

SETTING THE STAGE: CLIMATE AND TRANSIT

GETTING ON THE RIGHT TRACK: REAL-WORLD APPROACHES TO CLIMATE CHANGE ADAPTATION

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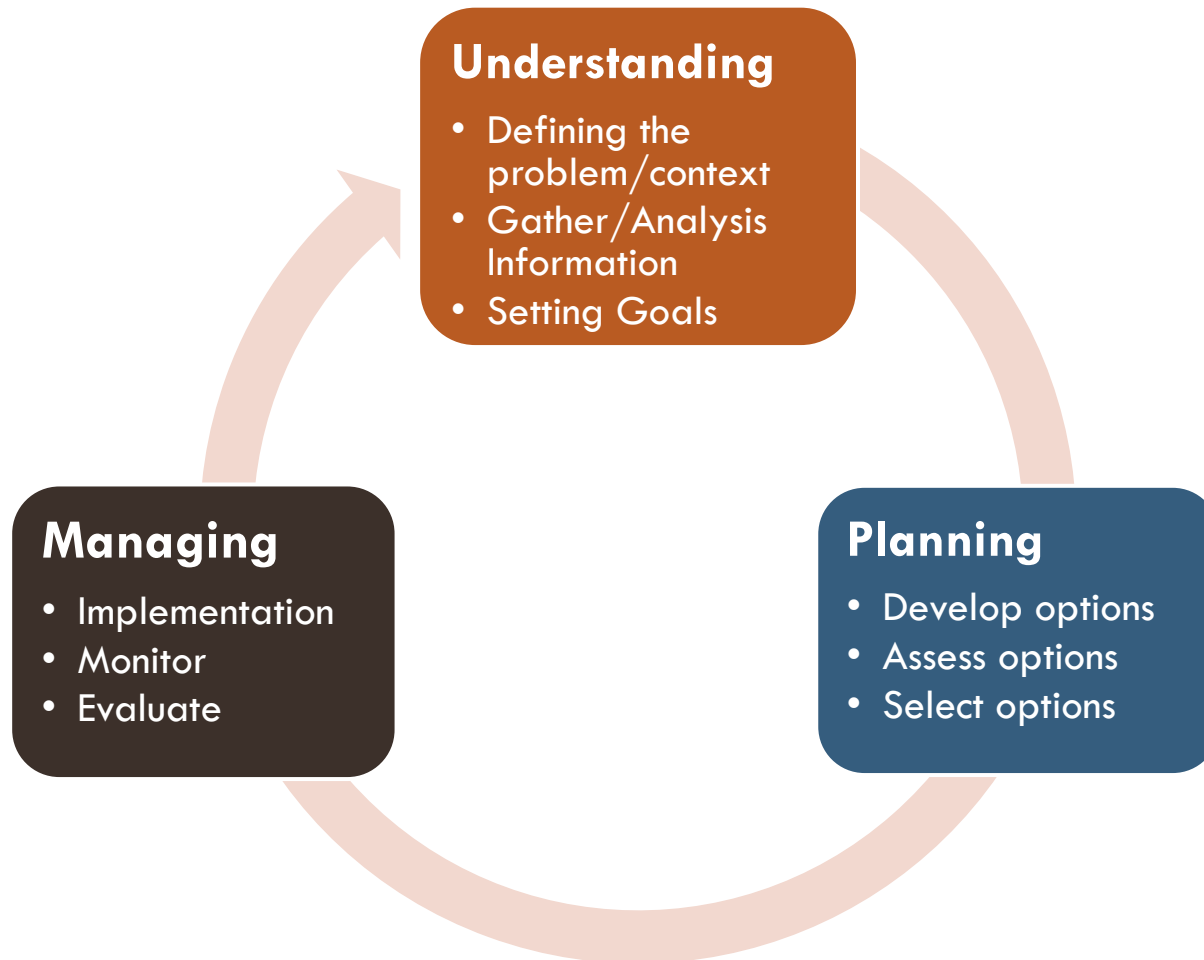
March 21-22 2012 Arlington, VA



2011 - An Important Kickoff Year

- **FTA Report: Flooded Bus Barns and Buckled Rails: Public Transportation & Climate Change Adaptation**
- **7 FTA Transit Climate Change Adaptation Assessment Pilots**
- **5 FHWA Adaptation Conceptual Model Pilots**
- **FTA and DOT Policies on Climate Change Adaptation**
- **APTA Guidelines for Climate Action Planning**
- **Workshop and Webinars**
 - **FTA - Getting on the Right Track: Real-World Approaches to Climate Change Adaptation, Arlington, VA, 3/12**
 - **FTA/APTA - Transit Climate Change Adaptation Seminar, Los Angeles, 8/3/11**
 - **FTA - Webinar: Transit and Climate Change Adaptation, 8/8/11**
 - **FTA/APTA - State of Good Repair in an Era of Climate Change, New Orleans, 10/5/11**
 - **FTA - Using Asset Management to Adapt to Weather Extremes: Lessons Learned from Transport for London, 12/15/11**

Stages of Adaptation Process



Climate Change Focus

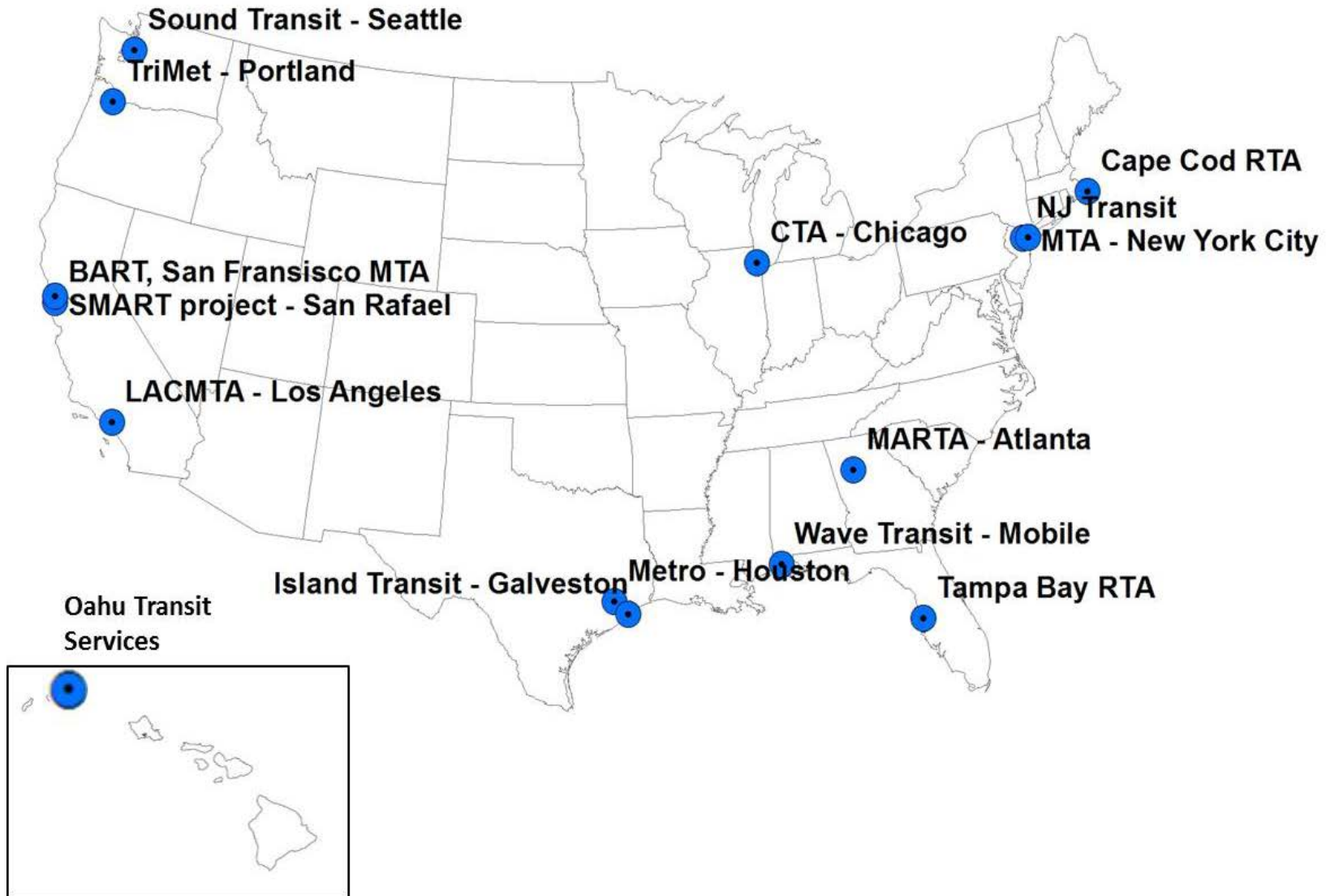
- Significant focus on mitigation
- Small group of agencies are doing both & exploring the interconnection
- Many organizations are not involved in climate change planning
- Current Concerns/Impacts – Causing service impacts and some temporary closures
 - ▣ Severe Weather
 - ▣ Flooding
 - ▣ Erosion
 - ▣ Heat Waves (operations & passengers)

Transit Agencies' Current, Past, or Future Activities Related to Climate Change Adaptation

| Transit Agency | Adaptation (or need for adaptation) included in agency... | | | | Climate Impacts Highlighted | | | | | City/Region or State Climate Action Plan or Report | |
|---------------------------------|---|---------|-------------|----------------------------------|-----------------------------|---------|-----|----------|-------------------|--|---------|
| | Plan | Project | Pilot Study | Vulnerability or Risk Assessment | Temp. | Precip. | SLR | Flooding | Other | City/Region | State |
| BART (San Francisco Bay) | | | | x | | | x | | | X* | X* |
| Cape Cod RTA | | | x | | | | | | | | X* |
| CTA (Chicago) | | x | | | x | x | | x | | X* | |
| Island Transit (Galveston) | | | | | | | | | | X* | |
| Tampa Bay RTA, Houston Metro | | | | x | | | | | | (Houston-Galveston) | X* (FL) |
| Los Angeles MTA | x | x | | x | x | x | | x | Drought/fire | X* | X* |
| MARTA (Atlanta) | | x | | x | | | | | | x | |
| NJ TRANSIT | | | | x | | | | | | | X* |
| NYC MTA | x | | | x | x | x | x | | Storm Surge | X* | X* |
| Oahu Transit Services | | | | x | x | x | | | Wind, Storm Surge | | X* |
| SEPTA (PA) | | | | x | | | | | | | X* |
| SFMTA (San Francisco) | x | | | x | | | x | x | | X* | X* |
| SMART project (San Raphael, CA) | | x | | | | | x | | | X* | X* |
| Sound Transit (Seattle) | x | | x | | x | x | | | | X* | X* |
| TriMet (Portland, OR) | | x | | | | x | | x | | X* | X* |
| Wave Transit (Mobile, AL) | | | x | | | x | x | x | | | x |

X* = climate action plan with adaptation language

Agencies Working on Adaptation



Organizational Departments Involved in Climate Change Adaptation

- Emergency Preparedness
- Planning
- Design/Architecture
- Operations
- Environmental
- Leadership/Management
- Construction
- Asset Management
- Risk Management
- Maintenance

More Involved



Less Involved

Barriers

- ❑ Other organizational priorities that take precedent
- ❑ Lack of clear policy on adaptation
- ❑ General funding constraints
- ❑ Lack of climate change science/adaptation knowledge within the organization's leadership
- ❑ Staffing constraints
- ❑ Limited public interest in climate change
- ❑ Lack of climate change science/adaptation knowledge within the organization's departments
- ❑ Lack of climate change science/adaptation knowledge within the political community
- ❑ Lack of regional and localized data to provide future climate projections
- ❑ Lack of management support

More Important

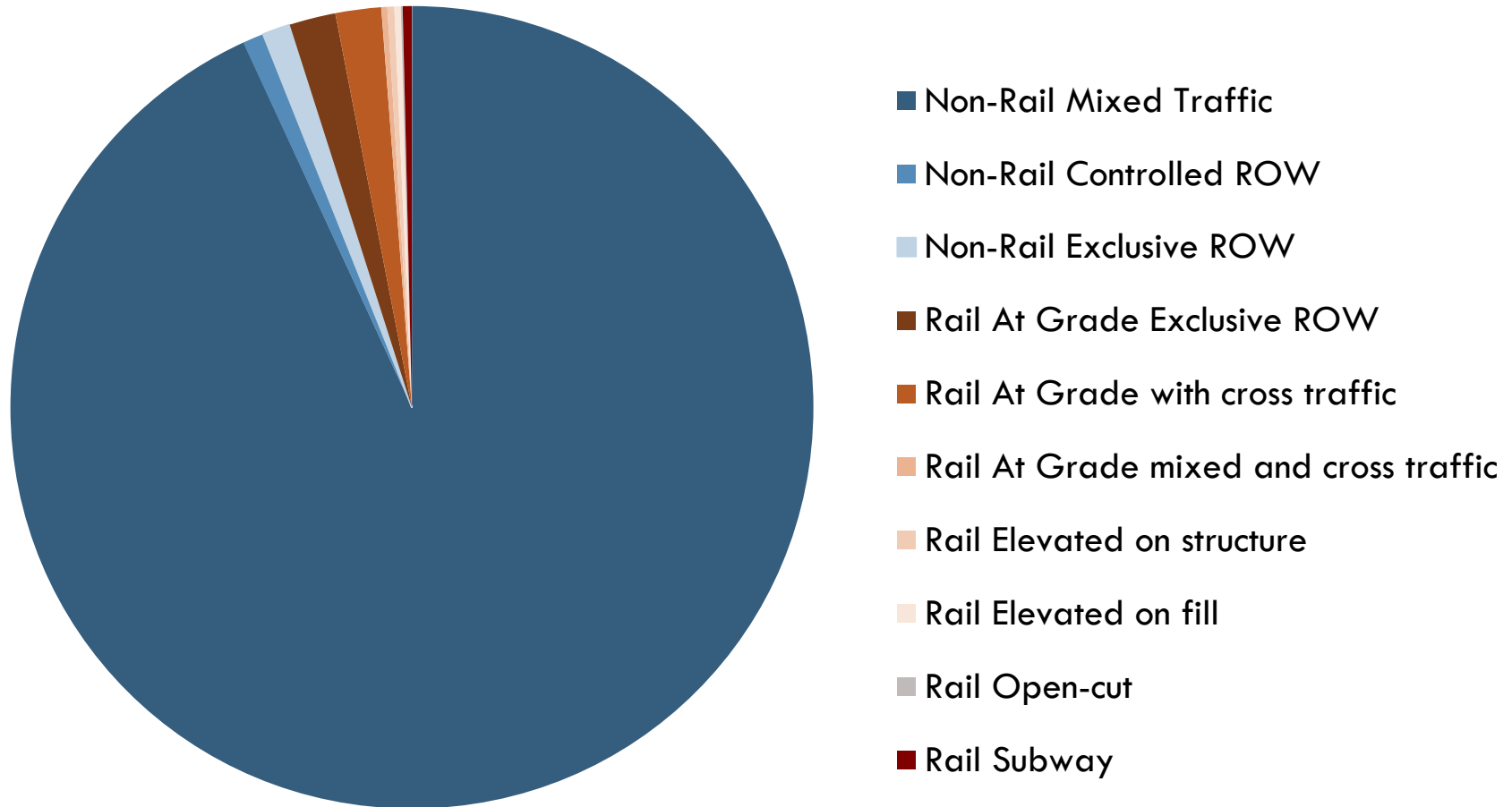


Less Important

Needs

- ❑ Sharing Guidance (best practices, case studies, ROI)
- ❑ Tools (assessment and visualization)
- ❑ Localized data (historical and future)
- ❑ Understanding “uncertainty” (data & decision-making)
- ❑ Communication (information and methods)
- ❑ Training (various disciplines and levels of organization)
- ❑ Resources (staffing and financial)
- ❑ Connect to regional efforts and strengthen partnerships

% of Transit Mode by Route Miles



- 239,500 Non-Rail Miles & 12,350 Rail Miles
- 4,650 Stations & 1,550 facilities
- 10 Billion Trips, 5 Billion Vehicle Trips per year

National Transit Database 2010

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