UNIVERSITY OF CALIFORNIA Berkeley
Transportation Sustainability
RESEARCH CENTER

Trends & Future of Shared-Use Mobility

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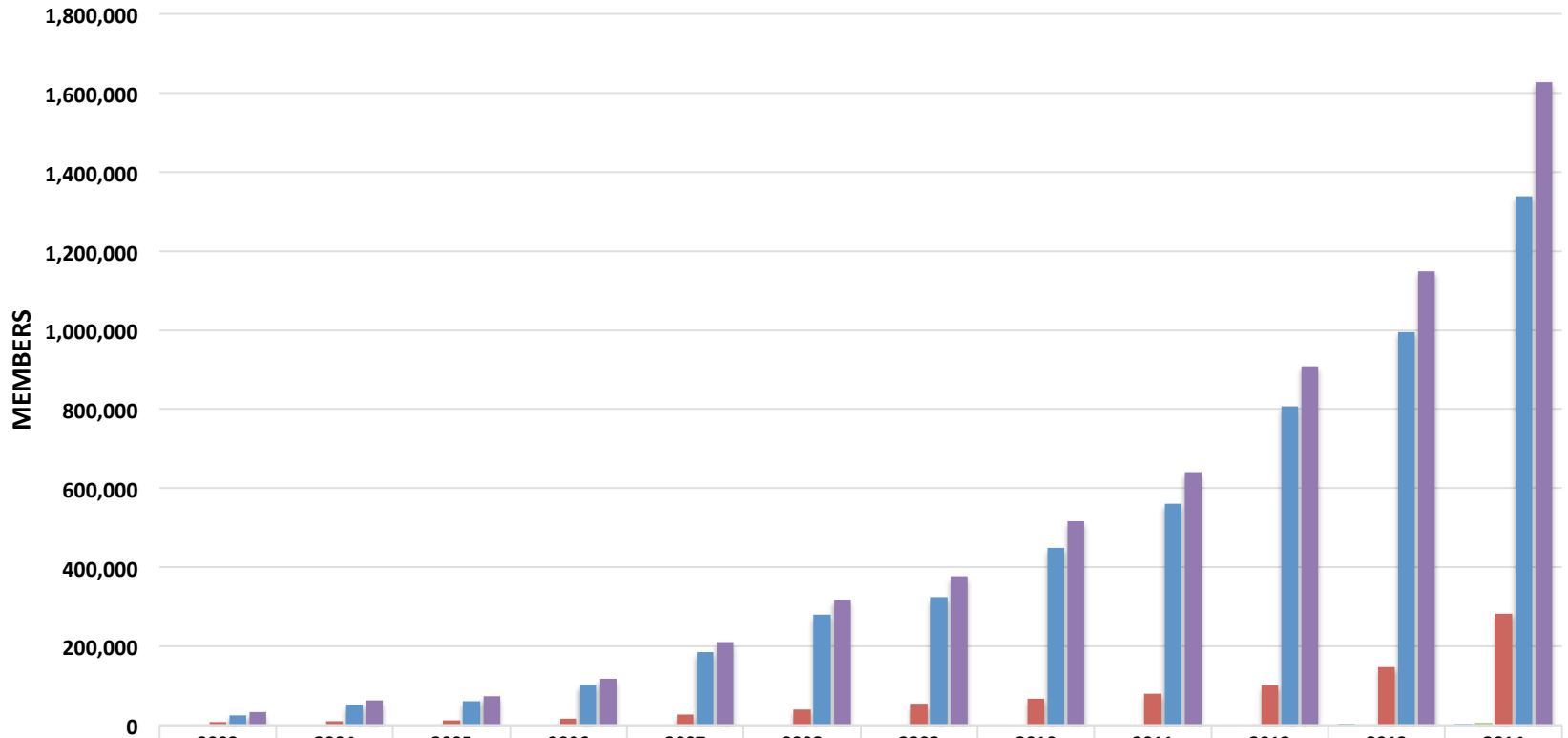
Overview

- Shared-Use Mobility Trends & Developments
  - Carsharing
  - Bikesharing
  - Ride services
- Summary
- Acknowledgements

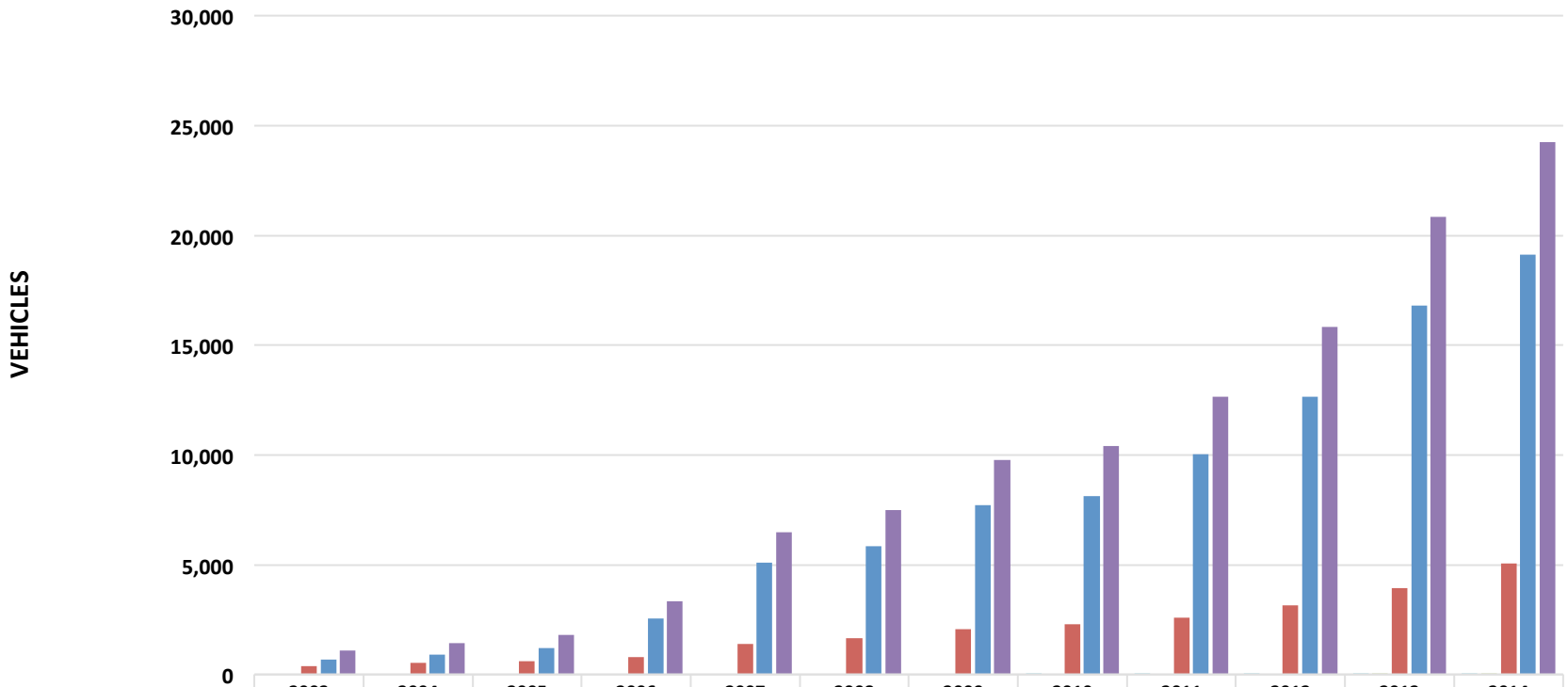
Carsharing Membership Growth: Americas



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Brazil (n=1)								98	347	910	2,884	2,857
Mexico (n=1)										750	2,654	6,174
Canada (n=20)	7,007	10,001	11,932	15,663	26,878	39,664	53,916	67,526	78,856	101,502	147,794	281,675
United States (n=23)	25,640	52,347	61,658	102,993	184,292	279,234	323,681	448,574	560,572	806,332	995,926	1,337,803
The Americas (n=45)	32,647	62,348	73,590	118,656	211,170	318,898	377,597	516,198	639,775	909,494	1,149,258	1,628,509

Shaheen and Cohen, 2014

Carsharing Vehicle Growth: Americas



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Brazil (n=1)								12	18	58	46	56
Mexico (n=1)											40	47
Canada (n=20)	397	521	599	779	1,388	1,667	2,046	2,285	2,605	3,143	3,933	5,048
United States (n=23)	696	907	1,192	2,561	5,104	5,840	7,722	8,120	10,019	12,634	16,811	19,115
The Americas (n=45)	1,093	1,428	1,791	3,340	6,492	7,507	9,768	10,417	12,642	15,835	20,830	24,266

Shaheen and Cohen, 2014

Some Carsharing Highlights: 2015

- E-bikesharing and carsharing to launch in SF Bay Area
- Zipcar to expand hybrid roundtrip and one-way carsharing outside of Boston
- New entrants and growth of one-way and electric service models:
  - Shift (Las Vegas, NV)
  - BlueIndy (Indianapolis, IN)
- Expansion of airport-based p2p FlightCar, providing p2p carsharing at nine international airports
- Fractional ownership through Audi “Unite”

Worldwide & US Bikesharing
December 2014

- Worldwide: **835 cities** with IT-based operating systems
  - **946,000 bikes**
  - **45,104 stations**

- US: **68 cities** with IT-based systems
  - **22,000 bikes**
  - **2,266 stations**

Source: Russell Meddin, 2015

Some Bikesharing Highlights: 2015

- Recent Launch of North American Bikeshare Association (NABSA)
- Free-floating bikesharing (SoBi)
- p2p Bikesharing (Spinlister)
- Campus-based systems (Zagster, SoBi)
- E-bikesharing & carsharing
- Keyless bike locks (e.g., BitLock)

Classic Ridesharing

- Grouping of travelers into common trips by private auto/van
- Carpooling, vanpooling
- Historically, differs from ridesourcing in financial motivation and trip origin/ destination

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

TNCs and Ridesourcing

- Platform used to “source” rides from a driver pool
- App-based, on-demand ride services
- Licensed Transportation Network Companies (TNCs) in SF:
  - Uber (uberX and uberXL)
  - Lyft
  - Shuddle
  - Sidecar
  - Summon
  - Wingz

Blurring Lines

- Sharing a ride no longer requires prearrangement or street hails
- Mobile technology and social networking can facilitate finding a ride in real-time (e.g., app-based taxi dispatch or “e-hail”)
- Companies testing ridesplitting within ridesourcing: Lyft Line, Sidecar Shared Rides, uberPOOL
- Less distinction among classic ridesharing, ridesourcing, and commercial transportation

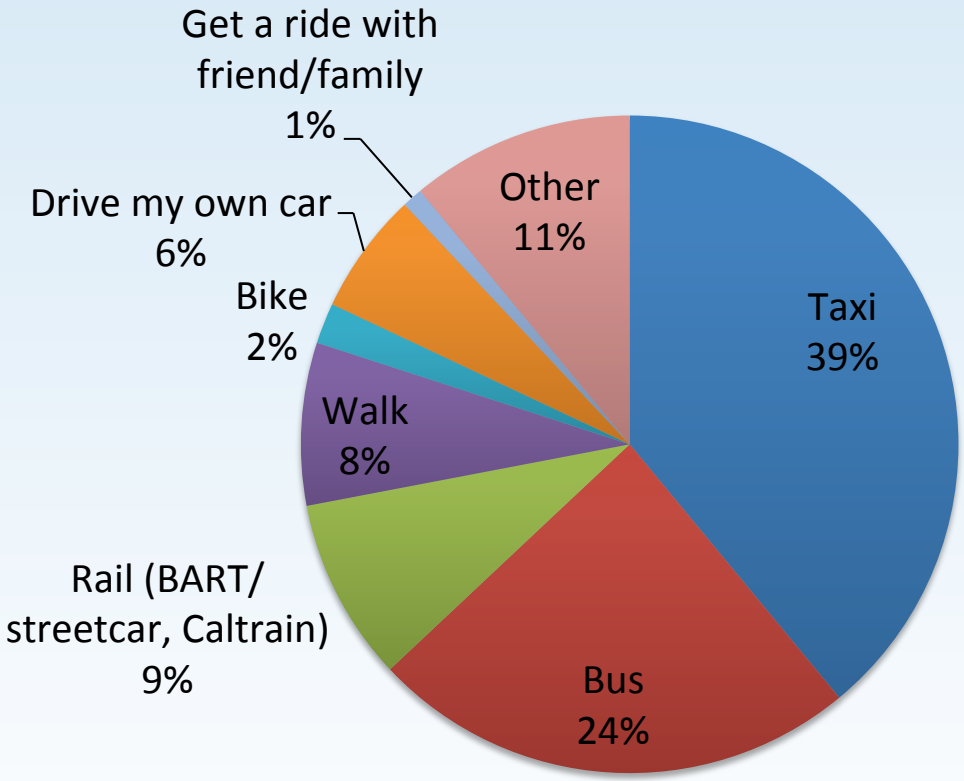
Ridesourcing: Some Early Understanding

- Between May and June 2014, surveyed 380 users at three "hot spots" in San Francisco: Mission, Marina, and North Beach districts
- Of all trip responses, 67% were social/leisure (bar, restaurant, concert, visit friends/family); 16% were work; 4% were to or from the airport; and 10% were other (e.g., doctor's appointment, volunteer)
- Appears to substitute for longer public transit trips but otherwise complements transit
- Ridesourcing users tend to be younger, own fewer vehicles, and more frequently travel with companions than taxi users

Rayle et al, 2014

Key Findings: Modal Shift

How would you have made this trip if Uber/Lyft/Sidecar were not available?



- 92% would have still made the trip
- 8% induced travel effect
- 33% would have taken public transit (bus or rail)
- 4% named public transit station as origin/destination
- Some use ridesourcing to access transit
- 20% stated they were able to avoid drinking and driving

Rayle et al, 2014

Industry Developments: Merging Innovations

- Ride**splitting** within TNCs/ride**sourcing**
  - Lyft Line
  - Sidecar Shared Rides
  - uberPOOL
- **Via** in Manhattan merges aspects of taxi, TNCs/ridesourcing, and ridesplitting
  - Drivers and vehicles contracted to taxi/limo company
  - Flat-rate fares with set zone and operating hours
  - Shared rides with others going similar direction

Industry Developments: Commuter Carpooling

- **Carma** targeting longer commute trips with app-based, real-time carpooling
  - Experimenting with bridge toll reimbursement for Bay Area carpools

- **CarmaHop** in Lawrence, KS: riders write destination on whiteboard and record trip on smartphone, drivers pick up along the way

- **Commutr** replicating casual carpooling/ slugging on a smartphone, beta testing this winter

Industry Developments: Rides for Specific Populations

- **Lift Hero** in SF Bay Area providing rides for older adults
  - Incorporation of TNC/ridesourcing service into urban/suburban paratransit services
- **Shuddle** providing rides for kids (in SF, East Bay, and Peninsula)
  - Prearrange rides on smartphone
  - Monthly $9 membership fee on top of fares
- **ITN*Everywhere*** (e.g., ITNMonterey County)
  - Non-profit, membership-based "ridesourcing" for rural and small communities
  - Volunteer drivers receive ride credits

Industry Developments: Taxis

- **Taxis using apps and considering p2p space**
  - E-Hail apps (e.g., Curb, formerly Taxi Magic, Flywheel)
  - Employ peer-to-peer drivers (e.g., Yellow X)
  - Potential for less regulation from municipalities (e.g., lift limits on taxi permits)

Ridesharing/Ridesourcing Highlights: 2015

- Ridesourcing appears to be meeting a latent demand for urban travel, with short wait times and point-to-point service
- Impacts to congestion and VMT/VKT still uncertain, due to lack of available data
- Emerging public policy focused on insurance coverage, driver and vehicle safety checks, and taxi competition
- More research needed to inform future regulation for taxis, charter-party carriers, and TNCs

Summary

- As carsharing continues to grow, so does the number and type of usage and ownership models (e.g., round-trip, one-way, peer-to-peer etc.)
- Bikesharing innovations in technology and service models mimicking carsharing (free-floating, p2p, e-bikesharing, etc.)
- Renaissance in ride services being driven by real-time information and new service models

Acknowledgements

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www.tsrc.berkeley.edu