Transit: Backbone of Shared Mobility

New Partners for Smart Growth
St. Louis, February 4, 2017

TAYLOR **FUTURE SOLUTIONS**, LLC

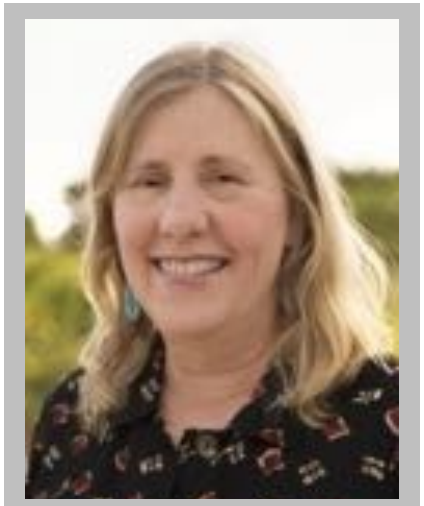
Sustainable Community and Transport Strategies

The Principals

- **Moderator**
  David Taylor, ENV SP, President
  Taylor | Future Solutions, LLC
  david.taylorfuturesolutions@gmail.com

- **Participants**
  - **Sharon Feigon**, Shared Use Mobility Center
  - **Jameson Auten**, KCATA
  - **Paige Tsai**, Uber
  - **Gwo-Wei Trong,** Federal Transit Administration

Sharon Feigon



- Founder and Executive Director, Shared Use Mobility Center
- Fosters collaboration in shared mobility and connectivity
- Former CEO of IGO Carsharing
- Previous R&D Director at CNT
- Active in TRB's Shared Vehicle Committee
- sharon@sharedmobilitycenter.org

Jamseon Auten

- Oversees contracted operations and regional mobility management
- Responsible for identifying, facilitating, and implementing long-range goals
- Developing and maintaining community involvement
- Vice-chair of APTA's Mobility Management Committee
- Jauten@kcta.org

Paige Tsai

- Member, Uber's Policy and Research Team
- Focuses on the future of mobility and transportation
- Fosters collaboration with public transit agencies to improve transportation accessibility for people in cities
- paiget@uber.com

Gwo-Wei Torng

- Director, FTA's Office of Mobility Innovation
- Responsible for shaping and promoting FTA's mobility research priorities
- Mobility on Demand (MOD) and transit automation are high priorities
- 15 years experience for transportation research in private industry
- Gwo-wei.torng@fta.gov

Questions We Will Probe

- What are the global trends?
- How is shared use mobility defined?
- What modes are we talking about?
- How does transit fit into the equation?
- Are car-sharing companies pivotal?
- Is shared mobility the same as connected vehicles?
- How is technology changing the game?
- What is there a federal interest?

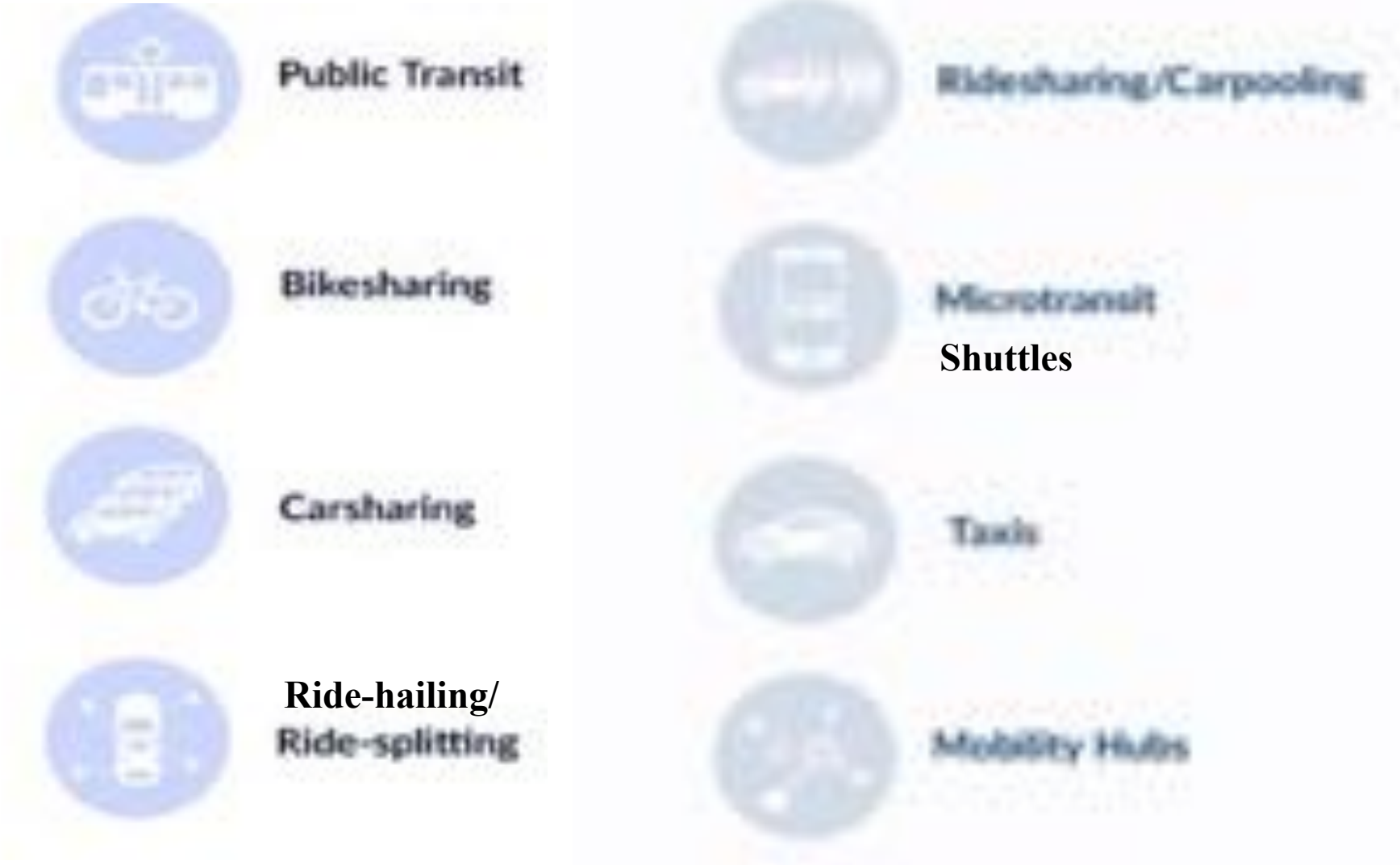
Shared Use Right Here, Right Now

Transit: The Backbone of Shared Mobility Overview

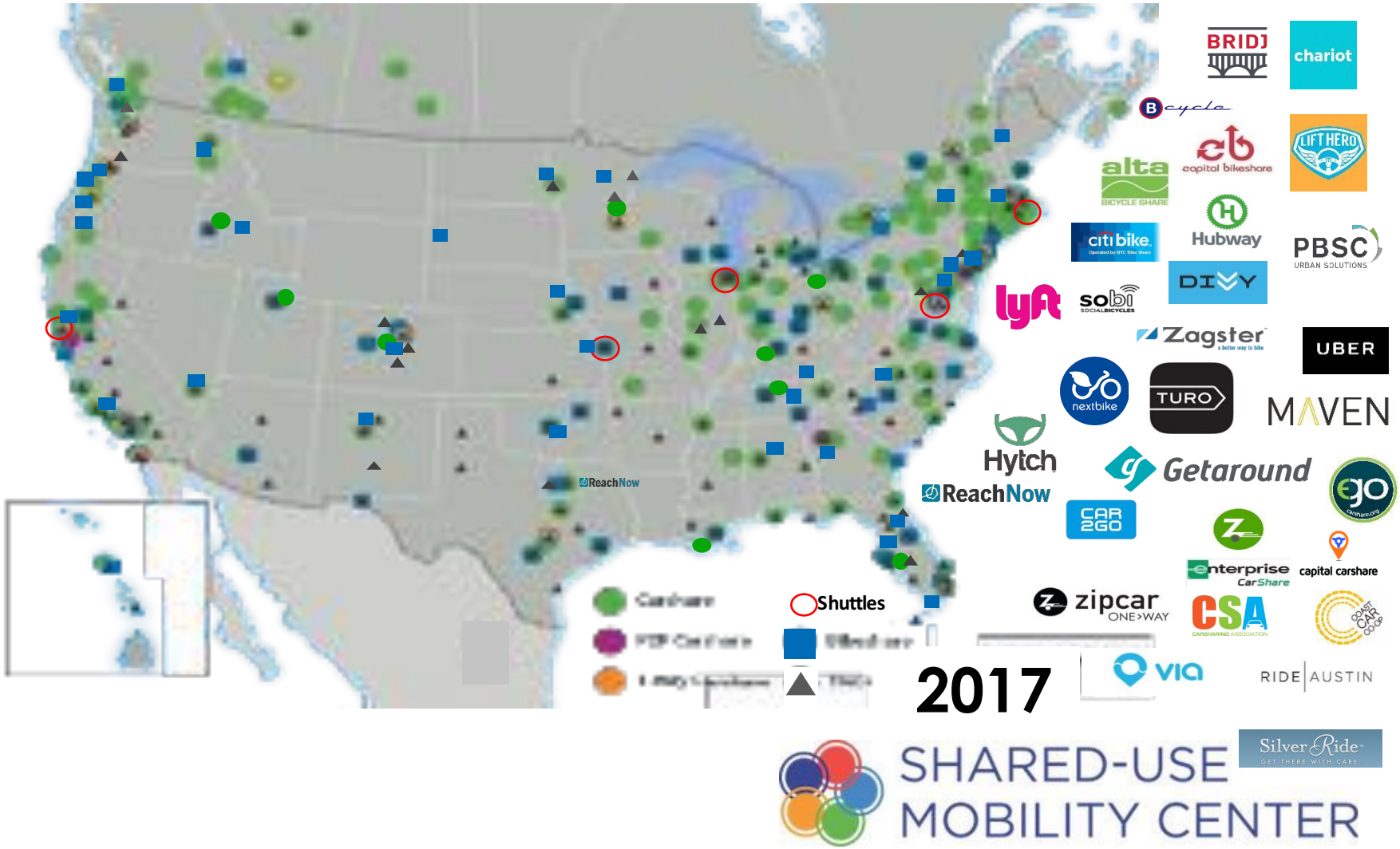
Sharon Feigon, Executive Director
sharon@sharedusemobilitycenter.org

SHARED-USE MOBILITY CENTER

Shared Mobility Typology



Tracking Shared Mobility in North America



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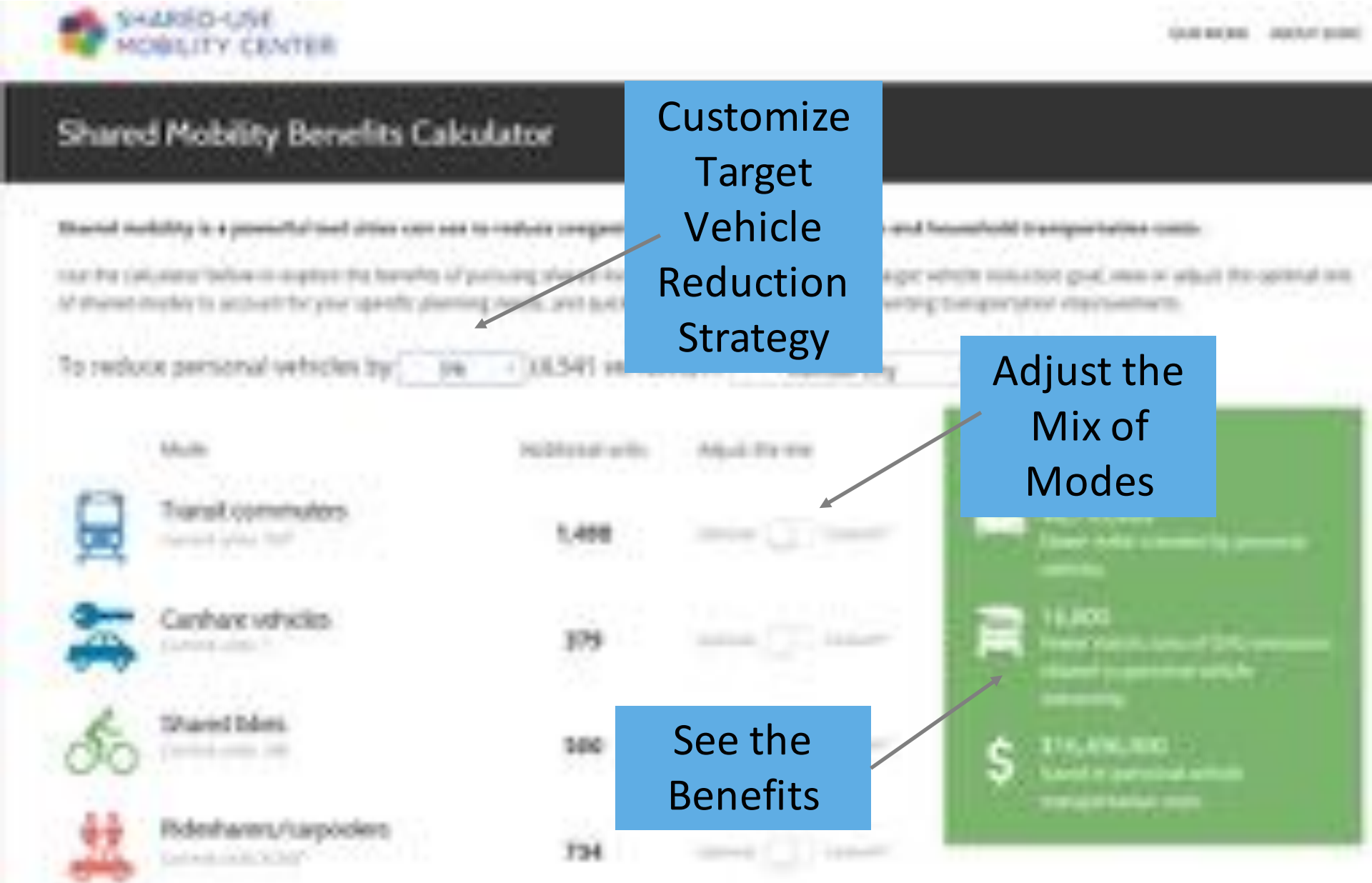
SHARED-USE MOBILITY CENTER

Making it possible to live well without having to own your own car, by creating a multimodal transportation system that works for all

Conducting innovative research and serving as the clearinghouse for shared mobility

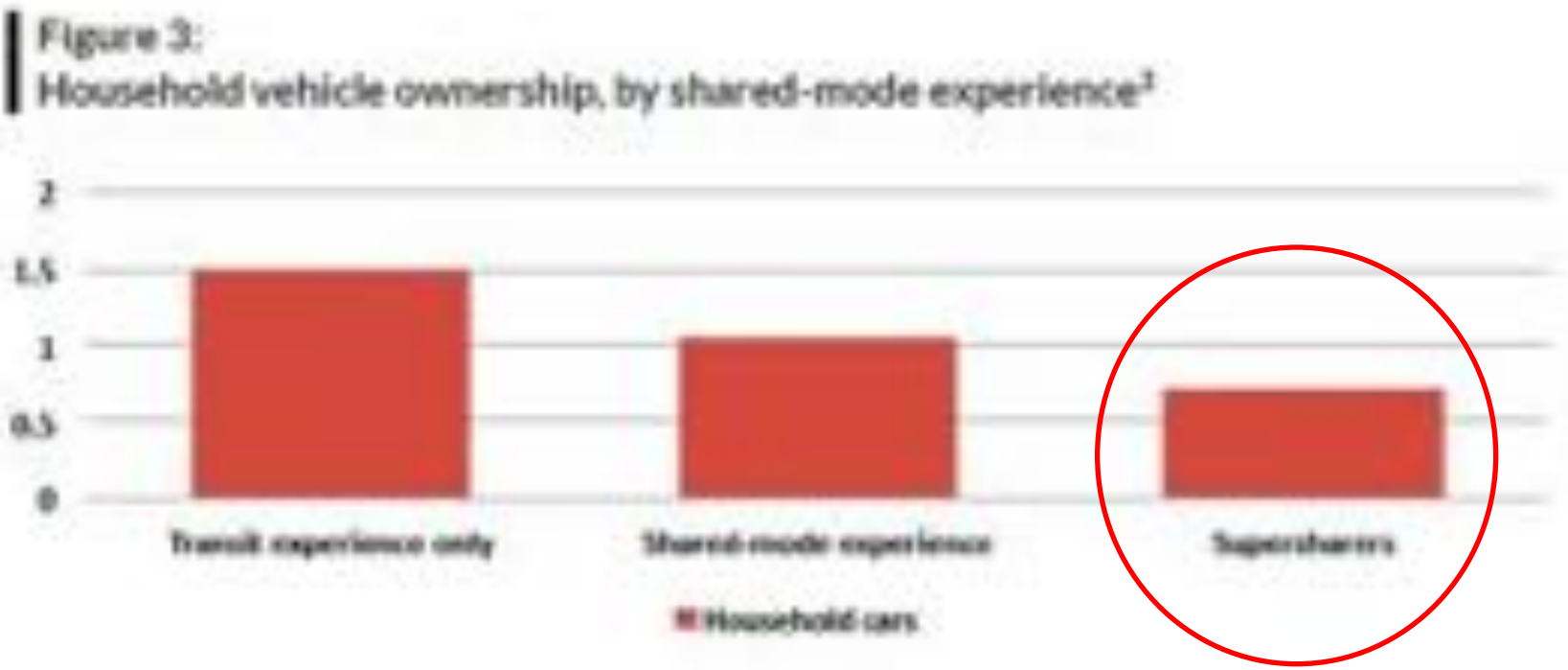
Benefits Calculator




Working with cities
to set mode shift
goals and test
new forms of
shared-use pilots

The more people use shared modes, the more likely they are to use transit, own fewer cars, and spend less on transportation overall.

"Supersharers" report greater transportation cost savings and own half as many cars as people who use transit alone.



Latest Developments

$170 Billion **in New Funding for Public Transportation** from US Cities and Regions

Successful Local Ballot Initiatives included:

- Alameda-Contra Costa CA Measure C1
- BART CA Measure RR
- Los Angeles CA Measure M
- Santa Clara CA Measure B
- Atlanta GA MARTA Sales Tax
- Indianapolis IN Income Tax
- Wake County NC Sales Tax
- Central Ohio Region Sales Tax
- Toledo OH Property Tax
- Charleston SC Sales Tax
- Kitsap County WA Sales Tax
- Seattle Region WA Sales Tax
- Spokane WA Sales Tax

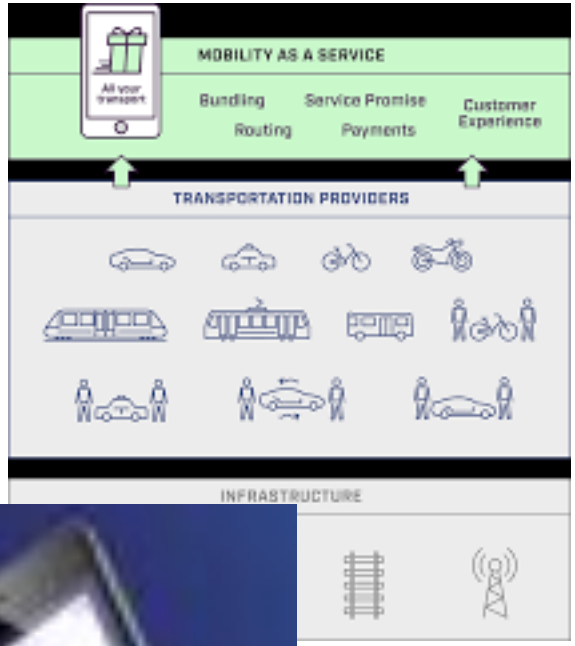
SHARED-USE MOBILITY CENTER

Shared Mobility Trends

- More Automaker stakes in shared mobility
- Autonomous Vehicle testing
- Ride-hailing first/last mile partnerships
- On-Demand/Microtransit pilots
- Electric bikesharing growing
- “Grassroots” ride-hailing solutions
- New solutions for seniors
- Mobility on Demand Sandbox
- Labor concerns unresolved


What's Next?
Fare integration 2.0
Mobility Hubs
Autonomous Vehicles

Fare Integration, congestion pricing for shared mobility- incentivize mode shift in real time



SHARED-USE MOBILITY CENTER

Hubs of Modes and Activities

- Public Transit
- Carsharing
- Bikesharing
- Ridesourcing
- Microtransit
- Interactive kiosks
- Bike parking
- EV charging
- Amenities?

Utopian or Dystopian Future?

The Future: Autonomous/Electric/Shared?

- Highway travel
- Freight
- Land Use
- Autonomous transit
- Insurance
- Operators
- Workforce
- Safety

SHARED-USE MOBILITY CENTER

BE PROACTIVE & SET GOALS

- **MAKE MOBILITY THE GOAL** and change performance metrics
- **INCENTIVIZE** scale & equity
- **SET RULES & REQUIRE DATA SHARING** and address accessibility
- **PILOT** innovative projects to find solutions
- **DEVELOP PARTNERSHIPS** and new business models
- **CREATE FLEXIBLE POLICIES** that can adapt to the changing environment

LEARN TOGETHER:

IT'S ABOUT THE PEOPLE

We Connect People to Opportunities

Bus Company vs. Mobility Facilitator

Range of Services

Facilitation Philosophy

- Creating a regional system
- Competition vs. Coopetition
- Rejection of Marriage to Mode
- Transit Backbone

BRIDJ Pilot

RideKC BRIDJ

- 1 yr. Pilot
- Goal: How to incorporate on-demand services and learning itself
- Transportation Research Sustainability Center evaluation
- Lessons learned


smartmoves
v3.0


RideKC

Integrating services to foster mobility……

RideKC FREEDOM

- RideKC Freedom
- On-Demand Service Options
- Paratransit and General Public
- Approx. 35% savings per trip

ENHANCING MOBILITY

Uber + Transit

Paige Tsai
Transportation Policy & Research

UBER

Agenda

Uber overview

How Uber impacts cities

Our work with transit agencies

Uber Overview


70+
Countries

How Uber Impacts Cities

5 Ways Uber Impacts Cities

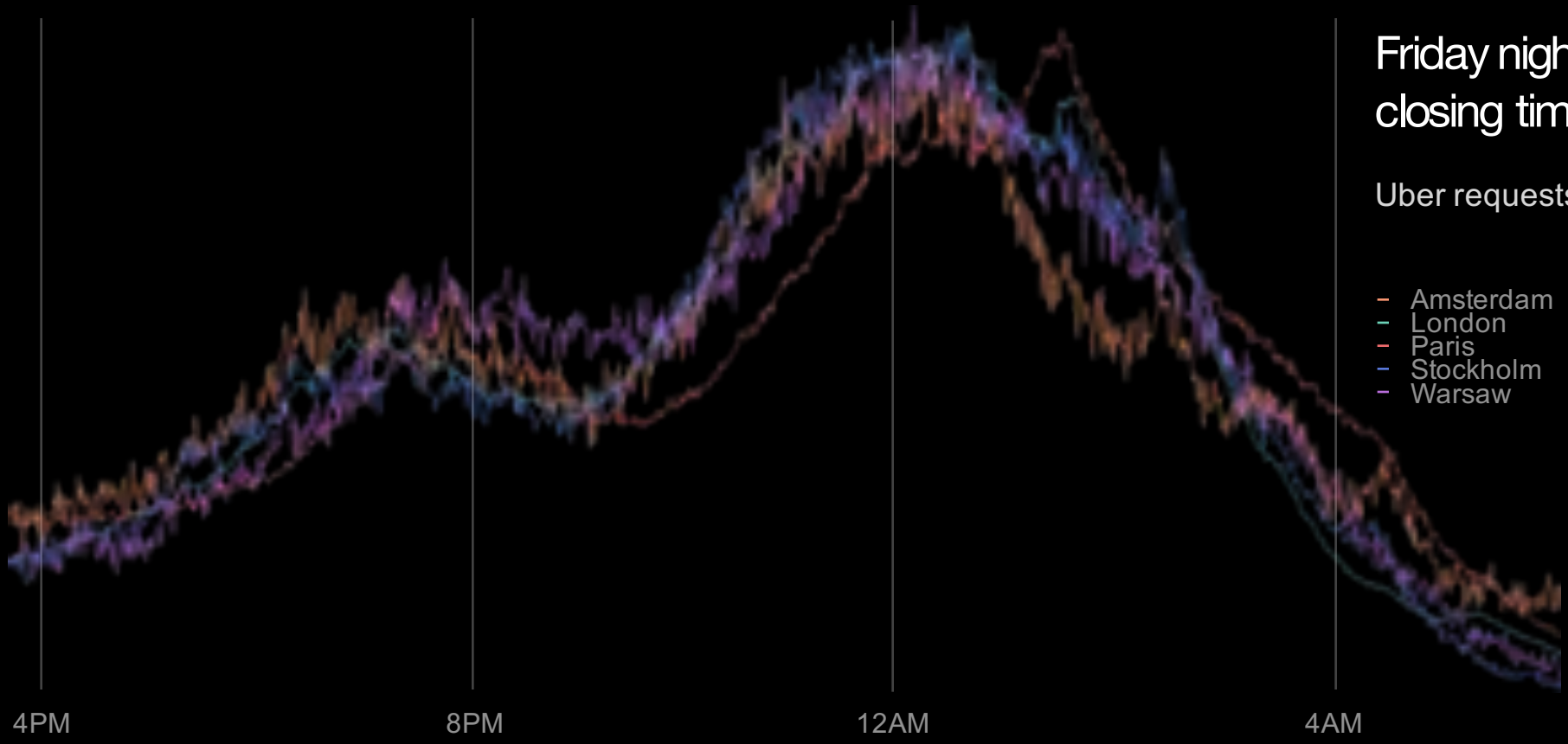
1. Increasing mobility options in underserved communities
2. Reducing congestion & pollution
3. Improving safety with technology
4. Providing an alternative to private car ownership
5. Extending the reach of public transit


Southern California

NYC YELLOW TAXI & UBER PICKUPS

- UBER PICKUPS
- YELLOW TAXI PICKUPS

Each dot represents the location where a trip started. Taxi trips are overplotted on Uber trips.


Friday night closing time
Uber requests
Amsterdam
London
Paris
Stockholm
Warsaw
4PM
8PM
12AM
4AM

Reducing congestion with uberPOOL

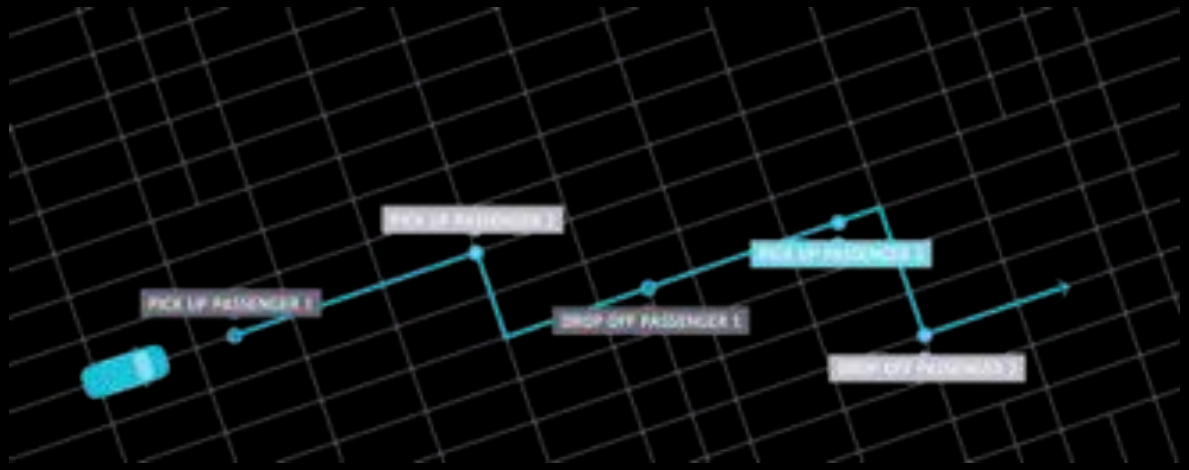
More people in fewer cars.

More efficient.

Drivers spend more time per hour earning money on longer trips—without the downtime between passengers

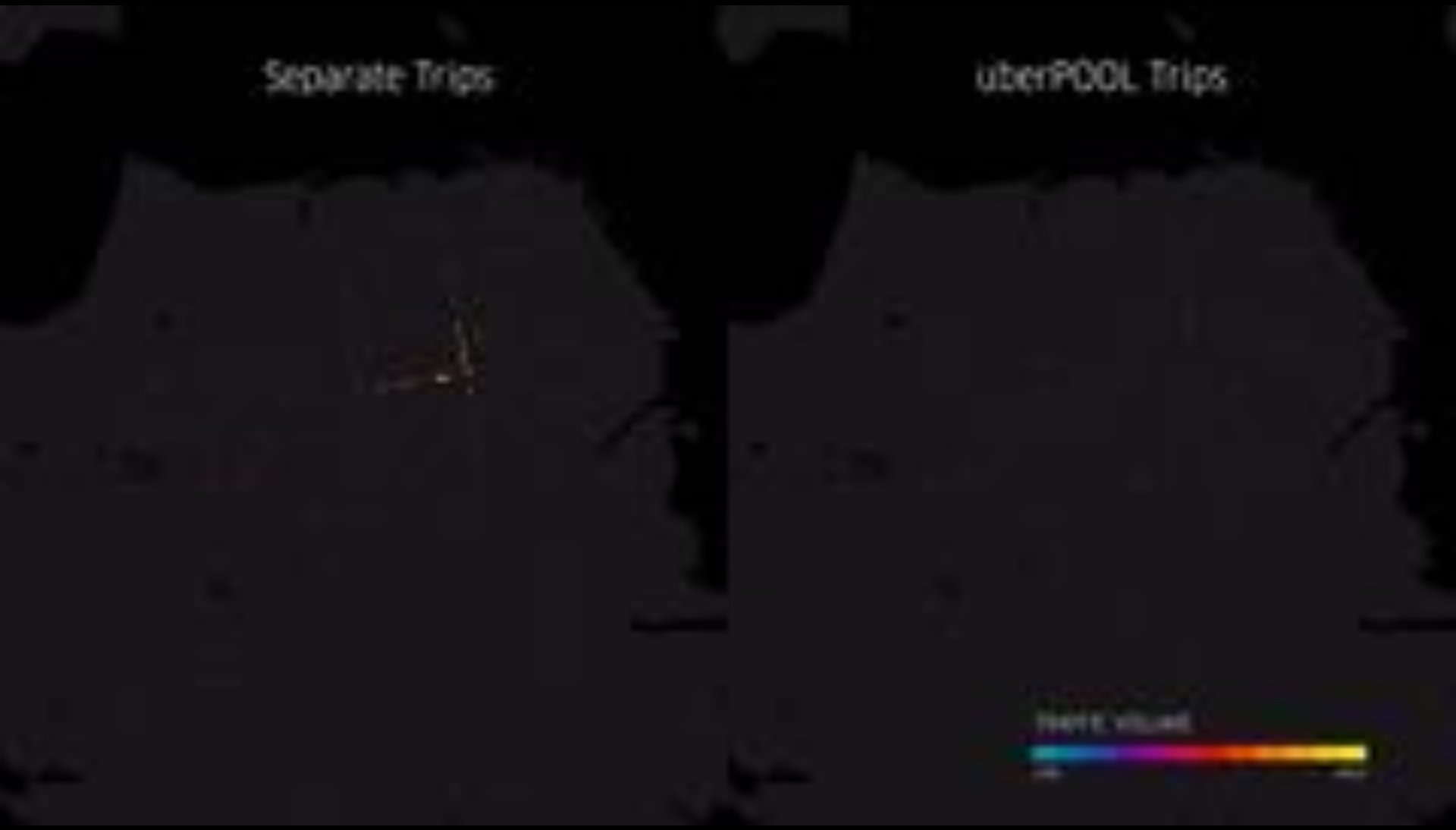
More cost-effective.

Riders share the cost between them, while adding only a few minutes of time per trip.



uberPOOL: How it Works

uberPOOL makes up 20% of our trips globally today, in cities where it’s available

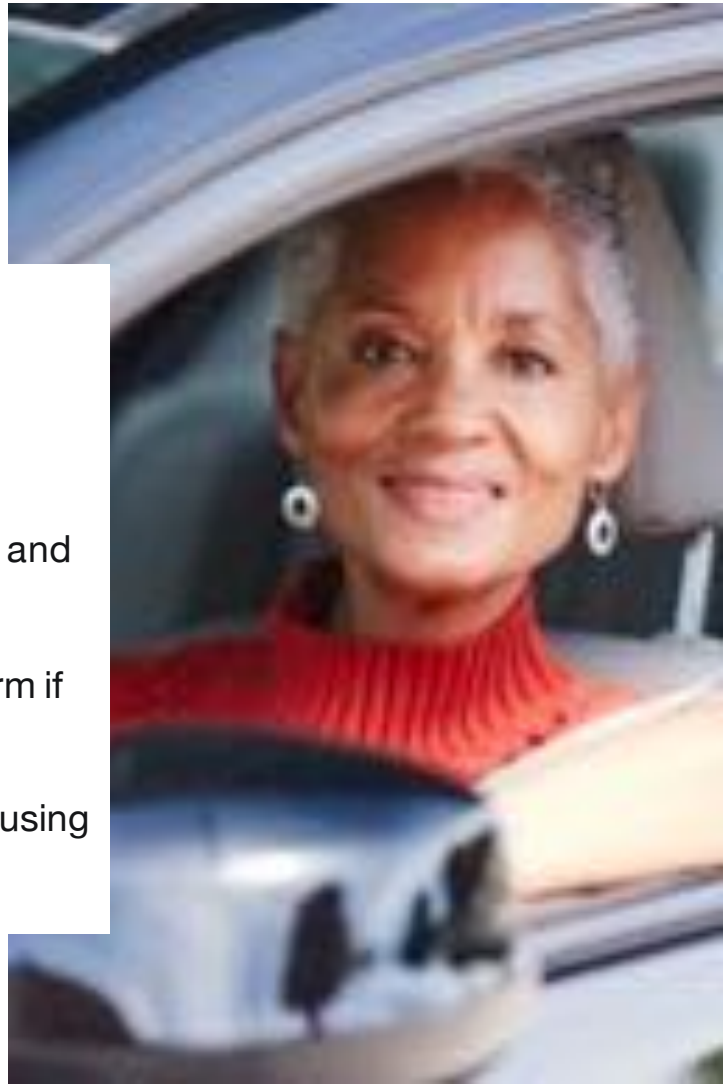

Separate Trips
uberPOOL Trips

Improving road safety

We are constantly developing and testing new solutions to predict, prevent and reduce safety risks.

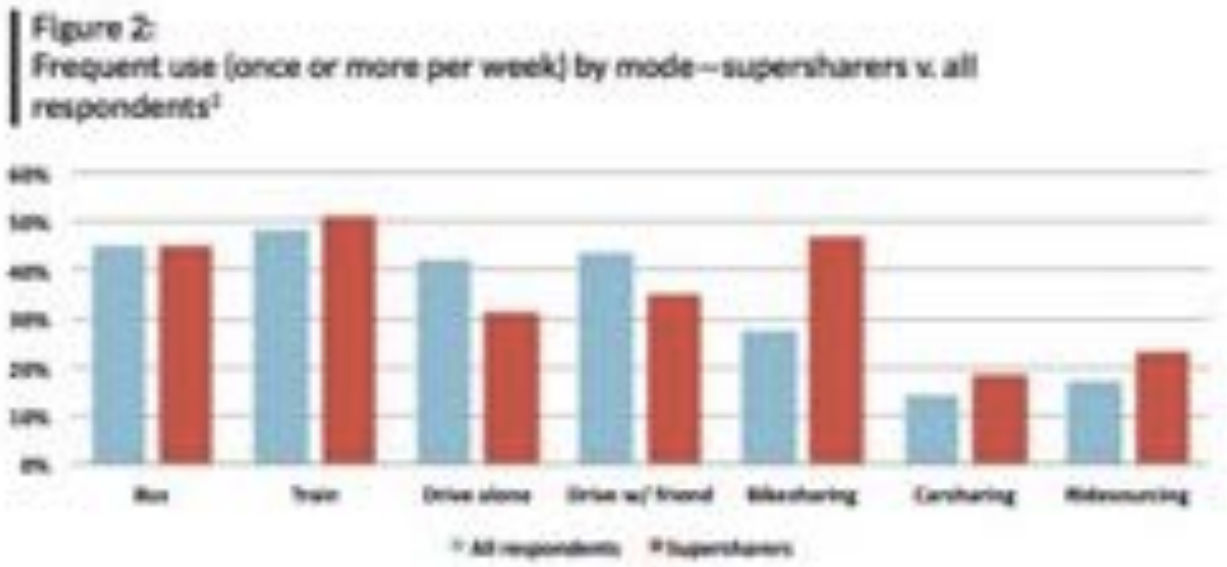
Some examples of ongoing tests include:

- **GPS and accelerometer data** identifies hard braking and fast acceleration.
- **Gyrometer data** identifies small movements and inform if a phone mount is being used.
- **Facial matching technology** confirms that the driver using the app matches the account on file.



American Public Transportation Association

Shared Mobility



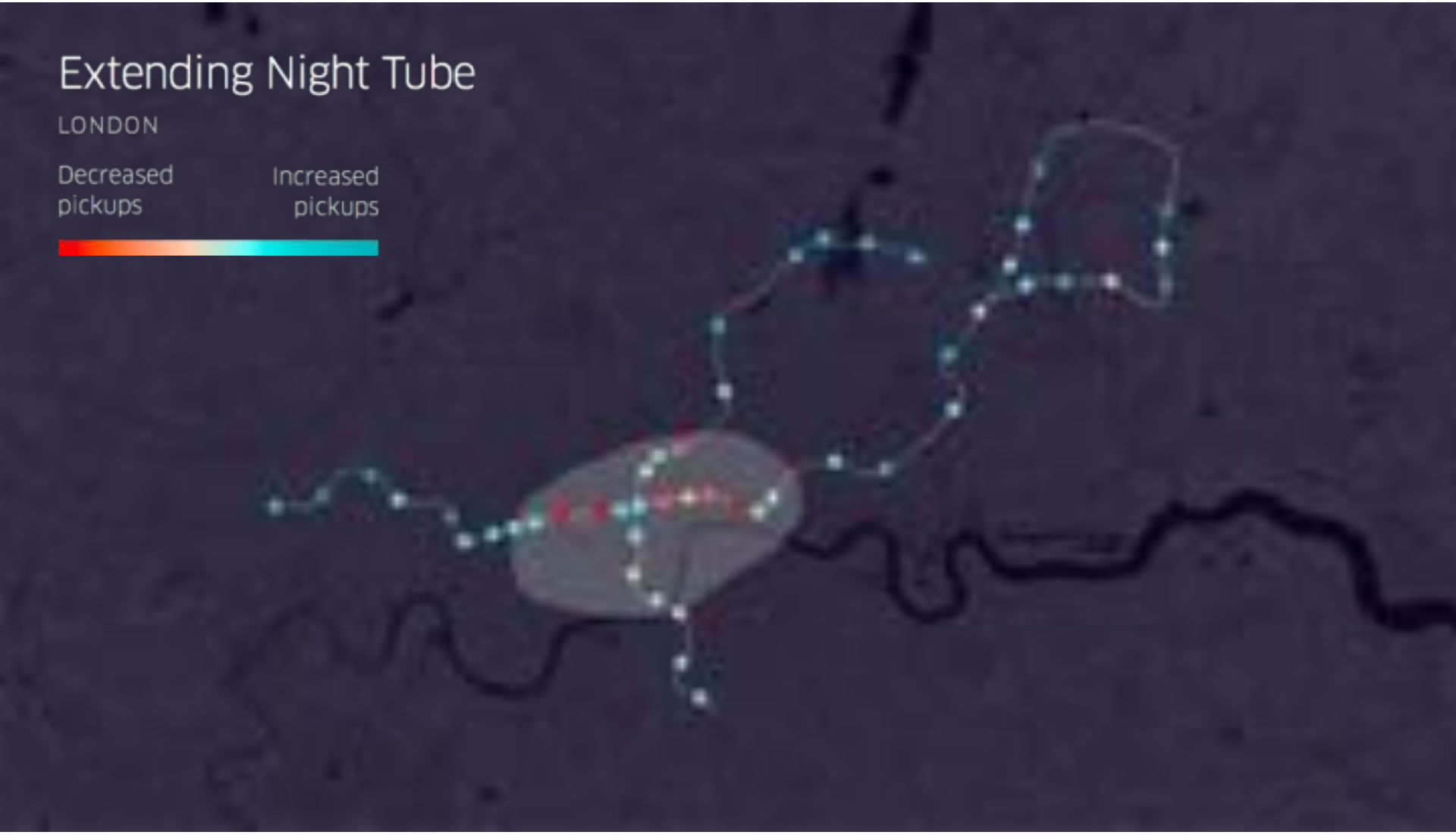
The more people use shared modes, the more likely they are to use public transit, own fewer cars, and spend less on transportation overall.

An alternative to private car ownership

By getting more people into fewer cars, we can provide a more affordable alternative to car ownership.

- Most negative impacts of current urban mobility patterns stem from the extraordinarily inefficient use of the private car
- 32% of London Uber riders in London say they are less likely to own a car because of Uber

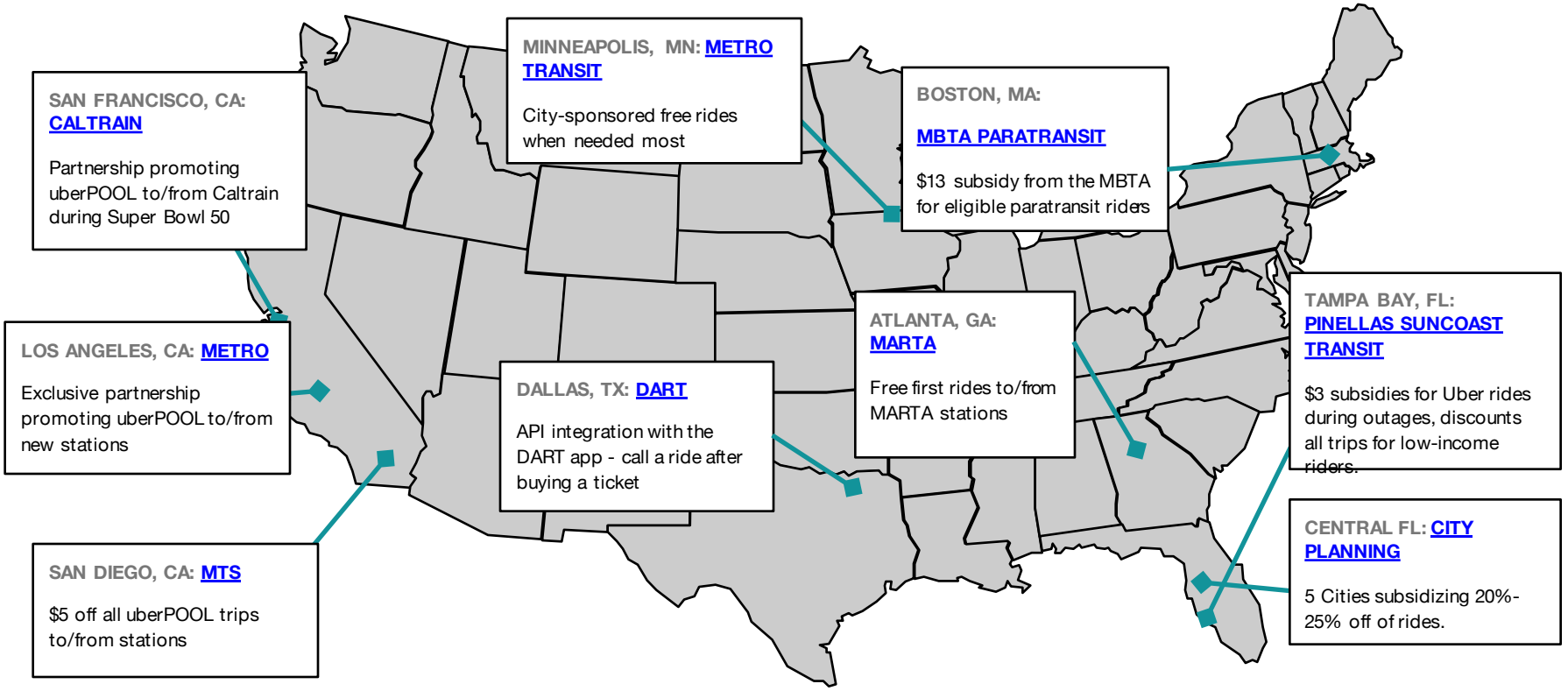

Extending public transit
London
Uber trips
Train stations


Extending Night Tube
LONDON
Decreased pickups
Increased pickups

Working with transit agencies

Nation-wide Transit Authority Partnerships

We have learnings from partnerships across the country and now know what works for improving first mile / last mile logistics



Partnering with transit

Pinellas Suncoast Transit Authority (Pinellas Park, FL)

Partnership details:

- PSTA will pay half the cost of any trip costing up to $6 to and from designated transit stops

“Once we make it easy for someone to get to the bus stop, riding the bus becomes a real transportation alternative”

– Brad Miller, CEO for the PSTA.

Providing an alternative to building a parking lot

City of Summit, New Jersey

Partnership details

- During commuting hours, residents enrolled in the existing parking program, can ride Uber to a NJ Transit hub for FREE!
    - Residents who aren't enrolled, are charged a flat $2.

"As an alternative transportation option, ridesharing is not new. But our program is the first of its kind in the United States to use ridesharing technology as a parking solution. Our innovation has the potential to shape how municipalities think about and implement parking options in the future."

- Summit Mayor Nora Radest

On-demand transportation for paratransit users

Massachusetts Bay Transit Authority

Partnership details:

- Rider covers first $2 of each trip; MBTA covers up to an additional $13 of each fare

"Partnering with Uber is an excellent opportunity to bring cutting edge services to our customers. Uber's customized app and willingness to provide smartphones to those who would otherwise be without access demonstrates the power of their platform. We are excited to partner with such an innovative company."

-MBTA General Manager Brian Shortsleeve

MBTA to subsidize Uber, Lyft rides for customers with disabilities

Encouraging car-free city living

San Francisco, California

Partnership details

- New residents are eligible for a $100 monthly stipend toward multimodal transportation, including Uber and public transit.
- uberPOOL fares to and from nearby public transit stations are capped at $5.

"I am excited to see Uber enter into this creative partnership to enhance urban mobility, recognizing their role in completing first and last mile trips while allowing transit to focus on what they do best. It is great to see business and public interests aligning so that city dwellers can truly take advantage of a suite of mobility services, weaning people off of personal cars, and allowing cities to rethink parking needs."

–Dan Sperling, Founding Director of the Institute of Transportation Studies at the University of California, Davis

What if all trips were shared?

ITF-OECD: How will shared mobility affect the livability of our cities?

- Congestion disappeared and traffic emissions were reduced by one-third.
- Mobility would be more affordable, thanks to the highly efficient use of vehicle capacity
- There would be more room for public parks, broader sidewalks and bicycle lanes.
- 95 percent less public space would be required for parking

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FEDERAL TRANSIT ADMINISTRATION

Mobility On Demand (MOD) Program

February 3, 2017

U.S. Department of Transportation
Federal Transit Administration

MOD
MOBILITY ON DEMAND

All Travelers Need Mobility Choice

The Sharing Economy

Car sharing, bike sharing, ridesharing, and pop-up bus services

The Enabling Technologies

Evolving Mobility Landscape

= Quality & Carefree Mobility Choices

MOD Sandbox Program Overview

Demonstration Program to Explore MOD Models

- **Explores** innovative approaches to integrate MOD solutions with public transportation
- **Empowers** project teams to implement innovate business models to deliver high-quality, seamless and equitable mobility options
- **Informs** the MOD program on how to approach MOD and structure future MOD policies, and support grantees

2016 MOD Sandbox Program

Funding and Eligible Applicants

- **$8 Million** in FTA FY14 and FY16 research funds
- **Local Share Minimum of 20%** of the net project cost in cash, or in-kind
- **Providers of public transportation** (public transit agencies, state/local government DOTs, and federally recognized Indian tribes) with one or more strategic partners
- Projects solicited though Notice of Funding Opportunity (NOFO) published May 3, 2016, with proposals due July 5
- The 11 awardees were announced on October 13, 2016

MOD Sandbox Applicants & Awardees

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MOD
MOBILITY ON DEMAND

2016 MOD Sandbox Themes

- Paratransit and Demand Response Service
- TNCs for First Mile/Last Mile
- Multimodal App/Payment
- Incentive Strategies
- Carpooling and Ridesharing
- Integrated Bikesharing

MOD Sandbox: At a Glance

REGIONAL TRANSPORTATION AUTHORITY OF PIMA COUNTY (PIMA COUNTY, AZ)

Integrating fixed route, subscription based ride-sharing and social carpooling services into a platform to address first mile/last mile issues

VALLEY METRO RAIL (PHOENIX, AZ)

Smart phone mobility platform that integrates mobile ticketing and multimodal trip planning, including ride-hailing, bike sharing, and car-sharing companies

CITY OF PALO ALTO, CA

Commuter planning project incorporating trip reduction software, a multi-modal trip planning app, and workplace parking rebates.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION

Mobility on demand partnership with the car-sharing company, Lyft. *This project, led by LA Metro, includes a companion project in Seattle, WA.

MOD Sandbox: At a Glance

SAN FRANCISO BAY AREA RAPIC TRANSIT

Integrated carpool-to-transit program.

PINELLAS SUNCOAST TRANSIT AUTHORITY (PINELLAS COUNTY, FL)

On-demand paratransit using taxis and a car-sharing company to provide door-to-door service

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Platform integrating transit and shared-use mobility options. By integrating data, the project will allow users to plan trips that address first/last mile issues while traveling by transit.

DALLAS AREA RAPID TRANSIT

Integrates ride-sharing services into DART's GoPass ticketing app.

MOD Sandbox: At a Glance

VERMONT AGENCY OF TRANSPORTATION

Statewide transit trip planner incorporating flex-route, hail-a-ride, and other non-fixed-route services into mobility apps.

PIERCE TRANSIT (PIERCE COUNTY, WA)

Limited Access Connections project connects service across two transit systems – local and regional – and ride-share companies to increase transit use across the Seattle region.

CHICAGO TRANSIT AUTHORITY

Incorporates local bike-sharing company Divvy into CTA's transit trip planning app.

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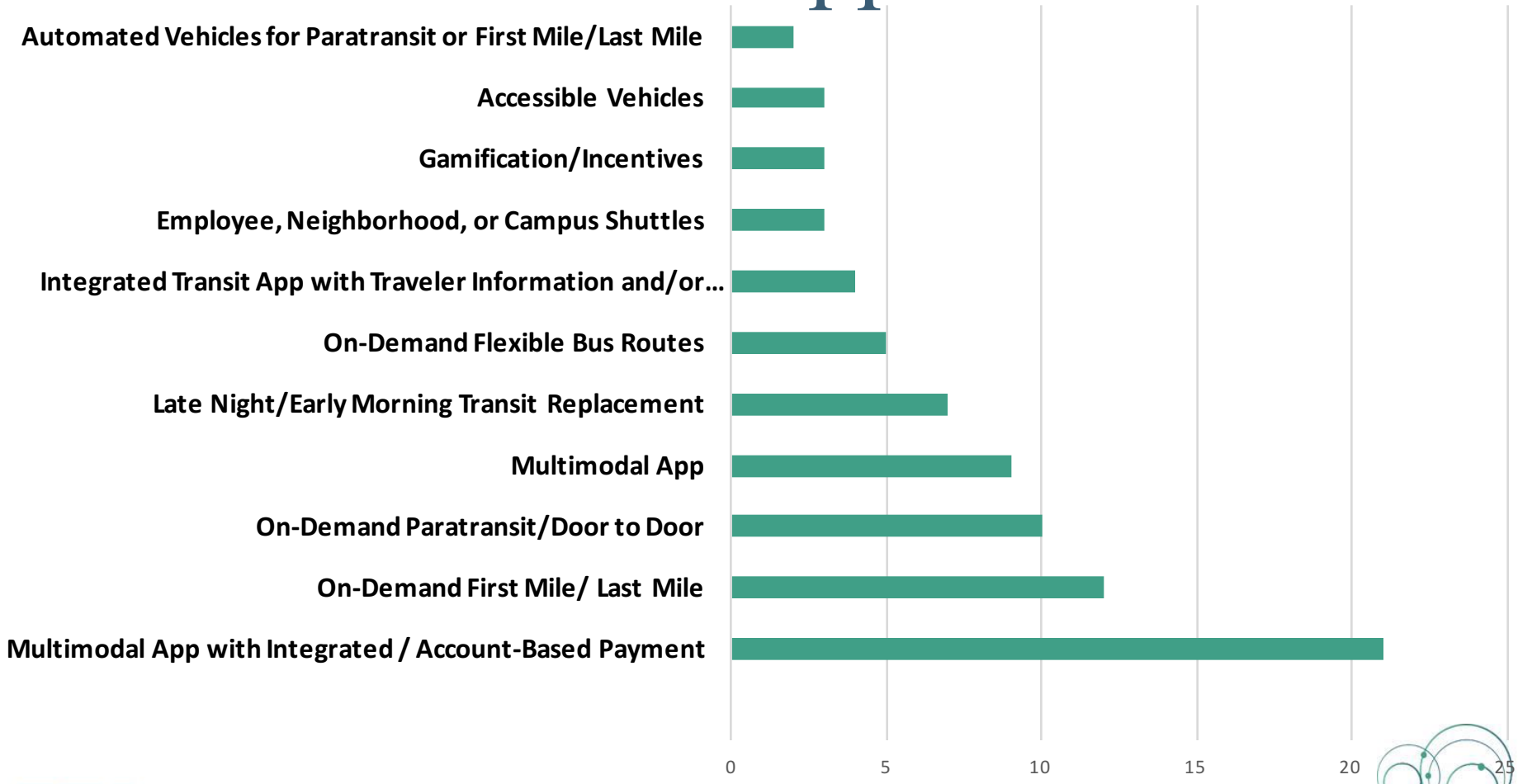
Opportunities Identified by MOD Sandbox Awardees

1. Affordable mobility options for work or social activities
2. Address first mile/last mile and low density area service gaps.
3. Reduce vehicle miles traveled and congestion while not reducing number of personal trips
4. Increase the utilization of existing investments in public transit/parking facilities.
5. Increase mobile ticketing adoption and usage
6. Increase usage of integrated mobility apps to reduce travel and wait times
7. Increase mode share of non-single occupancy vehicle options
8. Increase access to MOD, including low-income users
9. Improve safety, security, and satisfaction of riders
10. Decrease response times and cost of paratransit services for people with disabilities
11. Incorporate shared modes and accessible trips in trip planning
12. Establish best practices and standards for MOD demonstrations

Strategies Proposed by MOD Sandbox Applicants



Next Steps

- Identify **performance metrics** to assess the success of the MOD deployments.
- Conduct **independent evaluation** (IE) of the MOD Sandbox Demonstration projects
- Continue **stakeholder outreach and KTT** to **inform** the transportation community on the activities of the MOD program, elicit **stakeholder feedback**, and promote **technology transfer**
- Learn from **shared mobility FAQs and online dialogue**

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MOD
MOBILITY ON DEMAND

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Q&A

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Thank You