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TRANSPORTATION PERFORMANCE MANAGEMENT

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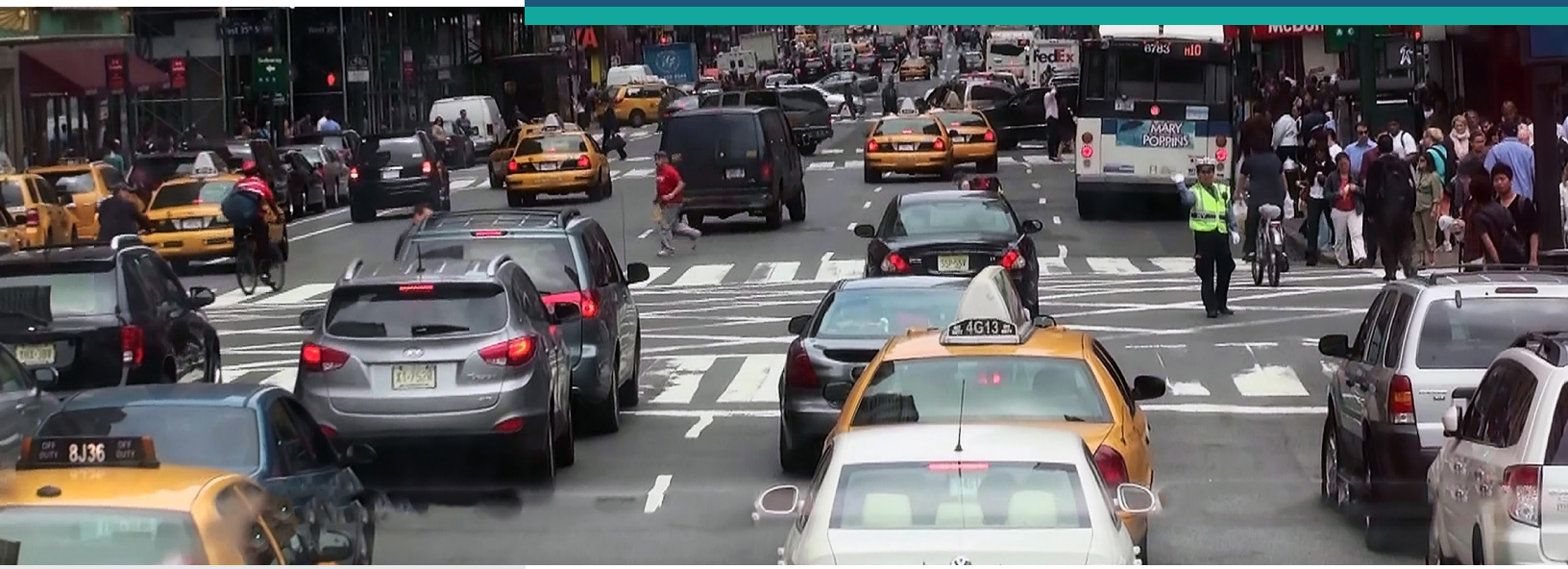

***Welcome to the Spring 2024 edition of the Transportation Performance Management (TPM) Newsletter**, sponsored by the American Association of State Highway and Transportation Officials (AASHTO) Committee on Performance-Based Management (CPBM) in collaboration with the TPM Technical Service Program. The Technical Service Program is supported by AASHTO in collaboration with the Federal Highway Administration (FHWA).*

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Welcome from the AASHTO CPBM Chair

Christos Xenophontos

Assistant Director for Administrative Services
Rhode Island DOT

Chair, AASHTO CPBM

Greetings, Performance Management Community! As the Chair of the American Association of State Highway and Transportation Officials (AASHTO) Committee on Performance-Based Management (CPBM), I am pleased to introduce the *Spring 2024 TPM Newsletter*. Please take a few minutes to read the *TPM Newsletter* focusing on updates from AASHTO CPBM and related efforts. The articles, resources, and events featured in this edition provide perspectives on performance management and performance-based planning activities within transportation agencies across the globe. Articles in this edition cover policy in action, the World Road Association (PIARC) 2024-2027 Research Cycle, the intersection of risk management, agency resilience, and performance-based planning and programming, and equity as it relates to asset management.

The content featured in the *Spring 2024 TPM Newsletter* includes updates on upcoming events, new resources, and tools of interest to the performance management community. In particular, look for information on the upcoming AASHTO 2024 Conference on Data Management & Analytics, Planning, and Performance-Based Management. This conference, which is being jointly hosted by AASHTO's Committee on Data Management & Analytics, Committee on Planning, and Committee on Performance-Based Management is taking place September 17-20, 2024, at the Hyatt Regency St. Louis at the Arch, in St. Louis, Missouri.

While I have your attention, I'd like to thank those who attended the recent AASHTO CPBM Research Symposium #1 on Thursday, April 11, 2024. The Symposium featured David Jared from the National Cooperative Highway Research Program (NCHRP), shared information about the CPBM research pipeline and Research Management System, and collaborative development of a preliminary set of research needs candidates related to transportation asset management (TAM), organizational management, risk management, emerging measurement areas, and cross-cutting topics.

We need your help understanding which of these research needs are most important and urgent to the community! Please take this opportunity to complete a short survey by Friday, May 10th to help with prioritization of the candidate research needs: https://www.surveymonkey.com/r/2024-CPBM-Research-Symposium-1-Results-Prioritization.

We hope you'll join us on May 23, 2024, from 2-4 PM ET for Research Symposium #2, where we'll work together to develop the candidate research statements further and take the survey results into account as we determine the highest priority research projects to pursue and assign responsibilities for full research statements. A link to the event page for registration is included in the upcoming events in this newsletter.

If you are an AASHTO Transportation Performance Management (TPM) Technical Service Program (TSP) member, thank you for continuing to support capacity-building resources like this periodic newsletter, the recent peer exchange, and our TPM and TAM Webinar Series. If your agency has not joined the TSP yet, please get in touch with me or Anna McLaughlin from AASHTO for more information.

I hope you enjoy the articles in this Spring 2024 TPM Newsletter. I look forward to your feedback on this edition and the topics you would like to see featured in upcoming quarters. Feel free to contact Anna McLaughlin or me with any feedback or suggestions for future articles.

Christos Xenophontos
Assistant Director for Administrative Services, Rhode Island DOT
Chair, AASHTO CPBM

The

AASHTO

Committee on Performance Based Management (CPBM)

seeks your insights on areas of interest and challenges. The survey results will guide CPBM in strategic planning. CPBM encompasses many aspects of performance management such as asset, organizational, and risk management, as well as system performance and emerging measures.

Please take 10 minutes to provide anonymous feedback so CPBM can meet your needs. The committee wants to know your personal perspectives; multiple responses from one agency are encouraged. Please share this survey with other relevant staff at your agency.

Please submit your input no later than Friday, May 10:
https://www.surveymonkey.com/r/CPBMIssues2024NL

AASHTO 2024 Conference on Data Management & Analytics, Planning, and Performance-Based Management

September 17-20, 2024

Hyatt Regency St Louis at The Arch | St Louis, Missouri

Driving Change: Transportation Policy in Action

Ryan Huff

Chief Strategy Officer, Nebraska DOT

Chair, CPBM Policy & Rulemaking Work Group

The March 7, 2024 Joint AASHTO CPBM/TPM TSP featured policy in action. This article summarizes the discussion and provides additional CPBM Policy & Rulemaking Work Group updates.

WHAT IS POLICY IN ACTION?

The definition of policy is a course or principle of action adopted or proposed by a government, party, business, or individual. Examples include rules and procedures for work from home, access control regulations, criteria for cable median guardrail use, and bridge performance and expenditure requirements.

Guidance and direction. Policies that clearly guide individuals and organizations on how to behave, make decisions, and carry out tasks within a specific context or environment and set the tone for acceptable behavior and actions.

Consistency and fairness. Policies that ensure consistency and fairness in decision-making and establish standard procedures and rules that apply equally to everyone, regardless of personal biases or preferences, promoting fairness and equity.

Risk management. Policies help mitigate risks by outlining guidelines for identifying, assessing, and addressing potential risks within an organization or society. Policies reduce uncertainty and improve overall risk management by establishing protocols and procedures.

Compliance and legal requirements. Policies that align with relevant laws, regulations, and industry standards help to ensure compliance and reduce the risk of legal liabilities and penalties.

Operational efficiency. Well-designed policies streamline operations by providing clarity on roles, responsibilities, and processes. They help optimize resource allocation, improve productivity, and minimize confusion or misunderstandings.

Promotion of values and culture. Policies that reflect an organization's values, culture, and priorities reinforce desired behaviors and norms, fostering a positive organizational culture and promoting a sense of shared purpose among members.

Stakeholder confidence. Clear and well-implemented policies enhance stakeholder confidence by demonstrating an organization's commitment to transparency, accountability, and ethical decision-making.

Good policies reduce rigidity, complexity, non-compliance, risk, and unintended consequences. Careful planning, implementation, and monitoring can avoid negative policy consequences.

EXAMPLES OF HOW GOOD INTENTIONS FOR POLICIES CAN RESULT IN NEGATIVE POLICY CONSEQUENCES

If state DOTs are not careful, they may have to live with negative policy consequences. Following are several examples of policies that support good concepts but also create negative consequences.

Checking for Insurance Coverage for At-Fault Drivers in Nebraska. Lawmakers in Nebraska enacted a law to protect from uninsured drivers. The law required DOT and Department of Motor Vehicles (DMV) workers to check for insurance coverage, which required a lot of time and expense. A process improvement project found that the total time to process was 44 days. With approximately 70,000 crashes occurring each year in Nebraska, it required a huge effort. The team made changes, got the time to process down to 1.5 days, and eliminated the backlog. The project was a success in terms of improving the process; but workers also found uninsured drivers represented only 0.007 percent of all yearly crashes in the process they studied. The team, and ultimately elected officials, recognized that the cost of the law did not match the benefit, so it was changed to eliminate the policy requirement altogether. The example illustrates how policy, however well intentioned, can result in operational inefficiencies, which is why policies need careful consideration prior to implementation.

NEVI in Nebraska. The Infrastructure Investment and Jobs Act (IIJA) established a National Electric Vehicle Infrastructure Formula Program (NEVI Formula) to provide funding to States to strategically deploy electric vehicle (EV) charging infrastructure and to establish an interconnected network to facilitate data collection, access, and reliability. New rules and guidance needed to be developed, some of which included requirements on where to build first and how to space chargers.

One of the requirements includes selling electricity to consumers in units of power (kWh). An alternative to this is selling in units of time (i.e. how long a car is plugged in). This isn't the most transparent way of selling electricity because car batteries are engineered differently. Yet, this is the only legal way to sell electricity at charging stations in Nebraska. This is because Nebraska is the only 100 percent public power state in the U.S., and has associated state statutes restricting the sale of electricity in kWh to public power entities alone. This statute, coupled with the new NEVI rule, effectively restricts the NDOT from programming NEVI projects. This illustrates situations where well intentioned policy at the federal level conflicts with well intentioned policy at the state level. As with the previous example, policy must be carefully considered before being implemented.

CONCLUSION

Effective collaboration on policy development is critical for ensuring transportation systems are well-managed, aligned with other policies, and serve the needs of the traveling public and communities.

The CPBM Policy and Rulemaking Work Group is dedicated to supporting CPBM and all state DOTs. By working together and sharing expertise, we can work toward policies that support good concepts and create positive transportation outcomes.

OTHER POLICY AND RULEMAKING WORK GROUP UPDATES

- The Greenhouse Gas (GHG) rule is finalized. GHG target submission enforcement is effective March 29, 2024.
- The Notice of Proposed Rulemaking (NPRM) related to 23 CFR Part 490 is in draft. The proposed rules need review and comments were due to the docket on March 12, 2024.

See the slides and a recording of the CPBM/TPM pooled fund March quarterly meeting here: https://www.tpm-portal.com/video/aashto-cpbm-tpm-tsp-joint-quarterly-meeting-q1-2024/

For more information about the AASHTO CPBM Policy and Rulemaking Work Group, contact:

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2024-2027 PIARC Work Cycle

By Christos Xenophontos, Deanna Belden, Jean Wallace, Daniela Bremmer, and Matt Haubrich

BACKGROUND

The World Road Association, also known as PIARC, was founded in 1909 with the aim of sharing knowledge and techniques on roads and road transportation. Today, with over 120 member countries across the globe, PIARC continues to foster and facilitate global discussions and knowledge-sharing on roads and road transport. Its headquarters are in Paris, where it all began.

PIARC's Technical Committees bring together experts from various fields to work on issues identified in PIARC's Strategic Plan. They produce reports on best practices and recommendations in their respective fields to support decision-makers, road engineers, and research engineers. PIARC Technical Committees comprise distinguished engineers and experts who are appointed by member countries and meet approximately twice annually. The 2024-2027 Work Cycle kicked off in January and February with initial meetings of the Technical Committees. Work will continue over the next four years, and will include workshops and seminars, reports and articles, and will culminate in presentations at the next World Road Congress in Vancouver, B.C., Canada, in October 2027. Several CPBM members are participating in the PIARC Technical Committees.

You can find additional information, including publications from previous cycles, at https://www.piarc.org/en/.

TC1.1 - PERFORMANCE OF TRANSPORT ADMINISTRATIONS

Christos Xenophontos

Assistant Director for Administrative Services Rhode Island DOT

Chair, AASHTO CPBM

Deanna Belden

Minnesota Department of Transportation

Co-Chair, Task Force on Emerging Performance Areas

Chair and Secretariat

Chair: Christos S. XENOPHONTOS (USA)
English-speaking Secretary: Alan COLEGATE (Australia)
French-speaking Secretary: Ariane DUPONT-KIEFFER (France)
Spanish-speaking Secretary: José Manuel BLANCO SEGARRA (Spain)

TC1.1 2024-2027 Activities

In the 2024-2027 PIARC Cycle, PIARC's Technical Committee (TC)1.1 will continue to address a strategic framework for the transport agency of the future with people and society at the center. As agencies redefine their strategic frameworks there is a need to better represent a focus on more holistic societal expectations while creating public value and modernizing the workforce.

There are three primary focus areas and associated work groups within this PIARC Technical Committee. CPBM Chair Christos Xenophontos Chairs TC1.1. Deanna Belden, CPBM Co-Chair for Task Force on Emerging Measurement Areas, will co-lead the 1.1.2 work group Public value creation by transport agencies.

- **1.1.1: Envisioning the transport agency of the future.** This work group will focus on the inputs, guiding principles, and outcomes that represent the North Star guiding future transportation agencies.
- **1.1.2: Public value creation by transport agencies.** This work group will explore how public value can be considered by transportation agencies to better represent holistic societal expectations.
- **1.1.3: Creating a stronger future-focused workforce.** This work group will further develop the issue of strengthening workforce through modernizing skills, and enhancing diversity, equity, and inclusion. It will also explore the capabilities, strategies, and equity of the future transportation agency.

See the TC1.1 homepage for more information.
https://www.piarc.org/en/PIARC-Association-Roads-and-Road-Transportation/PIARC-Technical-Committees/Strategic-Theme-Road-Administration/Technical-Committee-Performance-Transport-Administrations

TC1.4 - PLANNING THE RESILIENCE OF ROAD NETWORKS - CLIMATE CHANGE AND OTHER HAZARDS

Jean Wallace

Deputy Commissioner & Chief Engineer, Minnesota DOT

Vice-Chair, AASHTO CPBM

Chair and Secretariat

Chair: Shafiq ALAM (Australia)
English-speaking Secretary: Stuart WOODS (New Zealand)
French-speaking Secretary: Marie COLIN (France)
Spanish-speaking Secretary: Juan Fernando MENDOZA SÁNCHEZ (Mexico)

TC1.4 2024-2027 Activities

Transportation agencies ensure reliable infrastructure in the face of extreme events. Agencies must adapt to increasing natural hazards with institutional and situational resilience frameworks to meet service level expectations. In the 2024-2027 cycle, Technical Committee 1.4 will focus on resilience, response, and recovery from climate and other hazards.

Technical Committee 1.4 is a long-standing committee that is building on previous work. In this cycle, the committee is shifting from a climate adaptation focus to a resilience focus. There are two primary focus areas and associated work groups within this PIARC Technical Committee. CPBM Vice-Chair Jean Wallace will participate in this emphasis area.

- **1.4.1 Development of a resilience framework for road networks.** Climate change and other hazards. Using the PIARC Climate Change Adaptation Framework for Road Infrastructure developed in the last cycle, the intent is to extend the framework to resilience of road networks, considering an "all-hazards" approach. This work group will be coordinating with NCHRP 23-32 which has a similar approach.
- **1.4.2 Best practice in understanding organizational resilience for road networks.** This work group is focused on how agencies can be organized to support resilience.

See the TC1.4 homepage for more information.
https://www.piarc.org/en/PIARC-Association-Roads-and-Road-Transportation/PIARC-Technical-Committees/Strategic-Theme-Road-Administration/Technical-Committee-Planning-Resilience-Road-Networks-Climate-Change-Hazards

TC2.5 - ROAD INFRASTRUCTURE FOR CONNECTED AND AUTOMATED MOBILITY

Daniela Bremmer

Chief Innovation Officer, Cooperative Automated Transportation & Technology, Washington State DOT

Chair, Former AASHTO Subcommittee on Mobility and Emerging Technologies;

Chair, AASHTO CAV Community of Practice

Chair and Secretariat

Chair: Ana Luz JIMENEZ ORTEGA (Spain)
English-speaking Secretary: Ian PATEY (UK)
French-speaking Secretary: Abdelmename HEDHLI (France)
Spanish-speaking Secretary: Antonio GRANADO PÉREZ (Spain)

TC2.5 2024-2027 Activities

Emerging technologies are creating an evolution in the ways people and goods travel. Road authorities and operators need to understand the impact of these changes on their responsibilities and performance and prepare policies and safety standards to govern the practice. By understanding the potential opportunities and demands on infrastructure, they can make more efficient and effective decisions. The TC2.5 work groups will also take into account that there is variance in maturity among countries related to connected and automated mobility technologies. There are three focus areas and associated work groups within this new PIARC body. Daniela Bremmer, AASHTO System Mobility and Emerging Technologies (SMET) and CAV Community of Practice (CAV COP) Chair will lead the work group for TC2.5.3 *Policy frameworks and business models for public authorities and road agencies.*

- **2.5.1: Roads for cooperative, connected and automated mobility.** This work group will identify the characteristics and functionalities that roads must provide to enable cooperative, connected and automated mobility.

- **2.5.2: Automated driving and infrastructure.** This work group will focus on evaluating the impact of automated driving on road infrastructure, identifying physical and digital requirements, and analyzing challenges and opportunities for road operators and administration.
- **2.5.3: Policy frameworks and business models for public authorities and road agencies.** This work group will analyze the scope and type of policy, organizational and or business model frameworks needed for road infrastructure organizations for connected and automated mobility applications. It is focused on organizational structures, not technical architecture. This work group will collaborate with other groups.

See the TC2.5 homepage for more information.
https://www.piarc.org/en/PIARC-Association-Roads-and-Road-Transportation/PIARC-Technical-Committees/Strategic-Theme-Mobility/Technical-Committee-Road-Infrastructure-Connected-Automated-Mobility

TC3.3 - ASSET MANAGEMENT

Matt Haubrich

(Former) Transportation Asset Management Administrator, Iowa DOT

CPBM Subcommittee on Asset Management

Chair and Secretariat

Chair: Gerardo FLINTSCH (USA)
English-speaking Secretary: Michelle BARAN (Australia)
French-speaking Secretary: Pascal ROSSIGNY (France)
Spanish-speaking Secretary: Miguel VALDES FLORES (Chile)

TC3.3 2024-2027 Activities

Asset management is crucial for transportation agencies and operators to ensure effective management of assets throughout their lifecycle. TC3.3 has a longstanding history of focusing on improving the transportation sector's understanding of these practices to optimize performance. In the 2024-2027 cycle, this includes using digital technologies, enhancing risk analysis, and identifying successful approaches for addressing aging infrastructure. Matt Haubrich, Former Chair of CPBM's Subcommittee on Asset Management was the initial delegate to participate in the activities of this technical committee, which comprise four focus areas and five associated work groups. He has since moved on.

- **3.3.1 Leveraging Technology to Improve Asset Management Practice**
  a: Building Information Modeling (BIM) and Asset Management. This work group will focus on digital delivery for asset management.
  b: Innovative Data Collection and Analysis. This work group will focus on the use of artificial intelligence to support asset management.
- **3.3.2: Measuring for reducing risk and improving the resilience of road networks.** This work group will focus on methods to mitigate and avoid risks while enhancing the resilience of transportation infrastructure.
- **3.3.3: Renewal and Rejuvenation of Ageing Infrastructure.** This work group will focus on the management of aging assets.
- **3.3.4: Update the content of the Road Asset Management Manual.** This work group will recommend and publish updates to this document, which provides advice on the efficient implementation and continuous development of road infrastructure asset management.

See the TC3.3 homepage for more information.
https://www.piarc.org/en/PIARC-Association-Roads-and-Road-Transportation/PIARC-Technical-Committees/Strategic-Theme-Road-Safety-Sustainability/Technical-Committee-Road-Asset-Management

Get Involved!

The PIARC technical committees need your assistance! Stay tuned for upcoming surveys, requests for case studies, and calls for presentations at future conferences and other PIARC-sponsored events. By participating in these activities and making your needs known, you can inform the 2024-2027 work of PIARC's technical committees and associated work groups.

AASHTO Updates

Anna McLaughlin

Program Director Transportation Program Management

American Association of State Highway and Transportation Officials

POLICY AND RULEMAKING UPDATES

NPRMs. After receiving input from state DOT's, AASHTO submitted comments on FHWA's National Performance Management Measures Notice of Proposed Rulemaking (Docket No. FHWA-20230014). The comment letter can be found on the AASHTO website.

GHG Performance Measure. On March 27, U.S. District Court Judge James Wesley Hendrix ruled in a case brought by the State of Texas that the Federal Highway Administration "is not authorized" to regulate greenhouse gas or GHG emissions as the agency sought to do via a rulemaking issued in December 2023.

"The Final Rule exceeds the statutory authority granted to USDOT by Congress; is arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law; and is contrary to constitutional right, power, privilege, or immunity," the lawsuit said. Judge Hendrix concurred with that view in his ruling to vacate the FHWA's GHG regulation, which went into effect in January.

FHWA has agreed to temporarily not seek to enforce the February 1, 2024, deadline for States to submit initial targets and reports through March 29, 2024. Consistent with the Court's decision, States and MPOs are not required to submit initial targets and reports at this time.

Reauthorization. Reauthorization is the process by which Congress sets spending levels for transportation programs by authorizing a certain amount of funding over a set number of years through law. The most recent reauthorization bill (FY 2022-FY 2026), the Infrastructure, Investment, and IIJA —also referred to as the Bipartisan Infrastructure Law (BIL)—authorized programs and funding for 5 years. AASHTO kicked off the next reauthorization process at the February Washington Briefing. AASHTO Committees' primary role will be the development of a series of white papers to identify policy priorities. The development of AASHTO's policy priorities and recommendations is an opportunity for state DOTs to express their needs and policy objectives for the next several years. The Committee on Performance-Based Management will be working with the Committee on Planning and the Committee on Data Management and Analytics to draft one of eight white papers to be approved by the Transportation Policy Forum at the AASHTO Annual Meeting in October. Those interested in volunteering to help develop the white paper may contact Anna (contact information below).

AASHTO PERFORMANCE MANAGEMENT TECHNICAL SERVICE PROGRAM

The Performance Management Technical Service Program (TPM TSP) 2025 letters of commitment were sent to state DOTs in mid-March. This program supports state transportation agencies with implementing and sustaining performance management and provides a suite of offerings. The program includes core and optional services:

- Learning and capacity development resources and tools, including the TPM Webinar Series, TAM Webinar Series, and TPM Newsletter
- TPM Information Clearinghouse at https://www.transportationmanagement.us/
- Member Knowledge Transfer through in-person and virtual workshops, meetings, and peer exchanges
- Deep-Dive PM3 TPM Planning Analytics (OPTIONAL)
- Customized Implementation Support and Web Portals (OPTIONAL)

For more information about joining the TPM TSP, please visit: https://transportation.org/performance-management/. If you did not receive your state's 2025 letter of commitment, please reach out to Anna (contact information below).

SAVE THE DATE FOR THE AASHTO 2024 CONFERENCE ON DATA MANAGEMENT & ANALYTICS, PLANNING, AND PERFOMANCE-BASED MANAGEMENT

Please save the date for the AASHTO 2024 Conference on Data Management & Analytics, Planning, and Performance-Based Management which will be held September 17-20, 2024, at the Hyatt Regency at the Arch in St. Louis, Missouri. Conference registration information will be up on the AASHTO site in early May.

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TPM Webinar Explores the Intersection of Risk, Resilience, and Performance Management

TPM Webinar 21 explored the intersection of risk, resilience and performance management. Jean Wallace, AASHTO Committee on Performance-Based Management Vice Chair, facilitated the webinar which featured updates from the Federal Highway Administration (FHWA) and the American Association of State Highway and Transportation Officials (AASHTO) as well as several state departments of transportation speakers sharing their expertise.

FHWA PERSPECTIVE

Mshadoni Smith-Jackson indicated that the Bipartisan Infrastructure Law (BIL) provides the first ever legislative definition of resilience and establishes the Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) program. FHWA is developing tools, resources, training courses, and materials to increase resilience awareness.

AASHTO UPDATE

Anna McLaughlin provided information on the Joint Task Force on the AASHTO Transportation Risk & Resilience Manual. The NCHRP 23-32 project kicked off in January 2024 and should produce a draft in 2026. AASHTO has cross-committee engagement on this project and there are multidisciplinary subject matter experts participating. The task force goals and objectives are:

- Provide a direct and ongoing connection between the NCHRP project panel, research team and members of the AASHTO committees.
- Provide technical expertise to the NCHRP project panel and research team in subject matter areas of expertise (e.g., bridge design, pavement design, drainage, structural design, etc.).
- Serve as a review partner and coordinator of comments from the AASHTO committee members and state DOTs on behalf of the NCHRP project panel and research team.
- Serve as a sounding board for the NCHRP project panel and research team throughout the research and development of the various products and resources developed through the multi-phased project.
- Provide support to the NCHRP panel and research team for managing issues and topics on the development, implementation, and maintenance of Risk & Resilience Manual.

RESILIENCE IMPROVEMENT PLANS (RIPS) AND OUTCOMES: LESSONS LEARNED, APPLICATION BEYOND NATURAL HAZARDS

Three state DOT speakers presented on the following topics:

- **Stakeholder Outreach**, Michael Simmons, Nevada DOT
  Michael stressed that multidisciplinary participation is key and roles for specific stakeholders should be defined (involved, informed and aware). Stakeholders need to be engaged early and often.
- **Equity**, Stephanie Johnson, Delaware DOT
  DelDOT's RIP plan is referred to as DRIP and its mission statement includes everyone. Stephanie discussed DelDOT's equity analysis tool, the purpose of which is to: make informed decisions, provide data for public outreach and engagement strategies and to create a standardized tool to identify disadvantaged communities as required by Justice40 (Executive Order 14008). DelDOT's equity analysis tool identifies equity focused areas and helps to incorporate equity in practice.
- **Interdependencies**, Sandy Hertz, Maryland DOT
  Maryland's transportation resilience improvement plan (TRIP) includes all modes: roadways, commuter and freight rail, ports, airports, bus routes and sidewalks. TRIP's data-driven strategy looks at climate and extreme weather, as well as FEMA evacuation routes and hospital access. Several entities in the state are responsible for transportation infrastructure and need to work together. Coordination and consistent source data is necessary.

RISK COMMUNITY OF PRACTICE AND AGENCY RISK MANAGEMENT

Mónica Alemán-Smoot, Texas DOT, presented on the Enterprise Risk Prevention and Management Program (RPM) which began in 2011. RPM is a collaborative process across the agency including subject matter experts (SMEs) from divisions and districts. The risk management community of practice allows for knowledge sharing among SMEs. There are 95 risk collaborators and 18 risk champions that participate.

Figure 1. *Risk Collaborators Describing What Comes to Mind When They Think of Risk*

Source: Texas DOT (2024)

ENTERPRISE RISK MANAGEMENT (ERM) AND PERFORMANCE OUTCOMES

Jake Granholm, Minnesota DOT, presented on enterprise risk and performance management at MnDOT. ERM is a structure to manage uncertainty and there is a crossover with performance management. MnDOT's enterprise risk register identifies priorities and strategic connections. MnDOT has several tools for tracking performance: annual performance scorecard, transportation system performance report, transportation system performance dashboard, and ongoing analysis and research. Two examples of integration that Jake highlighted were infrastructure resilience and workplace stability.

A recording of the webinar and slides may be accessed at this link: https://www.tpm-portal.com/video/tpm-webinar-21-the-intersection-of-risk-resilience-and-performance-management/

To access other archived TPM webinars, go to this link on the TPM Portal: https://www.tpm-portal.com/event-directory/tpm-webinars/

For more information about Enterprise Risk Management, please visit the AASHTO Enterprise Risk Management Portal, at https://www.erm-portal.com/

TAM Webinar 68 Highlights Equity and Transportation Asset Management

The April 17, 2024 TAM Webinar 68 addressed the growing importance of equity. It provided an overview of equity in the context of transportation asset management, presented definitions of transportation equity, covered what resources exist, what resources are being developed, and shared practices of state DOTs and local agencies.

OVERVIEW AND RESOURCES

William Johnson, Colorado Department of Transportation, Performance and Asset Management Branch Manager, provided an overview of the topic. Under Executive Order 13985 Advancing Racial Equity and Support for Underserved Communities (2021), the term "equity" means the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment.

The FHWA Transportation Planning and Capacity Building (TCPB) program website states "Equity in transportation seeks fairness in mobility and accessibility to meet the needs of all community members. A central goal of transportation equity is to facilitate social and economic opportunities by providing equitable levels of access to affordable and reliable transportation options based on the needs of the populations being served, particularly populations that are traditionally underserved."

Johnson highlighted these federal agency equity tools.

- Environmental Protection Agency - EJScreen Tool
- Federal Emergency Management Administration - National Risk Index
- Centers for Disease Control and Prevention - Social Vulnerability Index
- Census Bureau - American Community Survey
- Department of Transportation - FHWA Planning and Equity Tool
- Department of Transportation - Screening Tool for Equity Analysis of Projects

Johnson provided an update on the NCHRP 08-169 project, Valuing Diversity, Equity, and Inclusion (DEI) in Transportation Asset Management. Some of the expected project objectives include a common set of DEI definitions; a list of quantitative and qualitative performance measures for asset management that incorporate DEI factors in transportation investment decisions; and a set of three to five case study applications that demonstrate the integration of DEI into TAM analysis.

Johnson also presented on the FHWA Transportation Asset Management Expert Task Group's Equity Considerations in Asset Management: Case Studies. State, regional and local examples were featured.

DENVER'S ASSET MANAGEMENT EQUITY APPROACH

Jason Smiley, Denver Department of Transportation and Infrastructure (DOTI), Performance Office GIS Data Administrator, presented on DOTI's asset management equity approach. Smiley said that Denver will achieve racial and social equity in transportation when one's race and other social identities can no longer be used to predict life outcomes, such as transportation choices and access, travel times, and economic or health outcomes. DOTI's three pillars of equity are workforce, business and community.

DOTI's equity approach is to ensure asset investments are equitable across neighborhoods and are supporting desired impacts. Equity is evaluated throughout the life span of existing assets.

The department has an Equity Index that is composed of seven demographic characteristics:

- Race and ethnicity
- Income and poverty
- Education level
- Populations of age 65+

- Households with no vehicle
- Female heads of household
- People with disabilities

"Denver Moves Everyone" is the 25 year transportation plan. They have an equity toolkit, a prioritization process, and they track equity in operations work.

TRANSPORTATION EQUITY AT MNDOT

Shaker Rabban, Minnesota Department of Transportation, Asset Management Planning Director, talked about MnDOT's Advancing Transportation Equity Initiative. MnDOT acknowledges that underserved communities have historically carried disproportionate burdens of transportation decisions. Rabban emphasized that the journey of transforming transportation systems, services and decision-making processes will require ongoing listening, learning, changing and adapting. MnDOT partners with community members, community-based organizations, transportation service providers, tribal nations and government institutions to evolve work and change outcomes for communities.

Community conversations: MnDOT conducted one-on-one conversations to learn about experiences and struggles with transportation. Transportation can be one of the main obstacles holding people back in many ways. MnDOT's Statewide Multimodal Transportation Plan (SMTP) has a 20-year planning horizon and is updated every five years. The 2022 SMTP is the first to include implementing equity in transportation decision making. MnDOT is currently scoping its 2026 Transportation Asset Management Plan (TAMP) and equity will influence what assets get included. Rabban shared information about the Government Accountability Office (GAO) report, National Highways: Analysis of Available Data Could Better Ensure Equitable Pavement Condition.

The participants agreed that addressing community needs starts with understanding what communities' expectations are. It is also important to track outcomes by quantifying the benefits and impacts of asset management decisions.

A recording of the webinar and slides may be accessed at this link: https://www.tam-portal.com/video/tam-webinar-68-equity-and-transportation-asset-management/

The TAM Webinar series is sponsored by the FHWA and AASHTO. To access other archived TAM webinars, go to this link on the TAM Portal: https://www.tam-portal.com/event-directory/tam-webinars/

Featured Transportation Research

Below is a selection of active, and recently completed AASHTO, FHWA, and NCHRP projects, NCHRP synthesis and other projects related to transportation performance management and the future transportation agency. Please note: Project descriptions shown in italics are directly from the National Academies of Sciences, Engineering and Medicine, Transportation Research Board (TRB), NCHRP website, www.trb.org. Accessed April 2024.

Road Safety Annual Report 2023. International Transport Forum. December 2023. https://www.itf-oecd.org/road-safety-annual-report-2023. *This report provides an overview of road safety performance for the 43 countries participating in the International Transport Forum's permanent working group on road safety, known as the IRTAD Group. The report describes recent road safety developments in these countries and compares their performance against the main road safety indicators.*

The Use of Artificial Intelligence in Pavement Engineering. Pacific Northwest Transportation Consortium (PacTrans) USDOT University Transportation Center. November 2023. https://digital.lib.washington.edu/researchworks/handle/1773/50994. Performance decay models are needed in pavement management systems to program pavement preservation and rehabilitation treatments to extend the service life and improve the performance of flexible pavements. *This study investigated and developed multiple types of artificial intelligence models to predict pavement performance.*

How Pavement and Bridge Conditions Affect Transportation System Performance. U.S. Department of Transportation, Federal Highway Administration. October 2023. https://rosap.ntl.bts.gov/view/dot/73519. *This document includes three fictional transportation asset management plan (TAMP) chapters illustrating how the TAMP could directly support multiple transportation performance objectives.* Those chapters are the performance gap analysis, risk assessment, and investment strategies.

Next-Generation Pavement Performance Measures. TechBrief. U.S. Department of Transportation, Federal Highway Administration. FHWA-HRT-23-076. September 2023. https://doi.org/10.21949/1521381. This TechBrief is part 1 of a two-part series.

Next-Generation Transportation Asset Management Methodology. TechBrief. U.S. Department of Transportation, Federal Highway Administration. September 2023. https://doi.org/10.21949/1521380. This TechBrief is part 2 of a two-part series.

Approaches to Forecasting the Third Performance Management Rulemaking (PM3) Measures for Target Setting. U.S. Department of Transportation, Federal Highway Administration. August 2023. https://ops.fhwa.dot.gov/publications/fhwahop21014/fhwahop21014.pdf. *This document developed a step-by-step calculation guide for three forecasting methods in support of target setting for the third performance management rulemaking (PM3) travel time-based performance measures.*

Methodology to Predict Federal Performance Measures from State Performance Measures of Pavement Networks. Transportation Research Record. Vol. 2677, Iss. 11. May 2023. https://doi.org/10.1177/03611981231164391. *In this paper, a new method to predict the federal performance measures of pavement networks from the state performance measures is provided, along with the mathematical models developed.*

Measuring new mobility: definitions, indicators, data collection. International Transport Forum. May 2023. https://www.itf-oecd.org/measuring-new-mobility-definitions-indicators-data. *This report defines "New Mobility" as intraurban passenger mobility services and vehicles enabled by digital technology. A comprehensive classification of "New Mobility" services and vehicles is proposed. It also identifies performance indicators to help set the right policies as New Mobility evolves.*

Scenario-Based Strategic Modeling of Road Transport Demand and Performance. Transportation Research Record. Vol. 2677, Iss. 5. January 2023. https://doi.org/10.1177/03611981221143377. *This study proposes an integrated, scenario-based strategic model which estimates transport demand, network performance, emission, and energy consumption.* The model accounts for future economic, behavioral, policy, and technological developments by including four future scenarios and traces the possible changes in transport infrastructure performance. The discussed results provide insights into the possible infrastructure investments within each scenario and elaborate on the possible effects of policies.

Applying Transportation Asset Management to Intelligent Transportation Systems Assets: A Primer. U.S. Department of Transportation, Federal Highway Administration. January 2022. https://ops.fhwa.dot.gov/publications/fhwahop20047/fhwahop20047.pdf. U.S. transportation agencies are identifying Intelligent Transportation Systems (ITS) assets as critical elements in asset management and long-range planning. *This primer provides information for applying Transportation Asset Management (TAM) principles to ITS assets in accordance with the Transportation Asset Management Plan (TAMP) requirements.*

Applying Transportation Asset Management to Traffic Signals: A Primer. U.S. Department of Transportation, Federal Highway Administration. January 2022. https://ops.fhwa.dot.gov/publications/fhwahop20048/fhwahop20048.pdf. U.S. transportation agencies are identifying traffic signals as critical elements in asset management and long-range planning. *This primer provides information for applying Transportation Asset Management (TAM) principles to traffic signals in accordance with the Transportation Asset Management Plan (TAMP) requirements.*

Transportation Asset Risk and Resilience. NCHRP 23-32. [Active] https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=5361. *The objective of this research is to provide a science-based technical resource to assess risk and resilience in transportation planning, design, construction, operation, and maintenance decisions.*

Analysis and Assessment of the National Performance Management Data. NCHRP 08-168. [Pending] https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=5321. MAP-21 and the FAST Act laid the groundwork for a comprehensive national-level performance management framework. The first 4-year reporting period began Jan. 1, 2018, and ended Dec. 31, 2021, and is the first complete set of consistent national-level performance management data. The availability of this data is an opportunity to conduct the first comprehensive analysis and assessment of this unique data set.

Performance Measures for Community-Centered Transportation Outcomes: A Guide. NCHRP 23-34. [Pending] https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=5540. *The objective of this research is to develop a guide to help state DOTs identify and implement nontraditional measures related to transportation performance with tactical strategies or methods for data collection and analysis.* Nontraditional measures may include accessibility, equity, health, or resilience.

A Guide for Program-Level Risk Management Performance Metrics. NCHRP 23-35. [Pending] https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=5541. *The objective of this research is to develop a guide to create program-level risk management performance metrics tailored for state departments of transportation, accompanied by example performance measures, case studies, and toolkits to drive data-driven decision-making throughout multimodal transportation systems.*

Integrating Performance Management, Risk Management, and Process Improvement: A Guide. NCHRP 23-37. [Pending] https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=5543. *This research focuses on the need to reveal the potential benefits and opportunities for integrating risk management, performance management, and process improvements by transportation agencies, including identifying the practices, methods, and data requirements to meet agency goals and objectives.*

Save the Date

CONFERENCES/WORKSHOPS

AASHTO CPBM Research Workshop #2 (Virtual)
May 23, 2024, 02:00 – 4:00 PM ET
More information:
https://www.tpm-portal.com/events/aashto-cpbm-research-workshop-2-255/

TRB 4th International Conference on Access Management
June 24-26, 2024, Boston, MA
More information:
https://trb.secure-platform.com/a/page/access_management

TRB 2nd Conference on Advancing Transportation Equity
July 15-18, 2024, Baltimore, MD
More information:
https://trb.secure-platform.com/a/page/transportationequity

AASHTO 2024 Conference on Data Management & Analytics, Planning, and Performance-Based Management
September 17-20, 2024
Hyatt Regency at the Arch, St. Louis, Missouri
Registration information coming soon!

MEETINGS

AASHTO Annual Meeting
October 28-31, 2024, Philadelphia, PA

WEBINARS

TPM Webinar 22
Reflections on Performance Management - Looking Back to Look Forward
May 15, 2024, 2:00 PM - 3:30 PM ET
More information:
https://www.tpm-portal.com/events/tpm-webinar-22/

AASHTO CPBM/TPM TSP Joint Quarterly Meeting
Feature Presentation: AASHTO Safety Action Plan and Low-Cost Strategies from NHTSA Countermeasures that Work
June 6, 2024, 2 PM - 4 PM ET
More information:
https://www.tpm-portal.com/events/tpm-tsp-quarterly-june-2024/

TAM Webinar 69
June 12, 2024, 2:00 PM - 3:30 PM ET
More information:
https://www.tam-portal.com/events/tam-webinar-69/

TPM Webinar 23
July 17, 2024, 2:00 PM - 3:30 PM ET
More information:
https://www.tpm-portal.com/events/tpm-webinar-23/

TAM Webinar 70
August 21, 2024, 2:00 PM - 3:30 PM ET
More information:
https://www.tam-portal.com/events/tam-webinar-70/

TPM Webinar 24
September 25, 2024, 2:00 PM - 3:30 PM ET
More information:
https://www.tpm-portal.com/events/tpm-webinar-24/

TAM Webinar 71
October 16, 2024, 2:00 PM - 3:30 PM ET
More information:
https://www.tam-portal.com/events/tam-webinar-71/

TPM Webinar 25
November 20, 2024, 2:00 PM - 3:30 PM ET
More information:
https://www.tpm-portal.com/events/tpm-webinar-25/

AASHTO CPBM/TPM TSP Joint Quarterly Meeting
December 5, 2024, 2 PM - 4 PM ET
More information:
https://www.tpm-portal.com/events/tpm-tsp-quarterly-dec-2024/

TAM Webinar 72
December 18, 2024, 2:00 PM - 3:30 PM ET
More information:
https://www.tam-portal.com/events/tam-webinar-72/

Get Involved in a CPBM Subcommittee, Work Group, or Task Force

Committee on Performance-Based Management (CPBM)
Chair: Christos, Xenophontos, Rhode Island DOT
Vice-Chair: Jean Wallace, Minnesota DOT
AASHTO Liaison: Anna McLaughlin
FHWA Liaison: Mshadoni Smith-Jackson
For a link to upcoming Joint Quarterly CPBM/TPM TSP Meetings, please visit the event page on the TPM Portal at https://www.tpm-portal.com/event-directory/

Subcommittee on Asset Management
Chair: Mike Johnson, Caltrans
Membership Coordinator: Louis Feagans, Indiana DOT
Policy/Rulemaking Coordinator: Todd Lamphere, Washington State DOT
AASHTO Liaison: Anna McLaughlin
FHWA Liaison: Tashia Clemons
Meetings: Monthly joint meetings with TRB AJE30, third Monday of each month, 1 PM – 2:30 PM Eastern Time
For a link to Zoom meetings please visit the TAM Portal at https://www.tam-portal.com/event/

Subcommittee on Organizational Management
Chair: Gary Vansuch, Colorado DOT
Vice Chairs: David Putz, Iowa DOT, and Gehan Elsayed, West Virginia DOT
Secretary: Stacey Houston, Iowa DOT
AASHTO Liaison: Anna McLaughlin
FHWA Liaison: Vacant
Meetings: Monthly joint meetings with TRB AJE15 Workforce Development and Organizational Excellence Committee, third Tuesday of each month from 12 PM – 1:30 PM Eastern Time
For a link to meetings, please contact Gary Vansuch. The subcommittee homepage is located at https://www.tpm-portal.com/community/cpbm-om/

Subcommittee on Risk Management
Chair: Nathan Lee, Utah DOT
Co-Chair: William Johnson, Colorado DOT
Vice-Chair: Monica Aleman-Smoot, Texas DOT
Secretary: Patrick Cowley, Utah DOT
AASHTO Liaison: Anna McLaughlin
FHWA Liaison: Daniel Fodera
Meetings: Second Monday of even-numbered months, 1 PM – 2 PM Eastern Time
For a link to Zoom meetings, please visit the ERM Portal at https://www.erm-portal.com/community/subcommittee-on-risk-management/

Policy and Rulemaking Work Group
Chair: Ryan Huff, Nebraska DOT
Vice-Chair: Lori Fisette, Rhode Island DOT
AASHTO Liaison: Anna McLaughlin
FHWA Liaisons: Alexis Kuklenski, Mshadoni Smith-Jackson
Meetings: Second Tuesday, 1 PM – 2 PM Eastern Time
For a link to Zoom meetings, please visit the work group homepage at https://www.tpm-portal.com/community/cpbm/policy/

Research Work Group
Chair: Edgardo Block, Connecticut DOT
Vice Chair: Alma Mujkanovic, Georgia DOT
AASHTO Liaison: Anna McLaughlin
FHWA Liaison: Nelson Hoffman
Meetings: Monthly meetings, second Friday, 2 PM – 3 PM EST
For a link to Zoom meetings, please visit the work group homepage at https://www.tpm-portal.com/community/cpbm/research/

Task Force on Emerging Performance Areas
Co-Chairs: Deanna Belden, Minnesota DOT and Kelly Travelbee, Michigan DOT
AASHTO Liaison: Anna McLaughlin
FHWA Liaison: Christina Leach
Meetings: Monthly meetings, first Wednesday, 2 PM - 3 PM
For a link to Zoom meetings, please visit the task force homepage at https://www.tpm-portal.com/community/tfepa/