



Transportation Network Companies: Impacts on Rider Choices



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Exchange

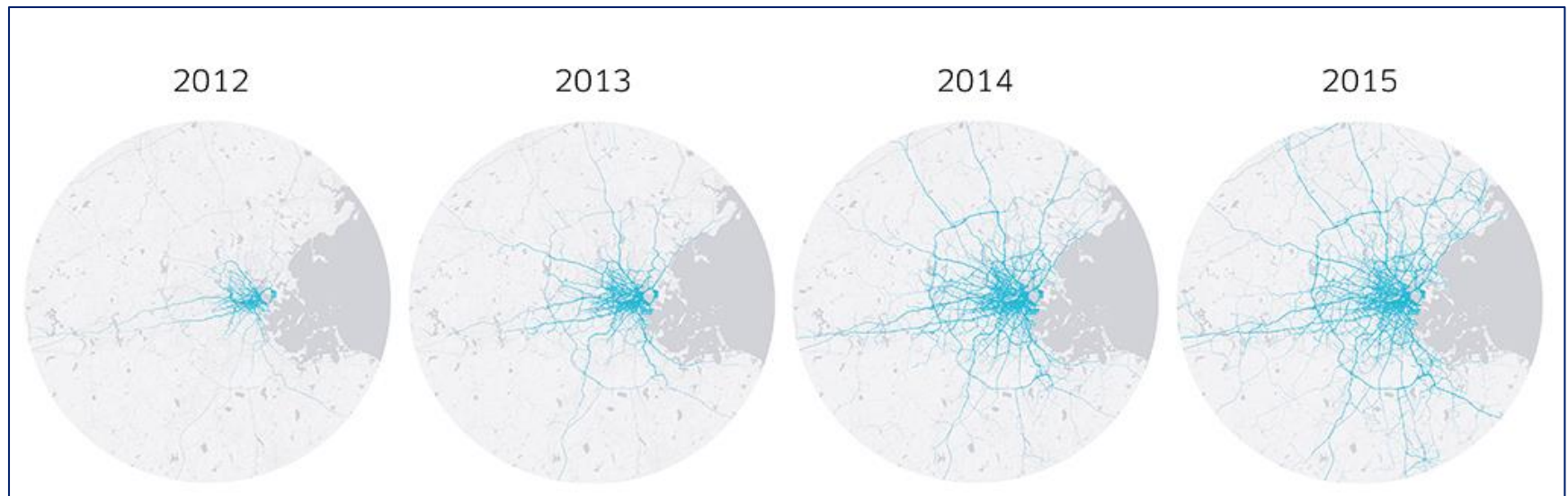


Rapid growth in ride-hailing

Uber arrived in Boston in 2011, followed by Lyft in 2013

Number of miles with Uber exceeded 115 million between 2012 and 2015

Growth in Uber trips in the Boston Region, 2012-2015



Statistics and Image Source: Uber Blog, 4 Years Moving in Boston

Necessary TNC data sources

Trip Volumes

Total Trips By:

- Time of day
- Day of week
- Month
- TAZ or other
- Jurisdiction

Travel Times

Travel Markets Served

- When and Where Trips are Made
- Origin-Destination
- Route Taken
- Trip Length

Efficiency Data

- Ridesharing: Riders Per Trip
- Productivity: Trips Per Hour Per Vehicle
- Deadheading

Travel Behavior

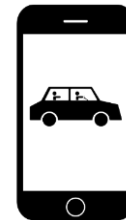
- Trip Purpose
- Rider Demographics
- Reasons for Taking TNCs
- How Trip Would Have Been Taken Otherwise

MAPC Rider Intercept Survey

MAPC recruited and trained 10 TNC drivers to ask passengers to take a survey about their ride-hailing trip during the trip itself

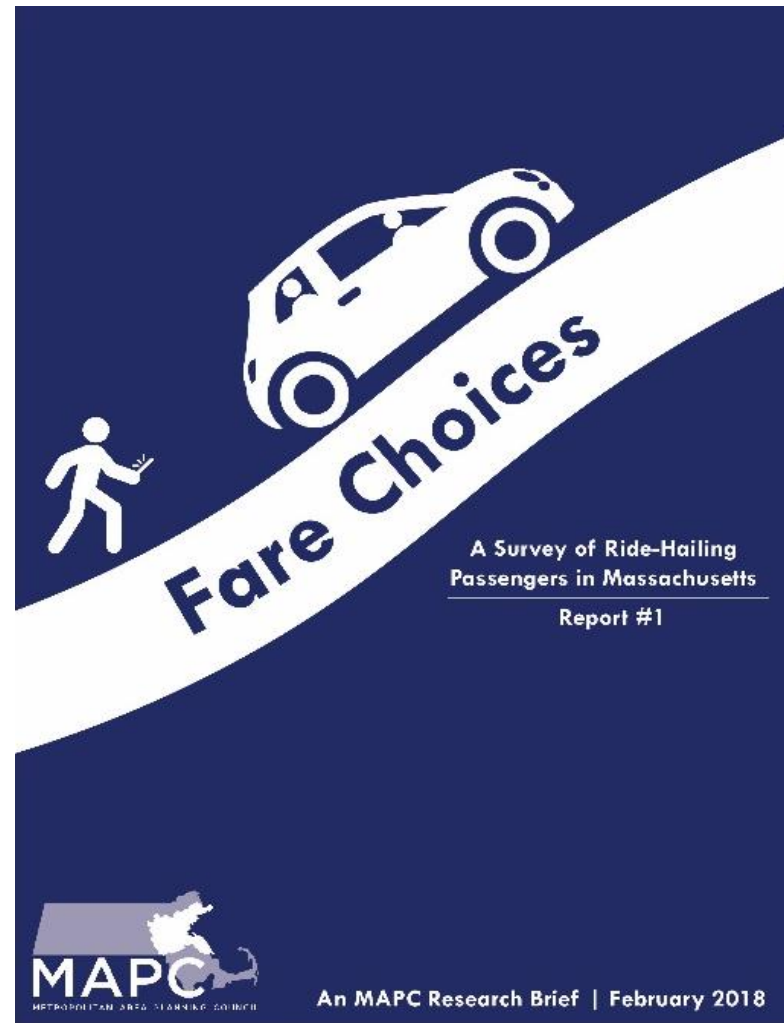
The survey instrument, a tablet, recorded passenger responses to questions about their:

- Socioeconomic background
- Specific trip context
- General travel behaviors and mobility options



Nearly 1,000 responses collected during a four-week period in Fall 2017

Fare Choices: A Survey of Ride-Hailing Passengers in Metro Boston



MAPC Rider Intercept Survey: Findings

Rider demographic profile

- Age: 65% were between 22 and 34 years old
- Gender: 54% were female
- Income: 21% under \$38k / 14% over \$137k
- Education: 25% with an advanced degree (Masters/PhD)
- Race/Ethnicity: 63% identified as being White

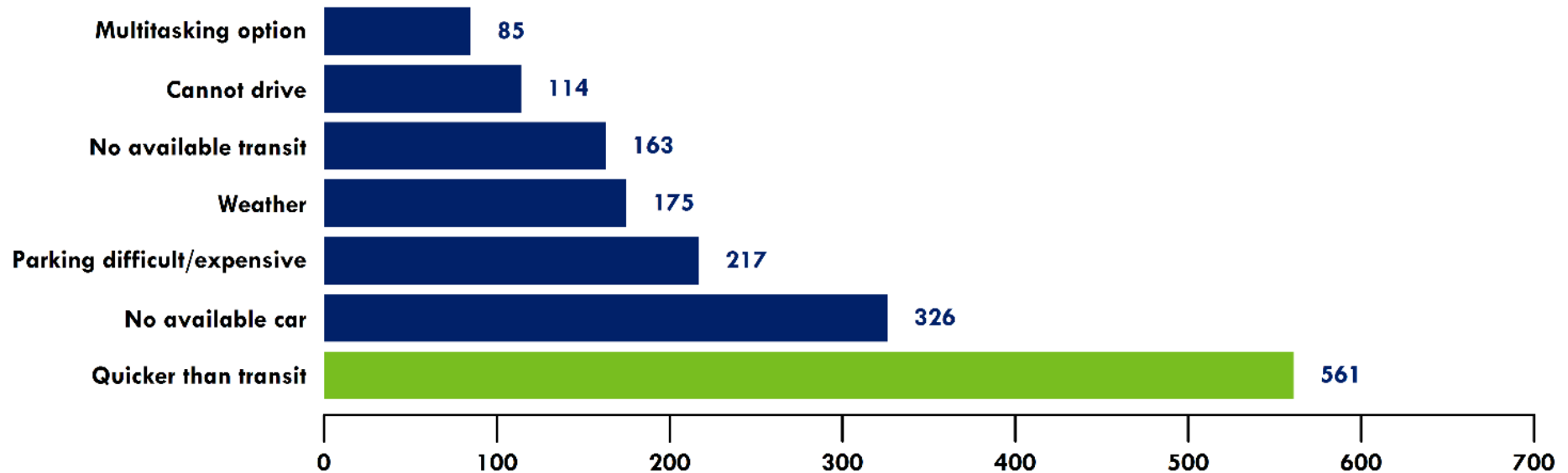
Frequency of TNC use over past 3 months

- Frequently (>3x per week): 29%
- Regularly (1-3x per week): 37%
- Sometimes (1-3x per month): 29%

Four-fifths of surveyed trips were single-customer services rather than pooled options such as Lyft Line or UberPOOL.

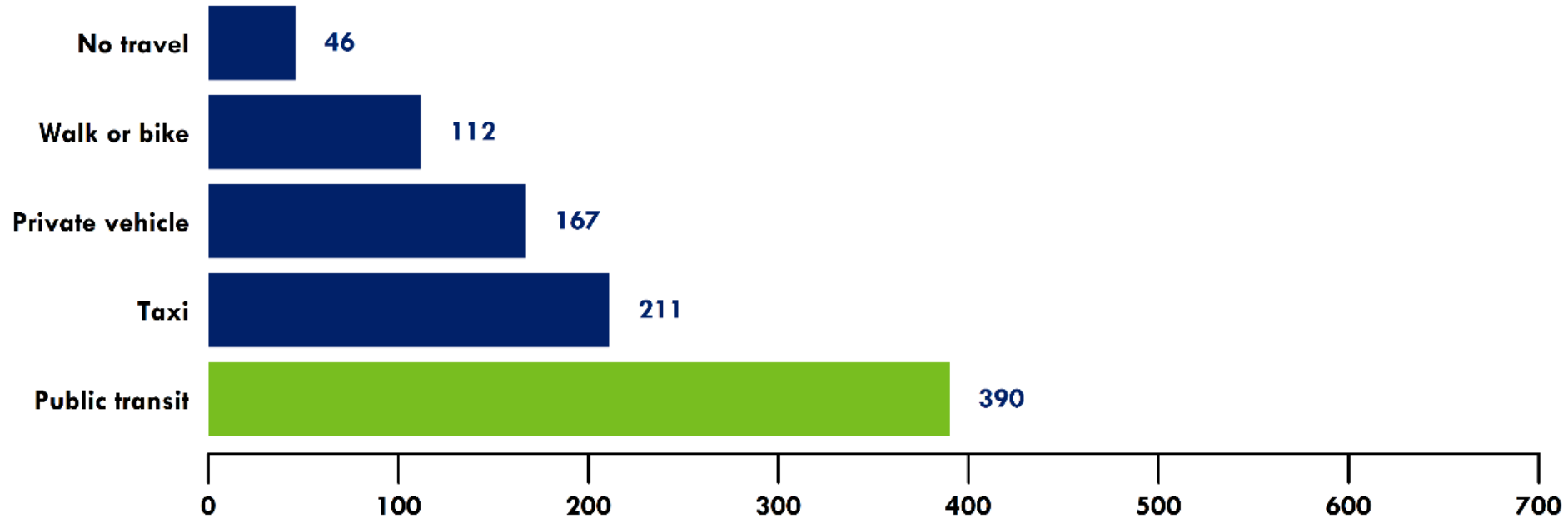
MAPC Rider Intercept Survey: Findings

For this trip, what are the main reasons that you chose Lyft/Uber over other options?



MAPC Rider Intercept Survey: Findings

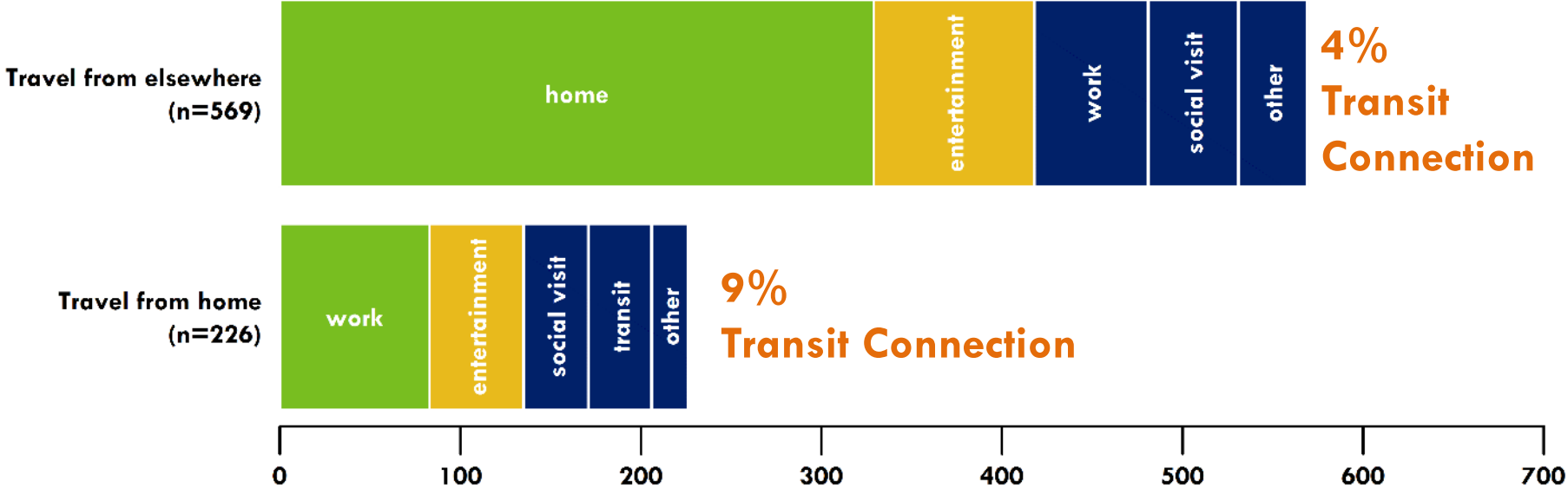
For this trip, how would you have traveled if Lyft/Uber wasn't an option?



If ride-hailing weren't an option, 42% of survey respondents said they would have taken public transit instead. 12% would have walked or biked.

MAPC Rider Intercept Survey: Findings

Destination



MAPC Rider Intercept Survey: Findings

- **Substitution is exacerbating regional roadway congestion. Overall, 15% of ride-hailing trips are adding cars to the region's roadways during the morning or afternoon rush hours.**
- **The average TNC trip in Boston represents 35 cents of lost fare revenue for the MBTA, exceeding the 20 cent fee.**

Why the Public Sector Should Understand TNCs' Impacts

Efficient Use of Public Space

Are TNCs causing congestion?

Are Riders Sharing Trips?

VMT and Emissions

Public Transit

Compete or Complement?

Filling gaps in service?

Slowing buses and blocking stops?

Equity

Serving underserved areas/times?

Impacts to Taxi and TNC Drivers?

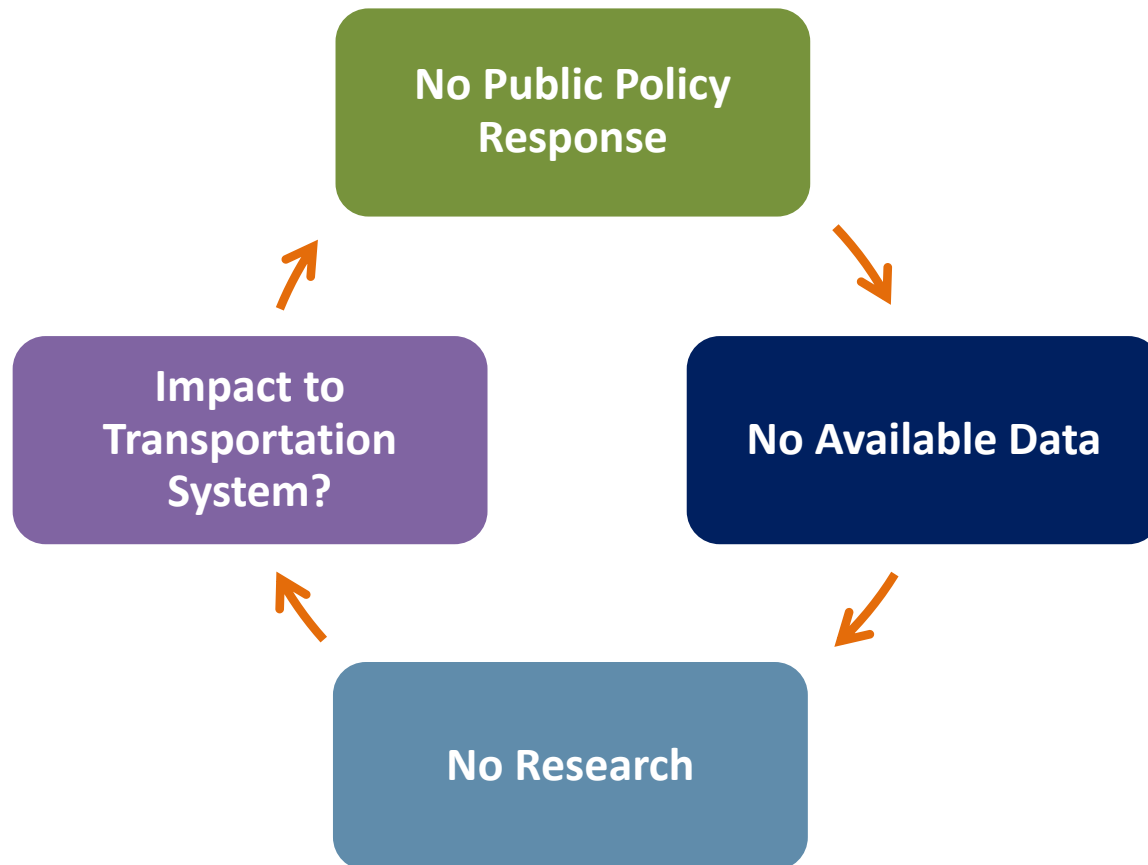
Modeling Travel Behavior

Trip purpose, demographics

Forecasting

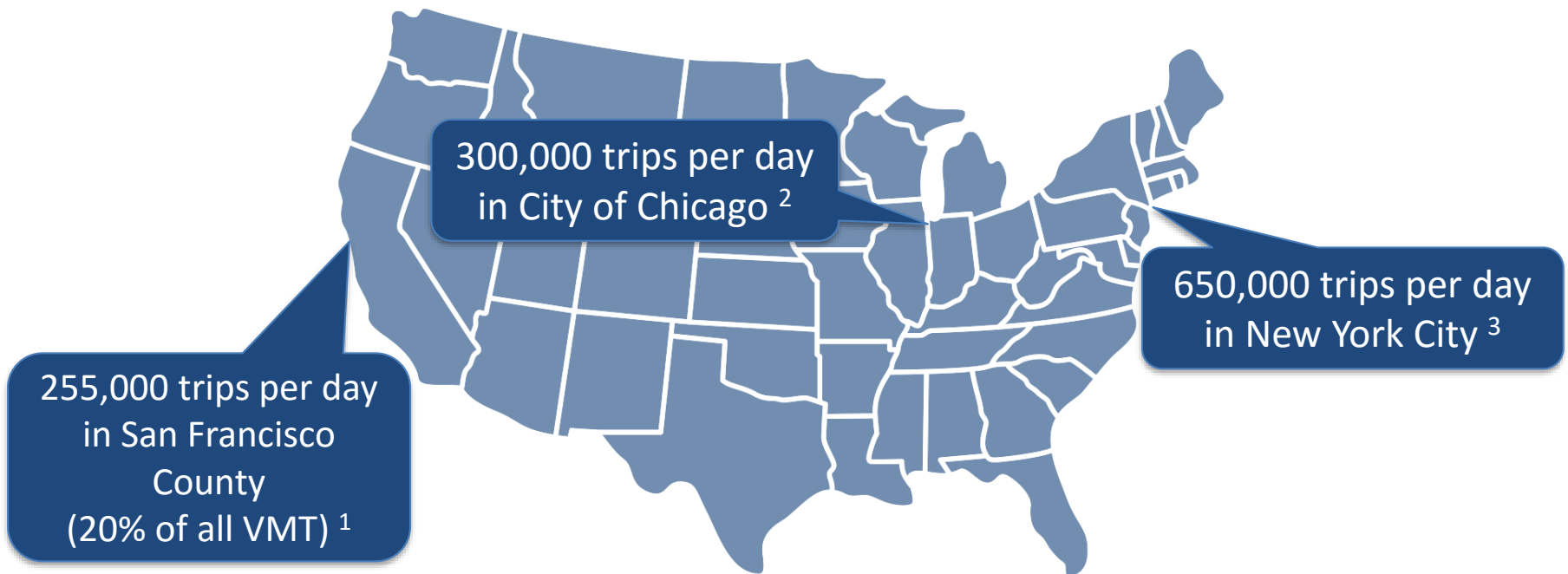
The “No Data” Cycle

Without data on TNCs (trips, riders, impacts), the public sector is unable to understand their impact to the transportation system, and cannot inform public policy responses.



How Big are TNCs in Other Cities?

In cities where data is available, TNCs are moving hundreds of thousands of trips per day.



1 – [TNCs Today: A Profile of San Francisco Transportation Network Company Activity](#), SFCTA, June 2017

2 – [Estimate based on City of Chicago's revenue projections from 15-cent increase in its per-trip TNC fee](#) (100 million trips/yr)

3 – [NYC Taxi and Limousine Commission data](#) for November 2017, vehicle trips per day on Uber + Lyft, assumed 1.5 persons per vehicle

