



Integrating Performance-Based Plans and Data into the Planning Process

**California Workshop
November 22, 2013**



U.S Department of Transportation
Federal Highway Administration
Federal Transit Administration

Objectives

- **Describe several related performance-based planning efforts**
- **List common elements within the related performance-based planning processes**



Integrating Performance-Based Plans into the Planning Process

- **Strategic Highway Safety Plans**
- **Transportation Asset Management Plans - Highway**
- **Congestion Management Process**
- **Transit Asset Management Plans**
- **Transit Safety Plans**
- **State Freight Plans**



Relationships Between LRTP and Performance-Based Plans

Performance Management Elements	Long Range Plan	Performance-Based Plans (SHSP, CMP, TAMP, etc.)
Goals/Objectives	Broad goals touching all areas	Drill down into the details of each goal, define meaningful objectives
Performance Measures	Limited number of high level measures	Additional measures to address objectives more thoroughly
Target Setting – Evaluate Programs, Projects & Strategies	Scenario analysis and tradeoff decisions across goals and measures	Identify & prioritize range of strategies (e.g, lifecycle cost, risk management, 4Es). Define scenario bounds
Allocate Resources	Resource constrained targets and trends	Implementation plan (phasing and funding)
Measure, Evaluate and Report Results	Monitor and report system performance	Evaluate effectiveness for update cycle

Relationship Between Long Range Plans and Performance Plans

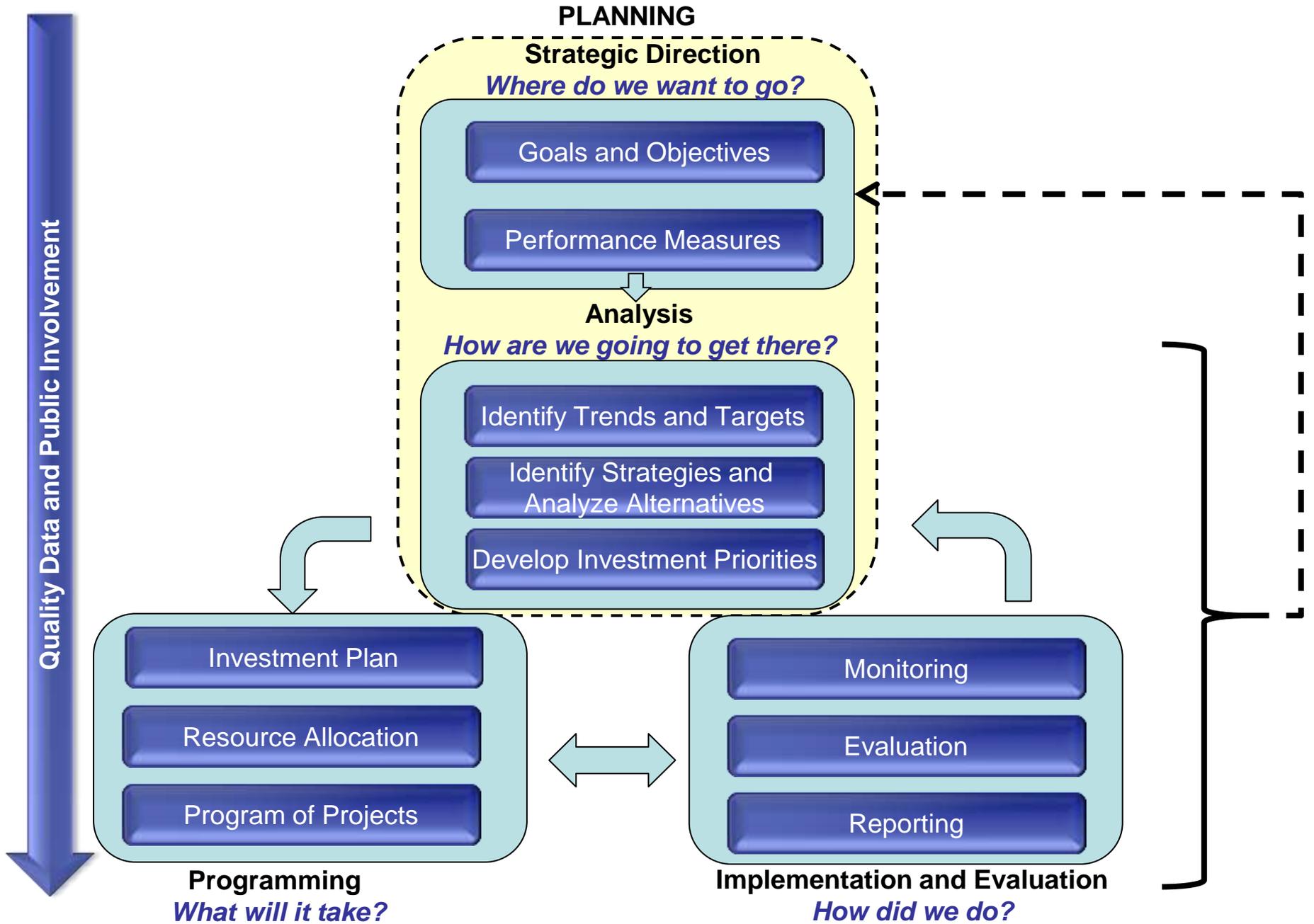
Long Range Plans

- Broad goals, objectives
- Small number of outcome measures
- Define agency priorities through tradeoff analysis

Performance Plans

- Detailed data & analysis
- Detailed measures, including outcome and output measures
- Define implementation steps





PERFORMANCE-BASED PLANNING AND PROGRAMMING



STRATEGIC HIGHWAY SAFETY PLANS



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Strategic Highway Safety Plans

- **Critical to the Highway Safety Improvement Program (HSIP)**
- **Coordinated framework for reducing highway fatalities and serious injuries on all public roads**
- **Defines strategic statewide goals, objectives, and emphasis areas**
- **Developed in consultation with Federal, State, local, and private sector safety stakeholders**
- **Coordinated with Highway Safety Plan (NHSTA required)**



SHSP and LRTP Comparison

SHSP	LRTP
5-Year Planning Horizon	20-Year Planning Horizon
Strategic Planning Document	Long-Range Planning/Policy Document
Targets Key Safety Issues (i.e. Impaired Driving, Intersections), not all Multimodal Safety Needs	Addresses current and future needs for Highways, Transit, Bike/Ped, Freight, Operations
Near-Term Solutions	Long-Term Policies and Programs
Safety Projects – Program Countermeasures	Safe Transportation – Safer Facilities
Stakeholder Input	Stakeholder Input AND Public Buy-In



Maryland SHA SHSP Example

Annual Number of Traffic Fatalities on All Roads in Maryland



Zero Fatality Goal

Reduce fatalities and serious injuries in half by 2030

4-E approach to Safety

- Engineering
- Education
- Emergency Medical Services (EMS)
- Enforcement

6 Emphasis Areas

Pedestrian	Occupant Protection
Aggressive Driving	Distracted Driving
Impaired Driving	Infrastructure



An aerial photograph of a highway interchange and bridge structure, showing multiple lanes of traffic and a large bridge spanning a body of water. The image is partially obscured by a white gradient on the right side.

ASSET MANAGEMENT PLANS (HIGHWAY)



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Asset Management Plan - Highway

- **Risk-based transportation asset management plan (TAMP)**
- **Required assets – pavement and bridge**
 - States encouraged to include all infrastructure assets within the right-of-way

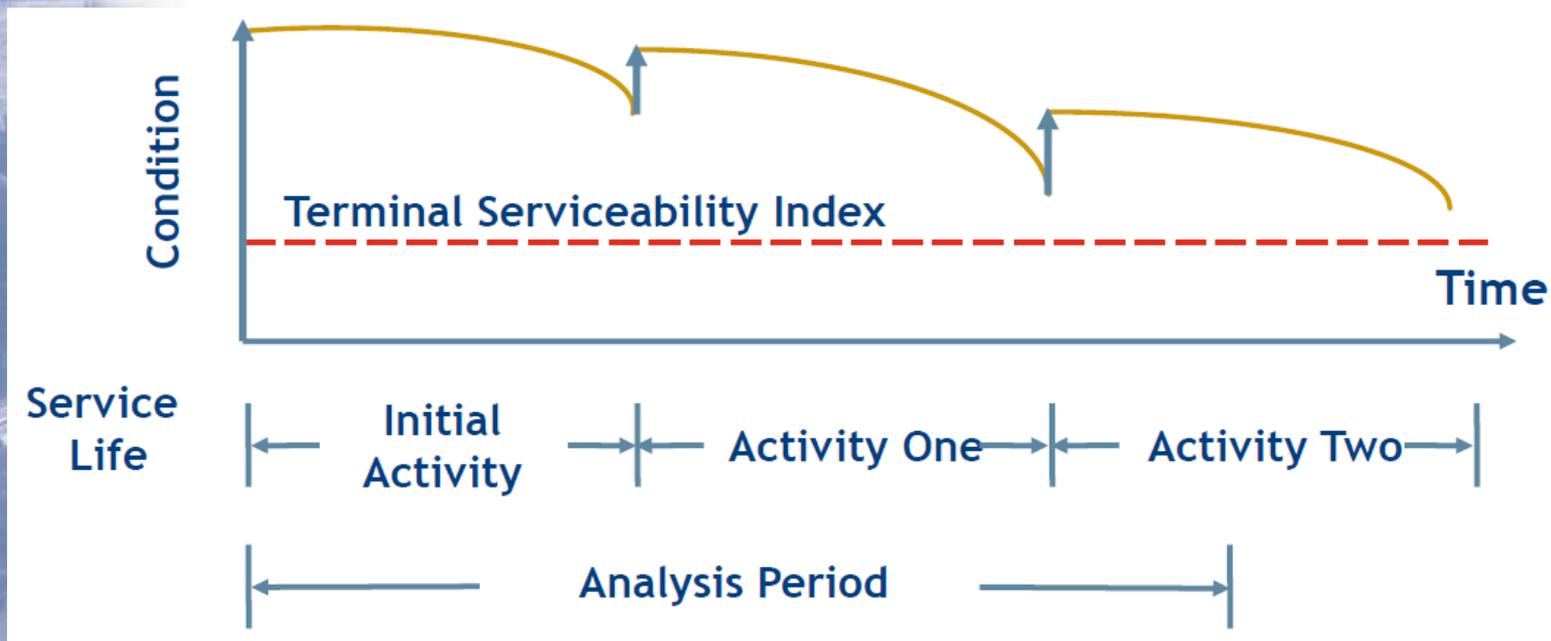


Required TAMP Elements

- **Summary listing of pavement and bridges on NHS, including the condition of the assets**
- **Asset management measures and objectives**
- **Performance gap identification**
- **Lifecycle cost management and risk management**
- **Financial plan – funding, expenses, tolling, etc.**
- **Investment strategies**



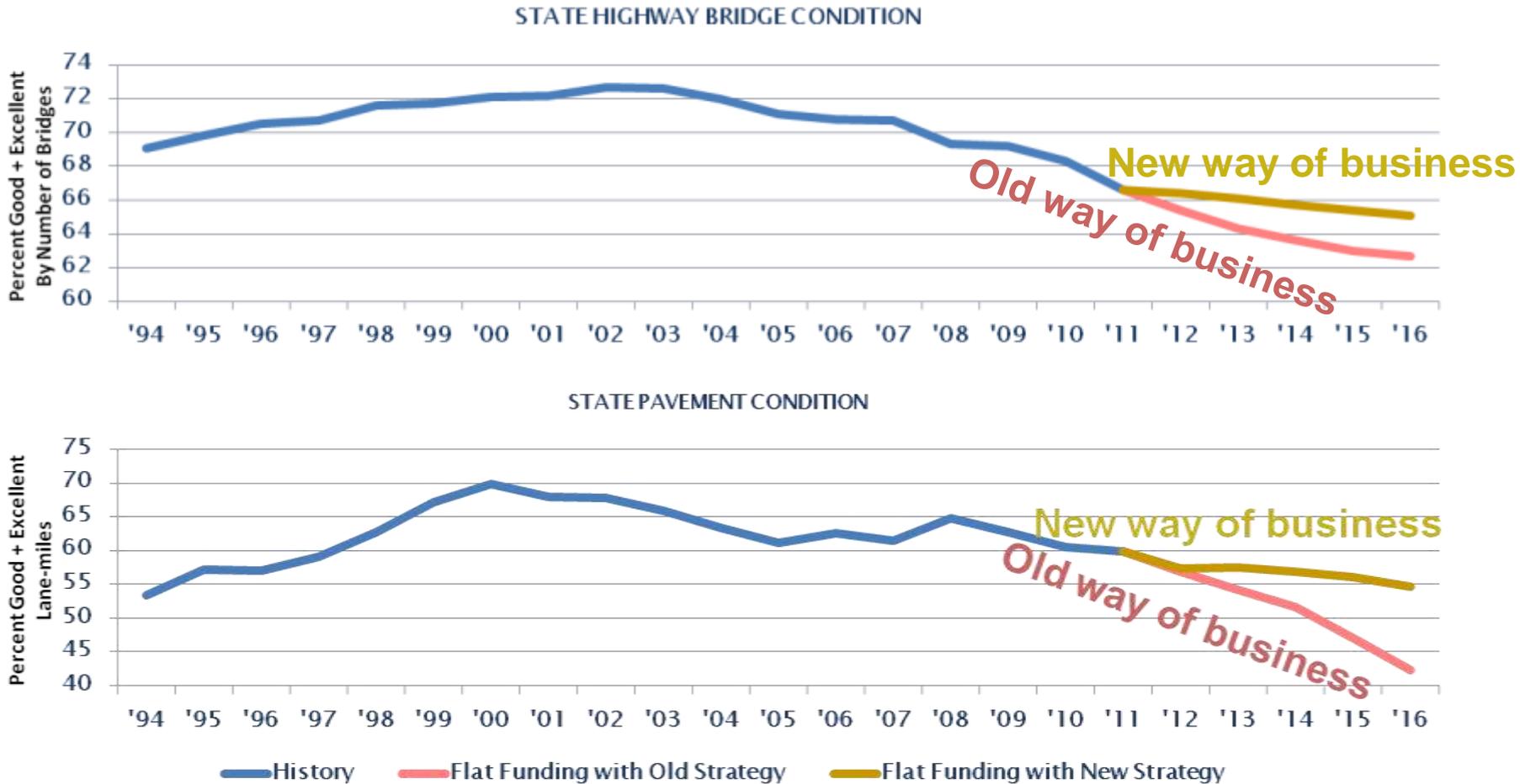
Life Cycle Cost Analysis



- **When will the future maintenance and rehabilitation costs be incurred?**



New York DOT Example





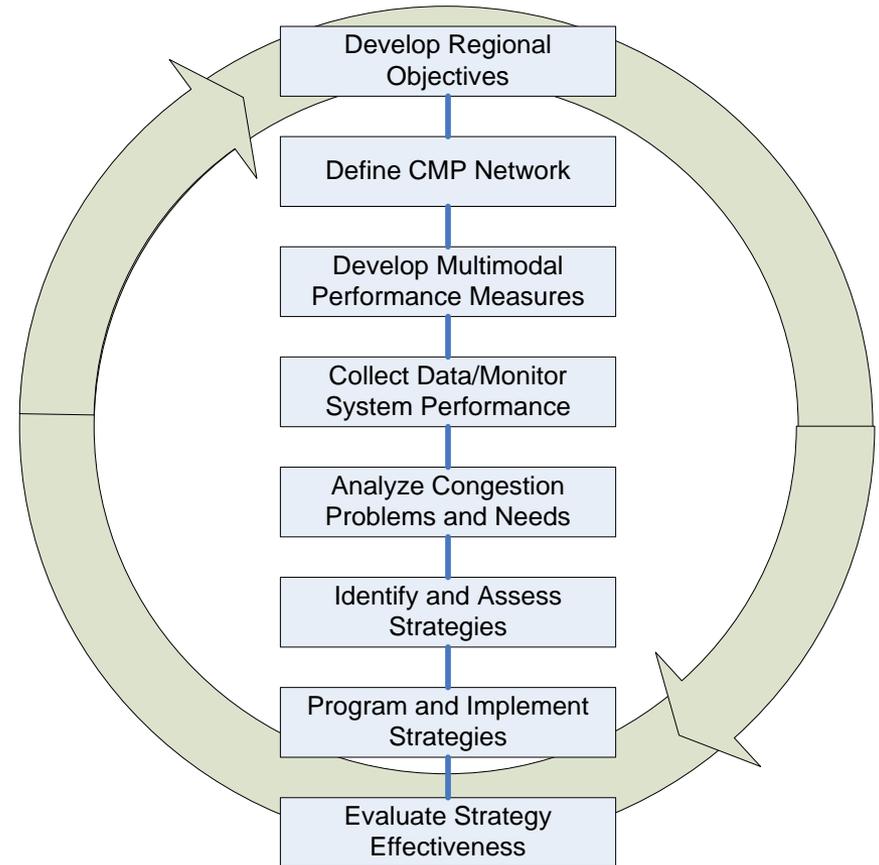
CONGESTION MANAGEMENT PROCESS



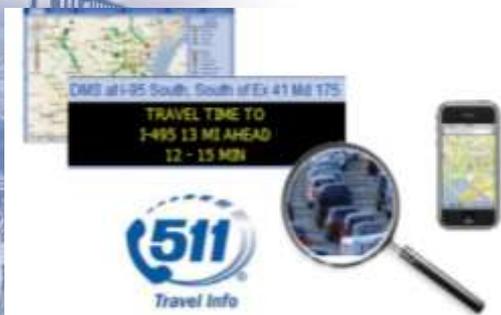
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Congestion Management Process

- **Integrated element of the planning process**
- **Source of information for project selection in the long-range plan and the Transportation Improvement Program (S/TIP)**

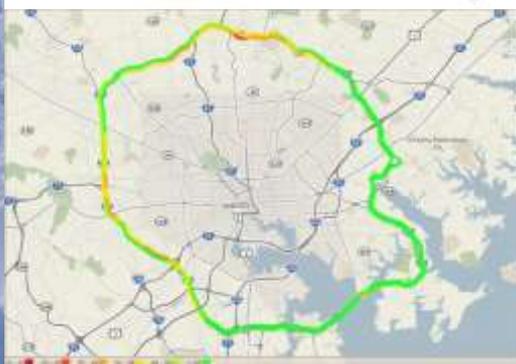


Maryland Planning for Operations



Collaboration and coordination efforts between planning, operations, and others to improve regional transportation system performance

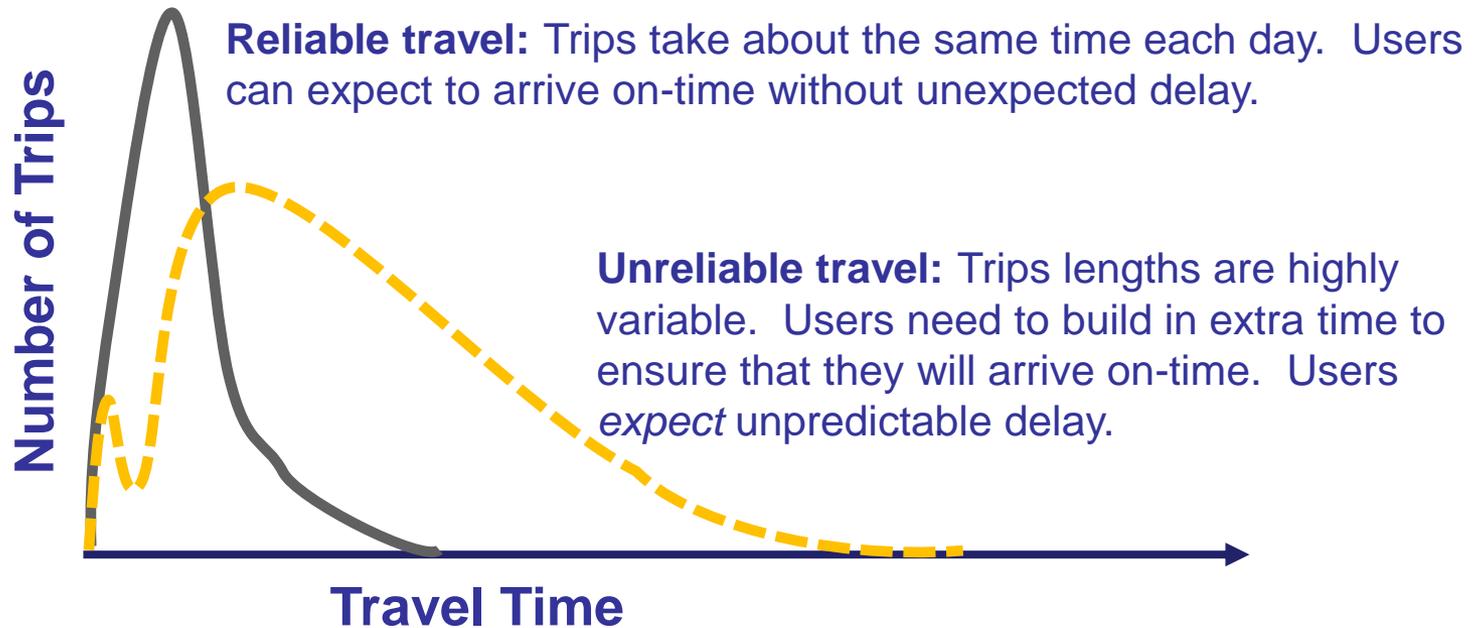
- Archived speed and traffic data to identify and prioritize projects
- **Low cost, short-term operational improvements in a strategic manner**
- Life-Cycle and Benefit/ Cost based evaluation
- Focus on transportation system management and operations (TSM&O)
- Before/ after studies to understand **outcomes**



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Reliability

Continuous Travel Time Data





TRANSIT ASSET MANAGEMENT PLANS



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National Transit Asset Management System

- **MAP-21 requires FTA to:**
 - **Establish a National TAM System**
 - **Define State of Good Repair (SGR), establish standards within 1 year by rulemaking process**
 - **Require recipients to collaboratively develop local TAM plans**
 - **Provide an analytical process or decision support tool and technical assistance**



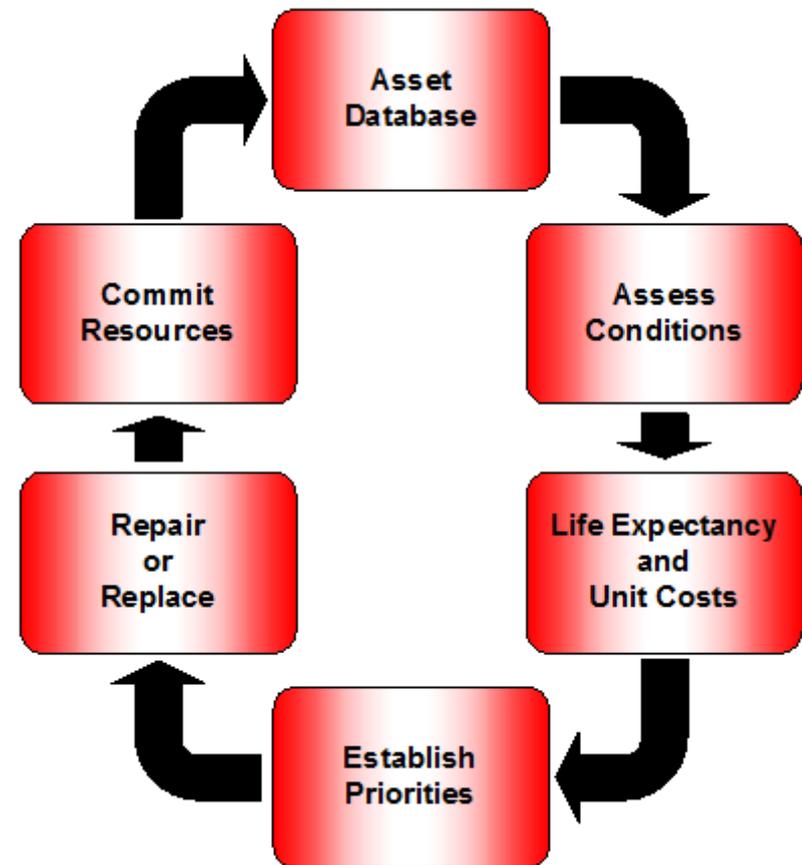
Transit Asset Management Plan and Reporting Requirements

- **Capital asset inventories and condition assessments**
- **Investment prioritization**
- **Change in condition since the last report**
- **Targets set under state of good repair performance measures**
- **Progress towards meeting targets**



MARTA Asset Management Program *Methodology*

- Inventory Assets
- Assess Conditions
- Quantify Deficiencies
- Prioritize Actions
- Evaluate Alternatives
- Program Acquisition, renewal, or disposal





TRANSIT SAFETY PLANS



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National Transit Safety Plan

- **Safety performance criteria for all modes of public transportation**
- **Will rely on TAM System definition (SGR)**
- **Performance standards for vehicles used in revenue operations:**
 - Does not apply to rolling stock otherwise regulated
 - Should consider National Transportation Safety Board recommendations and industry best practice
- **Public transportation safety certification training program**



Transit Agency Safety Plans

Required for all recipients of FTA funding:

- Strategies for identifying risks and minimizing exposure to hazards
- Trained safety officer to report directly to the general manager
- Performance targets based on safety performance criteria established by FTA
- Staff training program

Plan required within 1 year after effective date of a final rule issued by DOT to carry out the Public Transportation Safety Program



FTA Approach: Safety Management Systems (SMS) Framework

- Requires new thinking about
 - Safety policy
 - Safety risk management
 - Safety assurance
 - Safety promotion





STATE FREIGHT PLANS



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State Freight Plan

- **MAP-21 encourages each state to:**
 - Develop a comprehensive freight plan that identifies immediate and long-term freight-related investments
 - Establish a freight advisory committee
- **Performance measures to be determined within 18 months of enactment**
 - USDOT Secretary in conjunction with DOTs, MPOs, and other stakeholders will set measures
- **Freight targets**
 - States: Set within one year after final rulemaking
 - MPOs: Set no later than 180 days after the state target is set



State Freight Plan Elements

- **Freight system trends, needs, and issues**
- **Description of freight policies, strategies, and performance measures that will guide freight-related investments**
- **Assessment of how the plan will improve the state's ability to meet the national freight goals**
- **Consideration of technologies and operational strategies**
- **Inventory of freight system bottlenecks**



Freight Data

- **FHWA Travel Time data specific to trucks**
- **Freight flow data**
 - Freight Analysis Framework (FAF)
 - Private sector commodity flow data
 - Railroad waybill
 - Commodity Flow Survey
 - Waterborne commerce
 - Port gate data
 - Transborder freight data
 - FAA air cargo forecasts

