

Louisiana DOTD Our Experiences with Developing a TAMP

Presented by Michael Bridges, P.E.
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Outline



- TAMP development
- Asset management at LADOTD
- TAMP Requirements
- Governance structure
- LADOTD TAMP



TAMP DEVELOPMENT

LADOTD TAM Steering Committee

- Finance (Executive Champion)
- Maintenance Systems Management (Co-Lead)
- Multimodal Planning (Co-Lead)
- Data Collection and Management Systems
- Multimodal Planning (Long-range planning)
- Districts
- IT
- Engineering
- Research Center
- Strategic Planning/QCIP

Core Working Team

- Executive Champion
- Data Collection and Analysis
- Statewide Operations
- Asset Management Engineer
- Outside Consultant (Dye Management)
- FHWA Pilot Consultant (Cambridge and AMEC)



ASSET MANAGEMENT AT LADOTD

TAM at LADOTD

- LADOTD has robust state-of-the-art pavement and bridge management systems
- Condition assessment of Pavements every two years
- Bridges are assessed every two years at a minimum
- Predictive modeling for various funding scenarios
- Able to provide a level of service for the network

Pavement

- dTIMS (Deighton Total Infrastructure Management System) Pavement Management System
- HPMS – Highway Performance Management System
- TAHI – Legacy Highway Inventory Data System– homegrown mainframe application
- TAND – Legacy Highway Condition data system – homegrown mainframe application

Bridges

- [AASHTOWare](#)TM Bridge Management software BrM (formerly PONTIS)
- STRM – Legacy home grown mainframe application supporting National Bridge Inventory requirements



TAMP REQUIREMENTS

MAP-21 Legislation

- Requires a risk-based asset management plan for pavements and bridges on the NHS that includes, at a minimum:
 - *a summary listing of the pavement and bridge assets on the NHS in the State, including a description of the condition of those assets;*
 - *asset management objectives and measures;*
 - *performance gap identification;*
 - *lifecycle cost and risk management analysis;*
 - *a financial plan; and*
 - *investment strategies.*

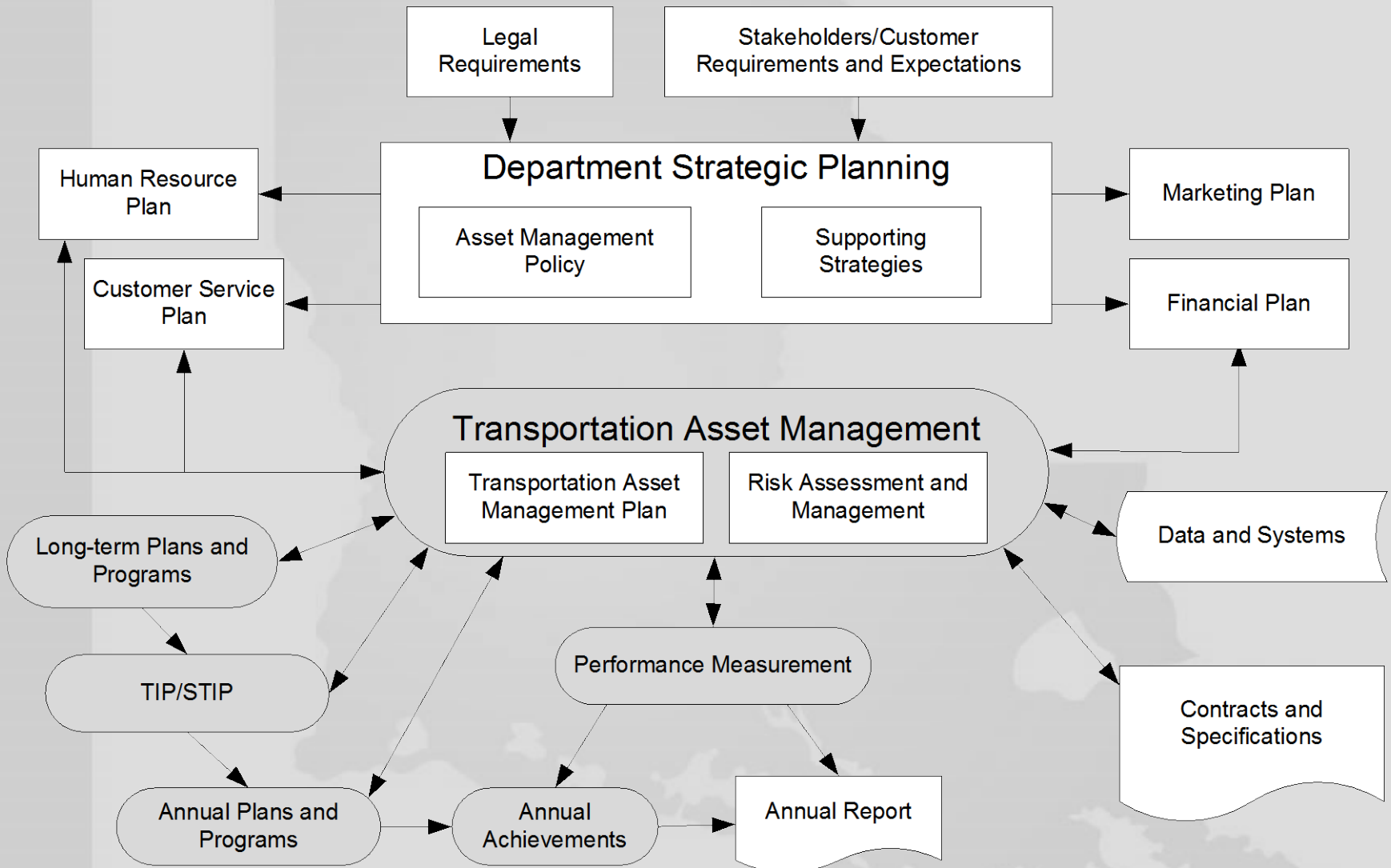
TAM Core Questions:

- What is the current state of my assets?
- What are my required levels of service and performance delivery?
- Which assets are critical to sustained performance delivery?
- What are my best investment strategies for operations, maintenance, replacements, and improvement?
- What is my best long-term funding strategy?

Relationship to Other Plans

- TAMP is a policy document
- TAMP not intended to replace other plans
- TAMP must influence all other plans
- Data Sources must support TAMP
- TAMP is revised on a cycle

TAMP Link to Other Plans



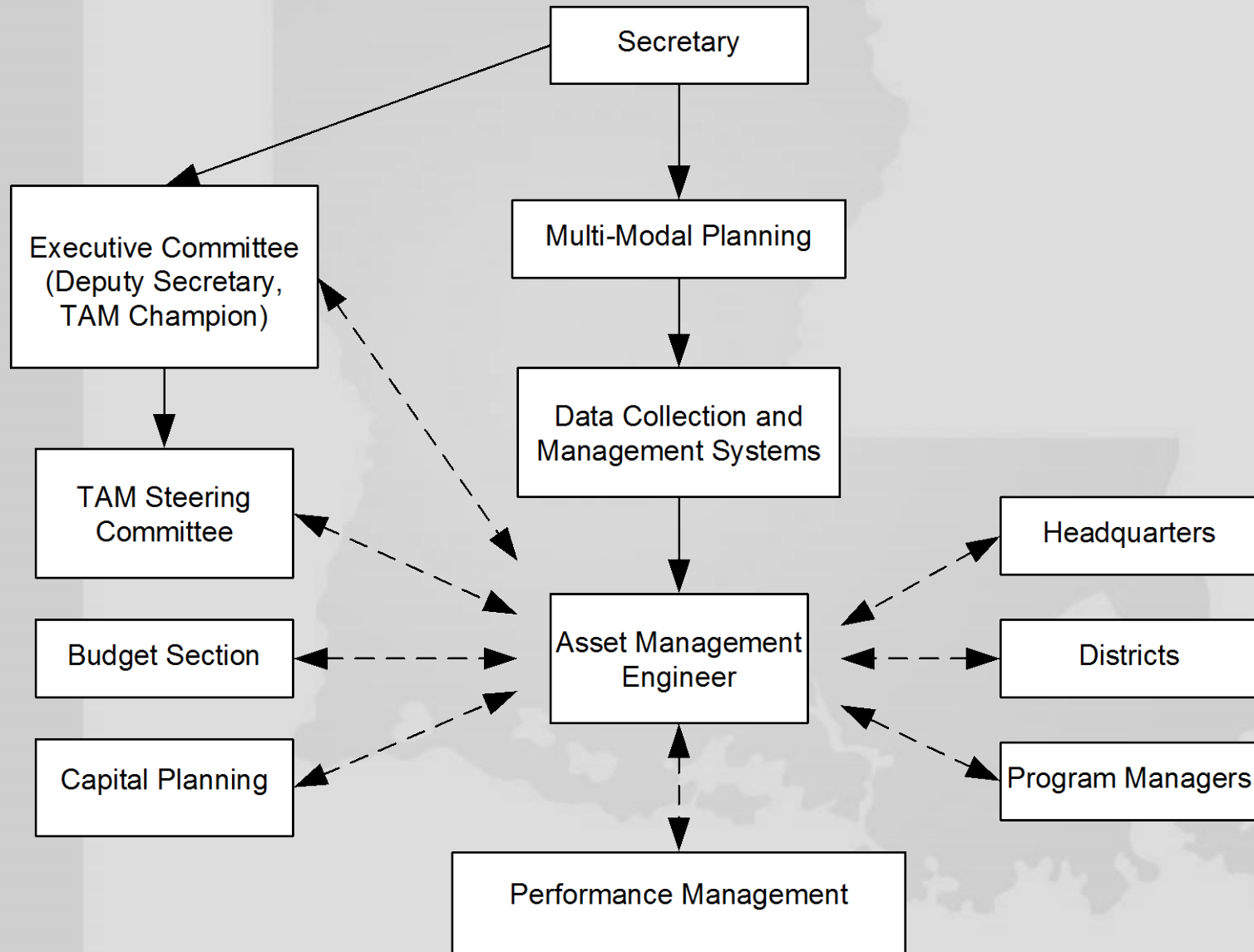


GOVERNANCE STRUCTURE

Asset Management Support

- Executive Champion
- LADOTD TAM Steering Committee
- Office of Multimodal Planning
- Data Collection and Analysis
- Asset Management Engineer
- Management by influence

TAM Support Structure





LOUISIANA DOTD TAMP

Chapters in our TAMP

Executive Summary

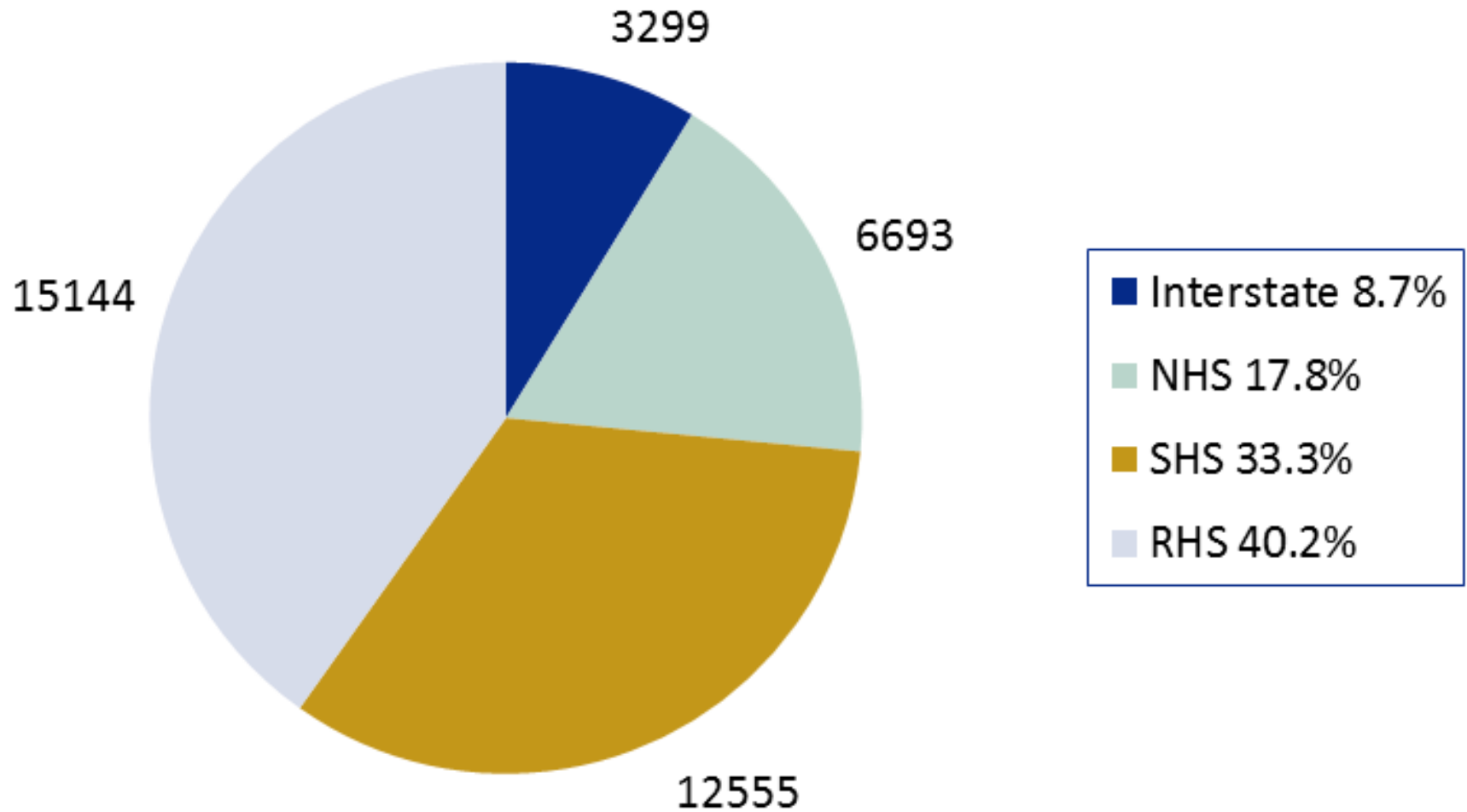
1. Introduction
2. Asset Management Structure and Objectives
3. Asset Inventory and Performance Measures
4. Performance Targets and Conditions
5. Whole Life Management
6. Risk Management Analysis
7. Financial Plan, Gap Analysis and Sustainability
8. Investment Strategies
9. Asset Management Process Enhancements

Assets In the LADOTD TAMP

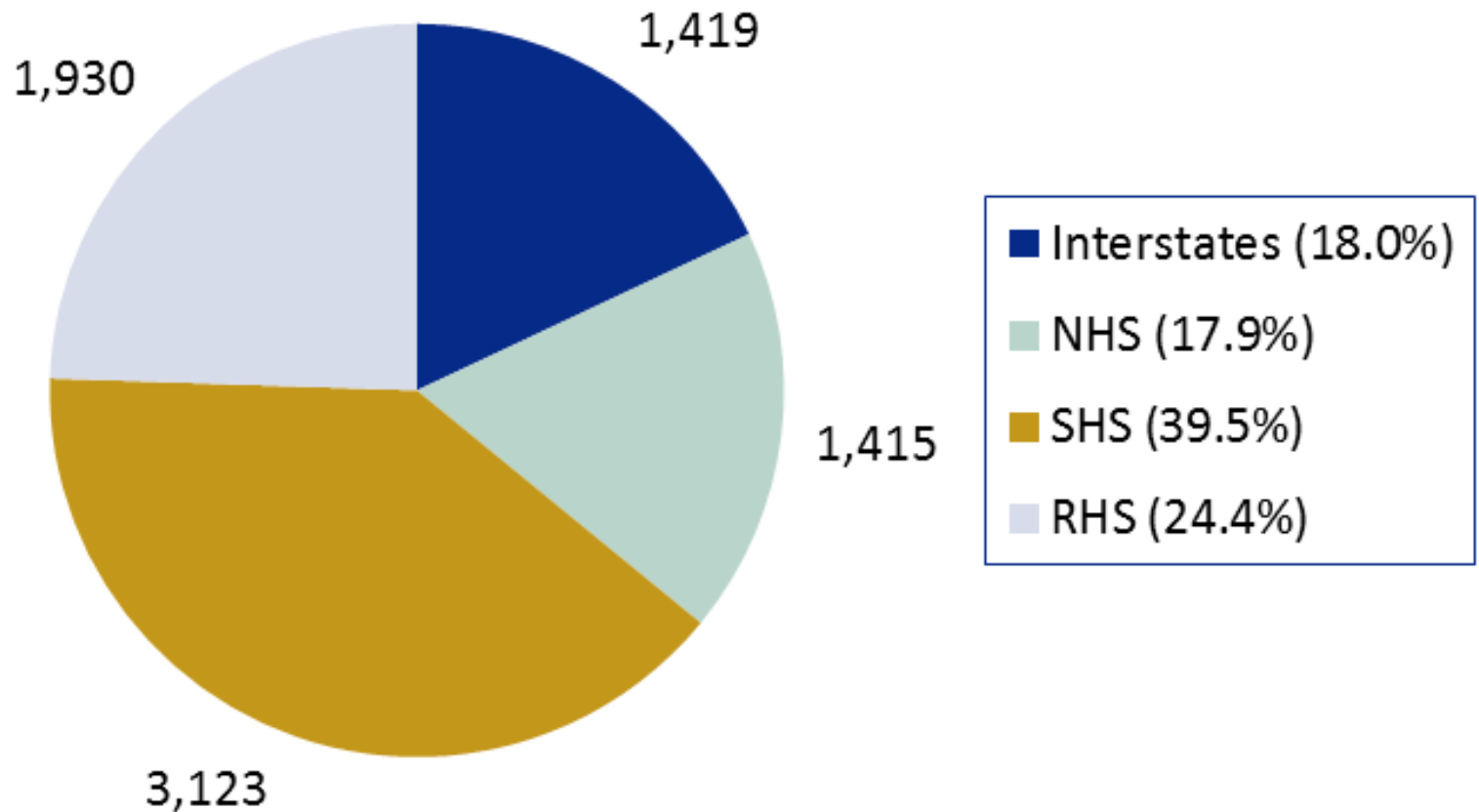
Highway Category	Center Line Miles	*Analysis Lane Miles	Lane Miles	Bridge Count	Bridge Deck Area, sq. ft.
Interstate	778	1556	3299	1,419	68,001,559
NHS	1981	2982	6693	1,415	39,160,556
SHS	6132	6243	12555	3,123	22,882,131
RHS	7341	7427	15144	1,930	7,876,947
Totals	16232	18207	37691	7,887	137,921,193
Local NHS	197	n/a	394	18	7,961,753

* = Pavement and Budget Analysis mileage is determined from the primary direction of travel for all undivided roadways and both directions for multi-lane divided roadways

Pavements



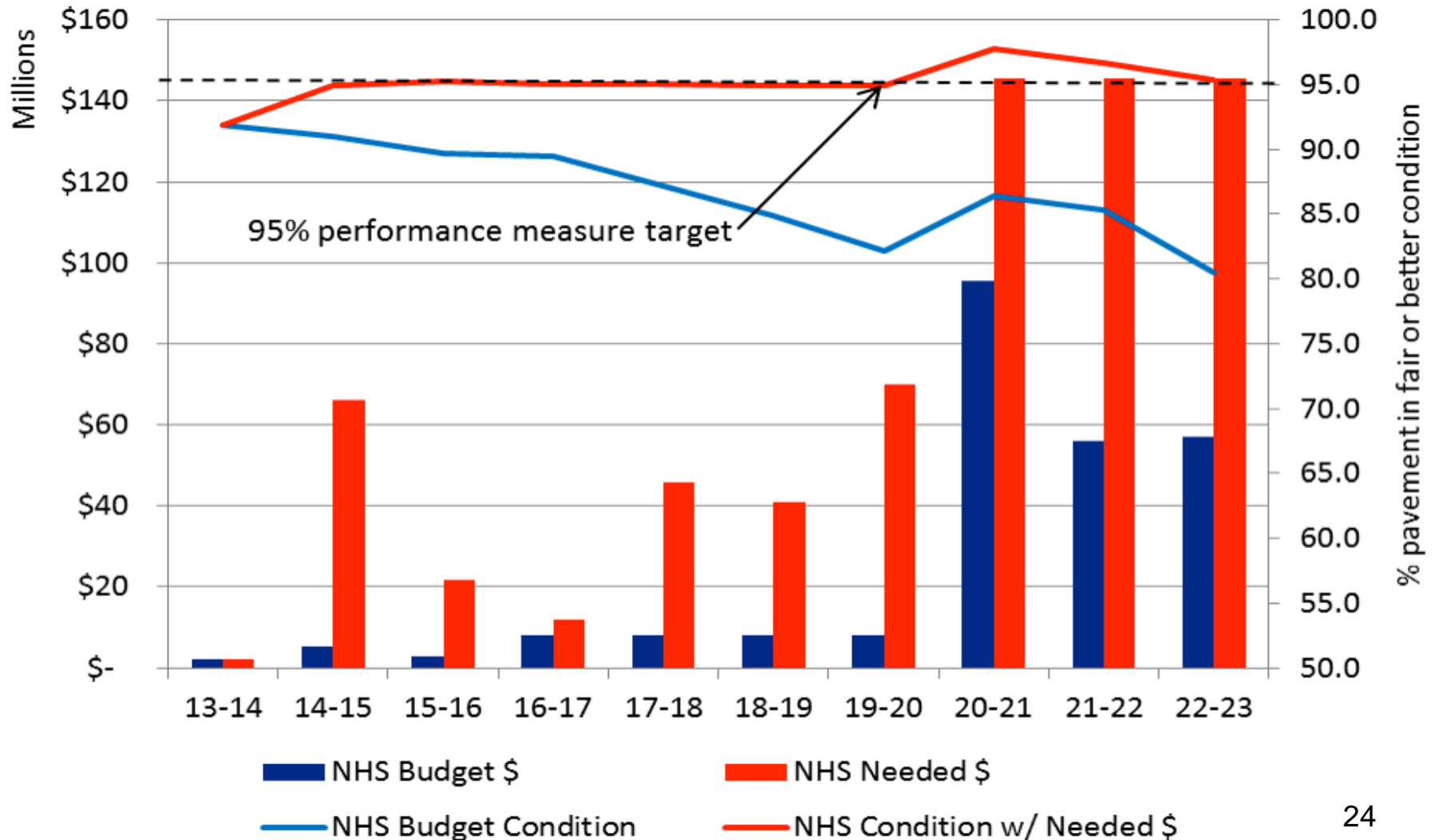
Bridges



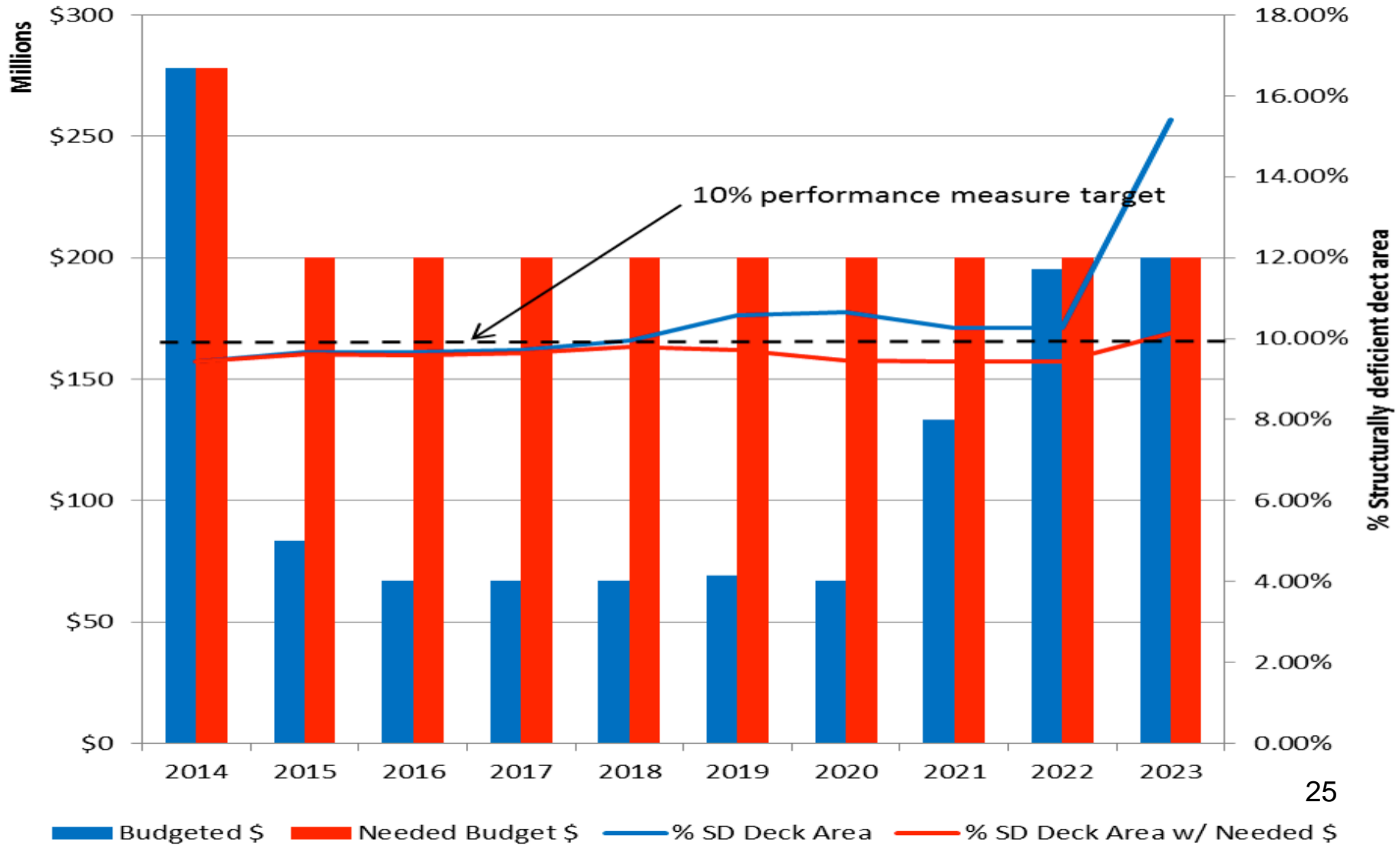
TAMP Financial Plan

- Revenue sources
- Estimate of revenue available over 10 years for roads and bridges
- Estimate of the costs needed to achieve condition performance targets
- Identification of funding gaps
- Investment Strategies
- Estimate of the value of the system

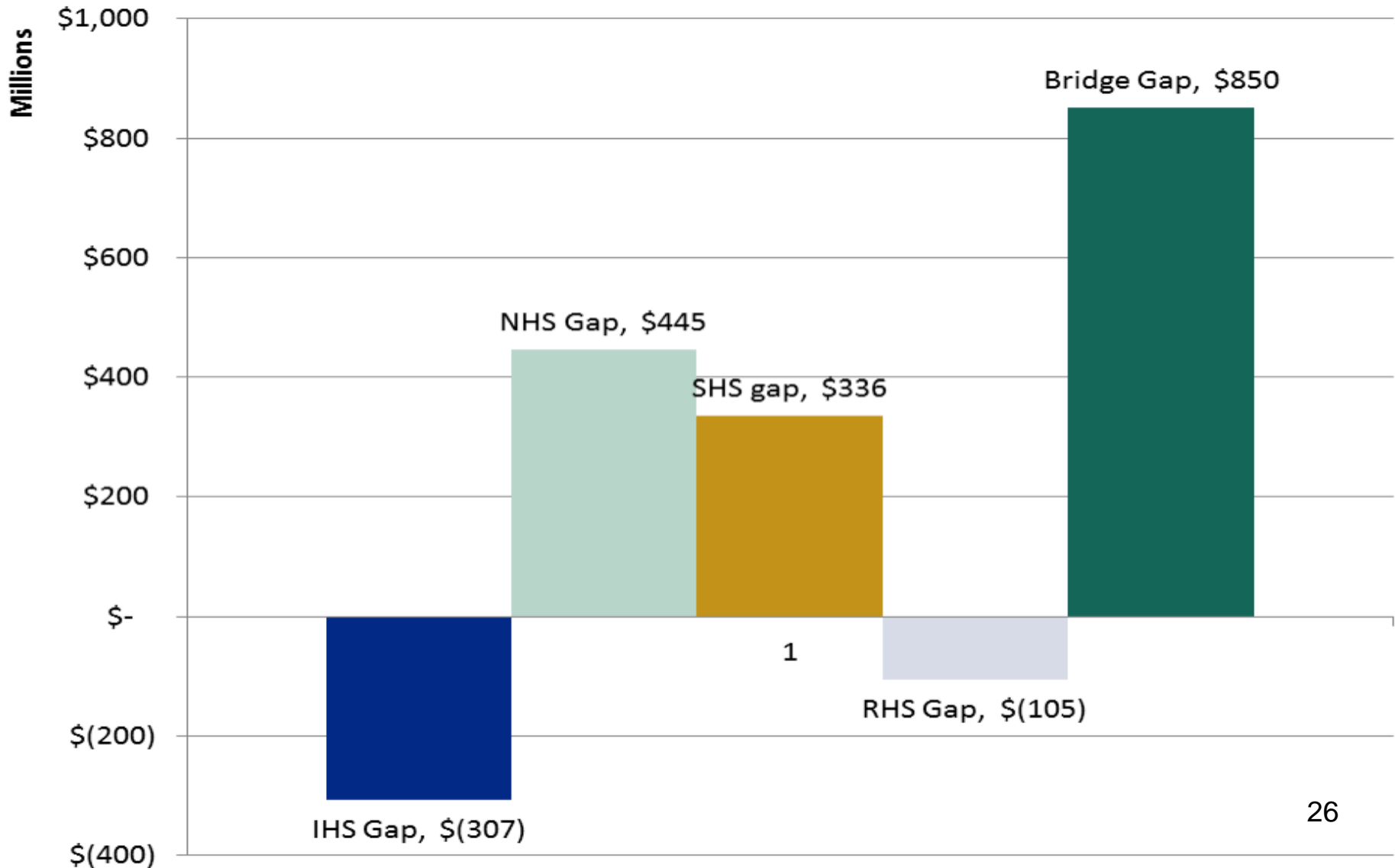
Funding Needed for Pavements (NHS, non-interstate)



Funding Needed for Bridges



Ten Year Funding Gap



Asset Sustainability

**LADOTD Pavement
Sustainability Ratio**

0.86

**LADOTD Bridge
Sustainability Ratio**

0.59

**LADOTD Asset
Sustainability Index**

0.74

Investment Strategies (examples)

- Focus on investments on interstates to maximize use of federal funds
- Capacity projects will only be funded with non-traditional sources
- Balance the funding to the performance targets for the four classifications of highways every two years
- Consider alternatives to full bridge replacement



Questions

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