

Transportation Asset Management in the U.S.A.

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U.S. Department of Transportation
Federal Highway Administration

Outline

- Where we are today ... 2025.
- What is Asset Management
- 2005 international scan
- What we learned on the domestic scan
- What is going on in asset management around the U.S.

Increasing Congestion 1993-2002

24% Increase in passenger car travel

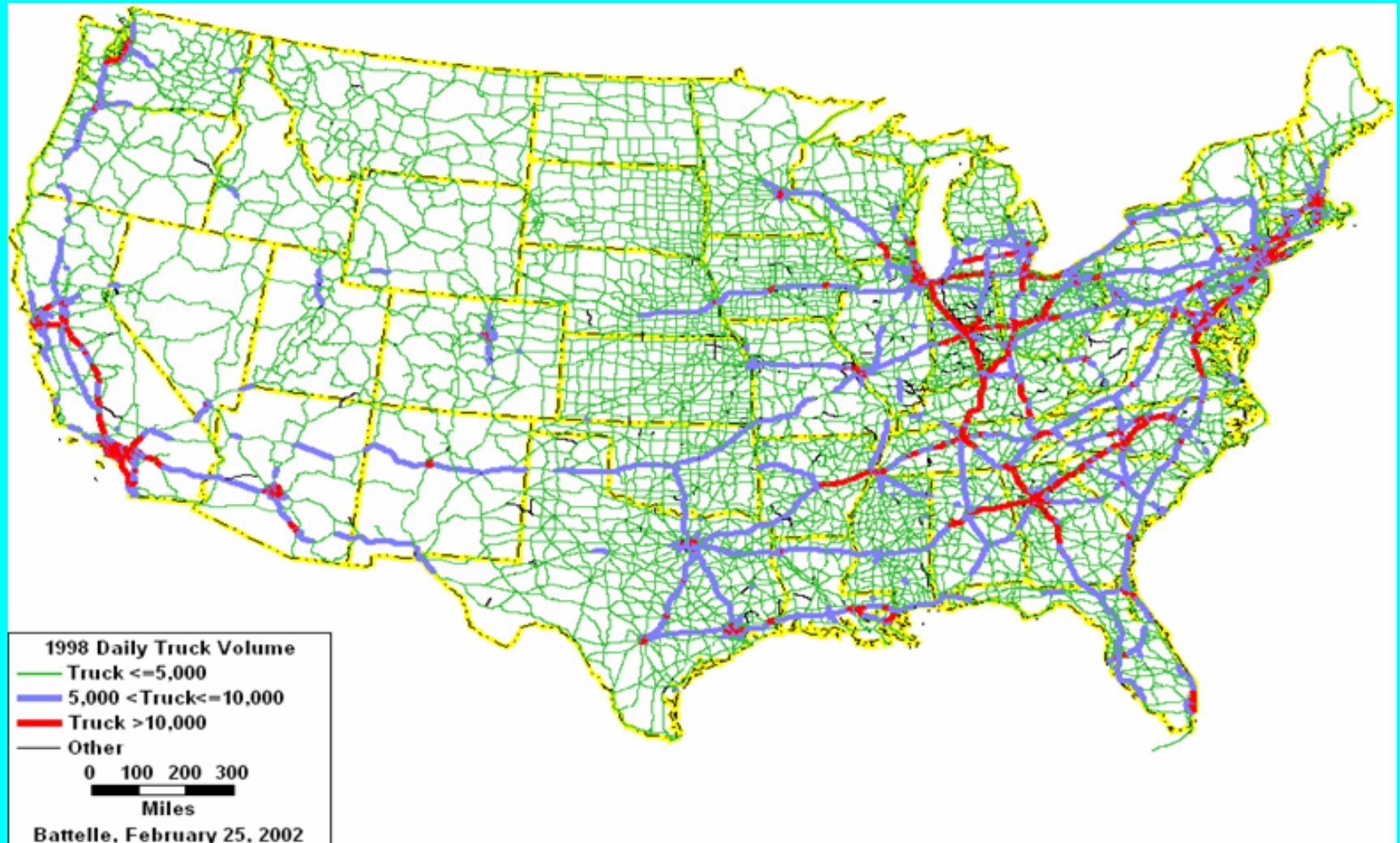
33% Increase in single-unit truck travel

34% Increase in combination truck travel

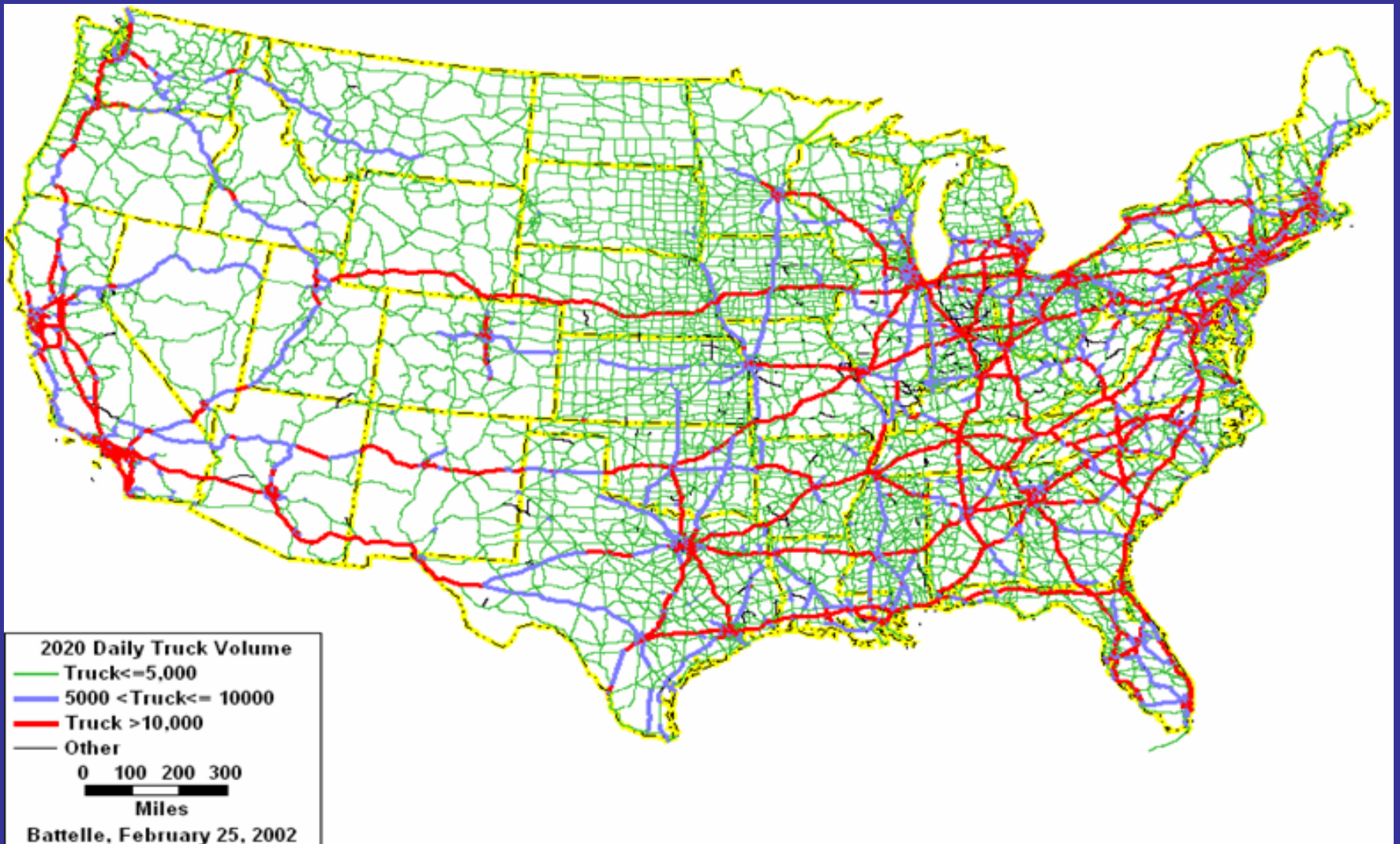
2% Increase in Lane Miles



Truck Volumes - NHS - 2000



Truck Volumes in 20 Years



2025 Challenges

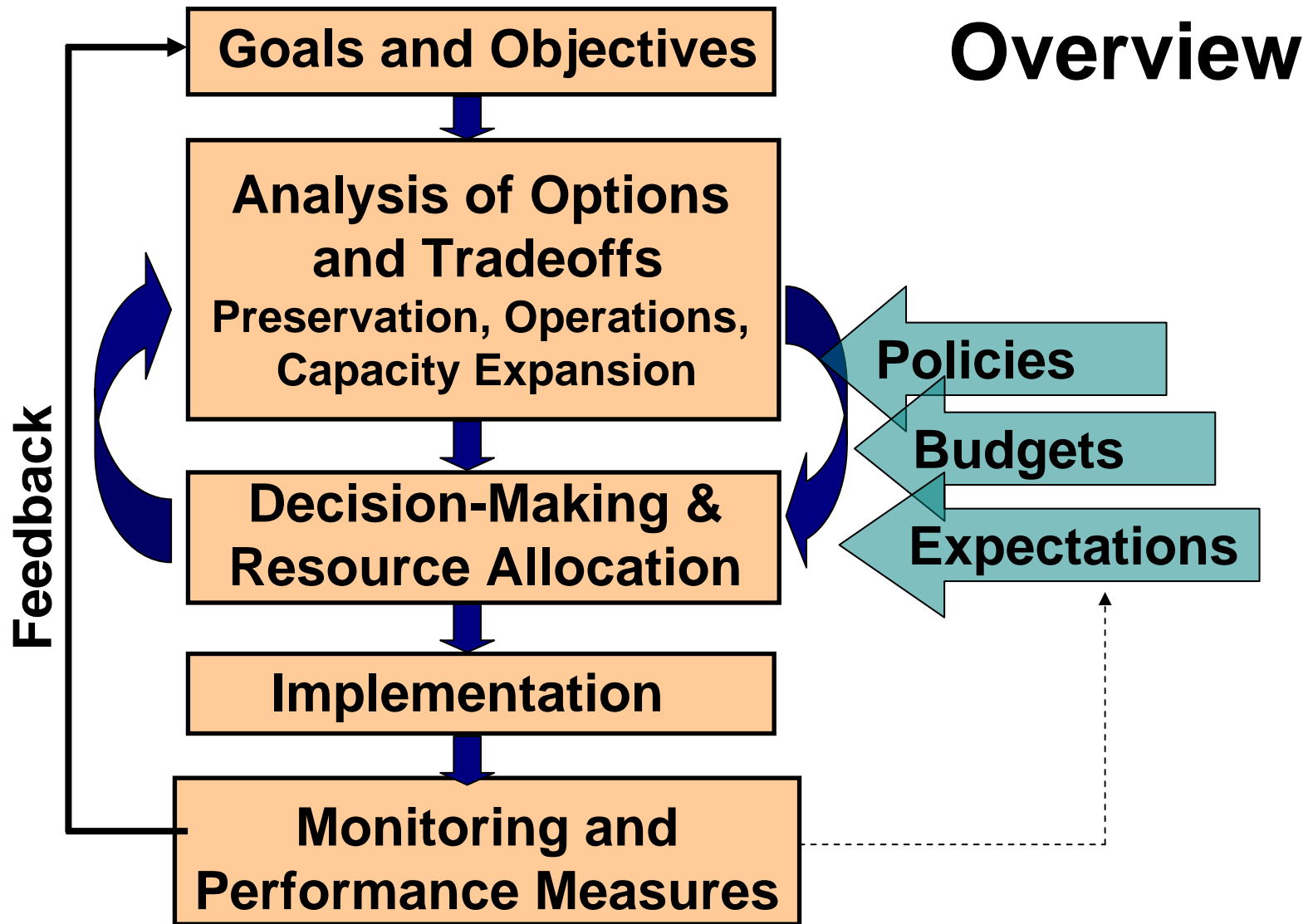
In just 18 years:

- Population and economic growth
- Increased VMT/congestion
- Freight movements are expected to double
- Aging infrastructure - Preservation
- Funding
 - Highway Trust Fund alternatives
 - Public-private partnerships
 - Preservation/Design

What is Transportation Asset Management?

A strategic and systematic process of operating, maintaining, upgrading and expanding physical assets effectively throughout their lifecycle. It focuses on business and engineering practices for resource allocation and utilization, with the objective of better decision making based upon quality information and well defined objectives.

Transportation Asset Management





International Scan on Asset Management: *Australia, Canada, England, and New Zealand*

April 8-April 23, 2005



Where we went....



Purpose

Investigate best case examples of asset management techniques and processes in the world...and identify lessons and applications for the U.S.

Sponsored by AASHTO, FHWA, and NCHRP

Results from International Scan – Drivers for adopting Asset Management Approaches

- Limited resources
- Increasing demands on and use of existing infrastructure
- Desire for credibility with elected officials and the public, that is, linking funding to system performance
- Where private provision of services was used, asset management was a way of providing strategic oversight

- Natural evolution in the development of individual infrastructure management systems
- Desire to evolve to a system that allows trade-offs among different asset categories and between asset strategies
- Legislative or governmental mandate, e.g.,
 - Road Management Act in Victoria
 - Local Transport Plan 2 guidance in England
 - Local Government Act in New Zealand

Domestic Scan on Asset Management:

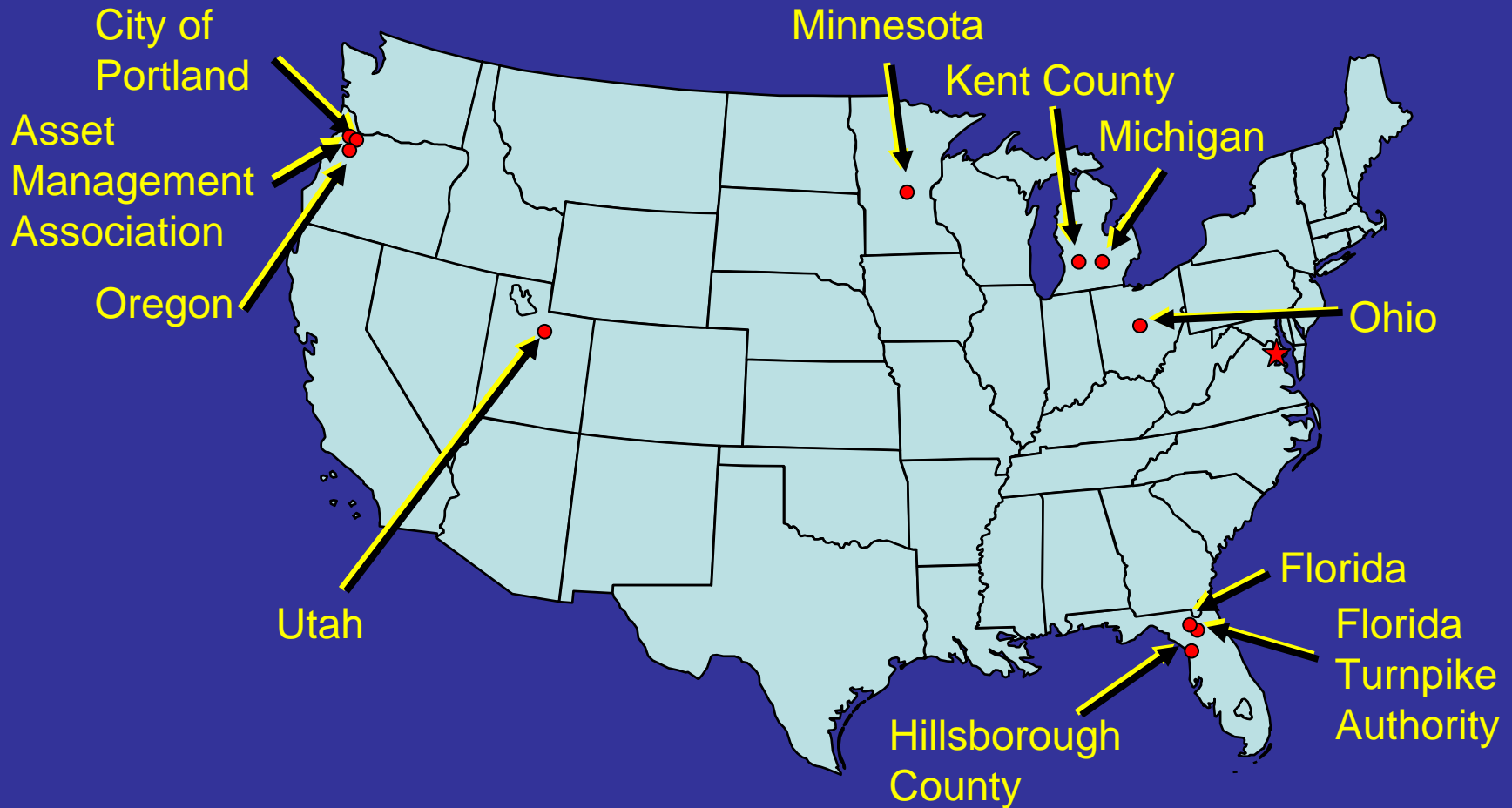
*Michigan, Ohio, Florida,
Oregon, Utah, Minnesota*

August/September, 2006



Purpose: Identify best case examples of the application of asset management principles and practice in U.S. transportation agencies.

Where we went...



What was found:

- Agencies visited exhibited various stages of evolution in their application of asset management to their transportation decision making process.
- In some cases the agencies have a comprehensive and sophisticated approach to asset management that has been integrated throughout their organization.
- Other agencies have not reached that level, but have adopted innovative and successful approaches.

Results from Site Visits

- The agencies visited had all adopted a **'preservation first' strategy for their investment priorities.**
- In each case, **the success of the asset management process was directly linked to the actions of an asset management champion or champions within the organization.**

Results from Site Visits

- **The most successful asset management processes had performance measures that guided investment decisions throughout the organization.**
- **Scenario analysis showing the consequences on performance measures was one of the most effective methods of convincing decision makers of the need for investment in the transportation system.**

Results from Site Visits

- The most **successful asset management processes** have moved away from a **“worst first” investment strategy**, and instead have adopted investment principles that are based on **life cycle costing** that result in the most cost effective preservation and maintenance strategies.
- There was no one organizational model for asset management.

Results from Site Visits

- **The “growing pains” of an asset management process in almost all cases, fostered enhanced communications among many different organizational units.**
- **One of the most important starting points for implementing an asset management process is to conduct an organizational self assessment.**

Results from Site Visits

- **There was very little evidence of the application of risk analysis techniques in the asset management processes observed.**
- **In several cases, agencies viewed data as an asset and the data collection/analysis process as an important decision support function.**
- **A customer orientation had been adopted as part of the asset management process.**

Implementation—Long Term

Refocus the national viewpoint of the transportation system from merely expenditures to investments in mobility, people, goods and services by using an asset management-based methodology

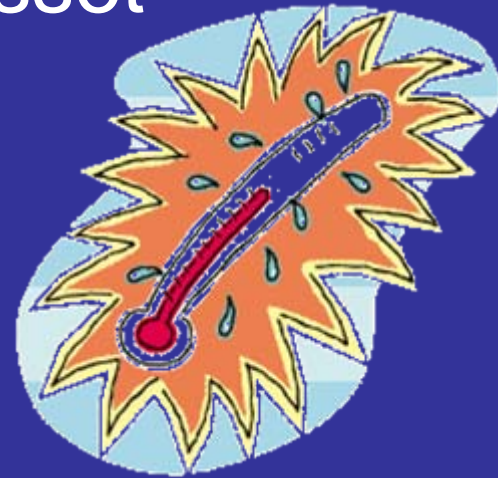
FHWA's Office of Asset Management

Teams:

- Management & Monitoring Systems
- Construction & System Preservation
- Evaluation & Economic Investment

What's Hot?

- Better Data Analysis and Actual Use
- Relating Policy, Planning, and Asset Management
- Trade-off Analysis
- Performance Measures
- Remaining Service Life
- Innovative Financing
- Training in Economics
- National Center for Pavement Preservation
- Preservation Techniques



What is available?

- Asset Management Primer
- Case Studies
- Workshops
- NHI Training
- Web conferences
- Websites:
 - Community of Practice – Transportation Asset Management Today (TAMT) –
<http://assetmanagement.transportation.org>

FHWA Office of Asset management

<http://www.fhwa.dot.gov/infrastructure/asstmgmt/index.htm>

Why is implementation of an Asset Management Program important to senior managers?

- Improved decision-making supported by policies, performance-based goals, performance measures, and appropriate service levels
- All assets considered comprehensively
- Decisions are based on accurate data, sound engineering and economic analysis, needs assessment, public involvement, and risk assessment
- Implementation of a successful Asset Management Program will not be successful without top management support