

SHARED MOBILITY: FROM DEFINITIONS TO MARKET TRENDS & IMPACTS

Susan Shaheen, Ph.D.

Adjunct Professor, Civil and Env't'l Engineering, UC Berkeley
Co-Director, Transportation Sustainability Research Center

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Overview

- Audience Poll
- What is Shared Mobility?
- Definitions
- Market Trends
- Understanding
- Acknowledgements



Poll: Have you ever used?

- Carsharing (e.g., Zipcar, car2go, Getaround)
- Bikessharing (e.g., Capital Bikeshare, Citi Bike)
- Carpooling or vanpooling?
- Ridesourcing (e.g., uberX, Lyft, Sidecar)



Shared-Use Mobility: Mobility services shared among users including:



Traditional public transportation services, such as buses and trains;



Vanpools, carpools, shuttles, ridesourcing/TNCs, e-Hail taxis;



Carsharing, bikesharing, scooter sharing in all its forms; and



Flexible goods movement

→ Can be b2c and p2p



Roundtrip Carsharing:
A fleet of autos used for round trips that require users to pay by hour or mile.



Peer-to-Peer Carsharing:
Shared use of private vehicle typically managed by third party

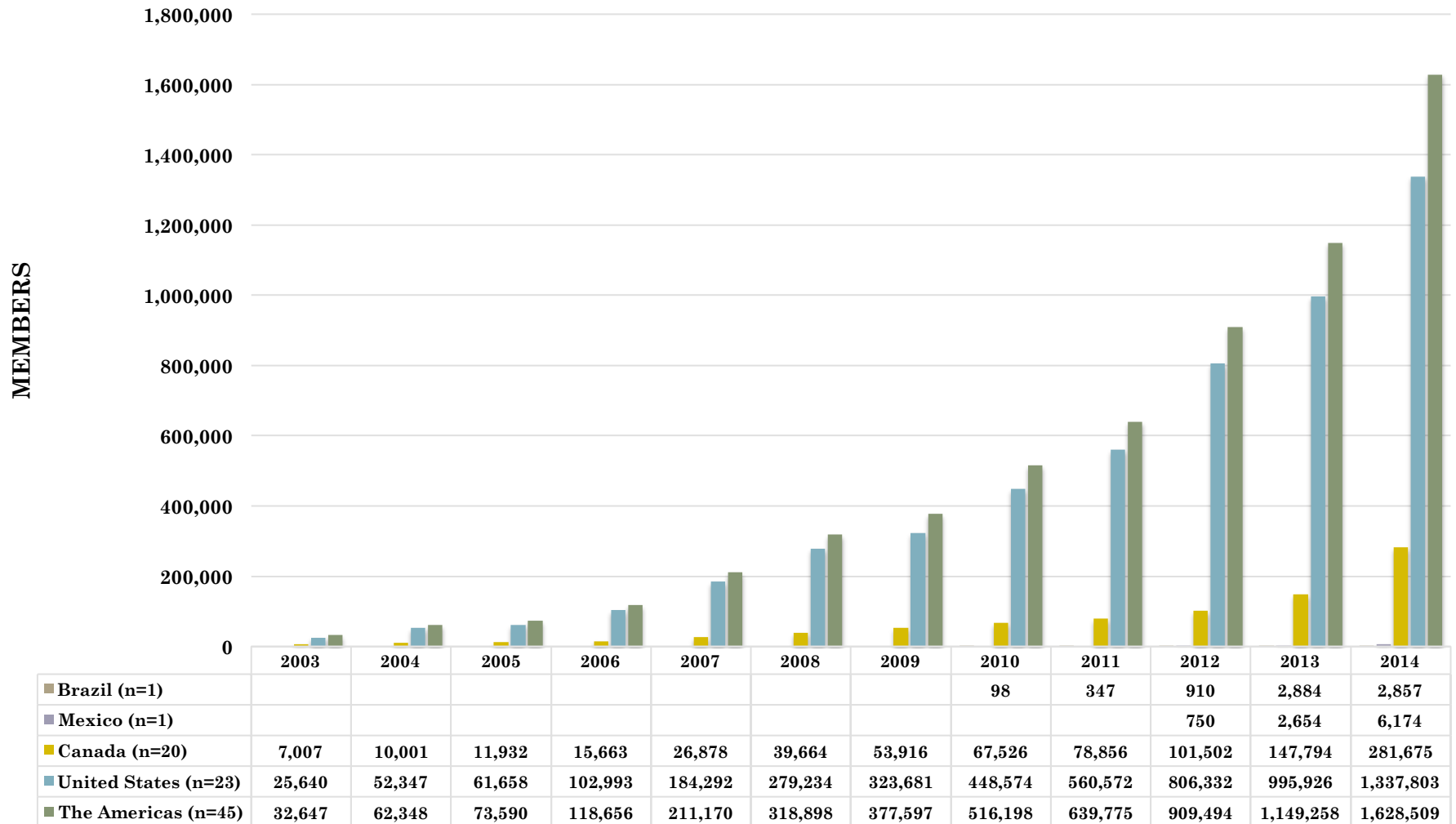


One-Way Carsharing:
A fleet of autos used for point-to-point trips, facilitated by parking agreements



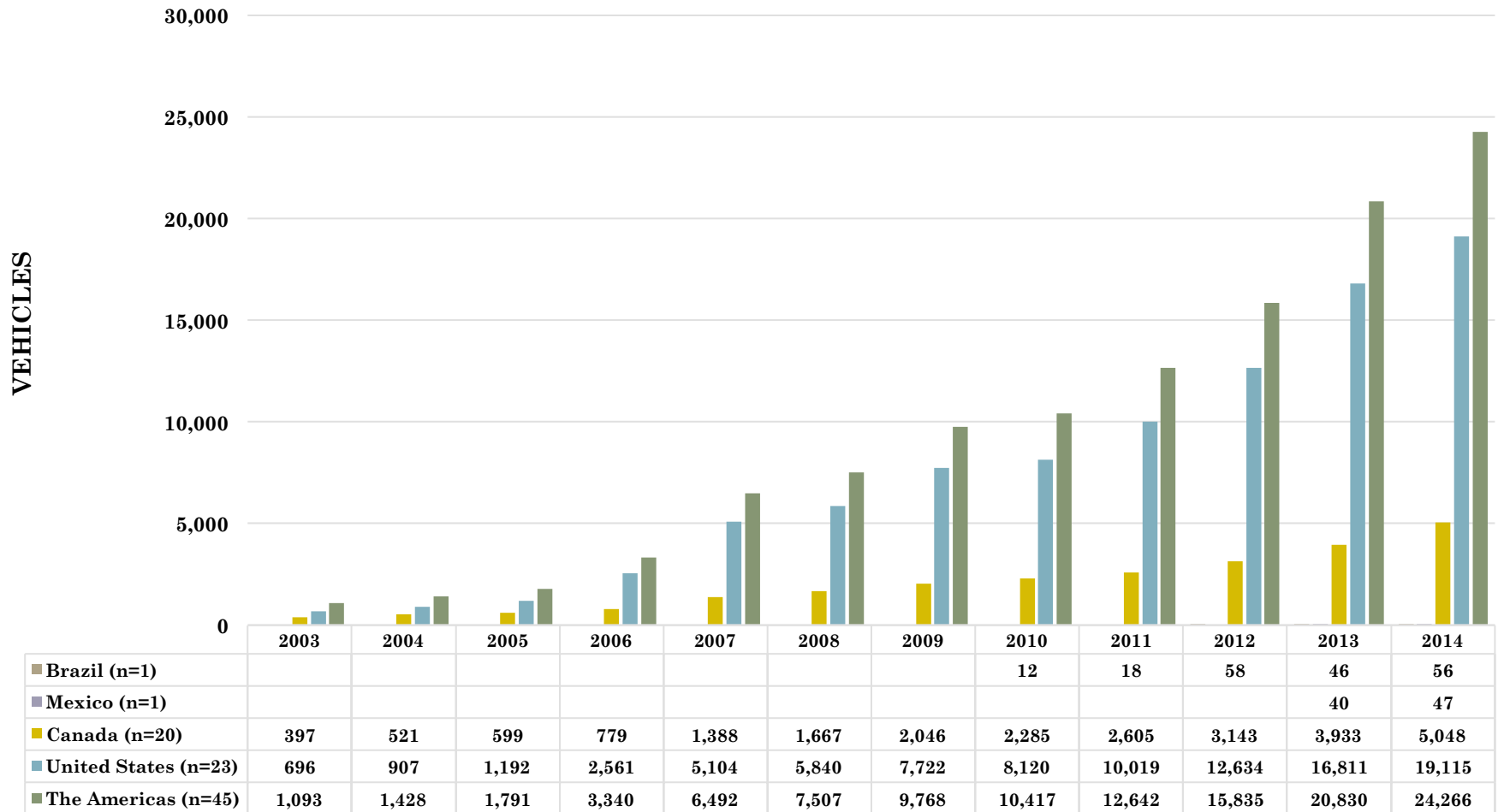
Fractional Ownership Carsharing:
Individuals sublease or subscribe to a vehicle owned by a third party

Carsharing Membership Growth: Americas



Shaheen and Cohen, 2014

Carsharing Vehicle Growth: Americas





Scooter Sharing:
An operator-owned fleet of motorized scooters made available to users by the hour or minute



Public Bikesharing:
Fleet of bicycles for short, point-to-point trips
usually found at stations



Closed Community Bikesharing:
Campuses and closed membership, mainly
roundtrip



Peer-to-Peer Bikesharing:
Rent or borrow hourly or daily from
individuals or bike rental shops

Worldwide & US Bikesharing:

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- Worldwide: **850 cities** with IT-based operating systems
 - **992,000 bikes**
 - ~789,000 bikes in China (and 247 cities)
- US: **69 cities** with IT-based systems
 - **~23,700 bikes**
 - **2,266 stations**
- In 2015, 7 new programs began operating in world: 5 in China and 2 in US

Source: Russell Meddin, 2015



Bikesharing Statistics: North America

as of January 1, 2013

	United States	Canada	Mexico	North American Total
Number of programs	22	4	2	28
Total Number of users	884,442	197,419	71,611	1,153,472
Number of members	41,695	53,707	71,611	167,013
Number of casual users, 1-30 Day	842,747	143,312	0	986,059
Number of bicycles	7,549	6,115	3,680	17,344
Number of kiosks	800	492	307	1,599
Number of docks	12,955	10,506	7,487	30,948



Carpooling:
Grouping of travelers into a privately owned vehicle, typically for commuting



Vanpooling:
Commuters traveling to/from a job center sharing a ride in a van



Real-time ridesharing services:
Match drivers and passengers, based on destination, through app before the trip starts

Ridesharing in North America: A Snapshot (July 2011)

- 612 carpooling services
- 153 vanpooling services
- 127 services offer both carpooling & vanpooling
- Includes both online and off-line programs



Chan and Shaheen, 2011





Ridesourcing/TNCs:

Service that allows passengers to connect with and pay drivers who use their personal vehicles for trips facilitated through a mobile application; can also facilitate “ridesplitting”



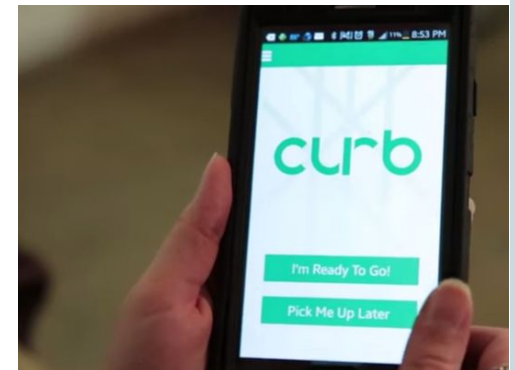
E-Hail or Taxi Apps: Taxis can be reserved through an “e-Hail” Internet or phone application maintained either by the taxi company or a third-party provider and cover multiple companies

Some Ridesourcing/E-Hail Market Trends

- Lyft: 60 cities
- Uber 161 cities; 162,000 drivers
- Sidecar: 10 cities; 10,000 drivers
- Flywheel: 5 cities, 5,000 drivers, including LA and SF
- Curb: 60 cities; 35,000 cabs



Flywheel





Corporate Regional Shuttles:
Employer-funded regional transit, closed
systems, limited stops



Local Shuttles:
Employer or development agreement service,
door-to-door, closed systems, workplace to
transit hub

Sidecar Deliveries

Flexible Goods Movement: By sharing vehicles and combining point-to-point private user trips with delivery, opportunity for quicker and more efficient deliveries

Flexible Goods
Movement

Opportunities for creating greater
efficiencies

Shared Mobility: Impacts



- Typically reduces car ownership/use and increases walking/cycling
 - e.g., 50% auto reduction in carsharing
- Can complement & compete with public transit
 - Depending on model and location
- Why?
 - Time savings
 - Cost savings
 - Mobility benefits (e.g., health)



Shared Mobility: Impacts (cont'd)



- Typically used by:
 - Younger
 - Well educated
 - Upwardly mobile
 - Caucasian individuals
 - Living in urban areas
- How to scale this to other populations & land uses (accessibility, paratransit)?
- More research needed on mobility ecosystem and collective impacts
- Data critical to understanding new services



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