CONGESTION CONSEQUENCES

• We want economic growth and more housing, but that mean more trips of all types.

• Per Transit First, vehicular congestion cannot be solved by adding lanes to streets or freeways.

• Cities formerly relied upon parking policy and pricing to limit trip making to busy areas. TNCs allow people to travel in a vehicle without the need to park.

• Increases in street congestion affects other modes, particularly transit. Slower transit can make driving more attractive.

• It is slower and takes more time for those who chose to drive, which may add to stress and business costs.
WHY IS CONGESTION INCREASING IN SF?
OUR CHALLENGE

SF is (roughly) 7 x 7
FACTORS THAT RESULT IN MORE VEHICULAR TRIPS

- Increased population
- Increased employment
- Increased vehicular trips by Uber and Lyft
- Increase in number of registered vehicles
VEHICULAR TRAVEL SPEEDS ARE DECLINING ON SF STREETS

Figure 0-2: CMP Network Average Travel Speed Change

- Arterial AM
- Arterial PM
- Freeway AM
- Freeway PM
ARTERIAL DELAY
2011 VERSUS 2017 IN AM PEAK (SOURCE: SFCTA)
ARTERIAL DELAY
2011 VERSUS 2017 IN PM PEAK (SOURCE: SFCTA)
SFCTA’s “TNC and Congestion” Report

Figure 1. Change in Vehicle Hours of Delay by Time Period by Factor

- TNC Change
- Network Change
- Employment Change
- Population Change
TRANSPORTATION NETWORK ACTIVITY HAS INCREASED

Source: SFCTA tncstoday.sfcta.org

Map of SF showing level of TNC pick-ups and graph showing pick-ups by time of day for a typical Friday.

SUMMARY STATISTICS:
Fridays:
222,500 citywide pickups

Source: SFCTA tncstoday.sfcta.org
INCREASE IN TRAFFIC ACTIVITY CONCENTRATED IN DISTRICT 6

FIGURE 5. CHANGE IN VEHICLE HOURS OF DELAY BY SUPERVISOR DISTRICT BY FACTOR
**Transit Speeds Are Not Declining as Much as Vehicular Speeds**

Figure 0-6: Auto-Transit Speed Ratio

The graph shows the Auto-Transit Speed Ratio from 2011 to 2017, with two lines representing ratio AM and ratio PM. The ratio AM and PM both show a slight decline over the years, with ratio AM slightly surpassing ratio PM in 2013.
Congestion Activity
OBJECTIVE

We would like your thoughts on:

a. Which congestion factors the SFMTA should focus on in 2019; and

b. Where these congestion factors are having an impact
CONGESTION FACTORS

- Construction
- Deliveries
- Double Parking
- Free On-Street Parking
- Schools
- Special Events
- Transportation Network Companies
- Work Commute
Ready?
Question 1: Types of Congestion

At the end of 2019, SFMTA is successful at reducing the impacts of congestion in San Francisco. Which congestion factors did the SFMTA focus on?

Please rank the 8 congestion factors on the line provided.

4 minutes
Please share the top 3 congestion factors you believe the SFMTA should focus on in 2019.

30 seconds each
For each of the top 3 congestion factors, select a location where this type of congestion occurs.

Please be prepared to share 1 location and why you selected this location.

3 minutes
Please share 1 of your congestion factors. For this factor:

- Share the location
- Why the SFMTA should focus on this location

2 minutes each
THANK YOU

Staff will summarize your input and report back after a short break.
Tools for Managing Congestion
Existing Tools for Managing Congestion

- Parking enforcement/PCO fixed post deployment
- Tighter approach to construction permitting and ISCOTT
- Spot parking and traffic changes
- Plan for large events
- Parking pricing/policy
- Signal timing adjustments
- Mode Shift efforts (Muni, bike network, ped safety)
- Transportation Demand Management (TDM)
POTENTIAL TOOLS FOR MANAGING CONGESTION

- Curb Management
- Automated Parking Enforcement
- Congestion Pricing
- Automated Vehicle (AV) Policy
- Mobility as a Service (MaaS)
- Restricting Use of Roadways (car free zones)
Curb Management
**Increased Demand for Curb Space**

- Curb uses and users growing rapidly

- Increased double-parking, blocking transit, travel and bike lanes
LIMITATIONS OF EXISTING STRATEGIES

• Prioritizes private car parking
• Parcel-by-parcel rather than block-, corridor- or area-focused
• Loading zones require individual applicants
• Some users excluded
Curb Management Team

- Interim curb management guidelines for streetscape projects
- Holistic, place-based curb-management planning
- Curb Management Strategy
  - Reframing the role of the curb and how it is allocated
  - New curb hierarchy
  - Engagement and communications

Images of reports: NACTO Curb Appeal, The Shared Use City: Managing the Curb, and How We Use the Street
# Curb Hierarchy by Land Use

<table>
<thead>
<tr>
<th>Residential Low Density</th>
<th>Residential Med - High Density</th>
<th>Neighborhood Commercial</th>
<th>Downtown</th>
<th>Major Attractor</th>
<th>Industrial/PDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement</td>
<td>Movement</td>
<td>Movement</td>
<td>Movement</td>
<td>Movement</td>
<td>Movement</td>
</tr>
<tr>
<td>Storage for vehicles</td>
<td>Storage for vehicles</td>
<td>Access for goods</td>
<td>Access for goods</td>
<td>Public space and services</td>
<td>Storage for vehicles</td>
</tr>
<tr>
<td>Public space and services</td>
<td>Access for goods</td>
<td>Public space and services</td>
<td>Public space and services</td>
<td>Access for goods</td>
<td>Access for people</td>
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<tr>
<td>Access for goods</td>
<td>Public space and services</td>
<td>Storage for vehicles</td>
<td>Storage for vehicles</td>
<td>Storage for vehicles</td>
<td>Public space and services</td>
</tr>
</tbody>
</table>
Congestion Pricing
CONGESTION PRICING

SFCTA SCOPE OF WORK:

• Project Management

• Community Outreach and Stakeholder Engagement:
  • Community Engagement Plan
  • Polling & Communications Strategy
  • Technical Advisory Committee, Policy Advisory Committee
  • Two Major Outreach Efforts

• Goals & Objectives, Purpose & Need

• Case Studies and Peer City Partnerships

• Evaluation Framework and Methodology

• Develop and Evaluate Scenarios

• Final Report: Overview of Process, Preferred Scenario, Funding, Implementation Plan
CONGESTION PRICING

TIMELINE & BUDGET

• Timeline: January 2019-June 2020
• Estimated cost: $1.8 million
• Potential funding sources: Prop K, IPIC, other grant sources

SFMTA BOARD INVOLVEMENT

• Updates through Director’s report
• Key milestones brought to Policy and Governance
• Present final report to full Board
Automated Vehicles
Advanced Driver Assist Systems
ADAS = 0-2

Automated Driving Systems
ADS = 4&5

**SAE AUTOMATION LEVELS**

0: Human handles driving but robot can alert to hazards
1: Human drives; robot can briefly control speed OR steering
2: Human drives; robot can briefly control speed AND steering
3: Human must remain attentive & available to drive as needed
4: Robot drives within manufacturer’s declared Operational Design Domain
5: Robot drives anywhere & any time

Diagram showing SAE automation levels 0 to 5.
INDUSTRY’S STATED VISION

• Eliminate collisions caused by human error

• Expand mobility for people with visual or other disabilities that make existing modes challenging

• Reduce cost of transportation
LIKELY EARLY BUSINESS MODELS
## Driverless Congestion Scenarios

<table>
<thead>
<tr>
<th>Utopian</th>
<th>Dystopian</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVs Operated as Fleets</td>
<td>Increased AV induced SOV use</td>
</tr>
<tr>
<td>Increased Pooling</td>
<td>Reduced Use of Transit &amp; Active Modes</td>
</tr>
<tr>
<td>Increased Sharing</td>
<td>Increased VMT through Ghost Trips</td>
</tr>
<tr>
<td>Improved First/Last Mile to Transit</td>
<td>Increased Sprawl</td>
</tr>
<tr>
<td>Allows Reuse of Space Currently Used for Parking</td>
<td>AVs Do Not Comply with Parking/Traffic Laws Better than Human Vehicles</td>
</tr>
</tbody>
</table>
WORLD ECONOMIC FORUM - AV POLICY FRAMEWORK

- Safety
- Transit
- Equitable Access
- Disabled Access
- Congestion

- Sustainability
- Financial Impact
- Accountability
- Labor
- Collaboration
Mobility as a Service

Image: Exploring Mobility as a Service by Nigel Zhuwaki
**What is Mobility as a Service?**

- Enable start to finish trip planning and payment
- Multi-modal trip planning tool
- Single user account to link multiple mobility accounts
- May include public and private transportation services
Levels of Mobility as a Service Integration

- Real-Time Information
- Trip planning
- Booking and payment
- Bundling or subscription
- Incentives or rewards
POTENTIAL BENEFITS

• Reduce car ownership
• Reduce local and regional congestion
• Integrate trip planning and payment across the Bay Area’s 25+ public transit operators
• Provide users with a seamless travel experience
• Obtain data for system planning and management
EXISTING SFMTA EFFORTS

- SFMTA.com
- Clipper
- Muni Mobile
- SF Paratransit Access Online
- SF Paratransit Taxi Online
- Customer Information System
INTERNATIONAL EXAMPLE – WHIM, HELSINKI

• Launched in 2016
• Public transit, bikeshare, taxis and rental cars
• Pay per ride or monthly plans
• Whim Unlimited: $565/month unlimited public transit, taxi and carshare access
DOMESTIC EXAMPLE: MIAMI DADE

• EASY Card
  o Transit
  o Ride-hailing
  o Bike-sharing

• Virtual EASY Cards
DOMESTIC EXAMPLE: LA METRO TAPFORCE

• Launched in November 2018
• Centralized program signup payment:
  o 24 transit agencies
  o Metro Bikeshare
• Planned for 2019:
  o New TAP mobile app
  o TAP rewards
  o Additional payment options (Apple Pay and Android Pay)
  o Include scooter sharing, parking, electric vehicle charging, micro transit, toll lanes, ride-hailing and other account-based programs
PRIVATE COMPANIES

- Transportation Network Companies are building MaaS platforms:

  **Lyft**
  - Ride-hail
  - Bike Share
  - e-Scooter Share

  **Uber**
  - Ride-hail
  - Bike Share
  - e-Scooter Share
  - Uber Eats
**Policy Questions**

- What barrier are we trying to reduce or remove?
- What services are we seeking to include?
- Should this be developed and owned by a public entity or private sector?
- Focus on an SF specific or regional approach?
THANK YOU