcing’ model without proper resourcing to maximize revenue and commercial viability.
- » A higher level of nuisance issues and complaints to municipalities can be expected.
- » Poor risk management of hazards and safety issues expected.
- » Municipality resources could be misused to assist with commercial operations; potential for additional costs on municipalities.

5.0 SYSTEM OPERATIONS

ID	Topic	Proposed Permit Application Requirement	Details
5.1	Helmet Plan	Require operators to: <ol style="list-style-type: none"> 1. Provide bicycle helmets that meet safety standards (CSA, ANSI, ASTM or SNELL B-95) 	<i>Demonstrate how the operator will take all reasonable efforts to ensure users ongoing compliance with existing BC helmet laws.</i>
5.2	Rebalancing Plan	Rebalancing plans, including: <ol style="list-style-type: none"> 1. Level of resourcing by day of week and time of day; 2. Who will be responsible for the rebalancing; 3. What is the proposed threshold for triggering a rebalancing; 4. Any User incentives to undertake rebalancing (discounts, how the information will be conveyed); 5. Timeline until completion 	<p><i>Require operators to submit a ‘rebalancing plan’ as part of an application to operate.</i></p> <p><i>Invite operators to offer incentives for users to undertake rebalancing.</i></p>
5.3	Rechargeable Electric Devices	Timeline for removal of devices from the street for rechargeable electric devices	<i>For each day of the week of operation, outline the proposed timetable for removing devices that will need to be charged from the street.</i>
5.4	Parking Incentives and Penalties	To facilitate compliance, incentives and penalties, visible device ID number and company’s contact information are recommended.	<i>Outline applicable incentives and fees for good and bad parking behaviour, including graduated fines and how this is proposed to be measured.</i>
5.5	Safety Check	Require operators to: <ol style="list-style-type: none"> 1. Check for signs of wear on helmets 2. Maintain components and structure of devices in working order (e.g. Brake maintenance, structural inspections) 	<i>Commit to periodic safety checks of all devices based on usage as recorded in the data specification outlined in 1.0 Data and Data Sharing.</i>

5.0 SYSTEM OPERATIONS

ID	Topic	Proposed Permit Application Requirement	Details
5.6	Complaints Management System	Complaints Management System that includes: <ol style="list-style-type: none"> 1. Faulty devices 2. Improperly parked devices 3. Missing equipment (e.g. helmets, warning devices) 4. Other complaints 	<p><i>Outline a Complaints Management System process for responding to complaints, including:</i></p> <ol style="list-style-type: none"> 1. <i>How the operator can be contacted</i> 2. <i>What action will be taken with respect to the four categories of complaints</i> 3. <i>Timelines for responding</i>
5.7	Compliance Management Framework	Tracking and reporting of ongoing level of compliance with: <ol style="list-style-type: none"> 1. Helmet Plan 2. Rebalancing Plan 3. Removal of devices from the street 4. Response to customer complaints 	<p><i>Tracking and reporting process outlined to comply with the previously mentioned items on an agreed period of time.</i></p>
5.8	Bank Guarantee	Require operators to agree to lodge a bank guarantee/performance bond as part of an application to operate.	<p><i>A bank guarantee would provide the City with the ability to access an agreed cash amount in the event of operator unexpected failure/withdrawal from the market. The amount would only be accessed in the event of system failure/withdrawal. As it would be a set amount, it does not lend itself to being used for day-to-day operational compliance purposes.</i></p> <p><i>The bank guarantee could be returned at the end of the permit period (Refer to 6.0 Permit Structure and Conditions).</i></p> <p><i>There is an opportunity for municipalities to cooperate so that operators would only be required to supply one bank guarantee for the Region instead of one guarantee per municipality.</i></p>



5.0 PERMIT STRUCTURE AND CONDITIONS

The Permit Structure and Conditions provides an overview of key terminology and regulatory approaches currently supporting shared micromobility permits and conditions being used in cities. It also provides high-level recommendations for regulating shared devices in the future, including pathways to transition from a vendor-based permit process to a comprehensive regulatory framework for shared micromobility in Metro Vancouver.

PREMISE FOR TOPIC

‘Guidelines’, ‘Permits’ and ‘Licences’

- » To understand the difference between guidelines, permits and licences, their purpose and structure, it is useful to contrast the definitions for each term:
 1. A **Guideline** is defined as ‘information intended to advise people on how something should be done or what something should be’
 2. A **Permit** is defined as the ‘granting of authorization or consent to someone (be it a person or legal entity) to do something’
 3. A **Licence** is defined as ‘a permit from an authority to own or use something, do a particular thing, or carry on a trade’.
- » The fact that the word permit is used to define the term licence results in a circular definition. Although the distinction between the two is subtle, within the transportation context, a permit is most often associated with granting permission to a business to operate a particular type of transportation service, especially with specific vehicles. For instance, many freight vehicles need vehicle permits to be legally allowed to operate on public roadways. The vehicle and the purpose for which it is being used are two factors that often determine whether a permit is required.

- » A licence is more commonly associated with the granting of permission to an individual operator to a particular type of vehicle, either for private or commercial use. For instance, until 2018 a driver’s licence was technically called an ‘Operator’s Licence’ in Alberta. People seeking to operate a vehicle must undertake a testing process for a particular class of vehicle to be able to use that vehicle legally on public roadways.

Definitions of the above terms can be interchangeable and vary on culture and context. For instance, the Land Transport Authority (LTA) in Singapore regulates device sharing operators through what it calls a licensing framework. This stated purpose of the LTA’s licensing framework is to ‘manage the size of each operator’s fleet, exercise stronger regulatory levers to require operators to manage indiscriminate parking and ensure responsible user behaviour’.

‘Permit conditions’

- » **‘Permit conditions’** are based on the idea that the authorization to issue a permit is explicitly tied to set of conditions for the permit holder.
- » **‘Conditions’** are defined as ‘a state of affairs that must exist or be brought about before something else is possible or permitted’.
- » It is common for permit conditions to contain enforcement provisions that allows the issuer of the permit (i.e. a municipality) to take a prescribed – but usually limited – set of actions against a permit holder if they do not comply with these conditions.

- » To understand how to set permit conditions regarding their intended purpose, it is helpful to understand the conditions and experiences of municipalities that have experimented with shared use micromobility services. These experiences can be applied to the permit application process for micromobility services by defining the risks these service’s devices have demonstrated (such as rates of injuries, poor vehicle parking behaviours, malfunctioning device mechanics, etc.). By doing so, a municipality can:
 1. Broadly define risks within the permit process by anticipating harm and requiring operators to outline how the operator proposes to minimize that harm
 2. Give some level of consideration to economic cost, technical and administrative feasibility for implementing the measures proposed to minimize harm when assessing permit applications.
- » Assuming multiple operators would be invited to apply in the permit process and likely devise a variety of ways to respond to the permit application requirements to meet their own commercial needs; there must be transparency and accountability for the determination of whether an applicant ultimately receives a permit or not.
- » To summarize, it is important to recognise:
 1. A permit process has inherent limitations; it cannot be devised a purely ‘black and white’ process.
 2. There must be a relatively large amount of discretion in the determination of who does and does not receive a permit, which complicates the application of risk assessment and uncertainty in a uniform manner to all operators.

‘Regulation’

- » The Canadian Policy on Regulatory Development notes that “**regulations** have binding legal effect and usually set out rules that apply generally rather than to specifically to persons or situations”.
- » After an initial period of no regulation and self-regulation in some cities, many cities in North America are now moving to different variants of regulation to protect the public interest.
- » Stakeholders expressed regional coordination is an important issue necessary to determine the opportunities that exist to create the greatest benefit to community. This includes determining permit vs. regulation approaches, through subsequent updates to the guidelines and rules associated with micromobility.
- » If a permit/licence regulated arrangement is ultimately preferred, device caps will be a key consideration within the permit process. Specifically:
 1. Whether caps are set at a municipal or regional level
 2. Use of incentives to try and encourage rebalancing through users (refer to **1.0 Data and Data Sharing** and **5.0 Systems Operations**)

PROPOSED OBJECTIVES

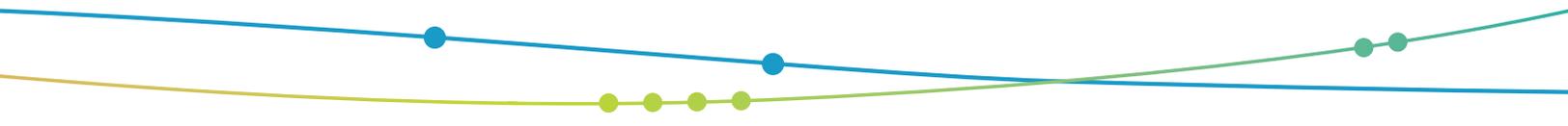
- » Greater understanding of the short-term options available to municipalities and other key stakeholders to influence shared micromobility behaviour through guidelines and a permit system.
- » Greater understanding of long-term regulatory options and arrangements for shared micromobility at a regional level including next steps on how to ensure any future regulation fulfills the 'greatest net benefit' objective, particularly in relation to the protection of public safety.

RELEVANT PRINCIPLES

- » Minimize risk, protect public interest and safety, and create the greatest benefit to the community.
- » Provide base entry requirements to enter the Metro Vancouver micromobility market.
- » The assignment of a permit should be transparent and accountable

RISKS (IF STATUS QUO IS MAINTAINED)

- » Operators are likely to place additional pressure on different levels of government to intervene and force implementation in an uncoordinated manner.
- » Expect continued uncertainty and difficulty in a coordinated approach to the planning and regulation of future shared micromobility services.

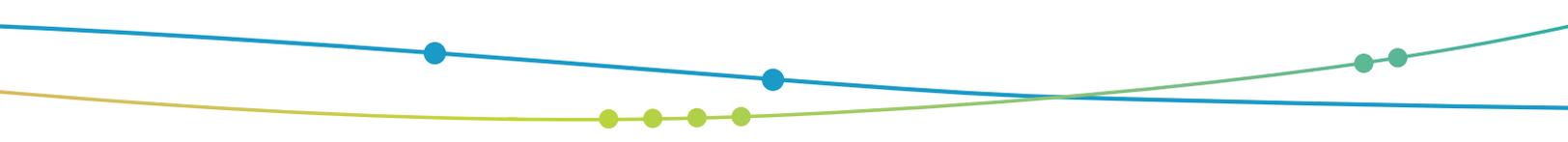


6.0 PERMIT STRUCTURE AND CONDITIONS

ID	Topic	Proposed Permit Application Requirement	Details
6.1	Standardized Permit Process and Conditions	<ol style="list-style-type: none"> 1. Determine a permit application process, including timelines and eligible organizations 2. Adopt standardized and defined terminology in permit application process 3. Determine and clearly distinguish between municipal recommended and mandatory requirements in application process 4. Determine specific permit conditions 	<p><i>Operators to demonstrate evidence of:</i></p> <ol style="list-style-type: none"> 1. <i>Their ability to plan and implement an initial deployment of devices, including clear long-term goals and objectives and a proposed pathway to achieving those goals and objectives based on unambiguous performance metrics and triggers</i> 2. <i>How their proposed deployment of devices (particularly the location and number of devices) contribute to achieving Metro Vancouver sustainable mobility goals.</i>
6.2	Permit Length Determination	<ol style="list-style-type: none"> 1. Determine the intended length of the permit, including start and end dates 	<p><i>Seattle was one of the first jurisdictions to recommend that micromobility permits for dockless vehicles be limited to one year in duration. Most jurisdictions have since followed this precedent. Washington DC conducted a trial of different devices and has now also followed this approach. The monthly cost per device permit is seasonal i.e. it varies by time of year and estimated demand.</i></p> <p><i>Annual, Competitive Process – permits are time limited</i></p> <p><i>Iterative – continual revision of permit</i></p> <p><i>Flexible – allows for adjustments in caps</i></p>

6.0 PERMIT STRUCTURE AND CONDITIONS

ID	Topic	Proposed Permit Application Requirement	Details
6.3	Administration and Cost Recovery	<ol style="list-style-type: none"> 1. Determine permit fees in accordance with the estimated resources required for the entirety of the permit period <ul style="list-style-type: none"> • Include set up and administration costs 2. Consider variable, seasonal permit fees 	<p><i>The more flexible the requirements, the greater potential for change in permit conditions resulting in more city-resources to administer. Cities should adopt a full cost recovery target, including estimating the costs of compliance enforcement.</i></p> <p><i>Washington DC varies its permit fees based on the time of month and number of devices that are actively deployed at any point in time.</i></p>
6.4	Long term Regulatory Framework	<ul style="list-style-type: none"> • TransLink to investigate most appropriate long-term regulatory model for shared micromobility devices, liaise with municipalities and recommend model to province 	<p><i>Each of the regulatory options involves a deliberate and targeted approach to regulation, however, depending on the chosen model, the day-to-day responsibilities of regulators and operators will vary. This is likely to have an impact on micromobility providers and their commercial business model. Municipalities expressed a desire to not have to dedicate a disproportionate amount of resources to administer the oversight of micromobility service providers and their fleets with devices. It also has the benefit of allowing municipalities to liaise with a membership organization (one central point) to encourage improvements in standards for all operators.</i></p>



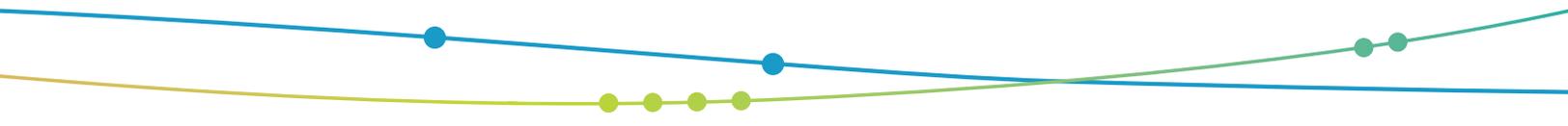
6.0 PERMIT STRUCTURE AND CONDITIONS

ID	Topic	Proposed Permit Application Requirement	Details
6.5	Regional Key Performance Indicators (KPIs)	<ul style="list-style-type: none"> KPIs set at a local or regional level to measure compliance with permit conditions and take enforcement action against non-compliant operators, where necessary 	<p><i>Municipalities could mandate KPIs to assist them with setting penalties for those operators who fail to meet requirements.</i></p> <p><i>Examples of applicable performance indicators for data sharing include:</i></p> <ol style="list-style-type: none"> <i>High level percentage availability of real-time data over a given period (>95%)</i> <i>Data release in accordance with the pre-determined timetable with warning and then penalty for non-compliance</i> <i>A 'data completeness of accuracy' requirement</i> <p><i>Scaled penalties would apply to non-compliant operators.</i></p> <p><i>Key Question: This could create significant resourcing issues for monitoring and enforcement as well as drive up compliance costs for operators: who, when, where and how would this be monitored by municipalities? Recommend a more detailed consideration as part of setting permit costs and determining exact requirements.</i></p>
6.6	Service area Expansion and Dynamic Fleet Cap	<ul style="list-style-type: none"> Determine an appropriate trade off between service 	<p><i>Service Area Expansions and Dynamic Fleet Caps provide the opportunity to generate additional incentives for proposed operators to comply with requirements.</i></p> <p><i>This will require further planning (for example a risk assessment and spatial demand analysis) of whether devices have the potential to become a nuisance for residents and council.</i></p>

KEY QUESTIONS FOR FUTURE CONSIDERATION

The decision whether to administer permits, licences and regulations of micromobility devices is closely linked to the question of whether devices should be regulated at the **operator** level, the **end-user** level, a **whole-of-industry** level, or a combination of the above.

- To achieve public policy objectives, it is also relevant to consider the extent to which a short-term permit process can be expected to achieve desired outcomes to long-term issues.
- If a comprehensive regulatory model is to be pursued, consideration must be given to issues such as:
 1. Which **level(s) of government** is/are best placed to pass appropriate laws
 2. How to **identify, apportion** and **mitigate** risks within a regulatory framework
 3. The structure of the regulatory framework: **when** and **how** to apply and use regulation
 4. **Level of resources** required to administer the regulatory framework on a day-to-day basis and use of cost-recovery mechanisms to reduce cost impacts on the government and the public
- The experiences of other cities to date suggests that many of the issues discussed here could benefit from a combination of a coordinated approach at a regional level. Stakeholders indicated a preference for a regional approach. Given a regional regulatory framework already exists for air quality protection with powers delegated from the province, it is reasonable to consider the issues associated with shared micromobility devices warrant an equivalent level of consideration and oversight. These and other issues could be explored through a **Regulatory Impact Analysis Statement (RIAS)**, tailored for the level of government it is intended to apply to. The RIAS would seek to justify the proposed regulations, demonstrate how the proposed framework results in a **net benefit to the community** while allowing competition and fair access to the shared micromobility market.





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