Mineta Transportation Institute Publishes Report on Public Bikesharing in North America
Researchers investigate US, Canadian IT-based systems and offer policy recommendations

San Jose, Calif., July 9, 2012 – The Mineta Transportation Institute (transweb.sjsu.edu) has released a peer-reviewed research report, Public Bikesharing in North America: Early Operator and User Understanding. It documents the state of public bikesharing in the U.S. and Canada, including key factors such as essential attributes and business models; economics and insurance issues; evolution of IT-based bikesharing; impact of bikesharing on walking, bicycling, public transit, and exercise; and other key factors. It also offers public policy recommendations.

Principal investigator was Susan Shaheen, PhD, with Elliot Martin, PhD, Adam Cohen, and Rachel Finson. The free 138-page report is available for download at transweb.sjsu.edu/project/1029.html.

“The shared use of a bicycle fleet — a transportation strategy that has recently emerged in North America,” said Dr. Shaheen. “These systems typically position bicycles at docking stations for immediate one-way or round-trip access. As of this past January, 15 information technology (IT)-based, public bikesharing systems had emerged in the US, accounting for 172,070 users and 5,238 bicycles. The four IT-based programs in Canada encompass 44,352 users and 6,235 bicycles. Another 20 public bikesharing programs will launch by December 2012 in the US and Canada. Growing interest in this mode and its rapid growth suggest that public policies on bikesharing should be considered.”

IT-based systems – the focus of this report – use electronic and wireless communications for bicycle pickup, drop-off, and tracking. User accountability has been improved through the use of credit or debit cards, and the systems include docking stations, kiosks or user interface technology for check-in and checkout, and other technology. As opposed to honor-system or coin-operated models, IT enables public bikesharing programs to track bicycles, improve system management, and deter bike theft. It is responsible for public bikesharing’s recent expansion.

The research team interviewed several experts, such as city and regional transportation personnel, public transit operators, policy makers, community bike coordinators, and bike vendors to understand the system from several perspectives. They also conducted an online survey of 10,661 members of early public bikesharing systems in Montreal, Toronto, Washington DC, and the Twin Cities. Interviews were conducted with all 19 operating IT-based bikesharing programs in the US and Canada as of April 2012, and five interviews were completed with brokers, underwriters, and attorneys to better understand bikesharing insurance.

The researchers identified five active bikesharing business models in North America. More than 75% of operators interviewed received startup or operational funding. More than half of the operators indicated that the optimum distance between stations is 300 yards to one-quarter of a mile. Over 40 percent of operators reported that the typical trip is a round-trip. They said that theft, vandalism, and accidents were relatively minor challenges.

The member survey found that the most common bikesharing purpose was travel to work or school, followed by entertainment and errands, indicating that bikesharing was primarily used for practical travel and was more broadly used as an extension of public transportation. Most
respondents felt that bikesharing enhanced public transportation, improved connectivity, and increased exercise.

The report suggests that several important policy questions should be considered. These include: What system designs are most effective for promoting a synergy between public transit and public bikesharing? Where will space be allocated for bike stations? What type of fees (if any) should be assessed for accessing public rights-of-way? What type of financial support (if any) is appropriate for startup and operation of public bikesharing? Other questions also were proposed.

The report includes 68 tables and figures for further illustration. Free PDF copies can be downloaded from transweb.sjsu.edu/project/1029.html.

ABOUT THE INVESTIGATORS

Susan Shaheen, PhD, is a lecturer in the Civil and Environmental Engineering Department and an associate research engineer at the Institute of Transportation Studies at the University of California, Berkeley. She is a co-director of the Transportation Sustainability Research Center. She has a PhD in ecology, focusing on technology management and the environmental aspects of transportation, from the University of California, Davis, and a Masters degree in public policy analysis from the University of Rochester. She completed her post-doctoral studies on advanced public transportation systems at the University of California, Berkeley. She has been a research associate with MTI since 2004.

Elliot Martin, PhD, is an assistant research engineer at the Transportation Sustainability Research Center within the Institute of Transportation Studies at the University of California, Berkeley. He holds a PhD in civil and environmental engineering and a dual Masters degree in transportation engineering and city planning, all from the University of California, Berkeley. He graduated from Johns Hopkins University with a Bachelor’s degree in economics and computer science.

Adam Cohen is a research associate at the Transportation Sustainability Research Center at the Institute of Transportation Studies at the University of California, Berkeley. He has focused his research on worldwide carsharing and public bikesharing. He earned a dual Masters degree in city and regional planning and international affairs from the Georgia Institute of Technology. He graduated from the University of California, Berkeley, with a dual Bachelor’s degree in urban studies and legal studies.

Rachel Finson is a project manager at the Transportation Sustainability Research Center within the Institute of Transportation Studies at the University of California, Berkeley. She has more than 20 years of experience in transportation issues pertaining to air quality, carbon emissions, transportation demand management, alternative fuels, advanced technologies, and land use. She earned her Masters degree in environment, technology, and society from Clark University.

ABOUT THE MINETA TRANSPORTATION INSTITUTE

The Mineta Transportation Institute (MTI) conducts research, education, and information and technology transfer, focusing on multimodal surface transportation policy and management issues, especially as they relate to transit. MTI was established by Congress in 1991 as part of the Intermodal Surface Transportation Efficiency Act (ISTEA) and was reauthorized under TEA-21 and again under SAFETEA-LU. The Institute has been funded by Congress through the US Department of Transportation’s (DOT) Research and Innovative Technology Administration, by
the California Legislature through the Department of Transportation (Caltrans), and by other public and private grants and donations, including grants from the US Department of Homeland Security. DOT selected MTI as a National Center of Excellence following competitions in 2002 and 2006. The internationally respected members of the MTI Board of Trustees represent all major surface transportation modes. MTI’s focus on policy and management resulted from the Board’s assessment of the transportation industry’s unmet needs. That led directly to choosing the San José State University College of Business as the Institute’s home. Visit transweb.sjsu.edu or Twitter @minetatrans

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