

National Perspective on TSMO

Ahnaf Morshed, TSMO Program Manager

Table of Contents

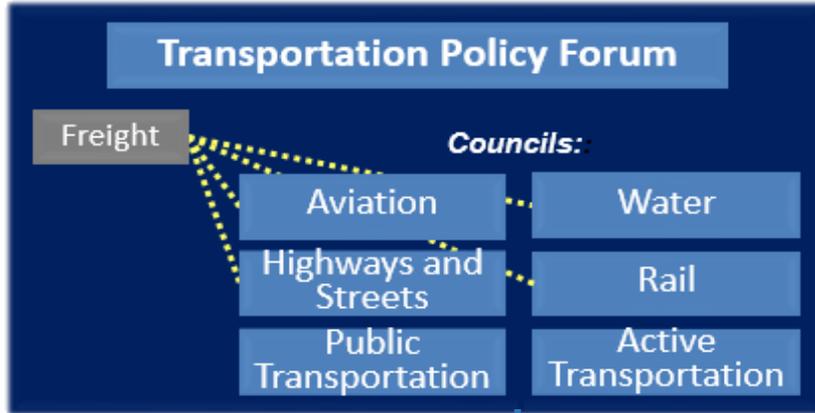
- AASHTO Reauthorization
 - Operations Priorities
 - What does this mean for States?
- Operations & Safety Integration
- AASHTO AI Initiative
- CTSO
- NOCoE

What is AASHTO?

- Nonprofit association that was founded in 1914
- Members include:
 - Transportation departments of the 50 states, the District of Columbia and Puerto Rico
- We cover all modes of transportation:
 - Highways
 - Transit
 - Rail
 - Aviation
 - Water
 - Active Transportation



Policy Bodies:



Board of Directors

- Executive Committee
- Strategic Management Committee

Special Committees:

- AASHTOWare
- Research and Innovation
- Associate Members

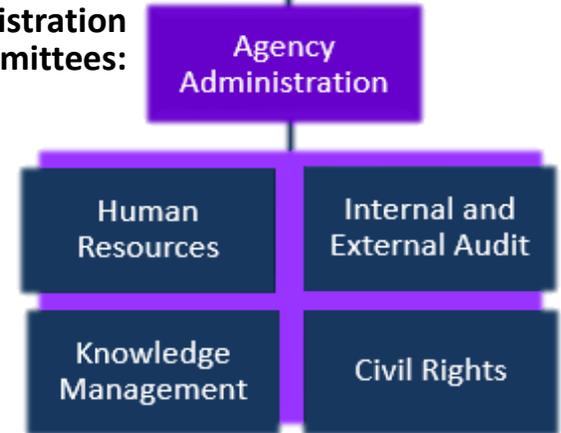
Program Delivery and Operations Committees:



Enterprise/Cross-Discipline Committees:



Administration Committees:



06/18/25

CTSO Co-Vice Chair
Shante Hastings, DE

CTSO Chair
Scott Marler, IA

CTSO Co-Vice Chair
Lisa Wilson, UT

AASHTO Staff

Operations Subcommittee

Technology Subcommittee

Freight Operations Subcommittee

Research Development and Implementation Coordinators

Traveler Information Systems Community of Practice

Transportation Incident Management Community of Practice

Connected and Automated Vehicles (CAV) Community of Practice

Operations Strategies Working Group

Communications Technology Working Group

Joint CAV Inter-Committee Working Group

Joint Subcommittee on Alternative and Innovative Uses of the Right of Way

Joint Transportation Cybersecurity Community of Practice

Operations Implementation Working Group

ITS Working Group

System Mobility & Automated Technologies Working Group

Workforce/Educate, Engage and Empower (3E) Task Force

National Operations Center of Excellence (NOCoE)

Transportation Operations Manual (TOM) Technical Committee

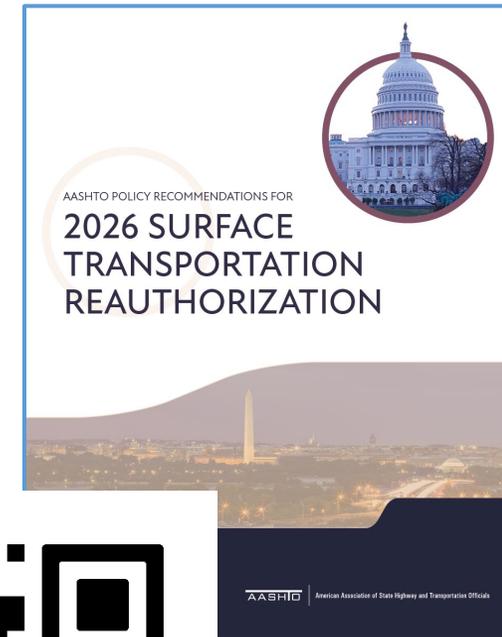
Reauthorization

Surface Transportation Reauthorization

AASHTO's Vision for Surface Transportation Reauthorization calls for a world-class transportation system that supports and strengthens the nation's transportation infrastructure for a strong economy with improved safety and mobility.

Core Policy Principles

1. Prioritize formula-based federal funding to states.
2. Improve project delivery and program administration by increasing flexibility, simplifying environmental regulations, and reducing program burdens.
3. Create a more safe, resilient, and efficient future by supporting state DOTs' ability to harness innovation and technology.



TSMO Policies

- Expand eligibility to fund technology and institute procurement flexibility
- Integrate operations considerations into every aspect of the federal aid project development process
- Strengthen the connection between safety and operations through TSMO integration

Additional Policies

- Prioritize formula funding
- Reserve discretionary grants only for projects of utmost federal interest
- Strengthen state flexibility
- Modernize the NEPA review
- Increase eligible activities and federal share for safety programs

What does this mean for State DOT's and their partners?

- Increased funds available for investing in emerging technologies
- Increasing project efficiency and bolstering innovation
- Integration of operations in wider range of DOT projects
- Strengthening the connection between safety and TSMO
- Increased access and stability for federal dollars

Integration Safety & TSMO

Integrating Safety and TSMO

- Advocating for policies that advance safety and TSMO
- Operations Practitioners Workshops: Synergizing Strategies for Enhanced Outcomes
 - Encourage TSMO initiatives to integrate TSMO strategies with Safe System frameworks.
 - Focus on developing safety-based dimension or integrate safety in all levels of TSMO capability maturity model.

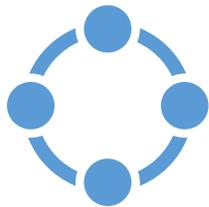
Operations Practitioners Workshop

Engages Transportation
Systems Management
and Operations
(TSMO) professionals

Explore key TSMO
topics through
collaboration and
discussion

Facilitates peer
exchange and
interactive discussions

Operations Practitioners Workshop



2025 Theme: Connecting Safety and Operations: Synergizing Strategies for Enhanced Outcomes



2025 Locations: Miami, FL (27 Participants) & St. Louis, MO (19 Participants) || 10 States



Highlighted the importance of aligning safety and operations efforts

Agenda Highlights

Session 1: Connecting TSMO and Safety

Explore how TSMO strategies directly enhance safety outcomes through actionable insights from peers.

Session 2: Planning Synergies – Aligning Safety and Mobility

Dive into the TSMO Capability Maturity Model (CMM) with hands-on activities to integrate safety across planning dimensions.

Session 3: Scenario-Based Discussions

Interactive tabletop exercises matching TSMO strategies to Safe System Approach principles.

Session 4: Panel Discussion – Bridging Safety and Operations

Hear from DOT leaders on challenges, successes, and lessons in aligning safety and operations goals.

Session 5: Transportation Operations Manual (TOM) Deep Dive

Learn how to utilize AASHTO's TOM to support statewide operations planning and deployment.

Session 6: Developing Action Plans

Collaborate in small groups to build agency-level action plans and implementation roadmaps.

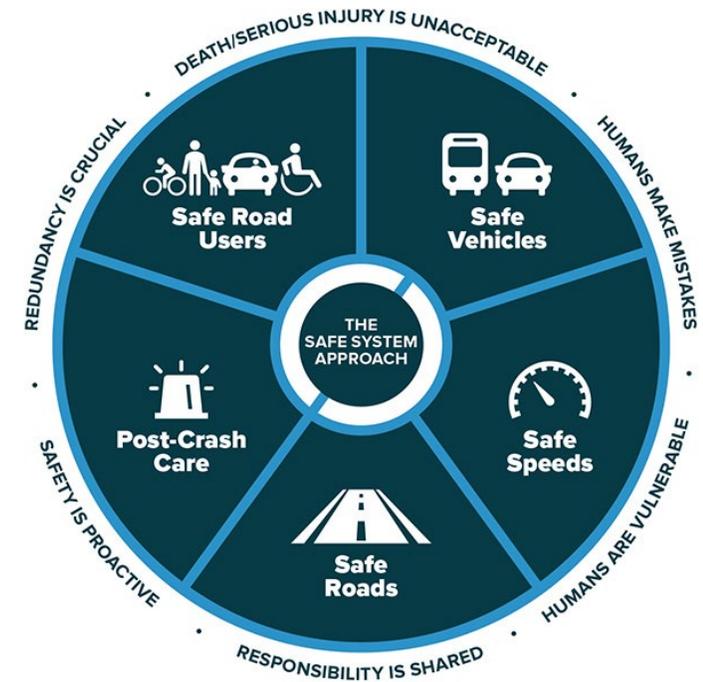
Planning Synergies – Aligning Safety and Mobility



- Option 1: Add safety as a core dimension in the CMM
- Option 2: Integrate safety into existing CMM dimensions

Source: FHWA, "Developing and Sustaining a Transportation Systems Management & Operations Mission for Your Organization: A Primer For Program Planning"

Matching TSMO Strategies with Safe System Elements



Source: FHWA.

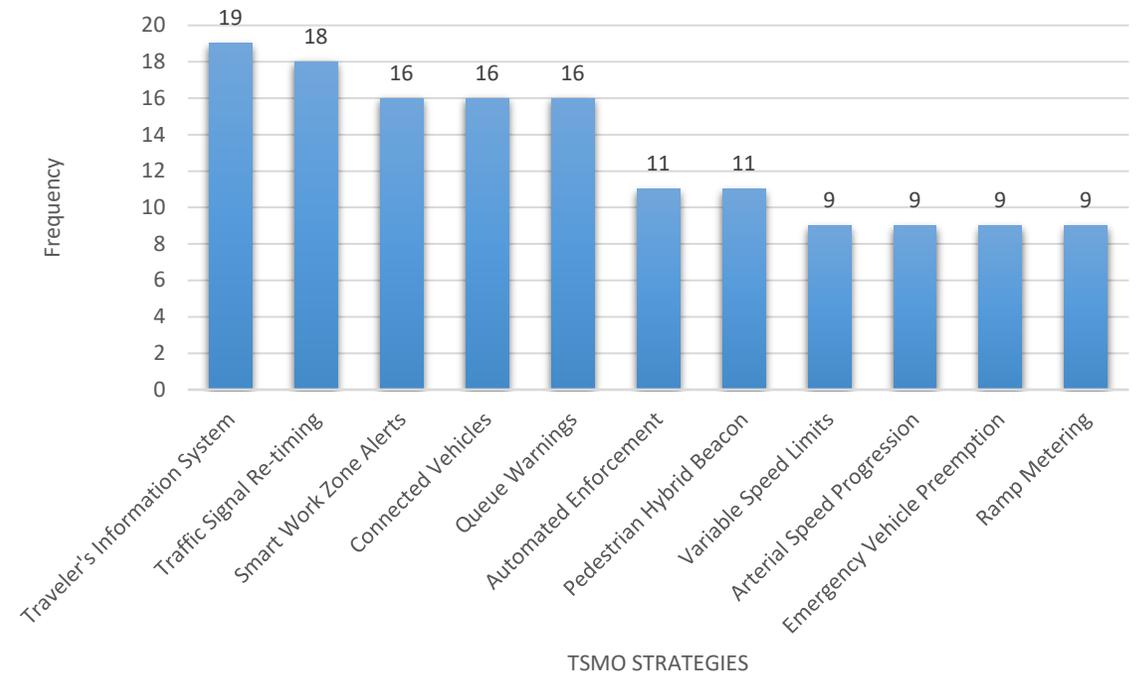
How open do you think transportation agencies are to adopting a holistic approach that integrates TSMO with the Safe System Approach (SSA)? 22



TSMO strategies should be integrated with the SSA Wheel. 22



Safe Road Users



Developing Action Plans

Session 6: Developing Action Plans

Participants break into small groups (not more than 4) to develop Action Plans.

Objective:

To build on insights from the earlier Operations Practitioners Forum sessions to develop actionable strategies for connecting safety and operations in transportation agencies.

Select a Focus for the Action Plan

- Enhancing TSMO strategies with safety metrics.
- Planning for TSMO and Safety.
- TOM implementation in a TSMO focused project.

Action Plan (unique to each agency)

Description of the action:

Why is this action important to your agency?

Desired outcome(s):

Potential challenges and mitigation strategies:

Who should be engaged to assist?

High-level steps to complete the action:



St. Louis, MO
MODOT



Miami, FL
FDOT

AI Adoption and Implementation in State DOT's Transportation Operations

Safety and Mobility Division, AASHTO

Survey Overview



Survey Objective



Key Focus Areas



Survey Design



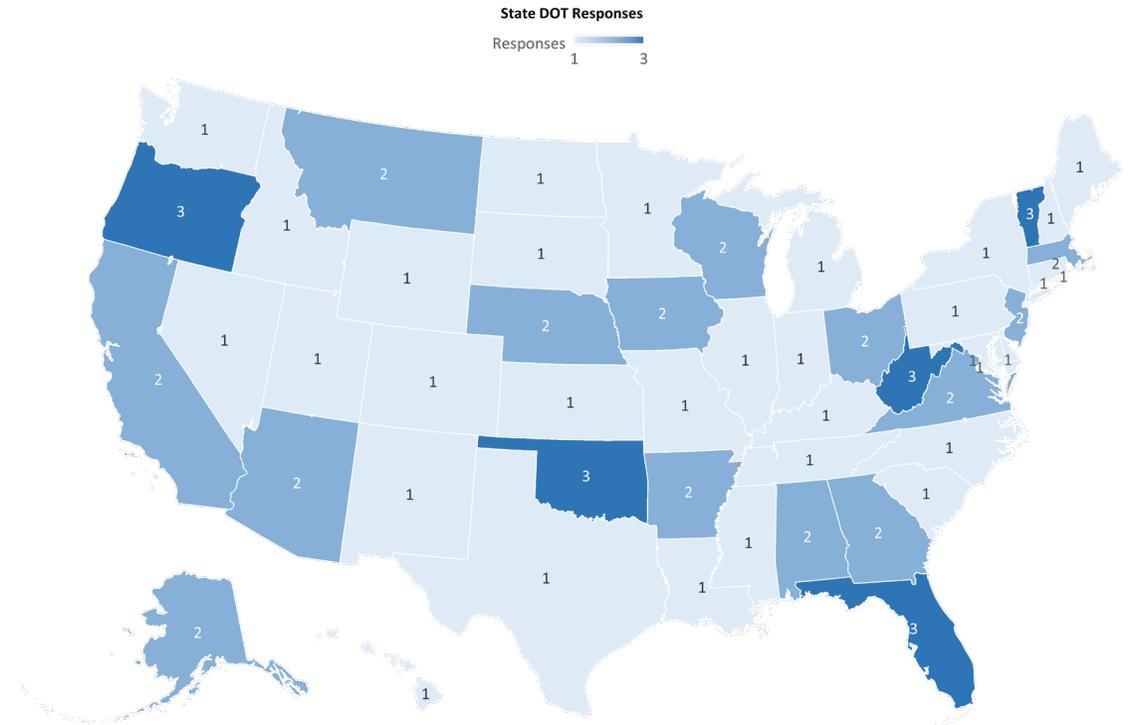
Target Audience



Data Analysis

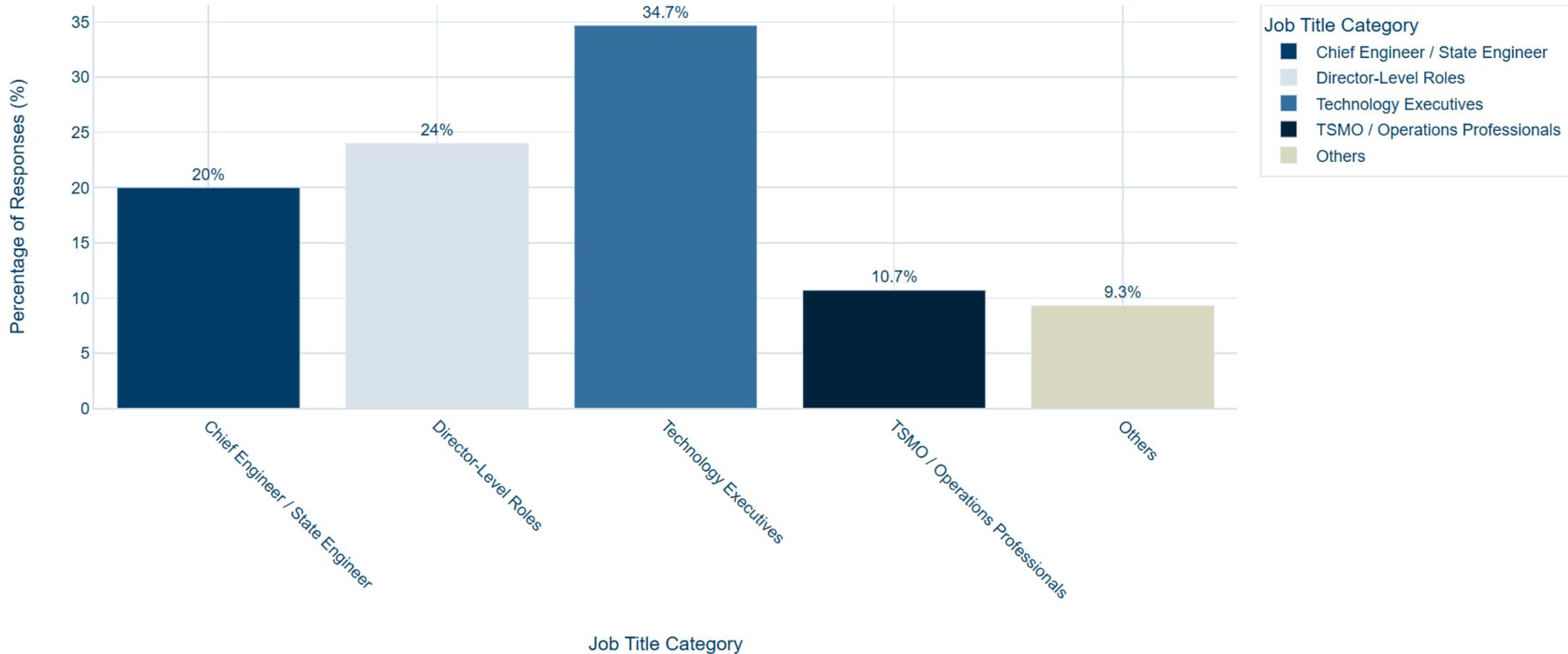


Roadmap & Dashboard

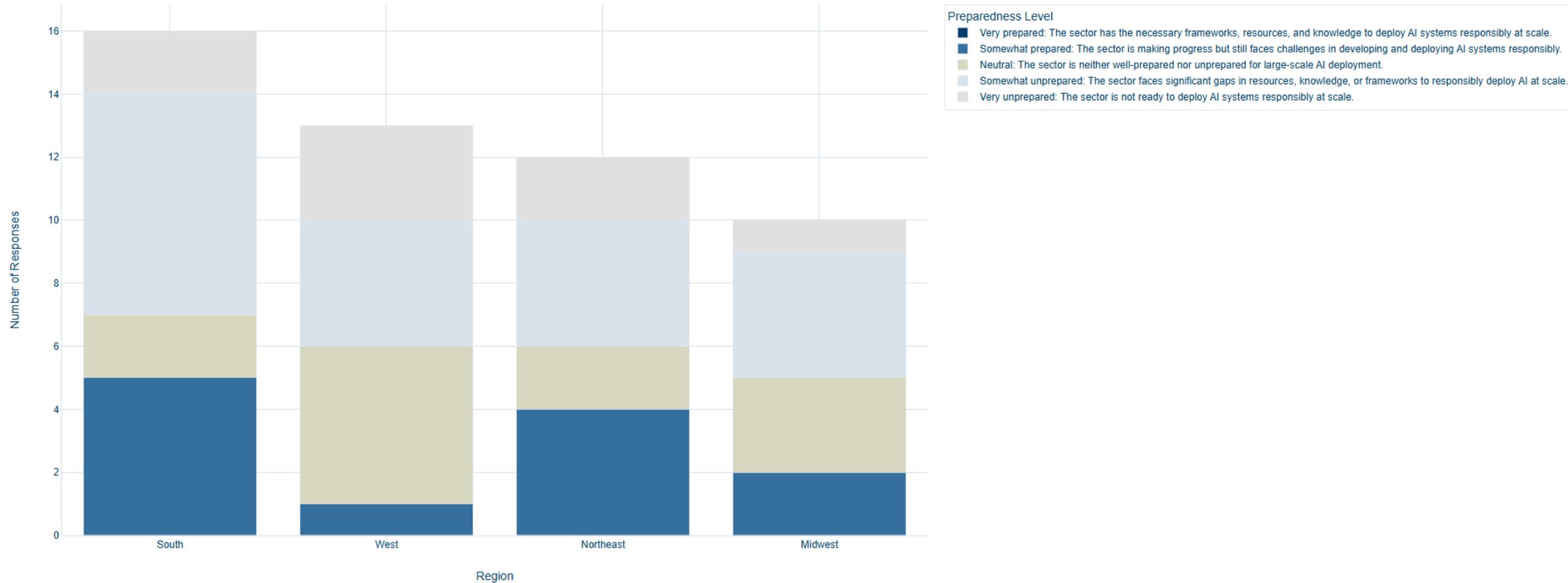


[Survey Link](#)

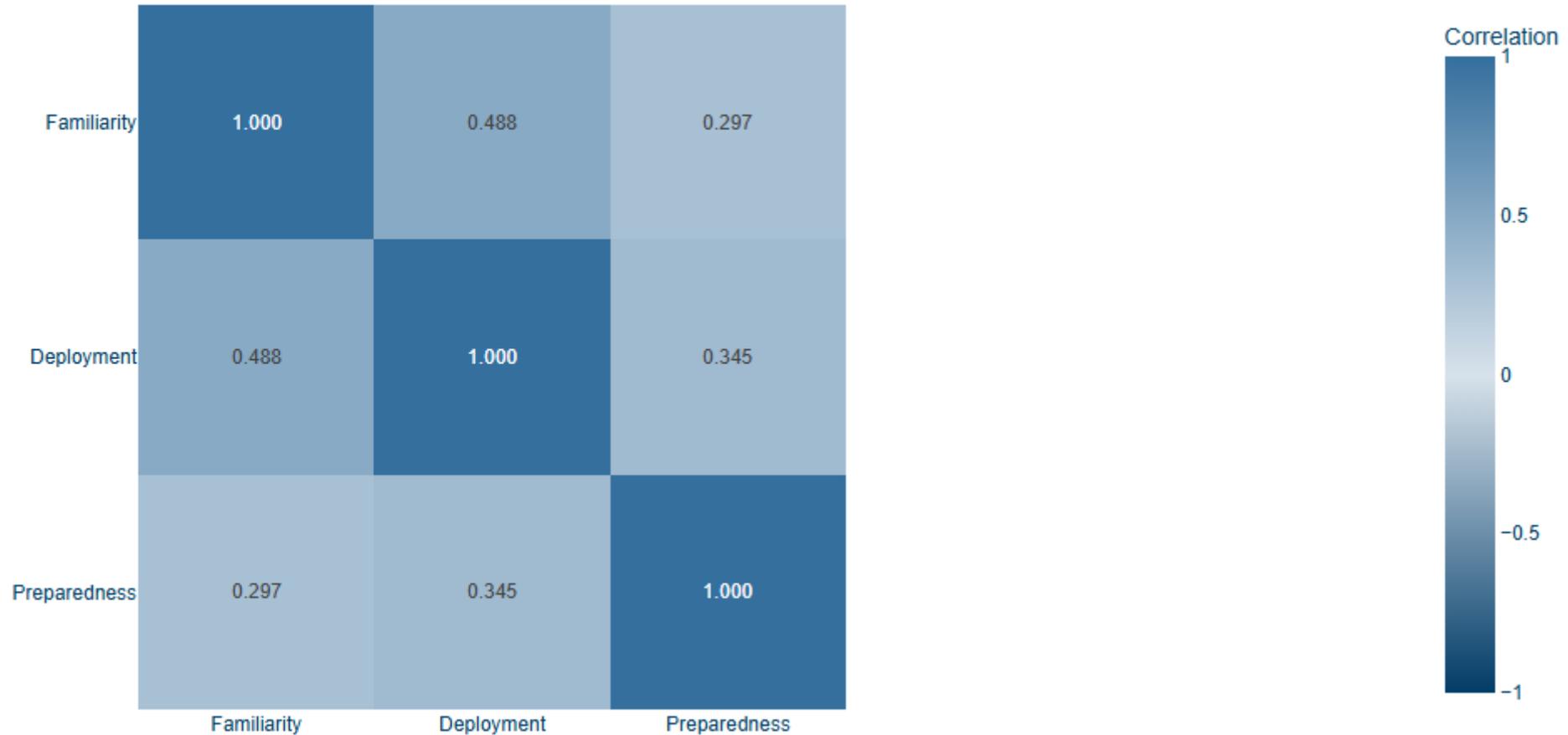
Frequency of Respondent Job Titles



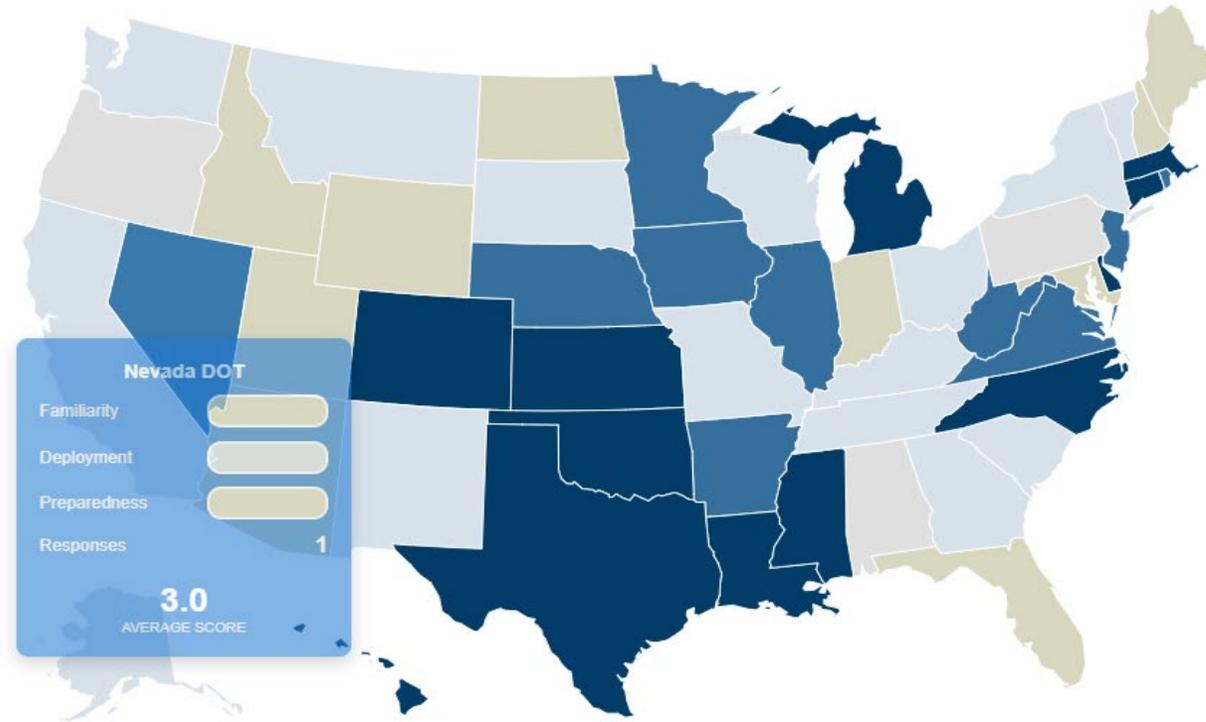
AI Preparedness by Region



Correlation Between AI Familiarity, Deployment, and Preparedness

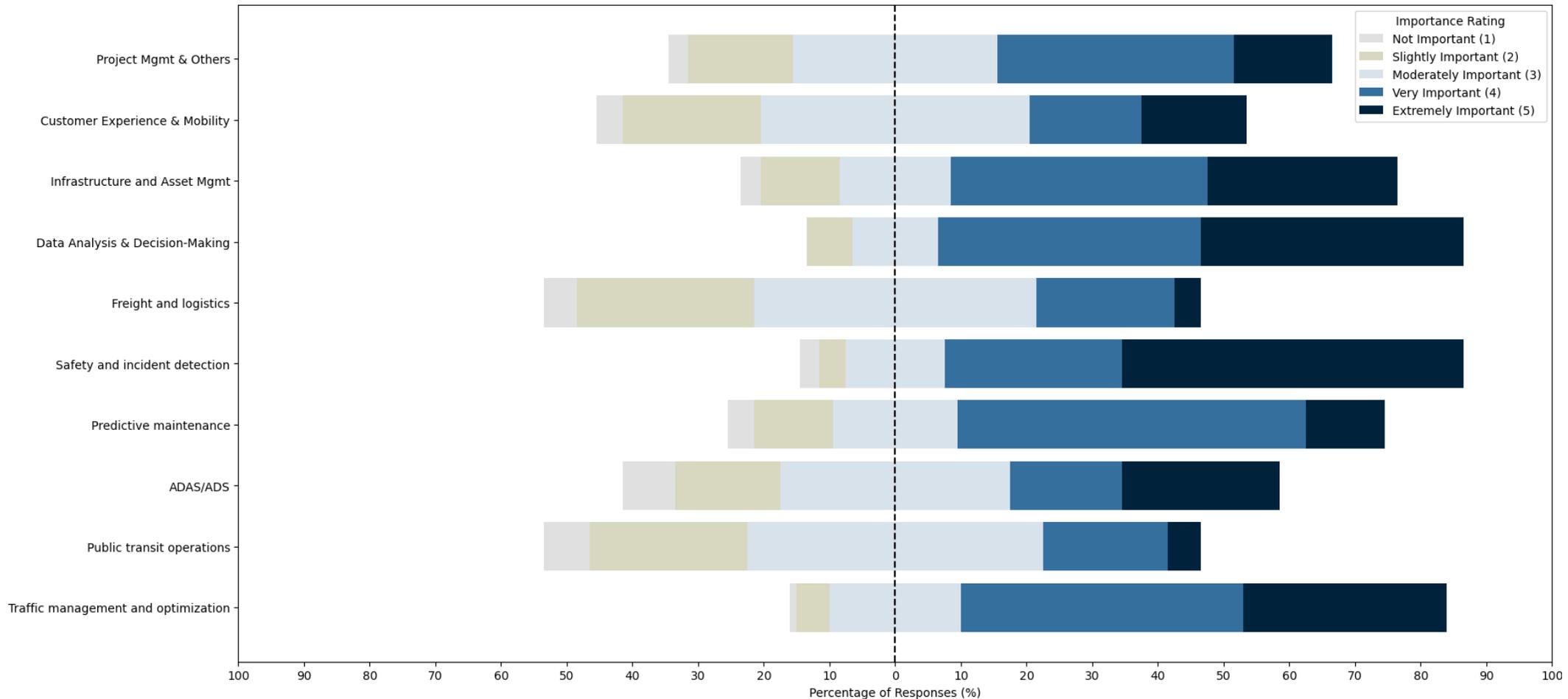


State DOT AI Status and Coverage Map



Correlation Status Very Low Low Medium High Very High

AI Importance Ratings Distribution by Transportation Focus Areas



Average Rating: 4.21

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Safety and Incident Detection

AI Importance Ratings Distribution by Transportation Focus Areas

Average Rating: 4.13



Data Analysis and Decision Making

AI Importance Ratings Distribution by Transportation Focus Areas

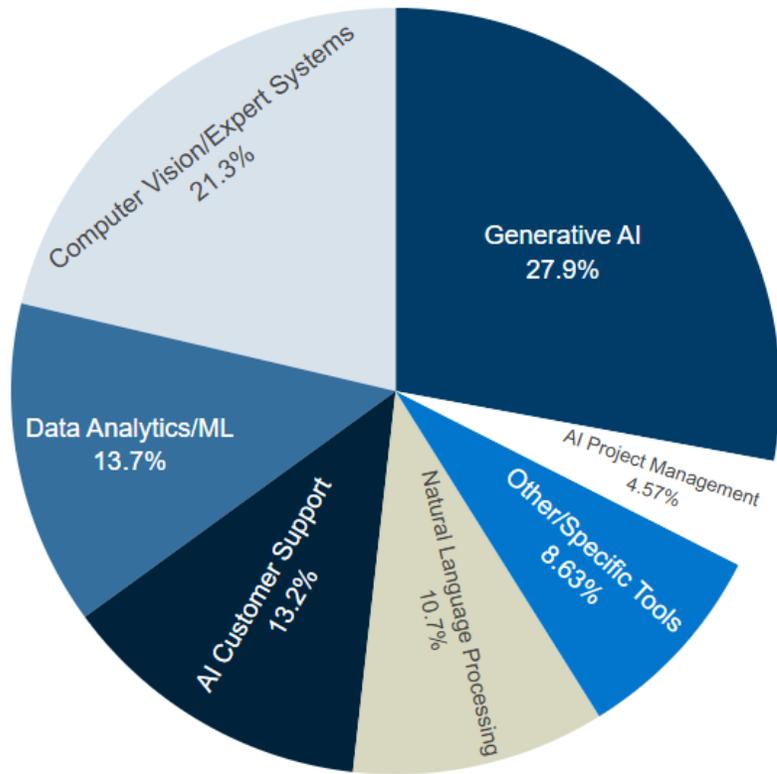
Average Rating: 3.96

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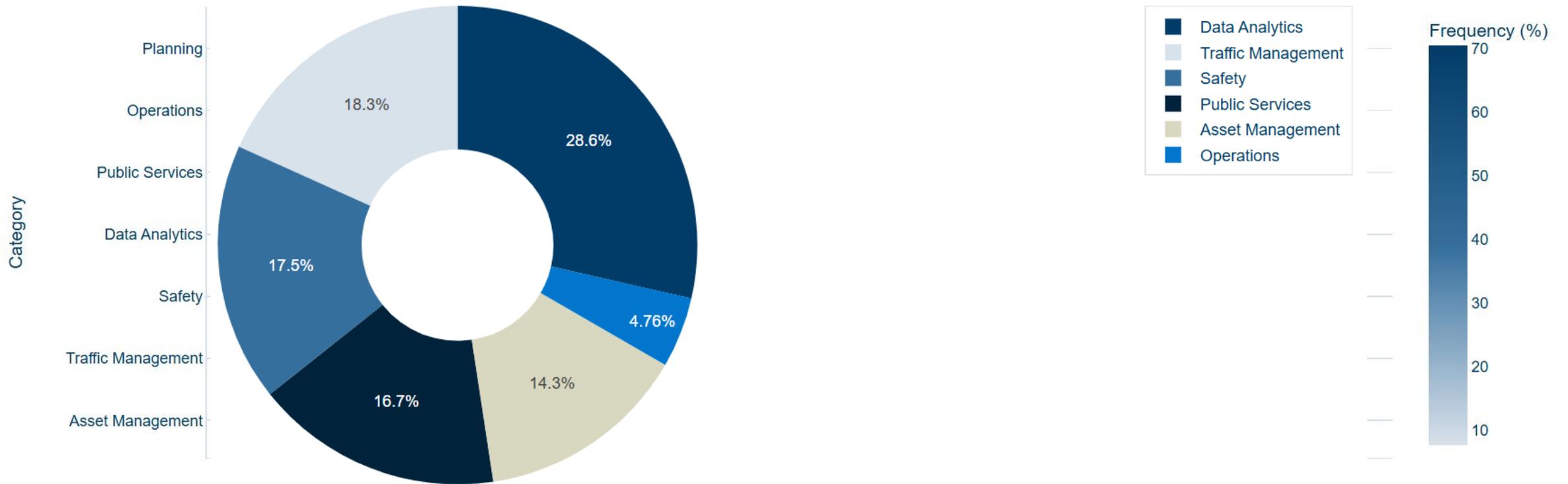
Traffic Management and Optimization

AI Importance Ratings Distribution by Transportation Focus Areas

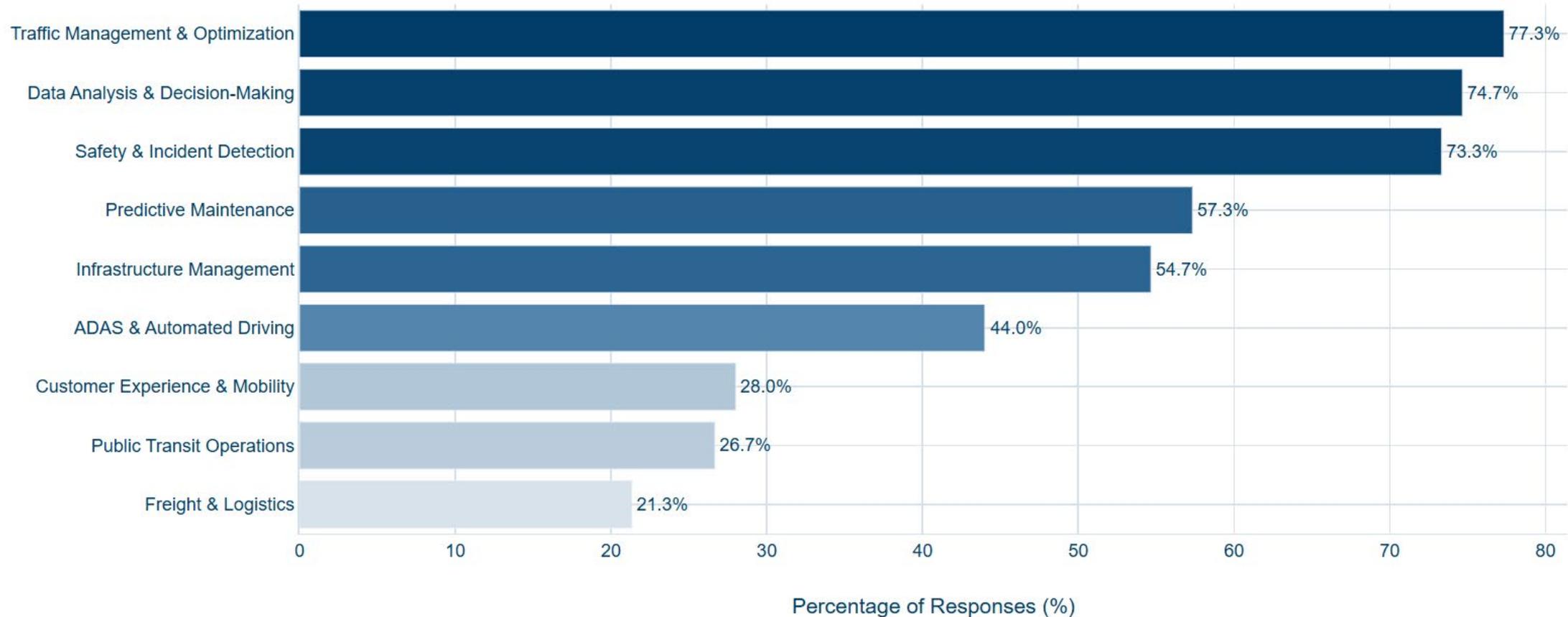
AI Tools Usage by State DOTs



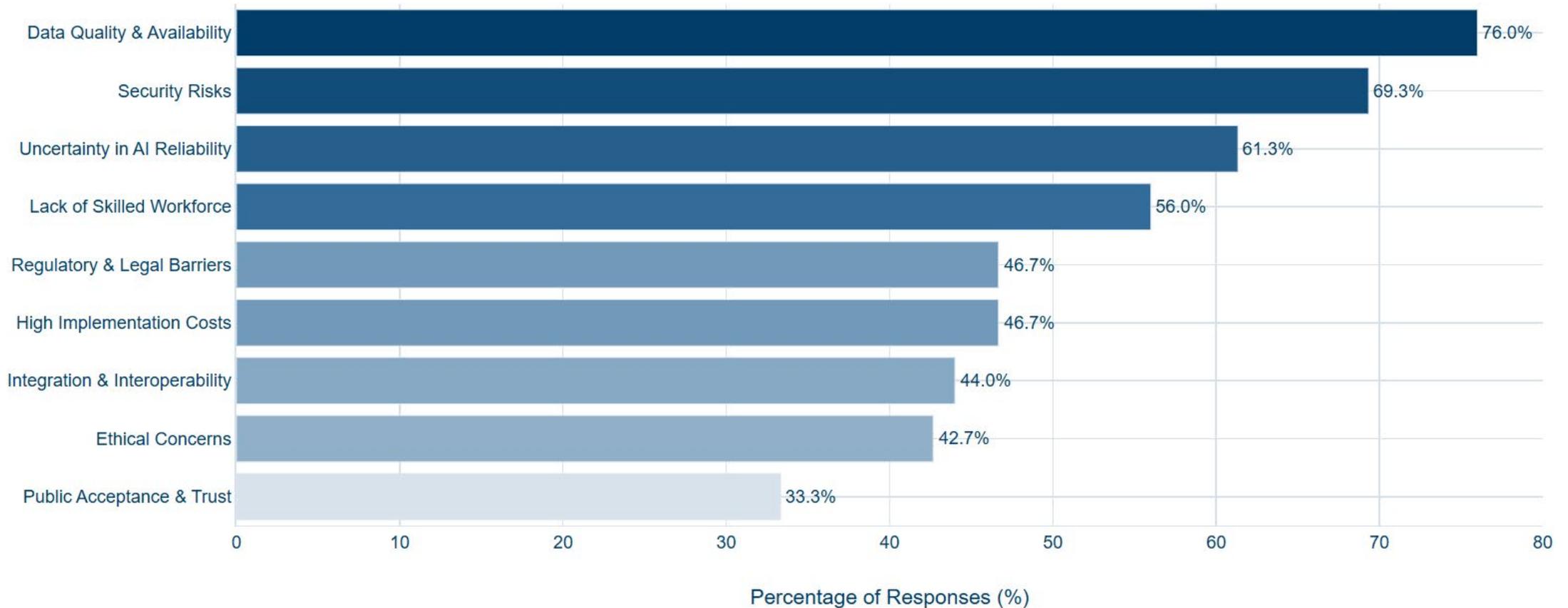
Existing and Planned AI Projects



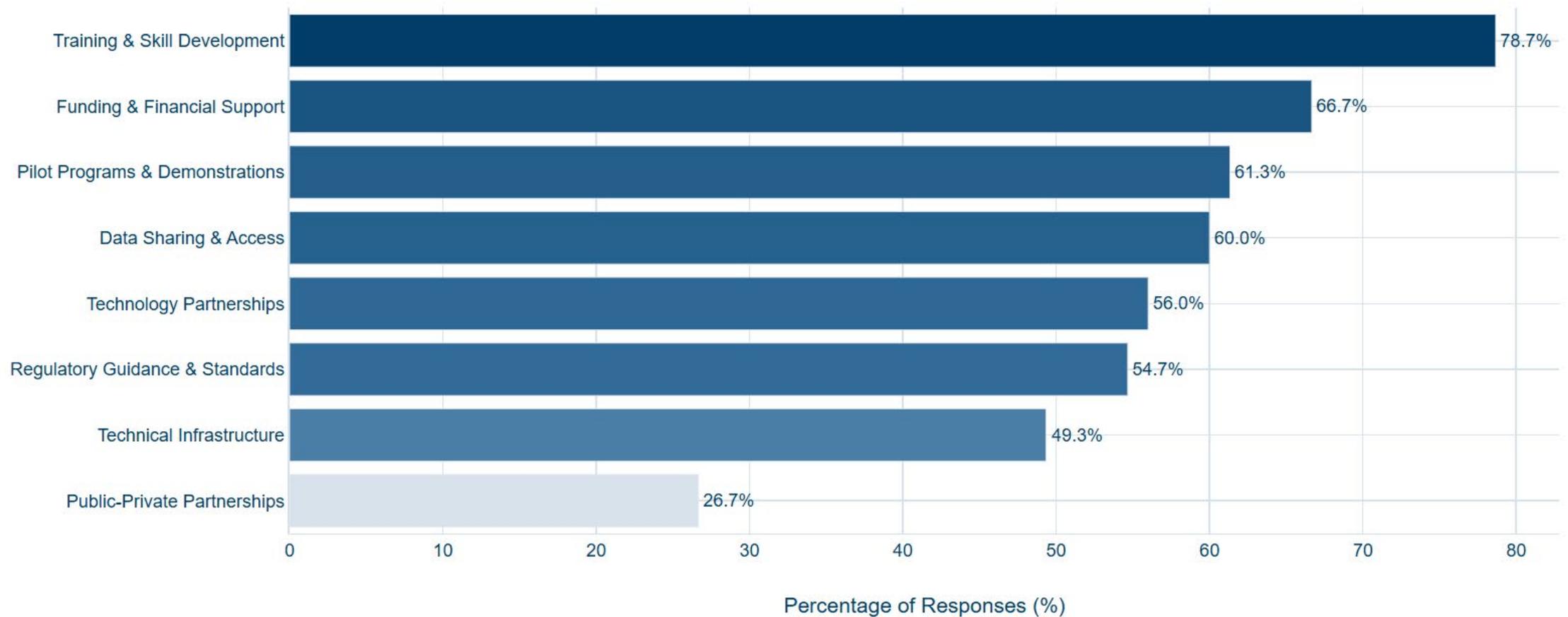
AI Opportunities in Transportation



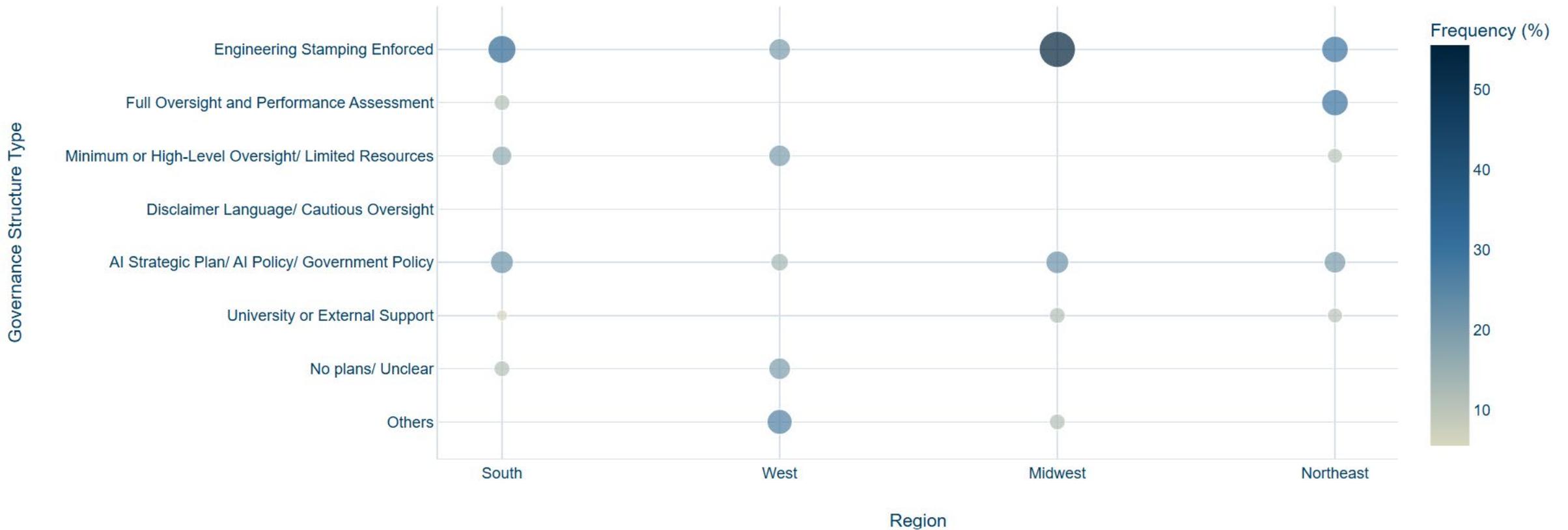
AI Challenges & Risks in Transportation

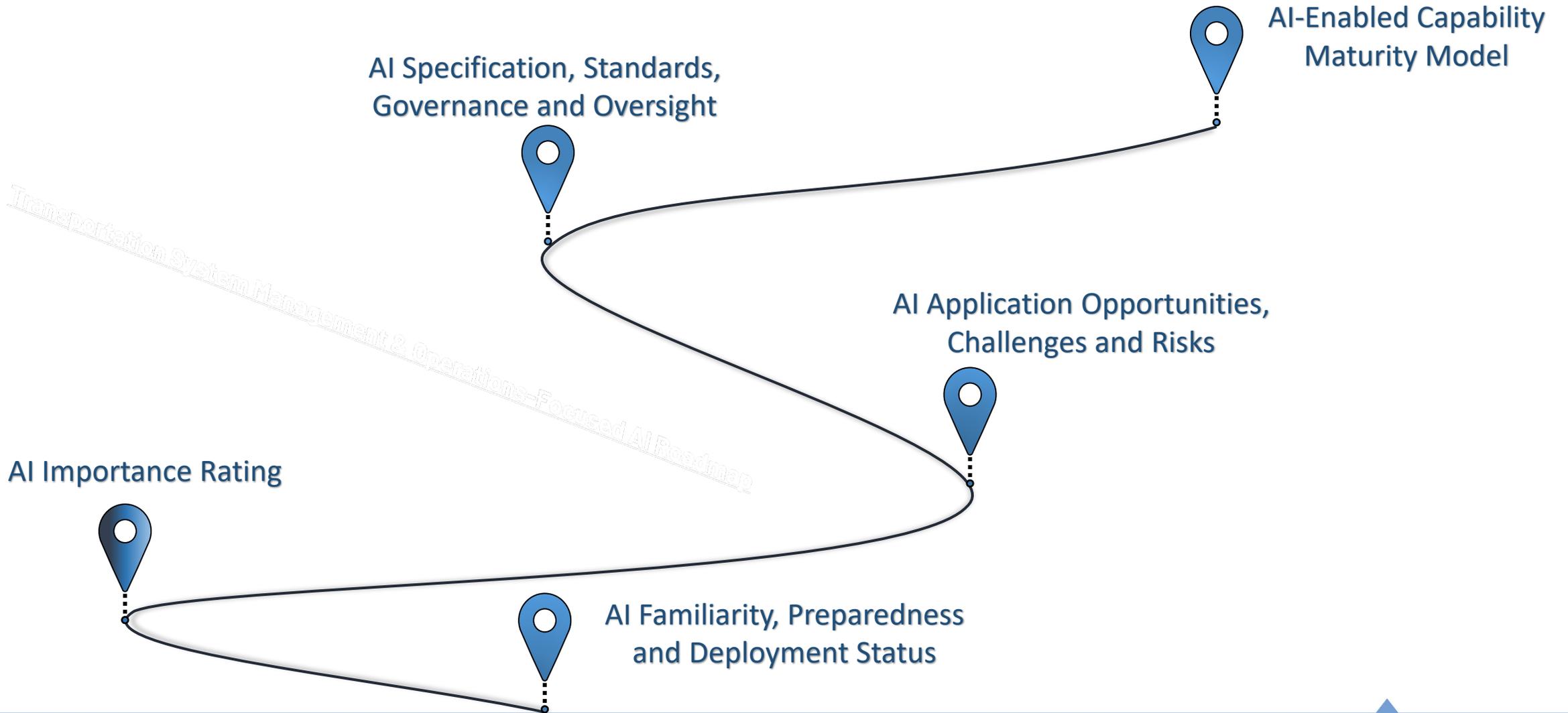


Resources & Support Needed for AI Adoption by State DOTs



AI Oversight, Planning, and Governance Structure by Region





Committee on Transportation Systems Operations

CTSO focuses on transportation system operations and associated intelligent transportation systems (ITS) and emerging technologies with a goal of improving safety, system reliability, and highway system performance.

Get Involved in a CTSO Group!

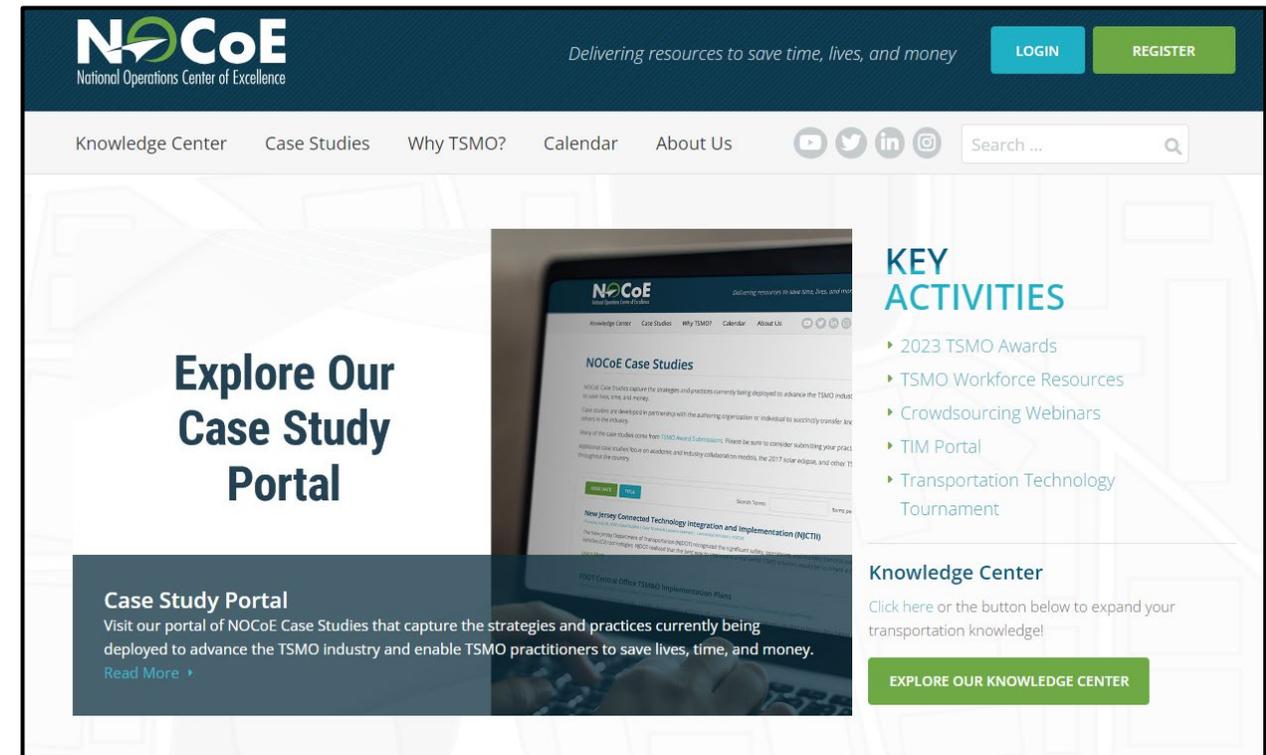


The National Operations Center of Excellence (NOCoe)

What is NOCoE?

The National Operations Center of Excellence (NOCoE) was established to provide centralized services to TSMO community to:

1. Provide a suite of TSMO resources
2. Facilitate knowledge transfer
3. Promote networking of professionals
4. Communicate TSMO advancements



Key Resources Offered

- Website and Knowledge Center (150,000+ views per year)
- Case Study publication (20 per year)
- Webinars and recordings (40+ per year)
- Peer Exchanges (6 per year)
- Industry summits
- On-demand resource support
- Additional knowledge transfer and management activities

2025 Peer Exchanges

- TSMO and IT Coordination
- V2X for TSMO
- AI for TSMO
- World Cup 2026 Mobility Planning
- Cybersecurity and TSMO
- Digital Infrastructure



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The latest NOCoE events and competitions.

The Workforce Portal

New Knowledge Center Resources



New case studies and other informational documents.

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Upcoming Webinars

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Questions?



Contact amorshed@aaashto.org