

INNOVATIVE MOBILITY CARSHARING OUTLOOK

CARSHARING MARKET OVERVIEW, ANALYSIS, AND TRENDS

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TRANSPORTATION SUSTAINABILITY RESEARCH CENTER - UNIVERSITY OF CALIFORNIA, BERKELEY

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Worldwide Carsharing Growth Continues

As of October 2014, carsharing was operating in 33 countries, five continents, and an estimated 1,531 cities with approximately 4.8 million members sharing over 104,000 vehicles. Europe, the largest carsharing region measured by membership, accounts for 46% of worldwide membership and 56% of global fleets deployed. The world's second largest carsharing market, North America, accounts for 34% of worldwide members and 23% of vehicle fleets. In 2014, Mexico maintained the highest member-vehicle ratios (131:1), followed by 107:1 in Italy.

As of October 2014, one-way carsharing accounted for 17.6% of global membership and 23.3% of global fleets deployed (based on data provided through expert interviews). As of October 2014, roundtrip carsharing accounted for 82.4% and 76.7% of global membership and fleets deployed, respectively. Regionally, North America had the largest percentage of one-way memberships, representing 27.4% of the continent's carsharing membership. Europe had the greatest percentage of one-way fleets regionally, representing 31.1% of the continent's carsharing fleet.

(Note: Numbers reflect business-to-consumer (B2C) carsharing only, including one-way operations.)

Recent Events



Disrupting Mobility

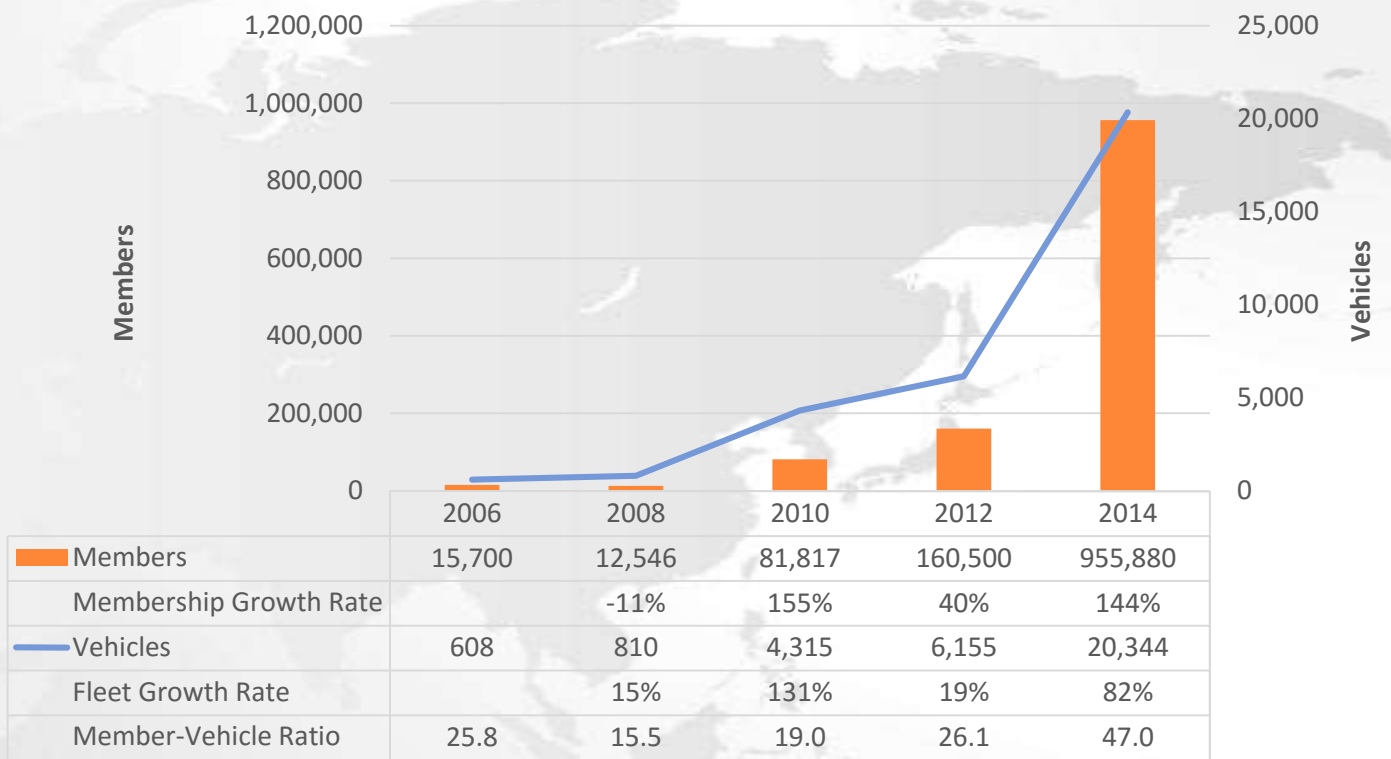
In November 2015, the Massachusetts Institute of Technology; the University of California, Berkeley; and the London School of Economics co-hosted the Disrupting Mobility Summit in Boston, Massachusetts. The summit provided an interactive forum for leading executives, government representatives, and academics to discuss sustainable transportation. To watch recorded video sessions from the summit, please visit:

<http://www.disrupting-mobility.org/video>

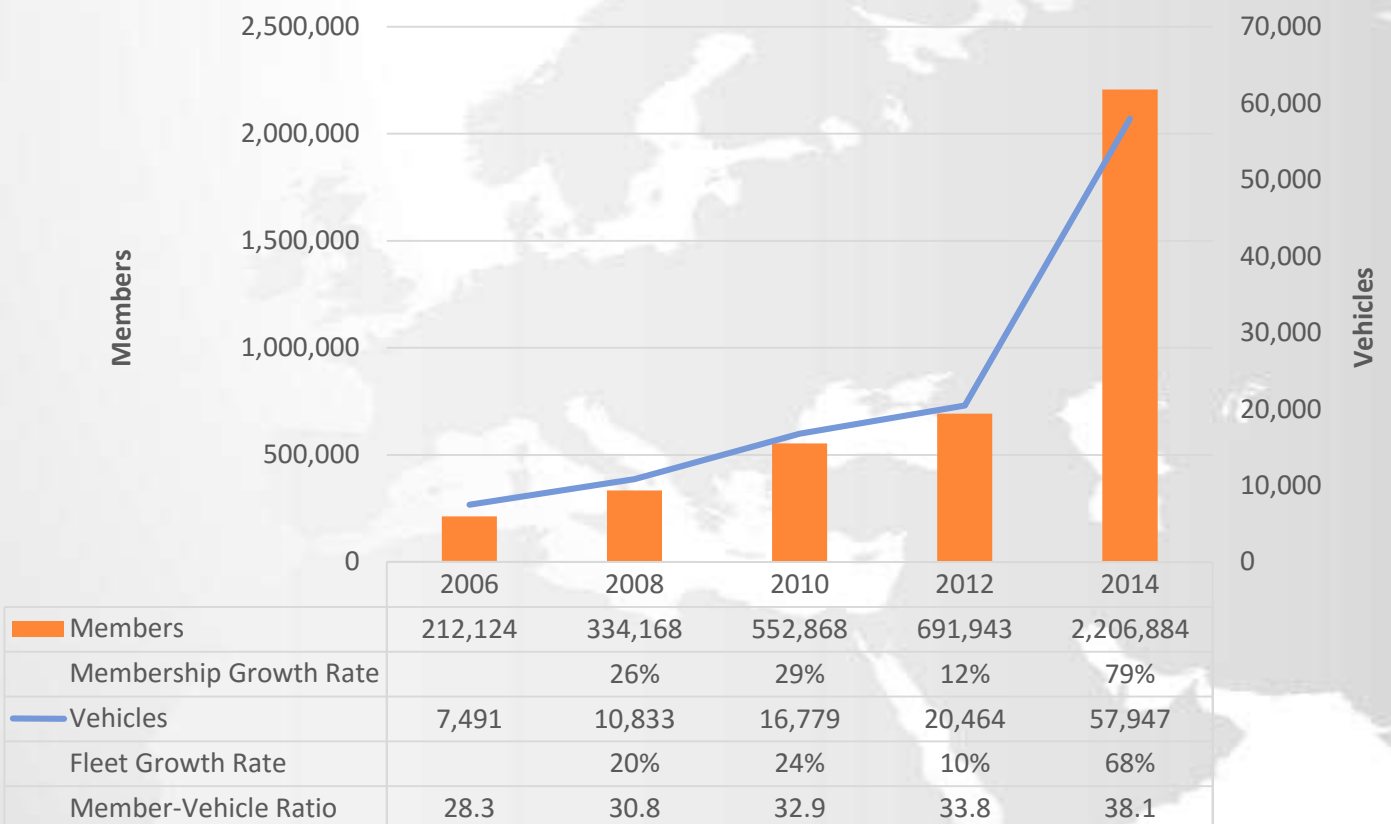
For more information about the summit, please visit: <http://disrupting-mobility.org>

REGIONAL AND GLOBAL CARSHARING MARKET TRENDS

Asian Trends



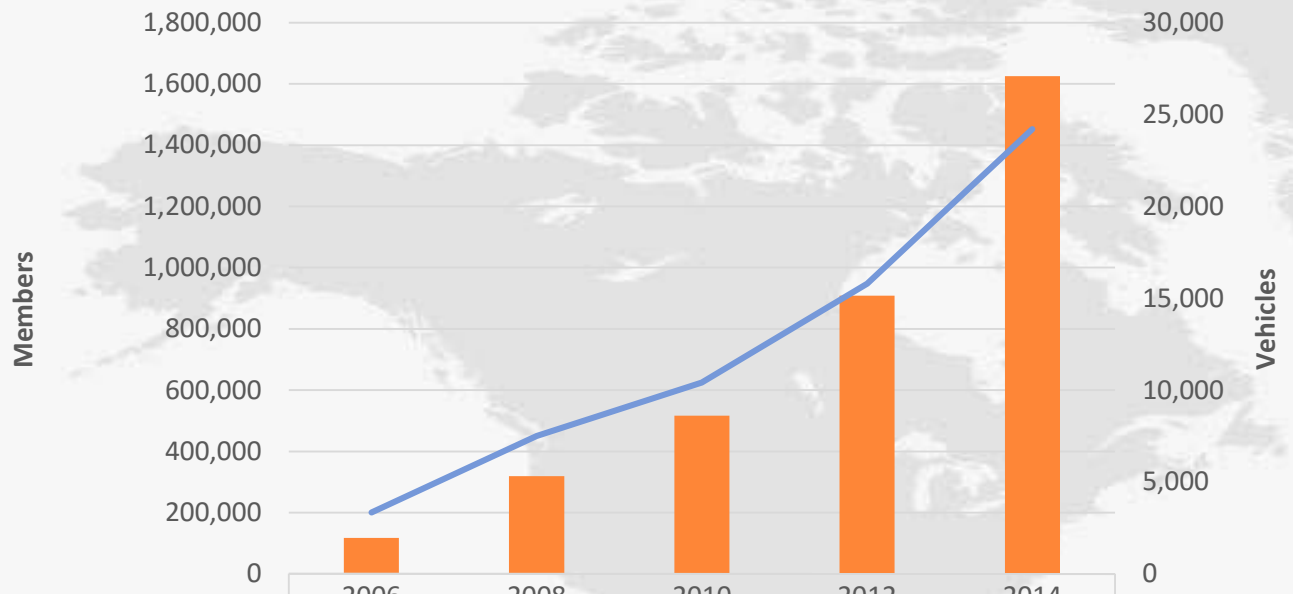
European Trends



Data depict October of each even numbered year

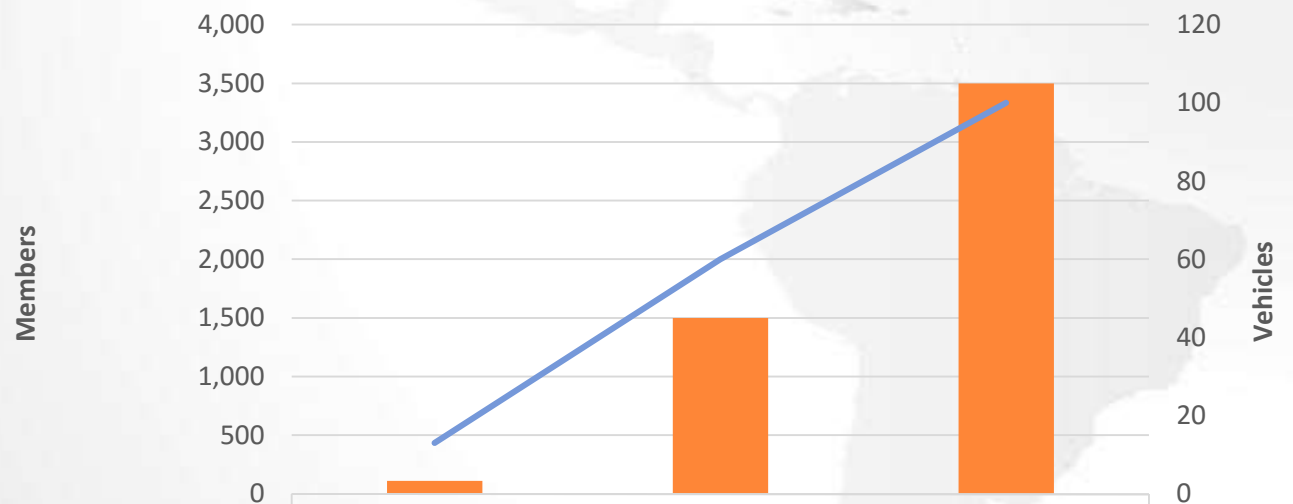
REGIONAL AND GLOBAL CARSHARING MARKET TRENDS

North American Trends



	2006	2008	2010	2012	2014
Members	117,656	318,898	516,100	908,584	1,625,652
Membership Growth Rate		65%	27%	33%	34%
Vehicles	3,337	7,505	10,420	15,795	24,210
Fleet Growth Rate		50%	18%	23%	24%
Member-Vehicle Ratio	35.3	42.5	49.5	57.5	67.1

South American Trends

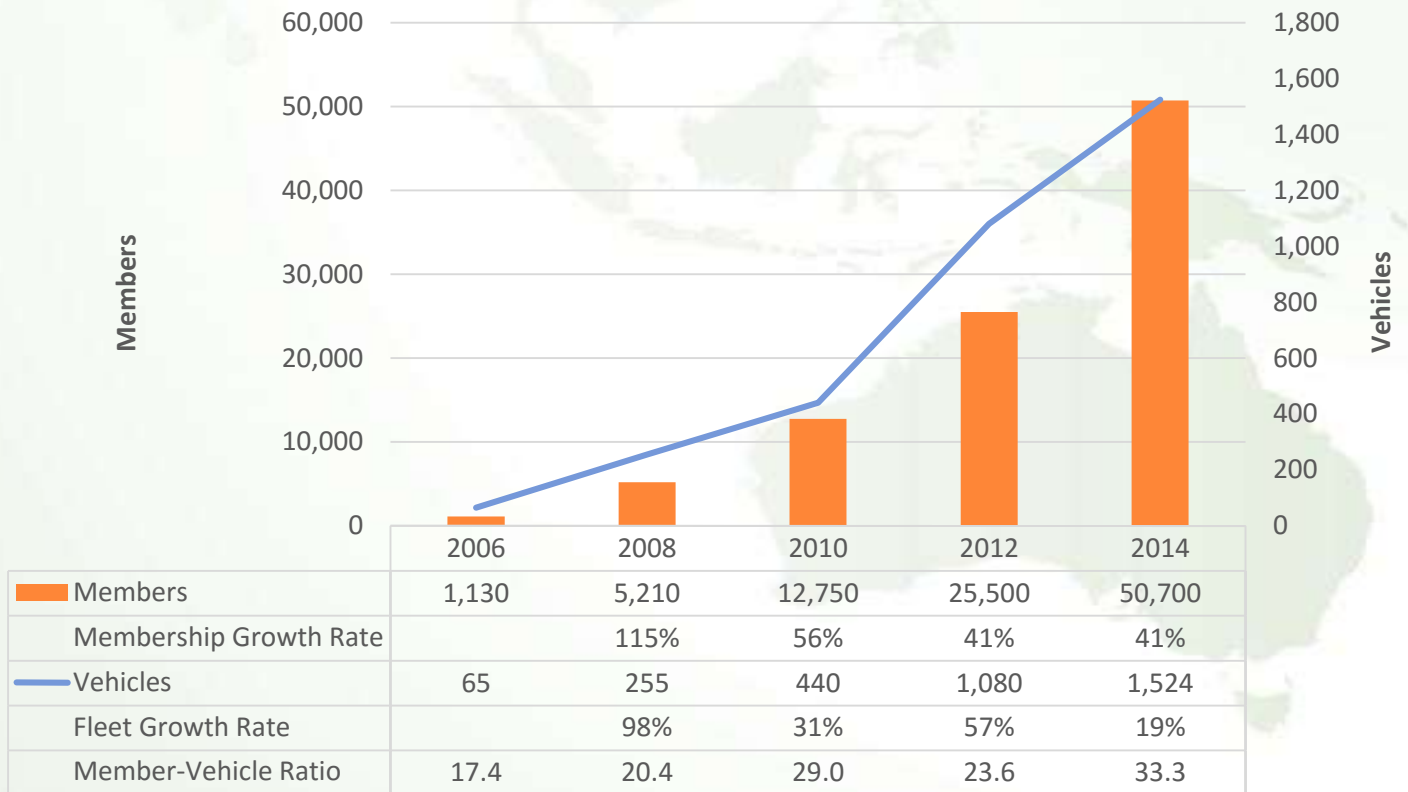


	2010	2012	2014
Members	110	1,500	3,500
Membership Growth Rate		269%	53%
Vehicles	13	60	100
Fleet Growth Rate		115%	29%
Member-Vehicle Ratio	8.5	25.0	35.0

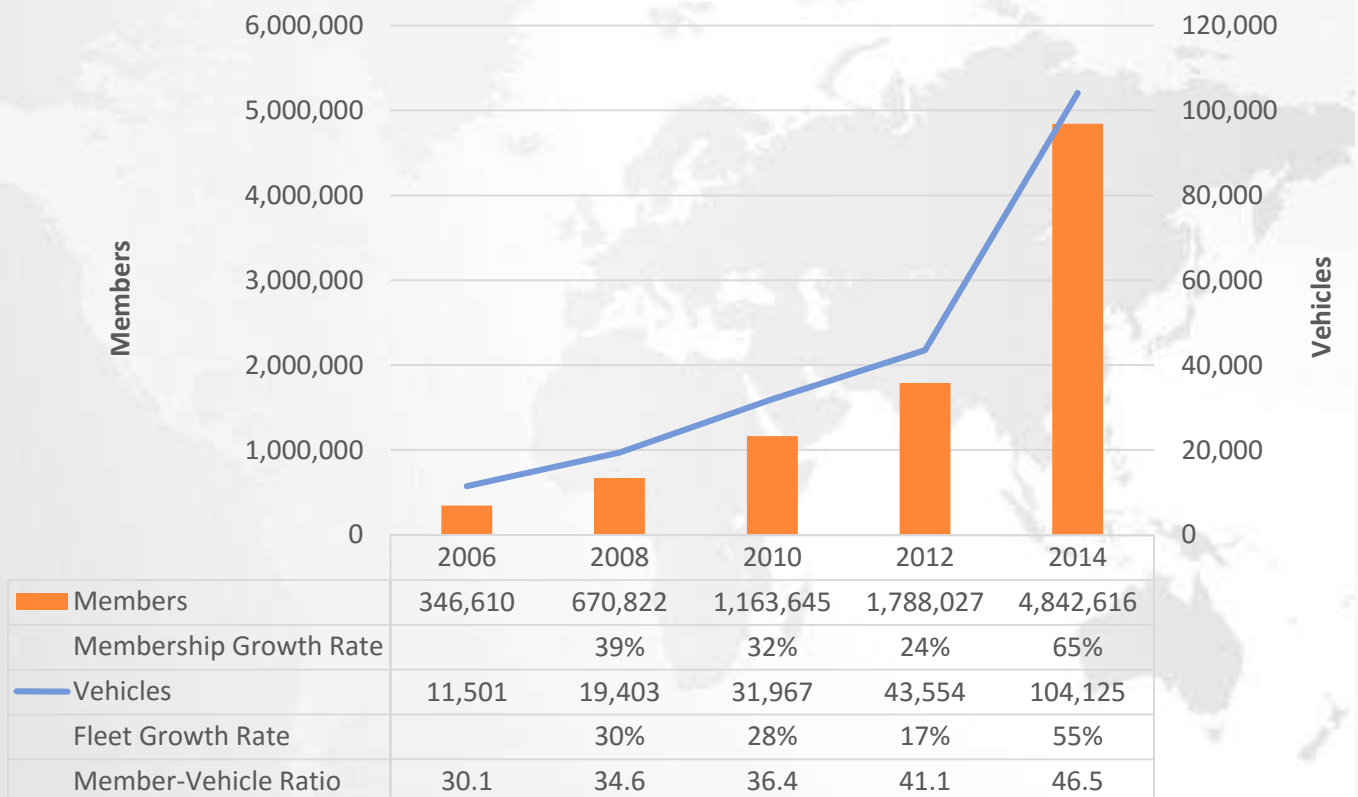
Data depicted October of each even numbered year

REGIONAL AND GLOBAL CARSHARING MARKET TRENDS

Oceania Trends



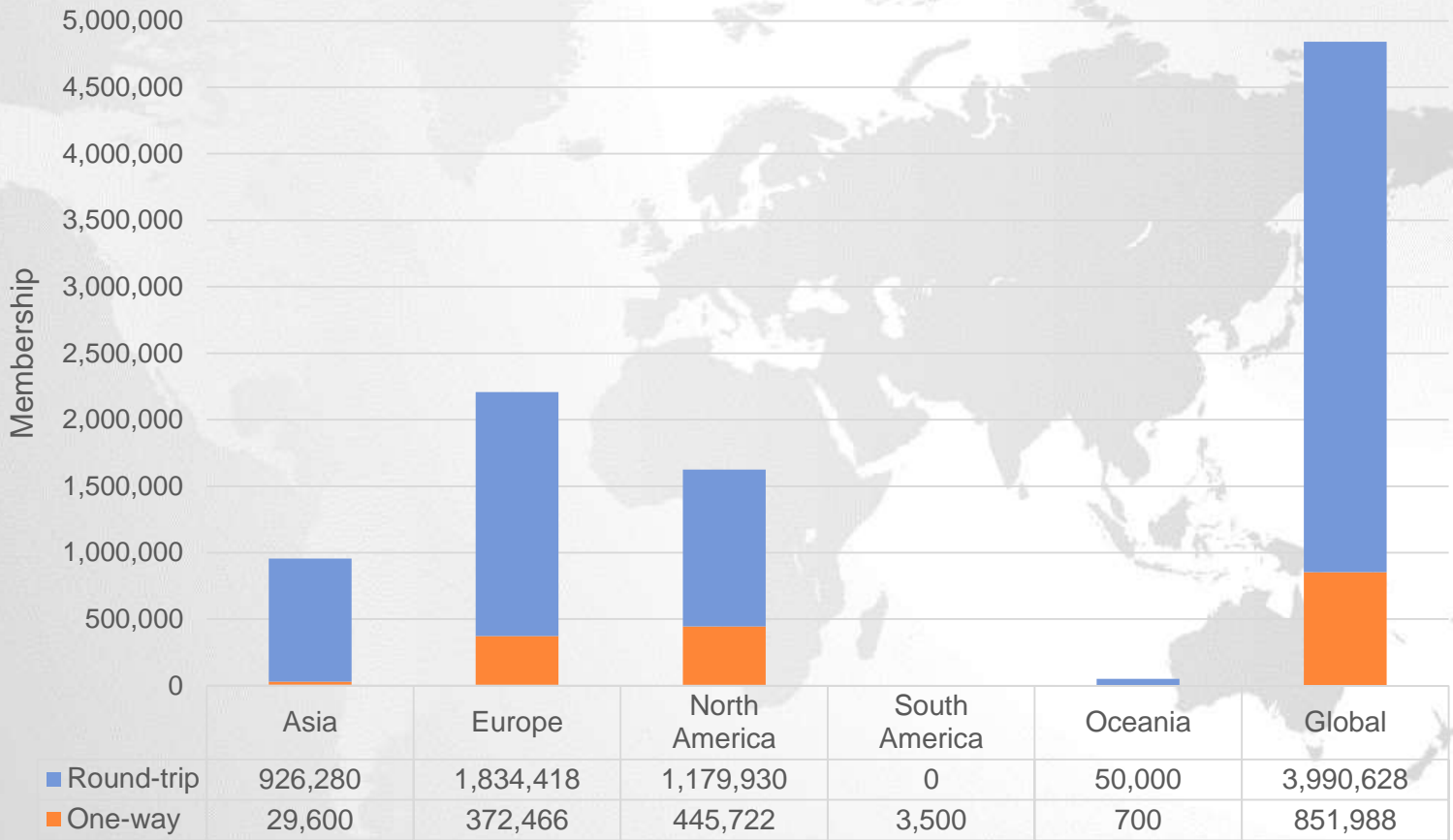
Global Trends



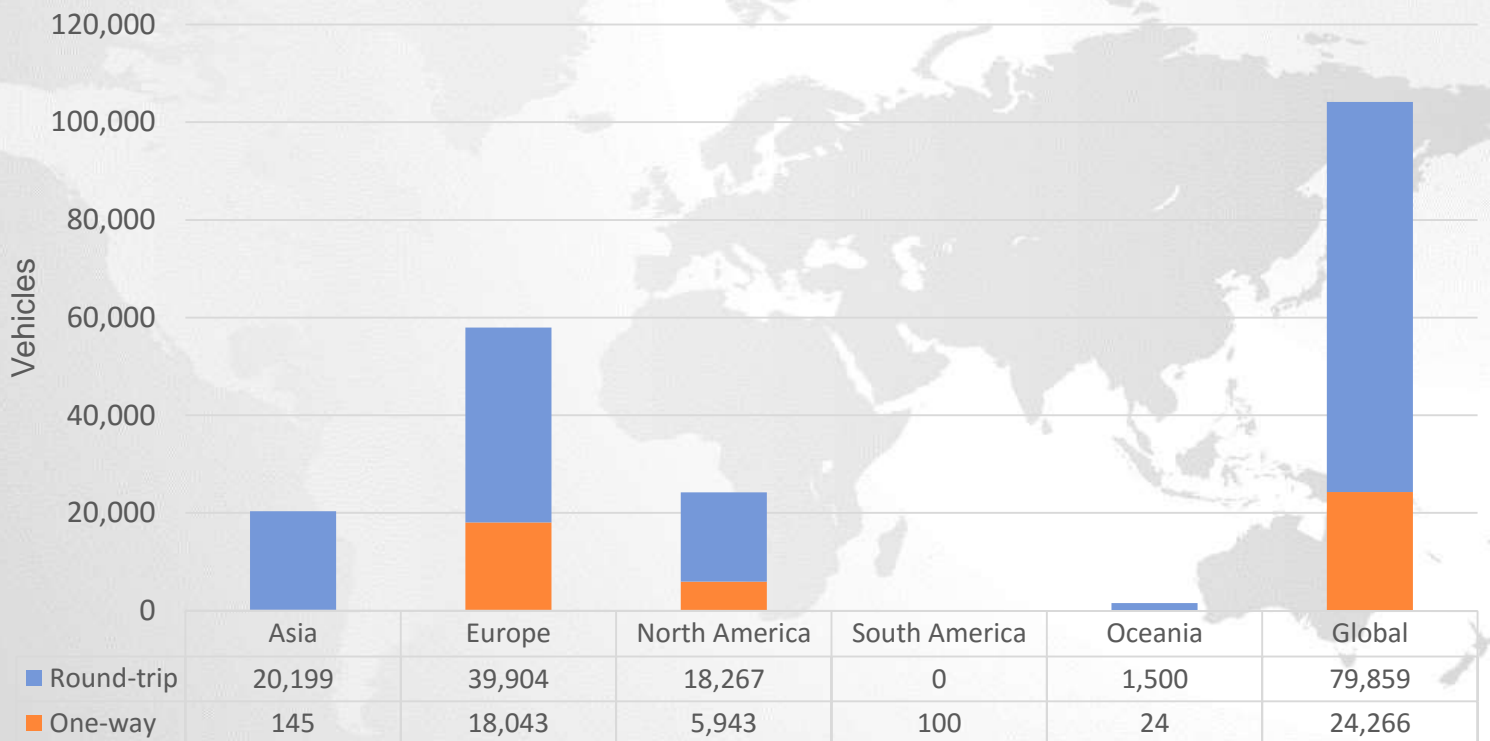
Data depicted October of each even numbered year

REGIONAL AND GLOBAL CARSHARING MARKET TRENDS

Roundtrip and One-Way Global Membership



Roundtrip and One-Way Global Fleets



Data depicted October 2014

Recent Publications

Greenblatt, Jeffrey and Susan Shaheen (2015). "Automated Vehicles, On-Demand Mobility, and Environmental Impacts," *Curr Sustainable Renewable Energy Rep.*
<http://dx.doi.org/10.1007/s40518-015-0038-5>

Rayle, Lisa, Danielle Dai, Nelson Chan, Robert Cervero, and Susan Shaheen (2016). "Just A Better Taxi? A Survey-Based Comparison of Taxis, Transit, and Ridesourcing Services in San Francisco," *Transport Policy*, Volume 45, pp. 168-178.
<http://dx.doi.org/10.1016/j.tranpol.2015.10.004>

Shaheen, Susan, Nelson Chan, Apaar Bansal, and Adam Cohen (2015). Shared Mobility: Definitions, Industry Developments, and Early Understanding. White paper prepared for California Department of Transportation Workshop, September, 30 pages.
http://innovativemobility.org/wp-content/uploads/2015/11/SharedMobility_WhitePaper_FINAL.pdf

Shaheen, Susan and Elliot Martin (2015). "Unraveling the Modal Impacts of Bikesharing," *Access*, Number 47, Fall, pp. 8-15. <http://www.accessmagazine.org/articles/fall-2015/unraveling-the-modal-impacts-of-bikesharing/>

Shaheen, Susan and Adam Stocker (2015). Zipcar for Business Research Results. Information Brief: Zipcar for Business Case Study & Impact Analysis, July.
http://innovativemobility.org/wp-content/uploads/2015/07/Zipcar_Corporate_Final_v6.pdf

TSRC Methodology

Data include one-way carsharing unless otherwise stated. Classic carsharing data exclude personal vehicle sharing numbers except for hybrid P2P carsharing. In hybrid P2P carsharing, individuals access vehicles by joining an organization that maintains its own fleet of vehicles, but it also includes private autos, throughout a network of locations.

Data includes the following countries: Australia, Austria, Belgium, Brazil, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Israel, Ireland, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Portugal, Russia, Singapore, Spain, South Korea, Sweden, Switzerland, Turkey, United Kingdom, and United States.

Worldwide member-vehicle numbers are collected through expert estimates and industry benchmarking through national and regional carsharing associations. In select circumstances, the authors augment data provided by national associations with data from large, non-member operators to obtain a more accurate estimate. In North America and in smaller markets with a limited number of operators, the authors collect member/vehicle data from each organization. Note, there may be inconsistencies with a few data points compared to prior publications due to updated numbers provided by experts after a publication was published.

Please note TSRC never releases disaggregated data without the express permission of the respective operator(s). The authors would like to thank all of the worldwide operators, experts, and associations who provide member-vehicle numbers, other data, and feedback.

Data and insights from this outlook should be attributed to TSRC, UC Berkeley. For more detailed market analyses (e.g., longitudinal U.S. and Canadian growth numbers), please see www.imr.berkeley.edu

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ABOUT TSRC

The Transportation Sustainability Research Center (TSRC) was formed in 2006. TSRC is managed by the Institute of Transportation Studies of the University of California, Berkeley. It is headquartered at Berkeley's Global Campus at Richmond Bay.

TSRC uses a wide range of analysis and evaluation tools including: questionnaires, interviews, focus groups, automated data collection systems, GIS, and simulation models to collect data and perform analysis and interpret data. The center develops impartial findings and recommendations for key issues of interest to industry and policy makers to aid in decision making. TSRC has assisted in developing and implementing major California and federal regulations and initiatives regarding sustainable transportation including: zero emission vehicle credits for carsharing vehicles as part of the Zero Emission Vehicle (ZEV) Mandate in California. Others include the California Global Warming Solutions Act (AB 32), the Low Emission Vehicle Program, the California Clean Cars Program (AB 1493), Low Carbon Fuel Standards policies, Sustainable Communities and Climate Protection Act (SB 375), and the federal Energy Independence and Security Act of 2007.

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