



# Memorandum

**Date:** April 17, 2018  
**To:** Transportation Authority Board  
**From:** Jeff Hobson – Deputy Director of Planning  
**Subject:** 05/08/2018 Board Meeting: Update on the Emerging Mobility Services and Technologies Report

<p><b>RECOMMENDATION</b>    <input checked="" type="checkbox"/> <b>Information</b>    <input type="checkbox"/> <b>Action</b></p> <p>Receive an update on Draft Emerging Mobility Evaluation Report</p> <p><b>SUMMARY</b></p> <p>Following adoption of the 10 Guiding Principles for Emerging Mobility Services adopted by the Transportation Authority Board (and San Francisco Municipal Transportation Agency board) in summer 2017, the study team evaluated several categories of mobility services against city goals and principles and engaged a with a wide range of stakeholders. This memorandum summarizes the findings and recommendations for sector management, research and partnerships based on those evaluation results. This memo is provided as an information item only for this draft report; we intend to return to the Commission with a final report for adoption this summer.</p>	<p><input type="checkbox"/> Fund Allocation</p> <p><input type="checkbox"/> Fund Programming</p> <p><input type="checkbox"/> Policy/Legislation</p> <p><input checked="" type="checkbox"/> Plan/Study</p> <p><input type="checkbox"/> Capital Project Oversight/Delivery</p> <p><input type="checkbox"/> Budget/Finance</p> <p><input type="checkbox"/> Contracts</p> <p><input type="checkbox"/> Procurement</p> <p><input type="checkbox"/> Other: _____</p>
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**Background.**

In the last decade, a number of emerging mobility services and technologies have emerged that increase mobility choices and over transportation benefits for some travelers, while also presenting challenges or impacts to other travelers, or to the attainment of key city transportation policies and goals, such as Transit First, Vision Zero, climate and equity. These services and technologies include everything from mobile applications that connect passengers with demand-responsive transportation services to self-driving and connected vehicles.

While this sector is moving at a fast pace and is driving transitions in the wider economy with effects in the short-term (switching modes for a given trip) and long-term (changing work, home location or vehicle ownership) all taking place at the same time, this study takes a snapshot of the sector as it stands today, with a view to laying out a roadmap for sector management, research and partnerships.

**Study Overview.**

The Transportation Authority Commission and the San Francisco Municipal Transportation Agency (SFMTA) Board adopted the 10 Guiding Principles for Emerging Mobility in June 2017 (see enclosed presentation, slide 4). The Guiding Principles serve as a framework both for proactive public sector

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development of policies and programs, and for formulation of sound, consistent responses when warranted. They also provide a clear indication to mobility companies about what the City seeks and expects from private service providers.

The Transportation Authority then developed evaluation criteria based on the adopted Principles for Emerging Mobility, engaging a wide range of community, industry and civic stakeholders in the process. The criteria include (a) “outcome metrics” which are objective measures that use data to evaluate the degree to which an Emerging Mobility service is aligned or misaligned with a Guiding Principles; and (b) “policy and design features” which are attributes of a service that are thought to contribute to attaining an outcome identified in the Guiding Principles.

Overall, the results of our evaluation determined the following major takeaways:

### *1. Pilots and permits lead to better performance*

Companies that have performed pilots with San Francisco public agencies have provided data and experience that has informed development of permit systems for those mobility types. The resulting permit systems for bike share, scooter share, and microtransit have guided these mobility types to be more aligned with the Guiding Principles. There are opportunities to strengthen and harmonize the various permit programs. In addition, the City does not yet have a standardized process to proactively conduct pilots and incorporate innovative service types and new companies into the city’s permitting and planning systems.

### *2. Inadequate data*

The city does not have adequate data from enough emerging mobility companies to fully evaluate how well emerging mobility services are aligned with our Guiding Principles. Other researchers have produced important studies and findings about some emerging mobility services, but more traveler trip data and surveys are needed to characterize SF travel markets and individual traveller choices.

### *3. Opportunities for equitable access*

Many emerging mobility services are available during late-night hours, on weekends, and/or in areas less well covered by public transit. This may provide opportunities to increase mobility for people with disabilities and increase access for people underserved by public transit.

### *4. Conflicts with public transit*

San Francisco is a Transit-First city, but inadequate data means we do not have comprehensive information on how the emerging mobility sector is impacting transit ridership or our capital investments. While some services play a useful first/last-mile connection role, no emerging mobility companies have implemented design features or policies that our methodology identified as directly supportive of transit.

### *5. Impacts on safety*

With the exception of Microtransit providers, operator training is inconsistent among emerging mobility services; almost no providers test operators following training. As a consequence, many services may exhibit roadway conflicts at curbs, in transit-priority lanes and on sidewalks -- all of which may have significant impacts, particularly on vulnerable roadway users. Additionally, many emerging

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mobility services may contribute to distracted driving, which also decreases roadway safety.

### *6. Impacts on congestion*

Because we have inadequate data, we do not fully understand how this sector is impacting travel mode choice behavior and congestion. We do know that many emerging mobility services rely on city rights-of-way and curbs. The city and the emerging mobility companies have not consistently coordinated to develop a robust curb management approach. Other researchers have found mixed impacts. For ride-hailing in particular, our *TNCs Today* study found that ride-hail vehicles in San Francisco are concentrated during times of day and neighborhoods of the city where traffic is most congested. A UC Davis study found that adoption of ride-hailing is likely to result in a net increase in vehicle miles traveled due to competition with public transit. Other studies have found that users of other mobility services chose to drive personal vehicles less frequently.

### Recommendations

#### *1. Partner: Proactively Partner*

The SFMTA and the Transportation Authority should develop a framework for emerging mobility pilots that considers this study's evaluation results and encourages the city to proactively partner with companies to develop innovative solutions to address unmet city transportation needs. This framework should consider partnerships with transportation companies, employers, developers, and civic and neighborhood organizations.

#### *2. Measure: Collect Emerging Mobility Data and Conduct Research*

San Francisco public agencies should develop a data reporting and warehouse strategy to coordinate and consolidate existing data streams. Additionally, the city should employ a travel decision study to understand travel behavior. Such a study could be combined with a mobile application pilot that studies traveler choices and factors that inform them.

#### *3. Regulate: Regulate and Recover Costs*

The SFMTA should harmonize existing permit programs related to emerging mobility and create a framework for new services. The emerging mobility permit program should administer a permit fee that considers the full cost to plan for and regulate these services. Similarly, the city should seek regulatory and/or impact fees to mitigate effects these services have on safety, city resources and investments, as warranted by research studies. The permit must also require a standard set of data necessary to conduct ongoing evaluation of these services and include standards for equitable provision of services to underserved areas and to people with disabilities.

#### *4. Bridge: Bridge Mobility and Access Gaps*

The city should develop a user study to more clearly understand who uses emerging mobility services and for what purposes. This study should focus on equity gaps for low-income users and issues related to disabled access. The SFMTA and the Transportation Authority should also develop pilots to fill mobility and access gaps, such as for paratransit, late night transportation, school-related transportation, and in areas less well-covered by public transit.

#### *5. Prioritize: Support and Prioritize Public Transit*

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The Transportation Authority and the SFMTA should continue to support the expansion of transit-priority facilities. The Transportation Authority and the SFMTA should collaborate in developing a series of studies related to rights-of-way prioritization, vehicle miles traveled, financial impacts, and cost-recovery. To support these studies, the Transportation Authority and the SFMTA should conduct pilot programs that improve first and last mile connectivity to transit stations.

### *6. Enforce: Enforce Safe Streets*

The SFMTA and the Police Department should increase enforcement of known emerging mobility conflict areas throughout the city and consider piloting enforcement blitzes to encourage safe operation. Similarly, they should seek legislative authority and implement a pilot that automates enforcement to promote safety, ensure more systematic adherence to traffic rules, and reduce enforcement costs. The SFMTA should also develop a Vision Zero study that studies collision rate trends and unsafe operations, determines whether there is a correlation with emerging mobility services, and identifies recommendations to reduce traffic fatalities.

### *7. Price: Manage Congestion at Curbs and on City Roadways and*

The SFMTA and the Transportation Authority should prioritize developing a curb management strategy that allocates and prices curb access appropriately. Such a strategy should be supported by curb management pilots with emerging mobility services and through a curb management prioritization study. The SFMTA should also develop and implement an emerging mobility streets design guide to reduce modal conflicts. Finally, based on current congestion levels on San Francisco roadways, San Francisco should move toward implementing a decongestion pricing and incentives system, whether through cordons or roadway user fees, to manage roadway congestion.

### Next Steps

We will seek feedback on this Draft Emerging Mobility Evaluation Report and return to the Board at a later date for adoption.

### **FINANCIAL IMPACT**

None. This is an information item.

### **CAC POSITION**

None. This is an information item.

### **SUPPLEMENTAL MATERIALS**

Attachment 1 -- Emerging Mobility Services and Technologies, Draft Report Evaluation Results and Recommendations (presentation)

# Emerging Mobility Services and Technologies

## Draft Report Evaluation Results and Recommendations



SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY

April 25, 2018

# Overview



- ▶ **Study Purpose**
- ▶ **Services Inventory**  
*What is an “Emerging Mobility Service or Technology”?*
- ▶ **Policy Framework**  
*Guiding Principles (adopted June 2017)*
- ▶ **Evaluation Method**  
*How should we measure alignment with our goals?*
- ▶ **Evaluation Results**  
*How are emerging mobility services helping or hurting?*
- ▶ **Recommendations**

# Emerging Mobility Services and Technologies



# 10 Guiding Principles for Emerging Mobility



Safety



Transit



Equitable  
Access



Disabled  
Access



Sustainability



Congestion



Accountability



Labor



Financial  
Impact



Collaboration



# Evaluating Emerging Mobility Services



Safety

## Outcome Metric

### 1 Operational Safety

Number of collisions per 100,000 service miles.

# Evaluating Emerging Mobility Services



## Safety

### Outcome Metric

#### 1 Operational Safety

Number of collisions per 100,000 service miles.

### Policies and Design Features

#### Operational Safety

2 Service avoids in-app messaging and navigation during vehicle operation (during revenue and non-revenue hours).

#### 3 Operational Safety

Safety training is required.

#### Operational Safety

4 Service has hours of service program for both revenue and non-revenue hours and checks DMV Record Duty of Service log.

#### Unsafe Driving Penalties

5 Service penalizes speeding, traffic tickets, blocking bicycle and pedestrian facilities, DUIs, reckless driver complaints, and leads to corrective action.

#### Personal Security

6 Service requires background checks of operators.

#### 7 Personal Security

Service provides 24-hour service with a human response in a timely manner.

# Results Overview



- ▶ **Pilots and permits lead to better performance**
- ▶ **Inadequate data**
- ▶ **Opportunities for equitable access**
- ▶ **Conflicts with public transit**
- ▶ **Impacts on safety**
- ▶ **Impacts on congestion**

# Recommendations Overview



**Partner:** Proactively partner and pilot with industry

**Measure:** Collect emerging mobility data

**Regulate:** Regulate and recover costs

**Bridge:** Reduce mobility and access gaps

**Prioritize:** Support and prioritize public transit

**Enforce:** Enforce safe streets

**Price:** Reduce congestion at curbs and on city roadways

Questions?

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