



Mobility/Accessibility

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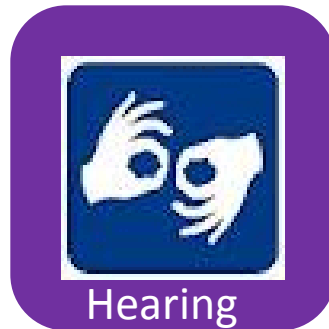
Federal Highway Administration

2012 TRB Road Vehicle Automation Workshop



Disability: What is it?

- A physical or mental condition that limits a person's movements, senses, or activities
- Disability Types



- User Groups (Special Needs)



How big is the problem?



Persons with Disabilities

- 54.4 million; 20% US population
- Unemployment 63%; Income: \$38,400 (\$61,000)
- Poverty: 24.7% (9.0%)
- Fed expenditures: \$226 B (2002); \$357 B (2008)



Veterans with Disabilities

- **Disability claims: 104, 819 (2006) vs. 634,743 (2012)**
- 1.4 million deployed; one third report a **disability**
- Spending: \$0.93 billion (2006) vs. \$5.95 billion (2012)



Seniors/Aging

- **Disability rates rise as people get older**
- 35 million age 65 + in 2004
- Expected to reach 72 million by 2025

"2011 World Report on Disability", WHO; US Census Bureau report "Americans With Disabilities: 2005"; "2007 Disability Status Report, United States" Cornell University, Rehabilitation Research and Training Center on Disability Demographics and Statistics; AAA Foundation. Getting around: Alternatives for Seniors Who No Longer Drive., May 2007; Goodman, N. J., and D. C. Stapleton; Federal Program Expenditures for Working-age People with 15 Disabilities. *Journal of Disability Policy Studies*, Vol. 18, No. 2, 2007; AAA Foundation. Getting Around: Alternatives for Seniors Who No Longer Drive, May 2007; Linda Bilmes, "Soldiers returning from Iraq and Afghanistan: The Long-term Costs of Providing Veterans Medical Care and Disability Benefits". Kennedy School of Government, Harvard University, 2007.

Transportation is key for their Mobility



Unable to Drive
or
Walk
Long Distance



Mobility

Quality of Life

Economic Outcomes



Data plays a Critical Role

Types of Accessibility Data

Transportation

Municipality

Points of Interest

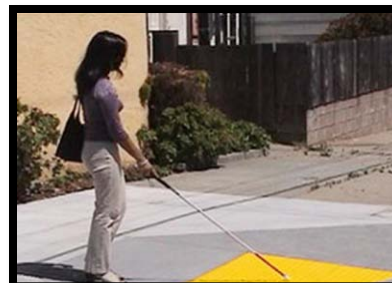
Are there any wheelchair spaces?

Does the street have a curb cut?

Is the restaurant menu available in accessible format?



Lift Status/Occupancy



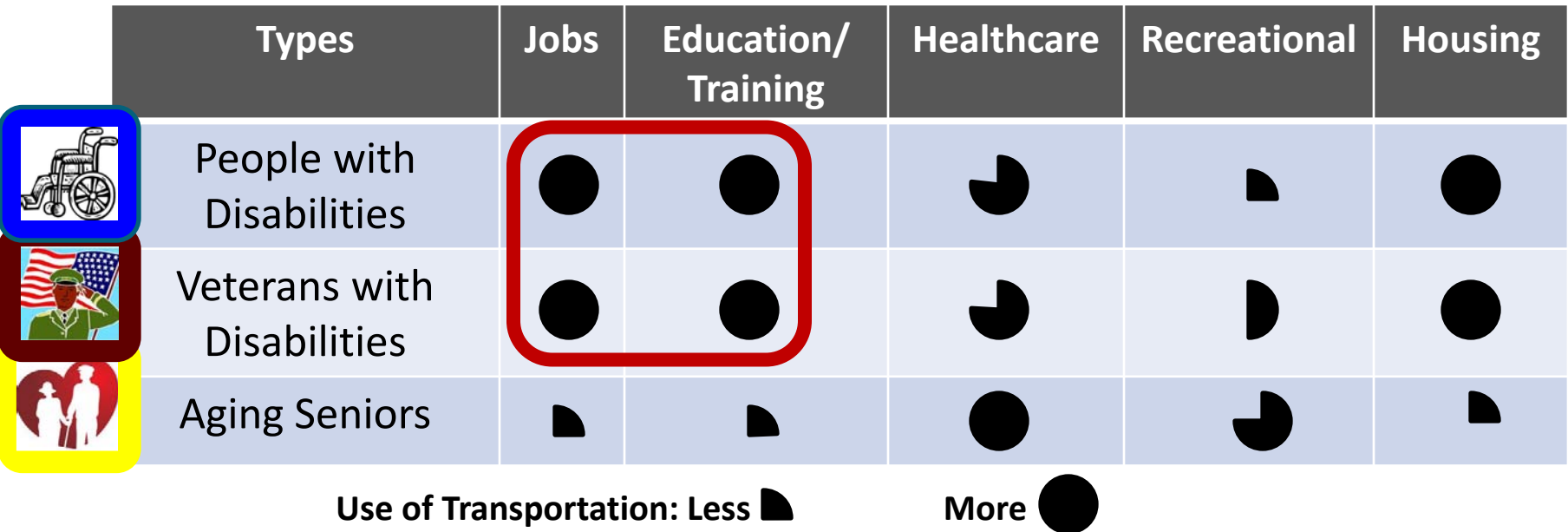
Curb cut Information



Restaurants

Reliance on Data is heavy

Impact of Transportation on User Group Needs



- Is lack of adequate transportation a problem?
 - **Twice as many** people with disabilities say it is important to their Daily Living Needs
 - 76% say it is important to their job search
 - 29% consider it a significant problem in accessing jobs

White House & USDOT Initiatives

- **White House** challenge to explore use of technology and data to increase travel by people with disabilities
 - Data-Enabled Travel report; POC prototype
- **FHWA** EAR projects on technology innovations in transportation for people with disabilities
 - 3 new projects; focus on situational awareness
- **FHWA** SBIR Smartphone Alert Status
- **FHWA** SBIR Pedestrian Detection
- **RITA** ITS JPO Dynamic Mobility Applications
 - MMITSS bundle –mobile accessible pedestrian signal



Automation Vision for Mobility/Accessibility

- User Needs
 - Disabilities: Mobility, Vision, Intellectual...
 - Modalities: Sidewalk, Vehicle, Bus, Rail, Airport...
 - Commutes: Work, School, Travel, Leisure...
 - Interfaces, Inclusive, Connected...
- Accessibility Data Standards
 - Data Definitions
 - Data Capture and Management; Reporting
 - Harmonization
- Automation Systems and Applications
 - Origin
 - Destination
 - Planning

Where Automation can take us...



Cost Benefit



- Automation systems and applications could result in **big savings** to the nation
- Example
 - Convert some Para-Transit to Fixed-Route trips
 - Para Transit Trips: 190 Million
 - Operating cost: **\$5.73 Billion**
 - 25% transition => \$1.5 Billion savings per year

Benefits to society

- Automation can
 - Deliver better transportation choices to travelers with special needs
 - Increase their mobility and independence
 - Ensure comfort, safety and efficiency
 - Enhance quality of life
 - Travelers with disabilities
 - Caregivers
 - Family members
 - Create better economic outcomes
 - People with special needs
 - US economy

USDOT Strategic Goal

Livable Communities

“Foster livable communities through place-based policies and investments that increase transportation choices and access to transportation services.”