Mobility at a Crossroads

What Have We Learned from Recent Research?

Neil Pedersen, Executive Director Transportation Research Board







Information Sources

- "Impact of Shared Mobility and Technology on Public Transportation," Susan Shaheen, presentation to TRB Executive Committee, 2018
- "Growth and Impacts of New Mobility Services," Bruce Schaller, presentation at 2018 TRB Annual Meeting
- TCRP Report 195, Broadening Understanding of the Interplay Between Public Transit, Shared Mobility, and Personal Automobiles. Sharon Feigon and Colin Murphy, 2018



Shared Mobility

© UC Berkeley, 2015

Shared mobility—the shared use of a vehicle, bicycle, or other low-speed travel mode—is an innovative transportation strategy that enables users to have short-term access to a mode of transportation on an as-needed basis. Shaheen et al., 2016 © UC Berkeley, 2018

Bikesharing Carsharing Car Rental Courier Network Services Liveries/Limos Carpool e-Hail Paratransit Vanpool High-Tech Company Shuttles Pedicabs Casual Microtransit Public Transit Carpool P2P Bikesharing Shuttles P2P Vehicle Sharing Taxis Ridesourcing/TNCs Scooter Sharing Core and Incumbent Innovative Services Services

Ridesourcing Modal Shift Impacts

Study Authors Location Survey Year	Rayle et al. San Francisco, CA (2014)	Henao Denver and Boulder, CO (2016)	Clewlow and Mishra* Seven U.S. Cities** Two Phases (2014 – 2016)
Drive	7%	37%	39%
Public Transit	30%	22%	15%
Taxi	36%	10%	1%
Bike or Walk	9%	12%	23%
Would not have made trip	8%	12%	22%
Other / Other Ridesourcing/TNC	10%	7%	-

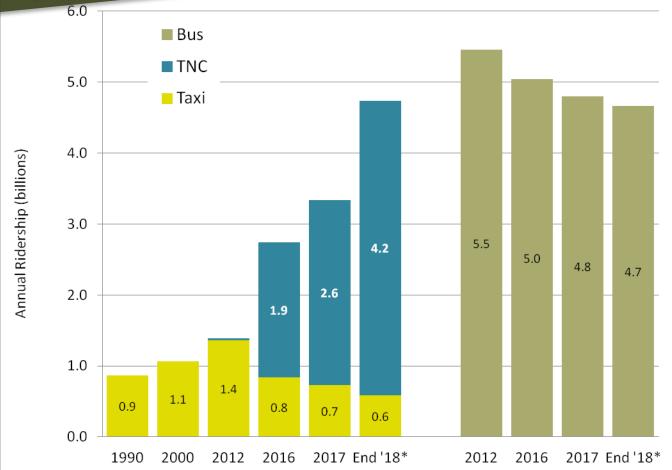
*Impacts in this study were weighted by usage and aggregated across 7 cities. **Cities in study include: Austin, Boston, Chicago, Los Angeles, San Francisco, Seattle and Washington, DC.



Shaheen et al., 2018

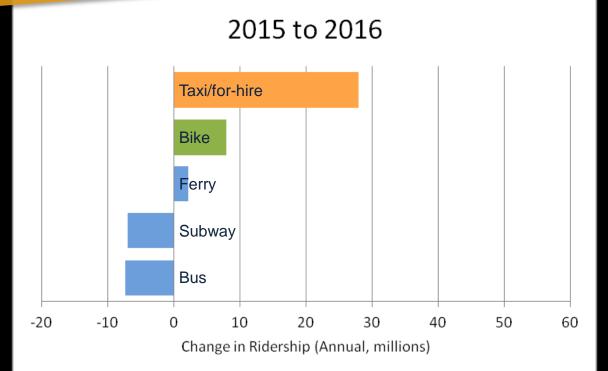
© UC Berkeley, 2018

Rapid growth in Taxi/TNC ridership



Sources: Estimates based on U.S. Census data on taxi industry revenues and number of drivers and published data on TNC trip volumes and growth rates. (See slide notes)

Changes in non-private auto travel, NYC



Source: Schaller Consulting, "Unsustainable? The Growth of App-Based Ride Services and Traffic, Travel and the Future of New York City."

TCRP 195 Findings

- The heaviest TNC use is during evening hours and weekends
- Most TNC trips are short and concentrated in downtown core neighborhoods and to airports
- There is no clear relationship between the level of peak-hour TNC use and longer term changes in the study regions' public transit usage
- People who use transit or commute by driving solo do so as part of a routine; TNCs are used on a more occasional basis
- Transit travel and wait times were top concerns of survey respondents who replaced transit trips with TNC trips



Conclusions: Large Urban Areas

- Continue to prioritize rail, bus rapid transit, bus-only lanes, and other transit-centered approaches that move large numbers of people efficiently and effectively
- Engage with TNCs to
 - designate curb space or other specific locations for TNC pick up/drop offs to minimize conflict near transit stops or stations
 - pursue cost savings through public-private partnerships on late night, call-and-ride, and paratransit services



Conclusions: Large Urban Areas

- Move to a Mobility Broker/Manager Model
 - Explore opportunities for integration of modes and services through mobile apps and unified platforms for payment, scheduling and routing.
- Track and Understand TNC Usage
 - Develop common survey questions that measure impacts on all transit modes and across service providers
 - Make data sharing mandatory as part of any partnership



Conclusions: Midsize and Small Urban Areas

- Pursue first/last mile partnerships
- Use co-marketing to reach new transit riders
- Mobile app integration
- Partner with employers on transportation demand management strategies
- Partner with TNCs to help augment fixed route service in areas with poor transit coverage
- Leverage TNCs to support demand responsive transit service outside of the highest use hours

Information Sources

- "Impact of Shared Mobility and Technology on Public Transportation," Susan Shaheen, presentation to TRB Executive Committee, 2018, <u>http://onlinepubs.trb.org/onlinepubs/excomm/18-01-</u> <u>Shaheen.pdf</u>
- "Growth and Impacts of New Mobility Services," Bruce Schaller, presentation at 2018 TRB Annual Meeting, <u>http://schallerconsult.com/rideservices/</u>
- TCRP Report 195, Broadening Understanding of the Interplay Between Public Transit, Shared Mobility, and Personal Automobiles. Sharon Feigon and Colin Murphy, 2018, <u>http://www.trb.org/TCRP/Blurbs/177112.aspx</u>

