Planning Urban Streets For Shared Mobility Environment

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How our streets will be shared in the future will be one of the biggest questions we will face.
Introduction

- Discussion not prescription
- Not presenting design concepts
- Not a policy paper
- Shared mobility options are changing transportation
- There are positive impacts but some negative implications
- Need to be proactive: Managed vs Unmanaged
- Curb space is a valuable resource
New Landscape of Mobility Options

- Bike sharing
- Scooter sharing
- Ride-hailing (TNC’s)
- Microtransit
- Car sharing
- Autonomous vehicles

Source: SUMC, Reference Guide
New Landscape of Mobility Options
What is the concern
Good, Bad and the Ugly

- **Good**
  - More options
  - First mile and last mile solutions

- **Bad**
  - Curb congestion
  - Safety concerns
  - Higher single-occupancy vehicle trips
  - Reduced transit use
  - Reduced ped and bike trips

- **Ugly**
  - Public investment ineffective

How can we take advantage of the good and manage the negative externalities and ensure public investment is effective?
What is the Solution(s)?

- Uncontrolled | Unmanaged Space vs Managed | Dedicated Space
- Proactive management using a collaborative approach
- Integration of mobility options to ensure safety and efficiency of the transportation system

*Dedicated curb space?*

Shared Use Mobility Zones
Is there a Precedent?

- Airports
- Tourist Destinations
- Convention Centers

Unique elements

- Singular destination
- Entrances and exits are controlled
- Enforcement is manageable
Region, Sub-Regions, Block
Region, Sub-Regions, Block
Region, Sub-Regions, Block
Modal Priority

- Transit
- Bicycle
- Vehicular
- Pedestrian safety is crucial
Block

Transit

Bicycle

Vehicle
Grouping Mobility Options

Do we create dedicated spaces by type of mode?

- Bike sharing
- Scooter sharing
- Taxis
- Ride-hailing
- Microtransit
- Car sharing
- Autonomous vehicles
Source: TCRP Research Report 195
Every city is different

Users approach seems to drive TNC usage

Traffic patterns vary

Data could be obtained from TNC’s to make informed decisions

The restrictions can be time and day specific

A collaborative approach can yield better outcomes
A Collaborative Approach

- Engage shared mobility providers and TNC’s
- Utilize data to identify high pick-up and drop of area
- Coordination between DOT’s, Transit agencies and TNC’s
Additional Considerations

- Land use
- Street capacity
- One-way vs Two-way streets
- On-street parking and loading zones
- Accessibility
- Equitable treatments of service providers
- Congestion pricing?
- Electric vehicles and charging stations
- Enforcement
- New planning and design guidelines
- Policy changes
Thank You

Curb space is a valuable resource.