Further Information on Micromobility Models

Ownership Models

There are four primary ownership models for bike share:

- **Publicly owned and operated** - Publicly subsidized, these systems can offer affordable pricing for users leading to higher usage. Advantages include full control over all aspects of the system, but require significant capital investment, internal expertise and risk.

- **Publicly owned and externally operated** - Similar to the publicly owned and operated model requiring public capital investment, expertise is provided instead by an external operator, reducing risk but potentially increasing cost of creating and managing the system. Public-private partnerships fit into this model.

- **Privately owned and operated** - a private company controls and operates all aspects of the system with little to no input from cities, taking all the risk including capital investments. This model tends to be used in dockless systems which require less infrastructure and are characterized by higher prices and fewer rules.

- **Publicly administered but privately owned and operated service (recommended)** - This is currently the most popular approach in Canada as it allows for a high degree of regulation while limiting the public investment required. Disadvantages of this model include a lack of control over pricing for users and implications if the system is not profitable for the operator. This model allows experience and expertise to be obtained which could be used if a different financial model was considered in the future.

Parking Models

There are typically three primary parking models for bike share:

- **Docked** - Physical locking stations which reduce concern over errant bike parking and theft but require high capital costs and long lead times for the infrastructure and offer less flexibility to move stations when required.

- **Dockless** - Also known as free-floating, this model allows bikes to be parked anywhere within certain parameters, making the system quick and inexpensive to implement. Dockless systems are often characterized by errant parking of bikes, sidewalk accessibility concerns and can be unpredictable for the user on where to find bikes. This model is not appropriate for a dense, urban environment and requires significant regulations and rules to be followed. An early version of the dockless model, operated by the private company U-Bicycle, was previously present in Victoria, Saanich and Oak Bay.

- **Parking Zones (recommended)** - This model has many of the same benefits of docked systems while replacing the permanent locking stations with a cheaper, lighter and more flexible approach. Typically, geofence technologies (a virtual boundary) are used in combination with a painted, signed boundary to mark the dedicated parking zone. Dependent on location/anticipated demand, these will be approximately the size of a single vehicle parking space. Parking zones could be upgraded to docked charging stations in the future if desired. Constructing and providing the parking zones for use by the selected operator allows for ownership of the parking zones for potential future versions of shared micromobility systems, more control over location and design, and allows the operator to focus on other elements of the system.

Devices

There are typically three types of devices in shared micromobility systems:

- **Classic bikes** - Analogue, pedal bikes used in older, traditional bike share systems. These are cheaper to purchase and maintain but pose the largest barrier to entry in terms of physical effort required and can lead to significant rebalancing challenges. Almost all systems are now moving towards offering at least some e-bikes, due to their popularity.

- **E-scooters** - Electric, upright scooters are proving popular, particularly with younger populations, visitors and those less familiar with bicycles. However, they can lead to more operational issues, both real and perceived, including those related to parking infractions, irresponsible riding and safety. They also tend to be taken for shorter trips, more likely to replace walking trips. While many cities are continuing to introduce shared scooters, others are banning them outright or requiring physical docking stations (such as Vancouver). At this time, e-scooters are not being recommended due to the lack of permanent Provincial regulation surrounding their use on streets, along with parking and safety concerns. It is recommended to ensure the e-bike share system is successful prior to considering expansion to other forms of micromobility and allow time for both staff and the public to adapt to shared mobility in Victoria.

- **E-bikes (recommended)** - Like personal electric bicycles, shared e-bikes are being used much more widely and for longer trips than classic bikes and are more accessible to a wider range of the population. Disadvantages include that they tend to be priced higher than classic bikes for the user due to being more expensive to purchase and maintain. E-bikes also require charging, which tends to be done through battery swapping, where removable batteries are charged off-site and replaced with fully charged batteries. In more established, publicly owned systems, batteries can be charged at electrified docking stations. This reduces labour costs of battery swapping but requires high capital costs for the infrastructure which cannot be easily relocated.