



# Shared Mobility and the Transformation of Public Transit

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**Baby  
Boomers**



**Millennials/  
Gen X**



**Drop in Licences  
Revenues**



**Ubiquitous  
Connectivity**



**Work Anywhere  
Everywhere**

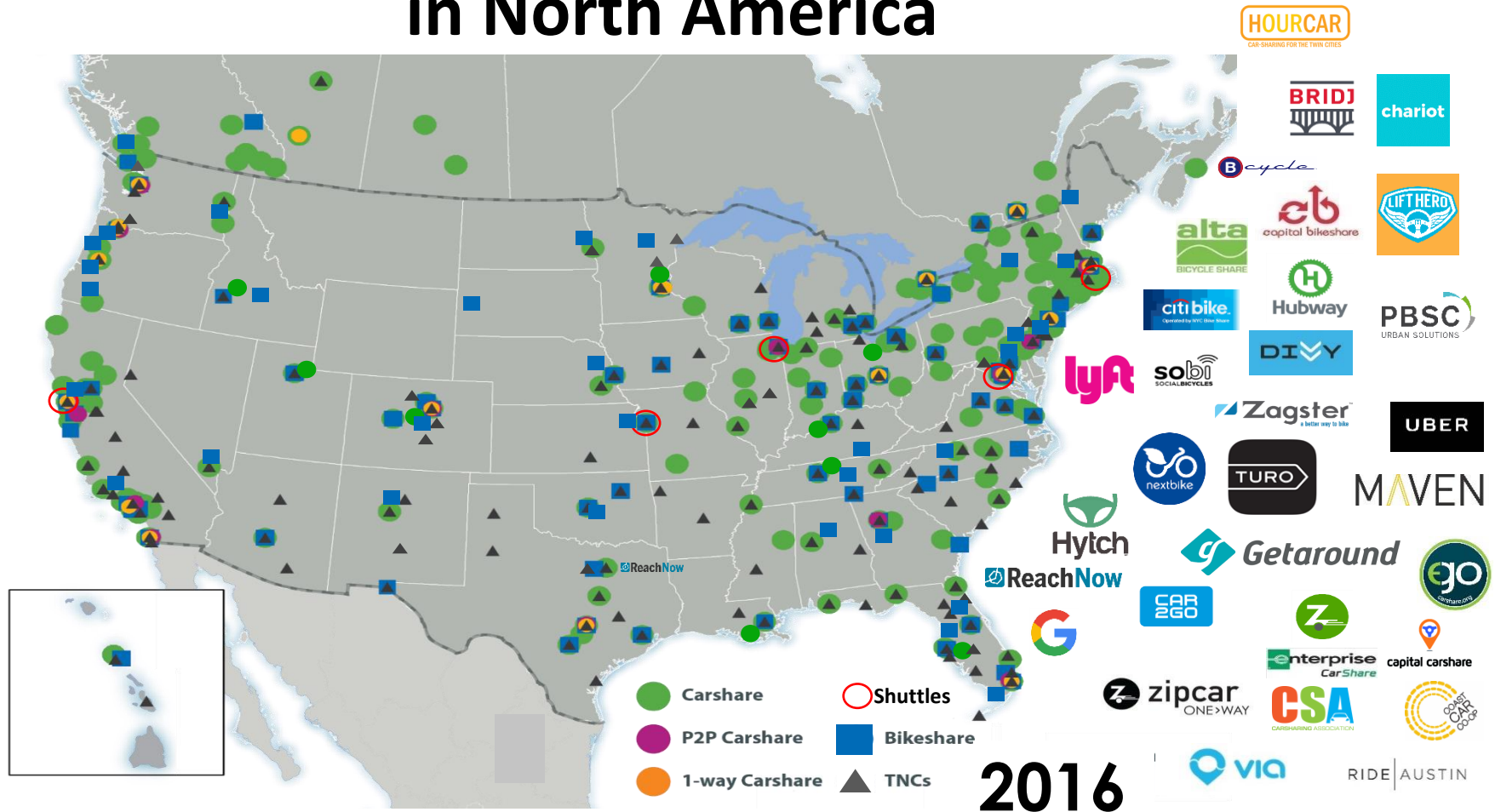


**Changing  
Preferences**



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# Tracking Shared Mobility in North America



# Shared Mobility Typology



**Public Transit**



**Bikesharing**



**Carsharing**



**Ride-hailing/  
Ride-splitting**



**Ridesharing/Carpooling**



**Microtransit  
Shuttles**



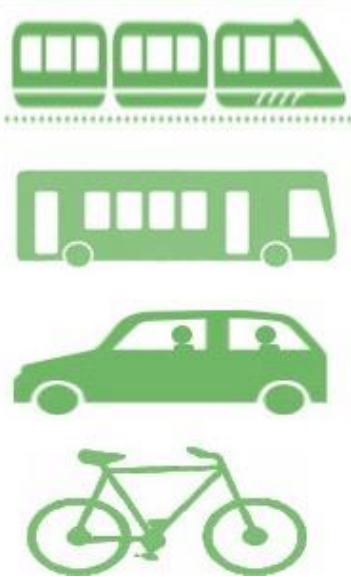
**Taxis**



**Mobility Hubs**



# Why Do We Need **Shared- Use Mobility?**



- Reduces reliance on private autos
- Can fill gaps in transit especially weekends and night-time service
- Provide connections between transit stations and timings – first and last mile
- Helps overcrowding on transit
- Can be implemented quickly

# New Research: Impacts of Shared Mobility

# TCRP

RESEARCH REPORT 188

## Shared Mobility and the Transformation of Public Transit



TRANSPORTATION RESEARCH BOARD  
The National Academies of  
SCIENCES • ENGINEERING • MEDICINE

TRANSIT  
COOPERATIVE  
RESEARCH  
PROGRAM

Sponsored by  
the Federal  
Transit Administration

## Objectives

- Improve understanding and find ways for transit agencies to learn from new tech-enabled mobility services
- Identify opportunities & challenges
- Present strategies & best practices for transit agencies to maximize public benefit

**Study cities: Austin, Boston, Chicago, DC, LA, San Francisco, Seattle**

# Finding 1:

## Transportation and Lifestyle

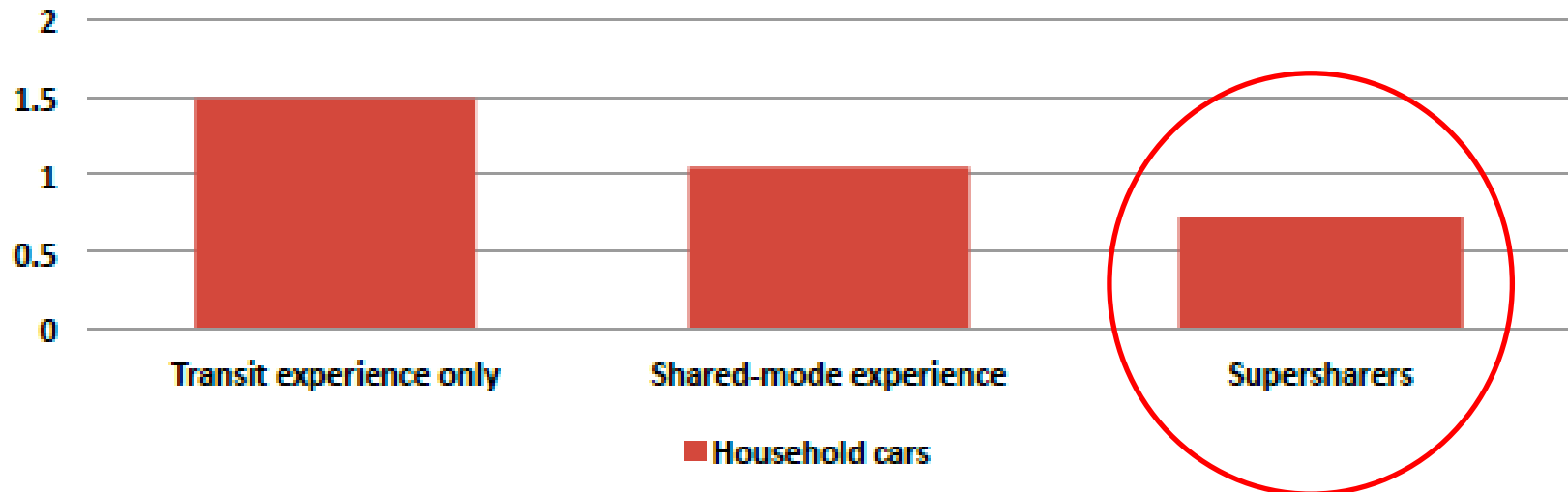
The more people use shared modes, the more likely they are to **use transit, own fewer cars, and spend less** on transportation overall.





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

**Figure 3:**  
Household vehicle ownership, by shared-mode experience<sup>3</sup>

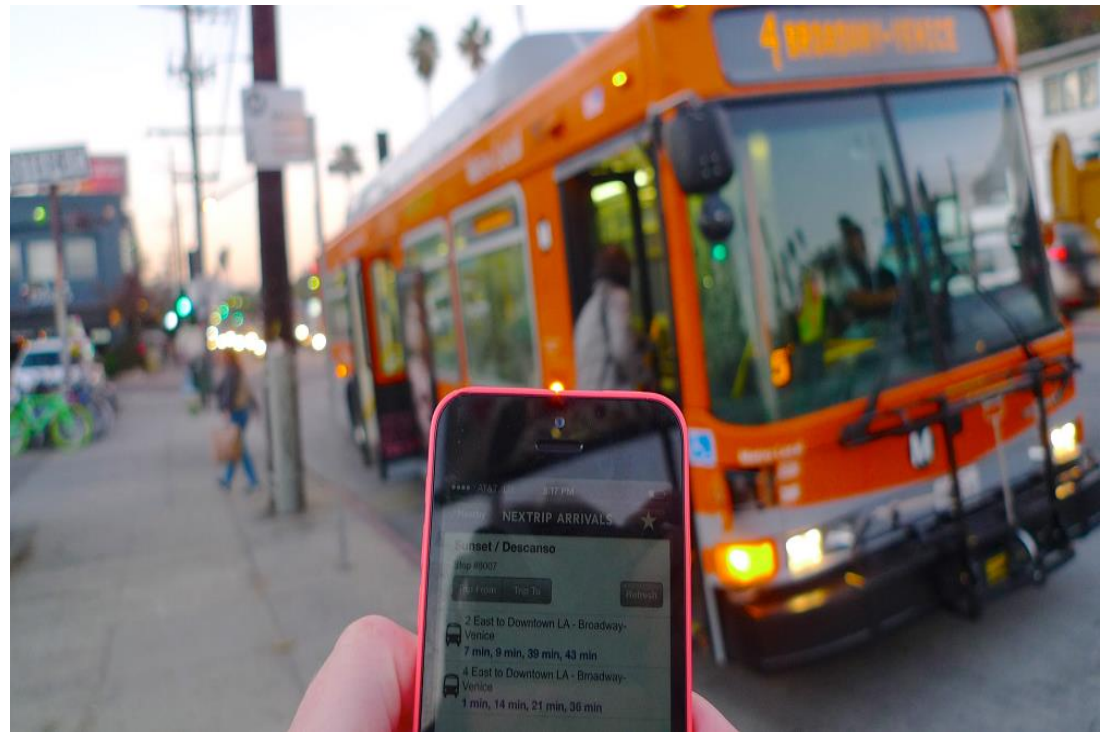


# Finding 2:

## Shared Modes and Transit Patterns

Shared modes largely complement public transit, enhancing urban mobility

Transit most competitive in its own right of way with frequent service.



- Ridesourcing services (e.g., Lyft and Uber) are most frequently used for social trips between 10 p.m. and 4 a.m., times when transit runs infrequently or is unavailable.
- Relatively few people (21% of respondents) use ridesourcing to commute—and those who do, do so occasionally, mostly one way trips.





# Finding 3:

## Emerging Mobility Business Models and Partnerships

- Key areas of collaboration are in microtransit/dynamic demand response; cross-modal trip planning, reservation, and payment application integration; service links and handoffs; and private access to the public way



What is the  
Shared-Use  
Mobility Center?

A row of black bicycle seats is shown in a shallow depth of field, with the foreground seat in sharp focus and the others blurring into the background. The seats are arranged in a line, and the background features a red and white striped pattern, possibly from a building or a fence. The overall lighting is warm and soft.

## **SHARED-USE MOBILITY CENTER**

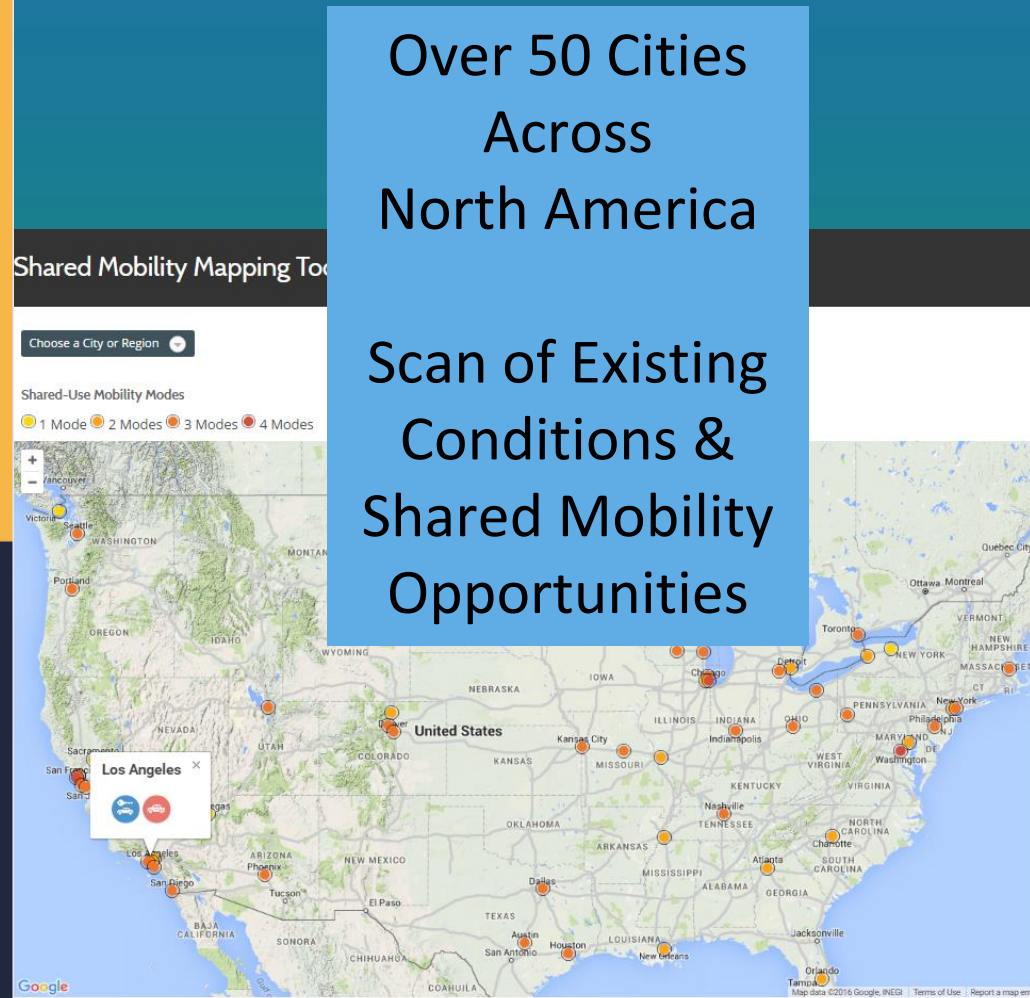
Making it possible  
to live well without  
having to own your  
own car, by creating  
a multimodal  
transportation system  
that works for all



Connecting public agencies  
and transit, community and  
private sectors to scale benefits  
of shared mobility for all



# Conducting innovative research and serving as the clearinghouse for shared mobility



# Working with cities to set mode shift goals and implement pilot projects





# Our goal:

Eliminate

# 1,000,000

cars within five years  
with shared mobility,  
transit & land use



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# Benefits Calculator



OUR WORK ABOUT SUMO

## Shared Mobility Benefits Calculator

Shared mobility is a powerful tool cities can use to reduce congestion and household transportation costs.





Use the calculator below to explore the benefits of pursuing shared mobility. Set a target vehicle reduction goal, view or adjust the optimal mix of shared modes to account for your specific planning needs, and quickly see the resulting benefits.

To reduce personal vehicles by  (4,541 vehicles),

Customize  
Target  
Vehicle  
Reduction  
Strategy

Adjust the  
Mix of  
Modes

See the  
Benefits

Mode	Additional units	Adjust the mix	
 <b>Transit commuters</b> Current units: 793 <sup>†</sup>	<b>1,498</b>	Optimal <input checked="" type="checkbox"/> Custom*	 18,755,000 Fewer miles traveled by personal vehicles
 <b>Carshare vehicles</b> Current units: 1	<b>379</b>	Optimal <input type="checkbox"/> Custom*	 16,800 Fewer metric tons of GHG emissions related to personal vehicle ownership
 <b>Shared bikes</b> Current units: 108	<b>500</b>	Optimal <input type="checkbox"/> Custom*	
 <b>Ridesharers/carpoolers</b> Current units: 8,392 <sup>†</sup>	<b>734</b>	Optimal <input type="checkbox"/> Custom*	 \$16,496,900 Saved in personal vehicle transportation costs

# Plan: 100,000 Cars Off the Road in Los Angeles County

Next up: Minneapolis



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LOS ANGELES COUNTY  
SHARED MOBILITY ACTION PLAN





# 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





# In the Last Year



- 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



Silver Ride

A new concept in mobility  
for older adults!

Enjoy independence and  
reliability with our services:



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# Public Private Partnerships: Examples



**First/Last Mile:** Publicly-subsidized Uber/Lyft trips within transit service areas (to/from transit hubs)



**Payment Integration:** Integration between transit and shared mobility services being tested in various US cities



**Carpooling/Ridesharing:** More private models arising for ride-matching on work commutes, voucher programs for Uber/Lyft through transit-run carpool program, google, waze app



**Expanded Services:** Concierge services address technology user gaps in niche markets, cash-based payment options





# What's Next?

- Fare integration 2.0
- Mobility Hubs
- Autonomous Vehicles

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

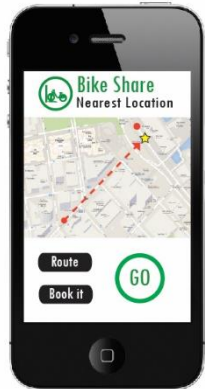


Wilson Blvd + Barton St				Clarendon Blvd + Barton St			
38B	Westbound to: Ballston Station	0	35 55	77	Shirlington Station to Court House Metro	10	36
41	Court House Metro - Columbia Pike/Dinwiddie	3	16 34	41	Columbia Pike/Dinwiddie - Court House Metro	11	28 44
77	Court House Metro to Shirlington Station	16		38B	Eastbound to: Farragut Square	11	90
Barton St + Clarendon Blvd				Capital Bikeshare			
41	Court House Metro - Columbia Pike/Dinwiddie	3	16 34	Wilson Blvd & Franklin Rd		7	4
4B	Westbound to: Seven Corners	14		M Court House			
77	Court House Metro to Shirlington Station	16		OR	New Carrollton	0	
Barton St + Clarendon Blvd				OR	Vienna	6	
4B	Eastbound to: Rosslyn Station	9	68	OR	New Carrollton	8	
				OR	New Carrollton	10	
				OR	Vienna	15	



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# 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



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# BE PROACTIVE & SET GOALS

- **MAKE MOBILITY THE GOAL** and change performance metrics
- **INCENTIVIZE** scale & equity
- **REQUIRE DATA SHARING** and address accessibility
- **PRIORITIZE** bike and pedestrian safety
- **PILOT** innovative projects to find solutions
- **INCREASE VISIBILITY** with on-street & marketing
- **DEVELOP PARTNERSHIPS** and new business models
- **CREATE FLEXIBLE POLICIES** that can adapt to the changing environment



**LEARN TOGETHER:**  
**IT'S ABOUT THE PEOPLE**





# Thank you

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