CPBM/TPM TSP
Quarterly Web Call

March 6, 2025

Agenda

2:00 **Welcome and Agenda.** Christos Xenophontos, AASHTO CPBM Chair, Rhode Island DOT.

2:10 **AASHTO Updates.** Anna McLaughlin, AASHTO.

2:20 **Identifying Data Gaps and Developing New Data Collection Processes to Inform Decision-Making: Data Self-Assessment Tools & Agency Assessment Experiences.**

Will Duke, Spy Pond Partners, LLC.

Upcoming TPM Webinar & Discussion.

3:05 **AASHTO CPBM Business Meeting.** Christos Xenophontos, Rhode Island DOT.

- Subcommittee & Task Force Updates. Subcommittee & Task Force Chairs.

3:50 **Discussion.** All.

3:55 **Action Items.** Karen Miller, Missouri DOT.

4:00 **Discussion and Wrap-Up.** Christos Xenophontos, Rhode Island DOT.

NCHRP Project 23-37 Survey

- NCHRP is partnering with Iowa State University on NCHRP Project 23-37 "Integrating Performance Management, Risk Management, and Process Improvement: A Guide."
- Research team is conducting survey of state DOTs to understand state of practice for integration of Performance Management, Risk Management, and Process Improvement.
- Results will help identify best practices, challenges, and opportunities.
- Please complete five-minute survey (one per state DOT) by March 17, 2025: https://iastate.qualtrics.com/jfe/form/SV_b2Q3vDhYTLUsIdw
- Any questions or issues with survey, please contact Dr. Omar Smadi by phone: (515-294-8103) or email: smadi@iastate.edu

Register for TPM Webinar #25

- Today's meeting is introducing the topic of identifying data gaps and developing new data collection processes to inform decision-making

- We will continue the discussion on the March 19th TPM Webinar with a set of cases studies highlighting data collection and use at state DOTs:
  - Liz Williams, Massachusetts DOT
  - Stephen Kut, Rhode Island DOT

- Register: https://www.tpm-portal.com/events/tpm-webinar-25/

AASHTO Updates

Anna McLaughlin, AASHTO

Administrative Actions Since January 20

- January 20: Executive Order 14154, Section 7 singled out NEVI and CFI programs; "Included but not limited to" language applying to IRA and IIJA
- January 21: FHWA temporarily shuts down reimbursements for states
- January 21: Clarification memo from OMB; most formula funding flowing again but uncertainty around NEVI and CFI
- January 27: OMB M-25-13; Near complete freeze on all grant obligations and outlays effective 5:00pm on January 28
- January 28: Clarification memo from OMB; Federal court issues a temporary administrative order halting implementation of the freeze
- January 29: OMB M-25-14; Nullifies M-25-13
- January 29: Memorandum from USDOT on Implementation of Executive Orders Addressing Energy, Climate Change, Diversity, and Gender
- January 29: USDOT Order "Ensuring Reliance Upon Sound Economic Analysis in Department of Transportation Policies, Programs, and Activities"
- February 6: Letter from FHWA suspending state electric vehicle infrastructure deployment plans
- February 14: "Probationary" federal employees dismissed

Updated Reauthorization Timeline

- State feedback on modal white papers due Friday, February 21
- TPF Meeting on March 6: Consider and approve core policy principles and vision statement for reauthorization
- TPF Meeting on April 3: Vet first round of policy resolutions
- Tentative Special TPF session in April: Vet second round of policy resolutions
- Tentative Special Board of Directors meeting in April: Approve core policy principles and vision statement
- TPF at Spring Meeting on May 14: Vote on policy resolutions
- Board of Directors Meeting on May 15: Vote of policy resolutions

Feature Presentation: Identifying Data Gaps and Developing New Data Collection Processes to Inform Decision-Making

Data Self-Assessment Tools and Agency Assessment Experiences

AASHTO CPBM/TPM TSP Quarterly Meeting

March 6, 2025

spy pond partners, llc

Presentation Overview

Purpose

Highlight tools to better understand, improve, and apply agency data.

- **Data Self-Assessment Basics**
- **Assessment Methodologies**
  - Data Value Assessment
  - Data Maturity Assessment
  - TAM Data and Information System Assessments
- **Agency Assessment Experiences**

Data Assessment

The Basics

spy pond partners, llc

Agency Data Assessment Motivations

Is your agency effectively managing and using its data and information systems?

- Provide a foundation for data strategic plans or business plans
- Take stock of how well agency data is serving its intended purpose
- Identify opportunities for making better use of existing data (and systems)
- Build awareness of and consensus around needed data improvements
- Track progress (through periodic re-assessment)

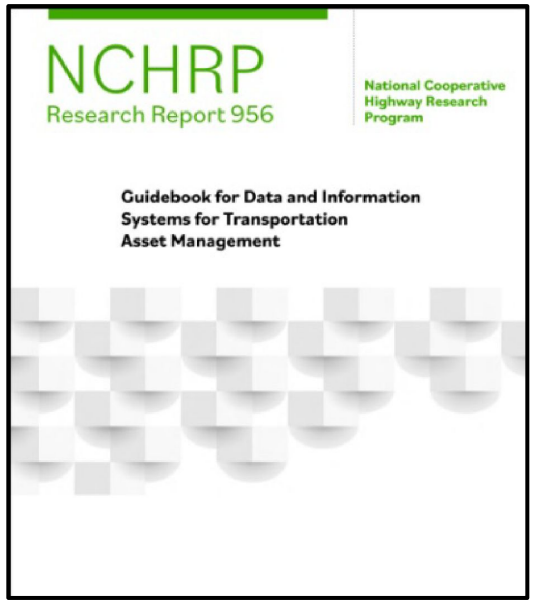
NCHRP 814 & 956: Data Self Assessment Tools

Data Value Assessment

Assess the extent data users feel data is providing value and meeting business needs.

Data Mgt. Maturity Assessment

Assess the agency capability to manage data assets to maximize their value.



TAM Data Assessment

Assess current practices and improve use of data and information for Transportation Asset Management.

NCHRP 814 Data Self-Assessment Background

Value & Maturity Assessments

NCHRP Project 08-92 *(2015)*

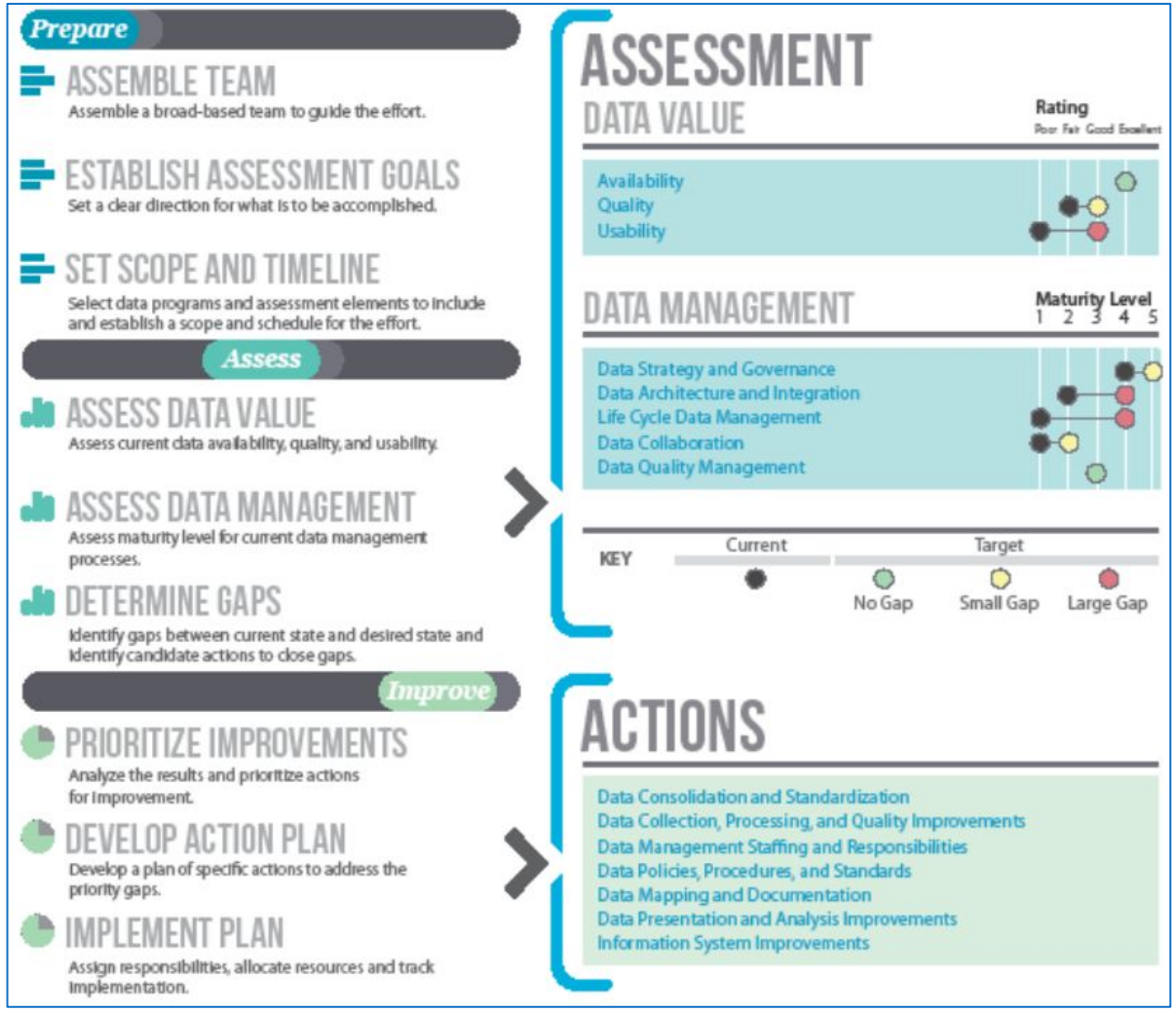
- Developed the data self-assessment tools
- Provided guidance through NCHRP Report 814

NCHRP 20-44(12) *(2022)*

- Supported implementation at 8 States and 1 MPO
- Prepared supplemental guidance
- Documented transferable practice

NCHRP 23-23 *(2024)*

- Provided data governance implementation guidance
- Delivered a web-based Data Mgt. Maturity Assessment tool



NCHRP 956 TAM Data Assessment Background

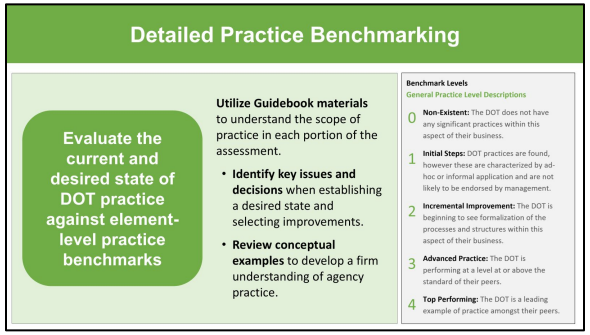
TAM Data Assessments

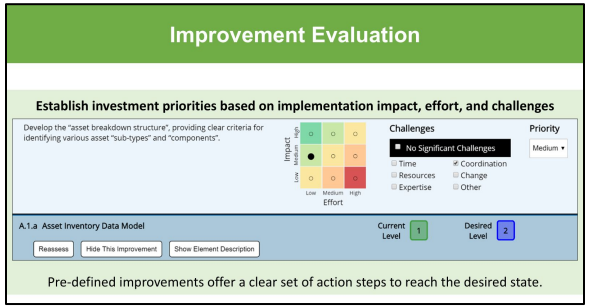
NCHRP Project 08-115 *(2022)*

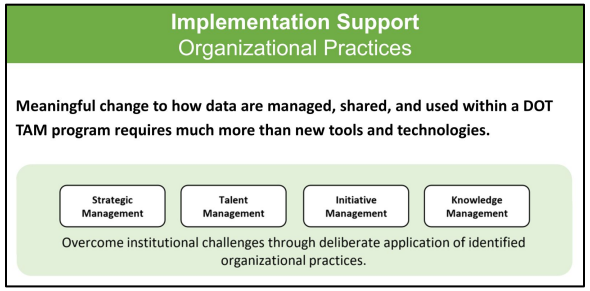
- Delivered a structured approach to assess and improve data and information for TAM
- Provided web-based AASHTO TAM Data Guide and AASTO TAM Data Assistant tools
- Published as NCHRP Report 956
- Supported implementation at 4 DOTs

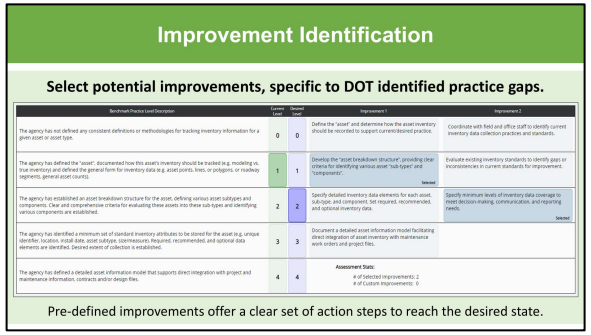
Recent DOT Implementations

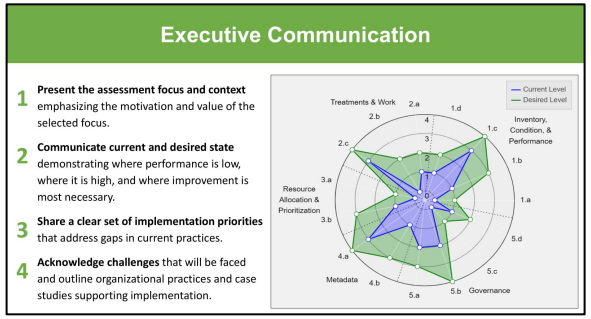
- Utah TAM Data Assessments
- Michigan TAM Data Assessments



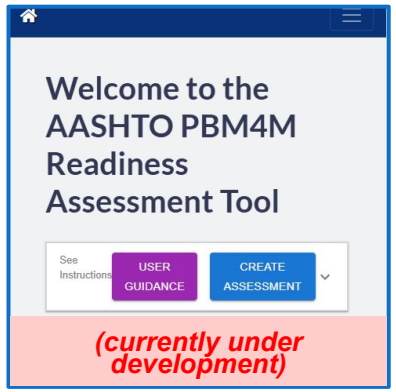








Other Data Assessment Tools



NCHRP 08-136: PBM4M Tool

Assess readiness for performance-based maintenance management and identify steps to close assessed gaps.

AASHTO AM Gap Analysis Tool

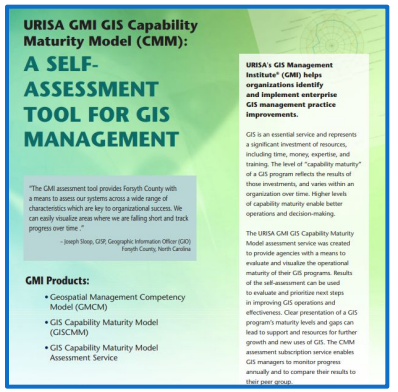
Evaluate current and desired asset management capabilities including Data Management and Information Systems.

FHWA Safety Data Assessment

Describe current capabilities of state safety data programs – across multiple capability maturity areas.

TPM Capability Maturity Model

Assess transportation performance management and identify specific steps to improve capabilities.



URISA Model

Assess capability maturity of an Enterprise GIS program – not Transportation specific, intended for local agencies, focused on operations and business users.

Slimgim-T

Assess and improve Enterprise GIS program structure, leadership, culture, capabilities, data, and technologies – with a focus on transportation.

Data Value Assessment

A Deeper Dive

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Data Value Assessment Elements & Tool

Data Importance

- How critical is a data source to a given business area or activity?

Data Availability

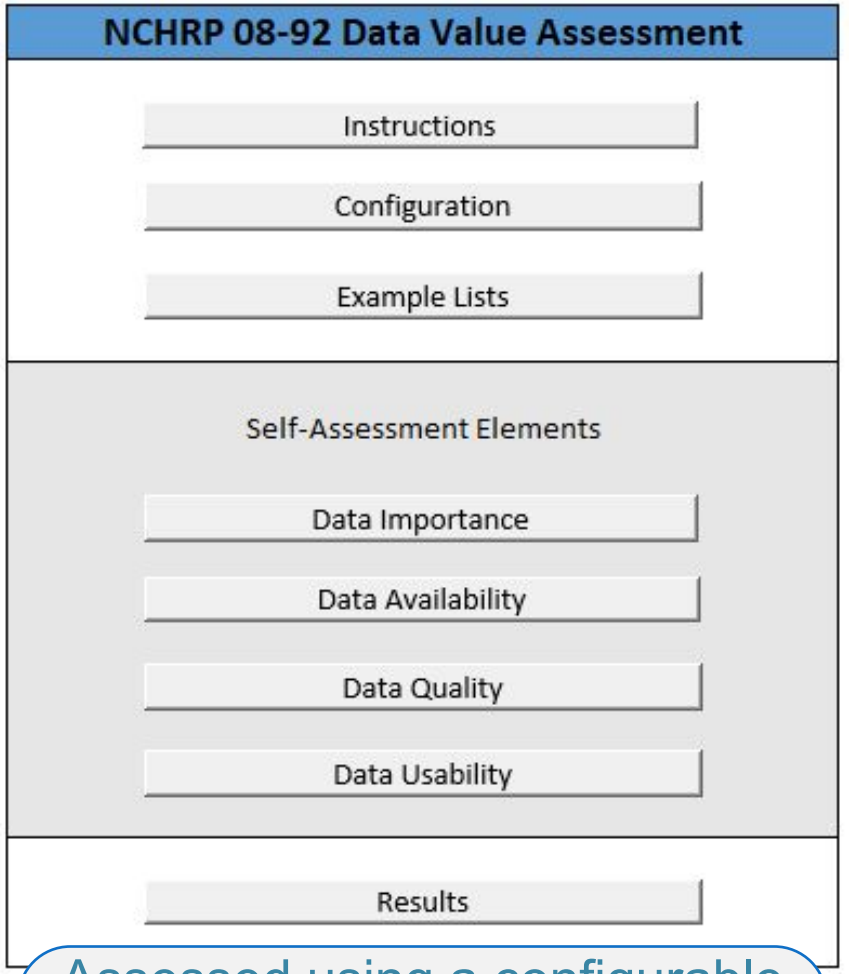
- Is the right kind of data in place, at the right detail, and with sufficient coverage?

Data Quality

- Is the data sufficiently accurate, credible, complete, and current to support decision-making?

Data Usability

- Can data be easily accessed, integrated, analyzed, and presented as needed to support decision-making?



Assessed using a configurable Spreadsheet Tool

Data Value Assessment Results

Initial Tool Configuration

Perform Data Value Assessment

Evaluate Data Importance

Evaluate Data Availability

Evaluate Data Quality

Evaluate Data Usability

Compiled Results

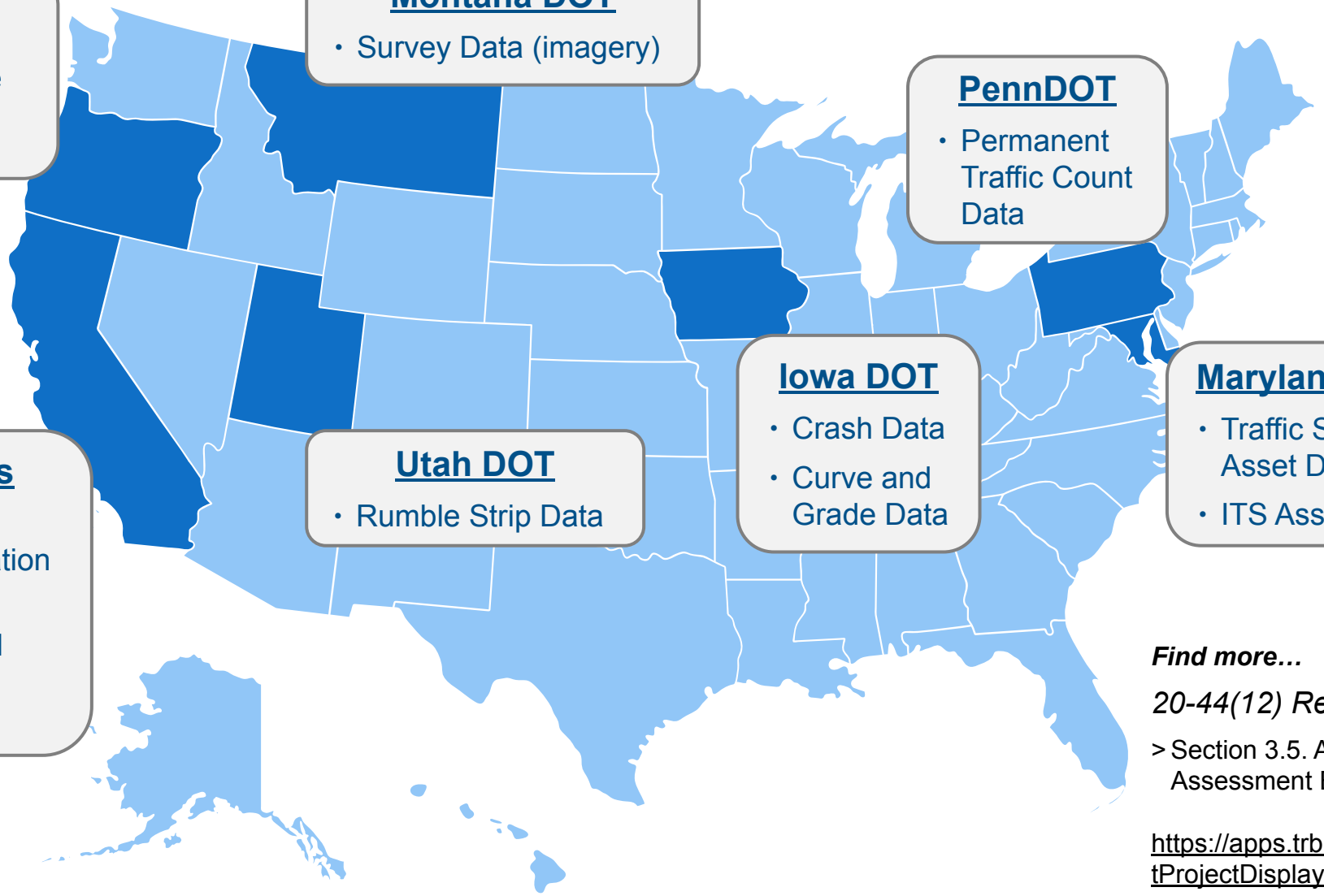
Results: Data Value Assessment

		Quality			
Data Source	**Importance**	**Currency**	**Accuracy**	**Completeness**	**Usability**
Source 1	High	Good	Fair	Fair	Good
Source 2	High	Good	Fair	Fair	Good
Source 3	High	Good	Fair	Fair	Fair
Source …	High	Good	Fair	Fair	Fair

Activity	**Availability**	**Quality**	**Usability**
Activity 1	Good	Fair	Good
Activity 2	Fair	Fair	Good
Activity 3	Fair	Fair	Good
Activity 4	Fair	Fair	Good
Activity 5	Excellent	Fair	Good
Activity ….	Good	Fair	Good

Business Area	**Availability**	**Quality**	**Usability**
Conservative (limiting activity)	Fair	Fair	Good
Optimistic (average of activities)	Good	Fair	Good

Data Value Assessment Experiences



Oregon DOT
- Medium- and Heavy-Duty Vehicle Data
- Culvert Data

Montana DOT
- Survey Data (imagery)

PennDOT
- Permanent Traffic Count Data

Caltrans
- Active Transportation Planning
- Multimodal Corridor Planning

Utah DOT
- Rumble Strip Data

Iowa DOT
- Crash Data
- Curve and Grade Data

Maryland DOT
- Traffic Signals Asset Data
- ITS Asset Data

Find more…

20-44(12) Research Report

> Section 3.5. Agency-Specific Assessment Experiences

https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4669

Data Maturity Assessment

A Deeper Dive

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Data Management Maturity Assessment Elements

Data Strategy and Governance

- How decisions are made – What to collect? How to manage and deliver data?
- Includes roles, accountability, policies, and processes

Data Lifecycle Management

- How data are maintained, preserved, protected, documented, and delivered

Data Architecture and Integration

- How data is standardized and integrated to minimize duplication and inconsistencies

Data Collaboration

- How collection and management is coordinated with internal and external users

Data Quality Management

- How data quality is defined, validated, measured, and reported

Data Management Maturity Levels

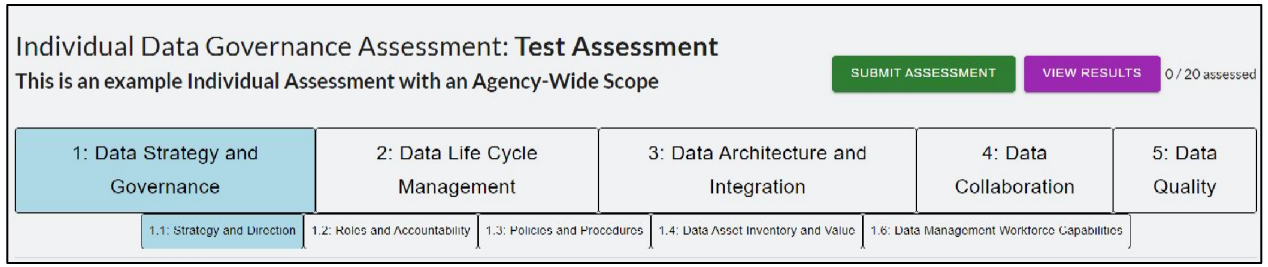
Maturity Level	Definition
1 – Initial	Processes, strategies and tools are generally **ad-hoc** rather than proactive or enterprise-wide; successes are due to individual efforts.
2 – Developing	Widespread awareness of more mature data management practices; **recognition of the need** to improve processes, strategies and tools.
3 – Defined	Processes, strategies and tools have been developed, agreed-upon and **documented**.
4 – Functioning	Processes, strategies and tools are generally being **implemented** as defined.
5 – Optimizing	Strategies, processes and tools are **routinely evaluated and improved**.

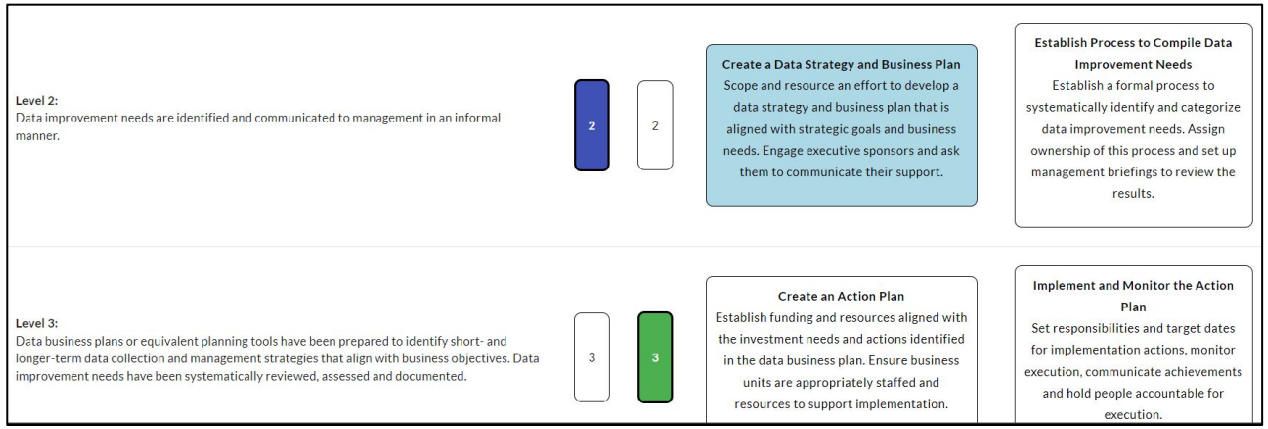
Companion Digital Tool

A product of NCHRP Project 23-23

- **Create Assessments**
- **Assess Maturity**
- **Select Improvements**
- **Summarize and Communicate Outcomes**
- **Support Implementation**

https://dgmassessment.tpm-portal.com/sign-in/





Data Mgt. Maturity Assessment Experiences

Find more…

20-44(12)
Research Report

> Section 3.5. Agency-Specific Assessment Experiences

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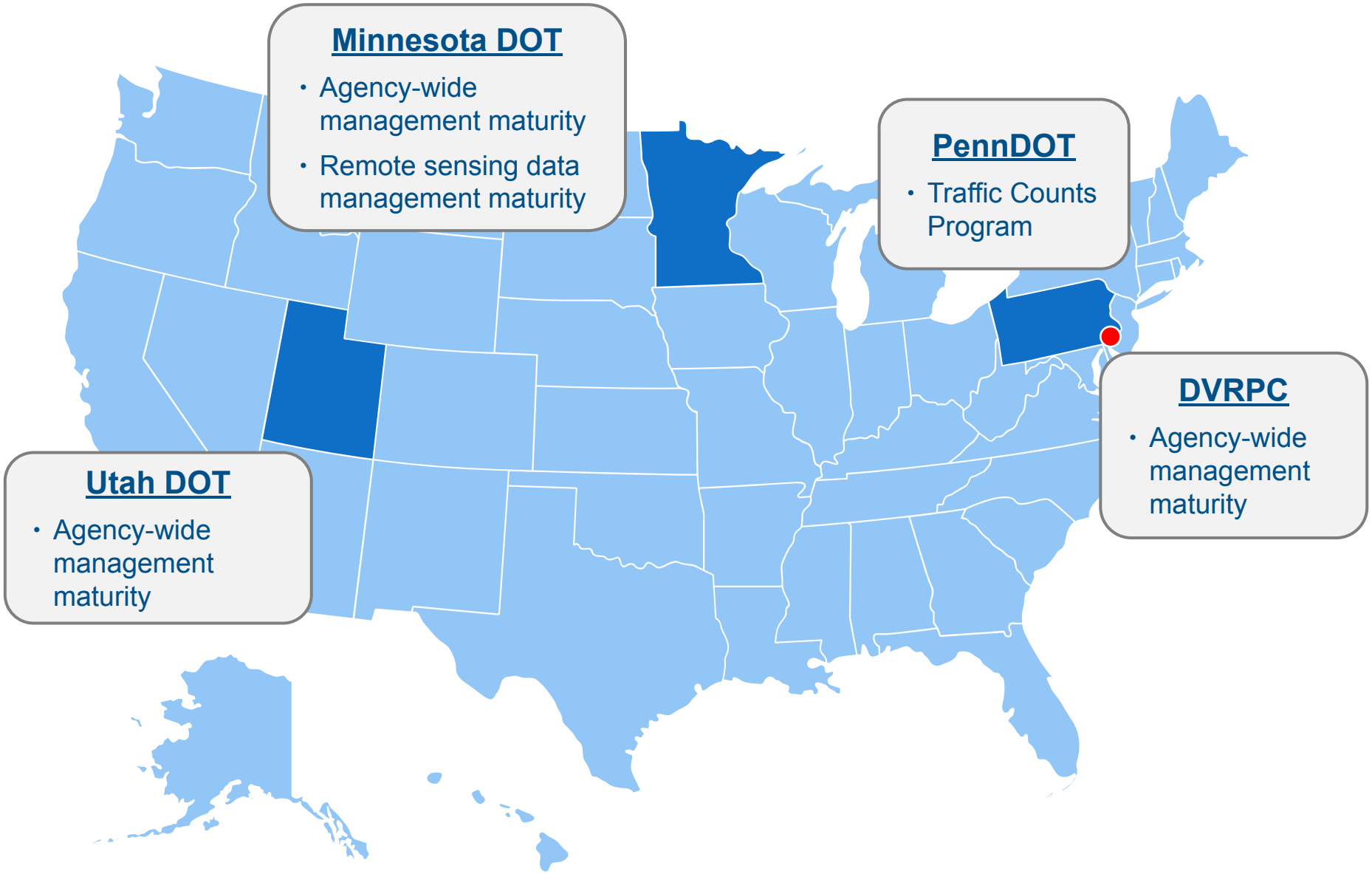

TAM Data Assessment

A Deeper Dive

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NCHRP Report 956: TAM Data Assessment

The TAM Data Guide provides a structured approach to:

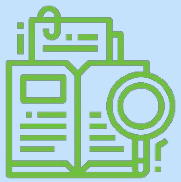
- Assess current practice
- Improve use of data and information for TAM

Companion Digital Tool

Detailed Practice Benchmarking

Improvement Identification and Evaluation

Executive Communication Summaries



Implementation Support

Guidebook Technical Framework

Specify and Standardize Data – Establish asset, treatment, and work data standards; prioritization factors; metadata standards; and governance programs.

Collect Data – Address coverage, automation, and collection of data for incorporation into the TAM program.

Store, Integrate, and Access Data – Structure, integrate, and provide access to data to support TAM operations, management and reporting needs.

Analyze Data – Establish decision-support tools, techniques, and practices to develop actionable information and insights.

Act Informed by Data – Apply data and information systems, processes, tools, and techniques to TAM decision-making.

Practice Benchmarking

The assessment includes 51 individual assessment elements.

- Each element has a unique set of practice benchmarks.
- The benchmarks are organized on a 0-4 scale.
- Each level in the scale has a unique practice benchmark.

Note: this differs from a Capability Maturity Model – which assesses the level of process standardization/formalization.

Benchmark Levels

General Practice Level Descriptions

0 **Non-Existent:** The DOT does not have any significant practices within this aspect of their business.

1 **Initial Steps:** DOT practices are found, however these are characterized by ad-hoc or informal application and are not likely to be endorsed by management.

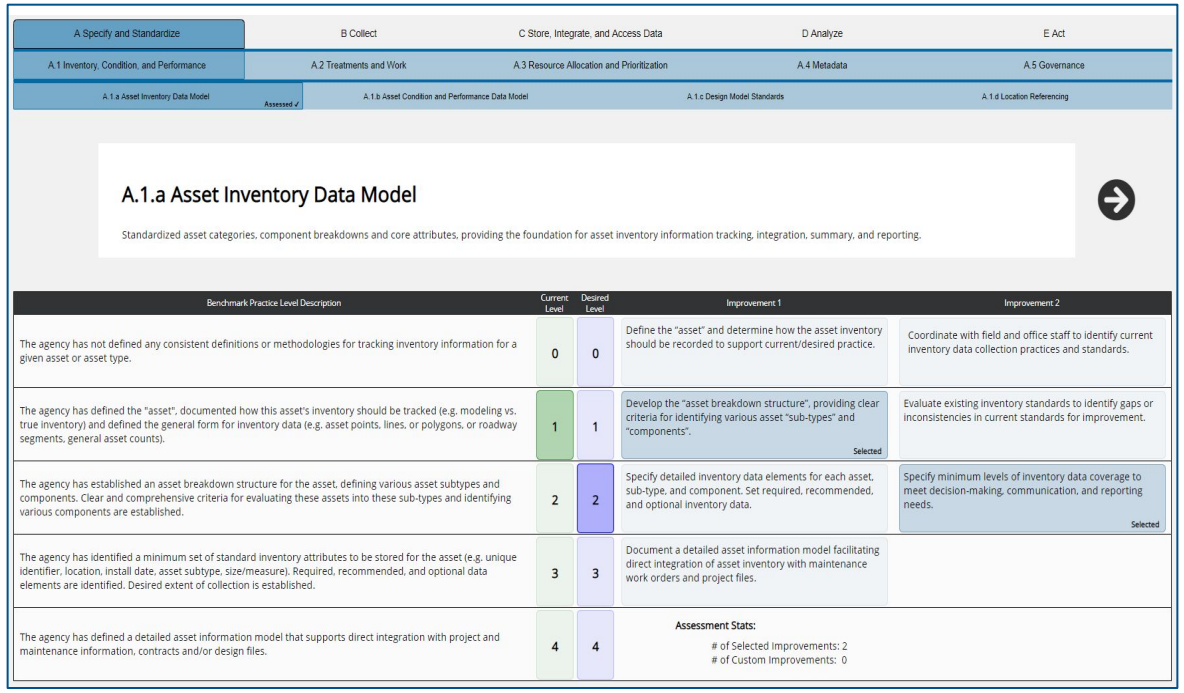
2 **Incremental Improvement:** The DOT is beginning to see formalization of the processes and structures within this aspect of their business.

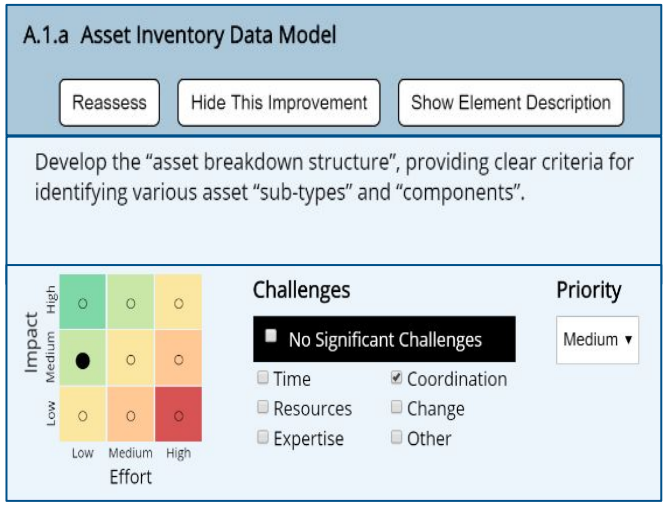
3 **Advanced Practice:** The DOT is performing at a level at or above the standard of their peers.

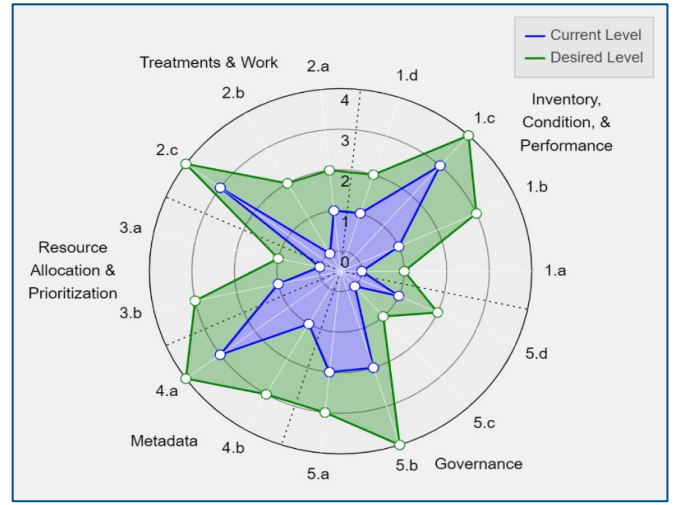
4 **Top Performing:** The DOT is a leading example of practice amongst their peers.

Companion Digital Tool

- Create Assessments
- Benchmark Performance
- Select, Evaluate, and Prioritize Improvements
- Summarize and Communicate Outcomes
- Support Implementation

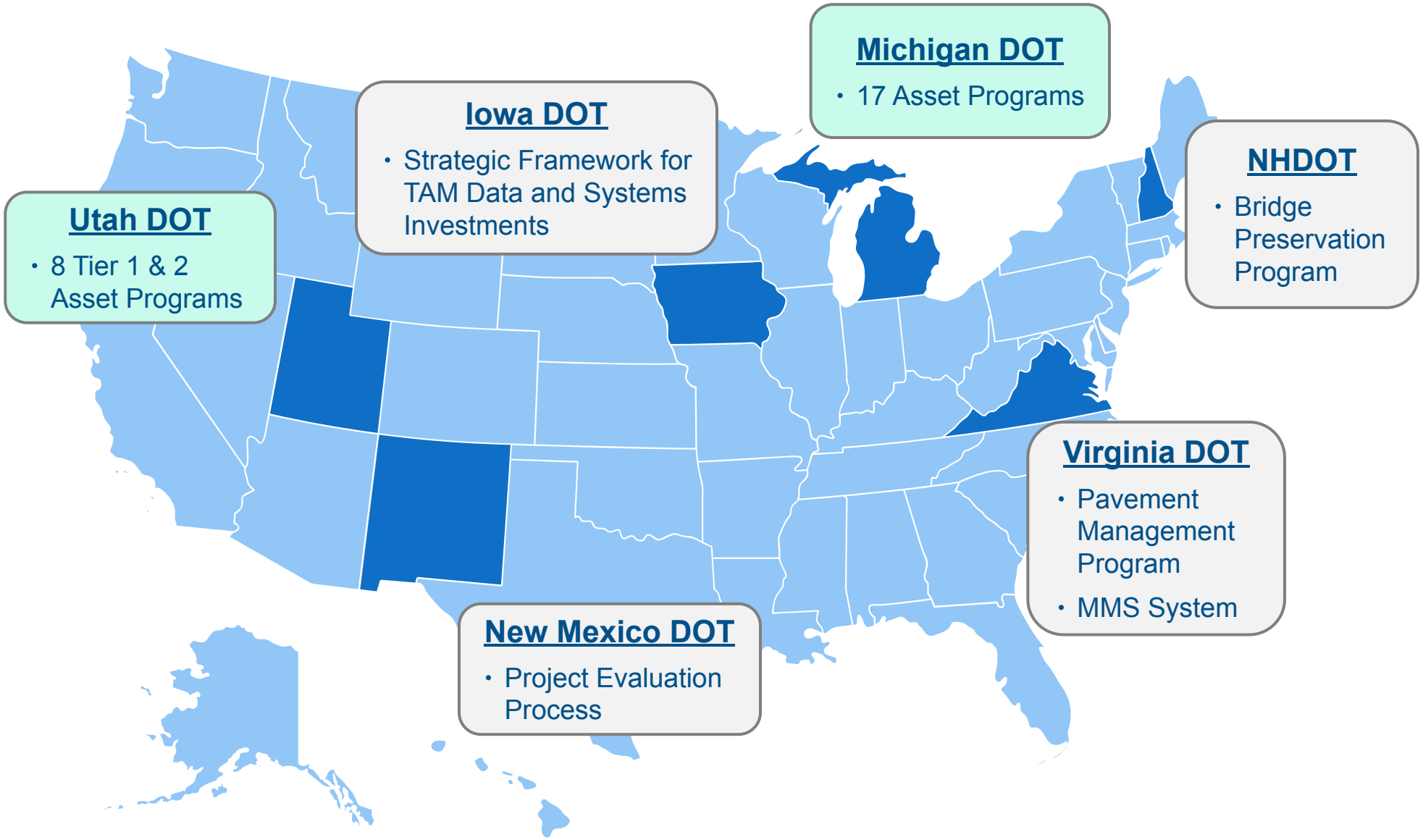






https://dataassessment.tam-portal.com/login/

TAM Data Assessment Experiences



Michigan DOT
- 17 Asset Programs

Iowa DOT
- Strategic Framework for TAM Data and Systems Investments

Utah DOT
- 8 Tier 1 & 2 Asset Programs

NHDOT
- Bridge Preservation Program

Virginia DOT
- Pavement Management Program
- MMS System

New Mexico DOT
- Project Evaluation Process

Find more…

AASHTO TAM Data Guide:

> Support Materials

> Research Implementation Examples

https://www.tamdataguide.com/research-implementation-examples/

Implementation Support Materials

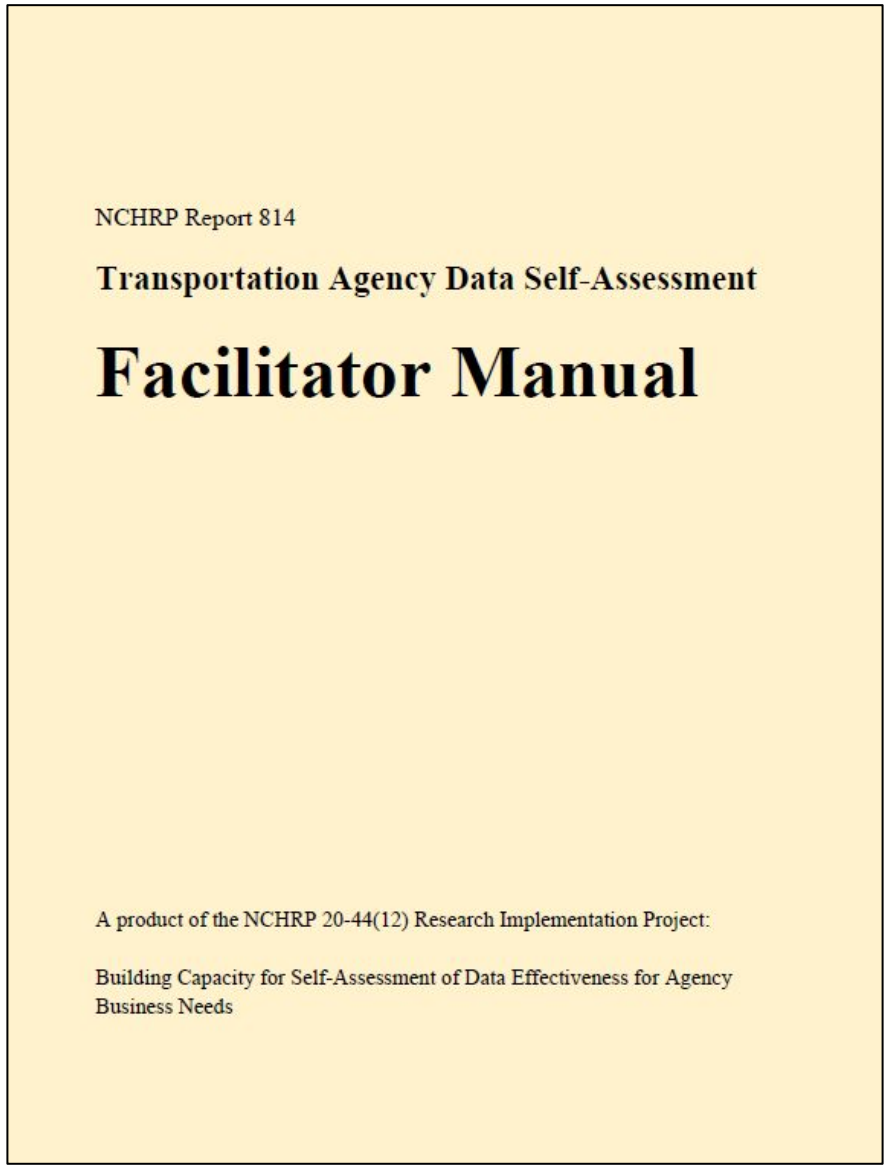
spy pond partners, llc

Report 814 Data Assessment Facilitator Manual

Step-by-step instructions for each phase in the Data Value and Management Maturity assessments.

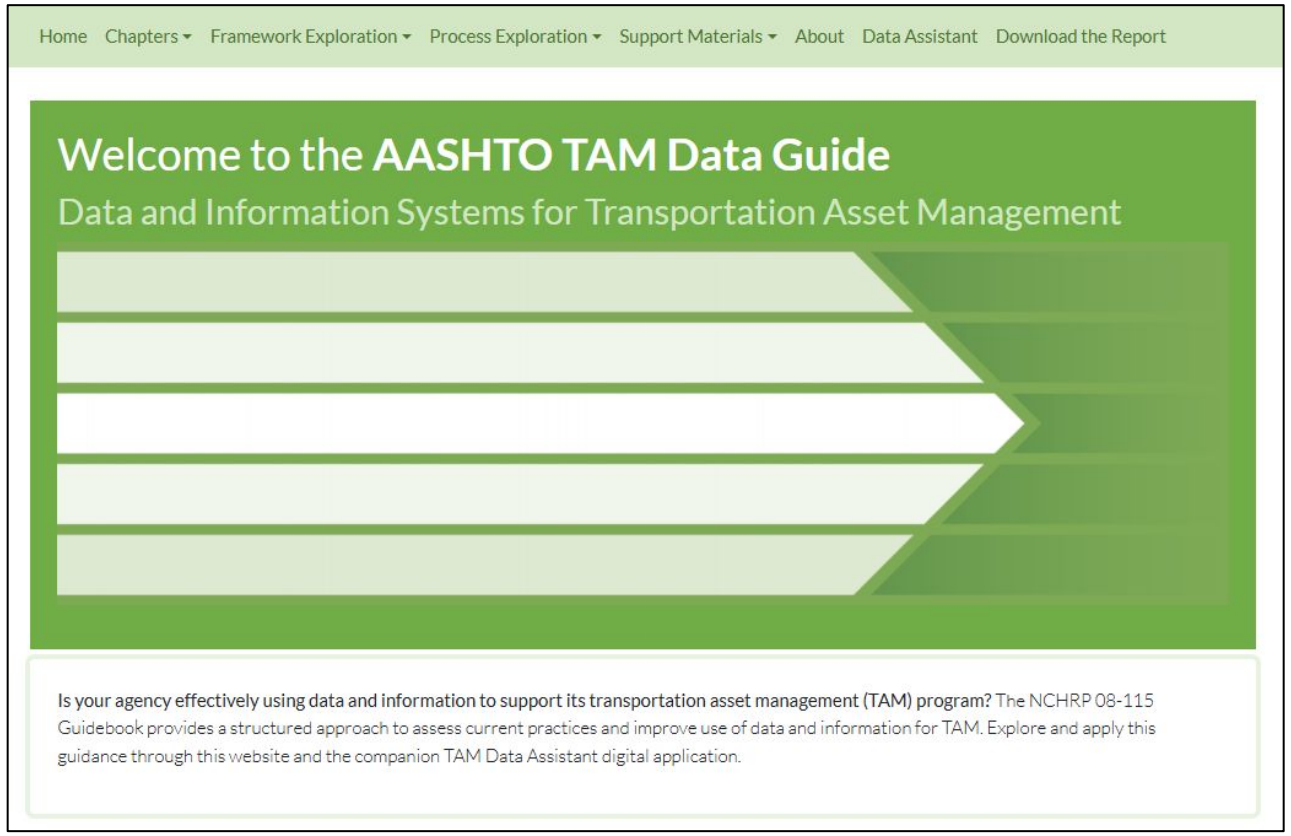
Organized into three sections:

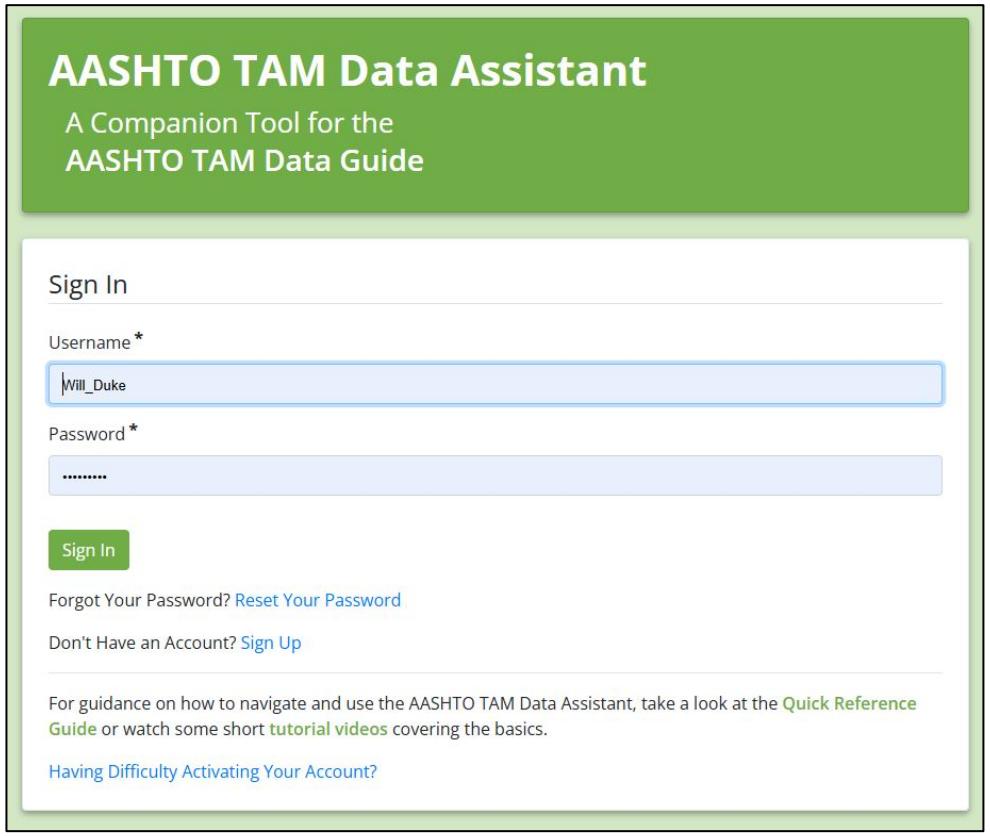
- “Getting Started”
- Data Management Maturity Assessment Facilitation
- Data Value Assessment Facilitation



AASHTO TAM Data Guide and TAM Data Assistant

Web-based support for the TAM Data assessment.





https://www.tamdataguide.com/

https://dataassessment.tam-portal.com/login/

Data Self-Assessment Resources

NCHRP Report 814
https://www.trb.org/Main/Blurbs/173470.aspx

NCHRP Project 20-44(12)
https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4669

NCHRP Project 08-115
https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4362

NCHRP Project 23-23
https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=5168

Data Management Assessment Tool
https://dgmassessment.tpm-portal.com/sign-in/

Thank You

Please contact me any time!

Will Duke
wduke@spypondpartners.com

CPBM Business Meeting:

CPBM Subcommittee & Task Force Updates

Christos Xenophontos, Rhode Island DOT

AASHTO CPBM Chair

Subcommittee on Policy and Rulemaking

Ryan Huff, Nebraska DOT
Lori Fisette, Rhode Island DOT

Reauthorization and TAMP NPRM

- Update on Executive Orders and other policy actions
- Reauthorization - Interview with Senate EPW on 2/18
- Update on USDOT's new governing principles and priorities

Subcommittee on Research

Edgardo Block, Connecticut DOT
Alma Mujkanovic, Georgia DOT

Subcommittee on Organizational Management

Gary Vansuch, Colorado DOT
David Putz, Iowa DOT
Gehan Elsayed, West Virginia DOT

Mission & Focus

- Mission - The focus of the Subcommittee on Organizational Management is on the development and implementation of:
  - Organizational management processes
  - Measures
  - Improvement frameworks
  - Strategies

  …in order to optimize the efficiency and effectiveness of transportation agencies
- We employ this definition of “Organizational Management” - the process of organizing, planning, leading and optimizing resources within an agency with the overall aim of achieving its goals and objectives.
- The concept of organizational management is based on the idea that there is a correlation between an agency’s capabilities in people, operations. and agency strategies to successfully implement their goals and objectives.

Current Activities

- Leadership of the the OM Subcommittee is working to clarify the focus of the Subcommittee, including the products and services produced by the Subcommittee for its customers
- Following that, the OM Subcommittee work with key executives at AASHTO member organizations to recruit members for the Committee
- The OM Committee has partnered for many years with the TRB Committee on Workforce Development and Organizational Excellence (AJE15)
  - The TRB Summit on the Future of the Transportation Workforce is a key upcoming product, in early June in the Denver metropolitan area.

Task Force on Emerging Performance Areas

Kelly Travelbee, Michigan DOT

Subcommittee on Risk Management

Nathan Lee, Utah DOT
William Johnson, Colorado DOT
Monica Aleman-Smoot, Texas DOT

Recent Activities

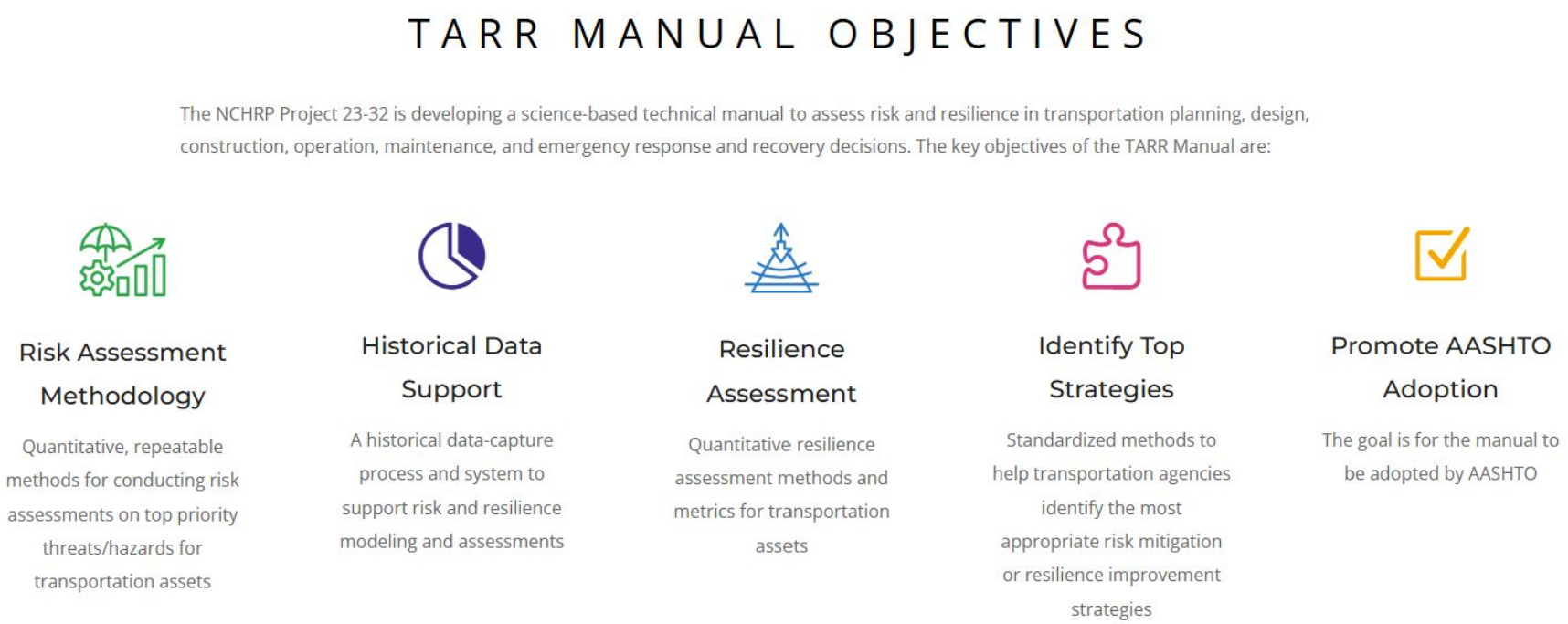
- Recap of February Meeting
  - Select TRB Topics:
    - AJE00(1) presentation and recommendations
    - MHEVRA Tool - Georgia DOT
  - NPRM (23 CFR part 515) and the Subcommittee on Risk Management
    - Comments submitted by AASHTO
- Next meeting April 14 1:00 PM Eastern
  - Soliciting presenters on project and delivery risks

Recent Activities

- NCHRP 23-32 Project and Task Force Update
  - Future Manual has a name:
    - Transportation Asset Risk and Resilience (TARR)
  - Workshop on February 25 & 26
    - Covered threat/asset pair models for:
      - flood/pavement and bridge, storm surge/bridge, embankment erosion/roadway prism, rockfall/roadway prism, heat/rail, wind/mast arm
    - Working on sending out tabletop exercises to the Task Force and other stakeholders for additional feedback.

Recent Activities

- NCHRP 23-32 Project and Task Force Update
  - New project website
    - tarrmanual.com



Subcommittee on Asset Management

Michael Johnson, California DOT
Justin Bruner, Pennsylvania DOT

Recent Activities

- The Sub-committee has been focused on setting our work plan for the year.
- We conducted an online poll of our members to determine which of our potential work plan activities resonated.
- In 2025 much of the sub-committee work will revolve around the national conference in August.
- The sub-committee is taking the lead on the development of the Peer Exchange in conjunction with the national conference.

Discussion

Review Action Items

Wrap Up

- Notes and materials from this meeting will be posted on the TPM Portal at TPM-portal.com
- Visit the TPM Portal for tools and resources, including links to the TPM Training Hub, TPM Webinar Series slides and recorded sessions, videos, state performance-based plans, and much more content for the TPM Community
- Watch you email for the upcoming Winter 2025 TPM Newsletter focusing on Access to Destinations and other updates
- Join us for upcoming TPM Webinars!
  - TPM Webinar #25 (March 19, 2025, 2-3:30 PM ET) Topic: Part 2 - Case Studies: Identifying Data Gaps and Developing New Data Collection Processes to Inform Decision-Making
  - TPM Webinar #26 (May 21, 2025, 2-3:30 PM ET) Topic: Case Studies in Telling a Story: How to Leverage Collaboration and Communication in Performance Management