

Standing Committee on Transportation Asset Management (ABC40)
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Leveraging Research that Supports and Improves Transportation Asset Management

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YESTERDAY

Internationally, transportation asset management (TAM) has proven to be an effective method of managing assets effectively as transportation funding decreases and the demand for service and mobility continues to increase. These agencies consider the long-term implications of investment options across modes, and hold decision makers accountable for making sustainable investment choices.

Over the last 10 years, interest in transportation asset management has grown in the United States, as agencies sought strategies to determine how to use limited funding most effectively. As a result of their focus on asset management, agency policies and investment decisions are:

- More aligned with organizational performance goals,
- Driven by data,
- Communicated more effectively with decision makers and other stakeholders, and
- More transparent.

In July 2012, Congress passed legislation, commonly known as the “Moving Ahead for Progress in the 21st Century Act,” or MAP-21, that further accelerated the interest and activity in TAM2 by establishing a performance-based Federal highway program that focuses on national transportation goals, increases the accountability and transparency of the Federal highway program, and supports the use of performance data to drive investment decision making. One of the provisions of the legislation is a requirement for State transportation agencies to develop “a risk-based asset management plan for the National Highway System to improve or preserve the condition of the assets and the performance of the system.” Such an asset management plan should include investment strategies that enable the highway agency to make progress towards its performance targets while supporting progress towards national goals. Although the legislation only requires the asset management plan to include pavement and bridge assets on the National Highway System, State transportation agencies are encouraged to include all infrastructure assets within the right-of-way corridor in their plan. Regulations implementing the TAM requirements went into effect in 2016 and initial TAM plans compliant with the regulations were submitted in 2018.

At a minimum, the asset management plan is to include the following information:

- A summary listing of the pavement and bridge assets on the National Highway System in the states, including a description of the condition of those assets.
- Asset management objectives and measures.
- The identification of any performance gap.

- A life-cycle cost and risk management analysis.
- A financial plan.
- Investment strategies.

MAP-21 also establishes new requirements for transit asset management by FTA's grantees, as well as new reporting requirements to promote accountability, as part of a strategic effort to assess needs and prioritize investment needs that will bring the nation's public transit systems into a state of good repair. Under the regulations for transit asset management initiated by MAP-21 and finalized in 2016, transit agencies must report a set of performance measures for characterizing the state of repair of their assets, establish performance targets, report progress towards meeting performance targets, and develop transit asset management plans that summarize capital asset inventories and conditions, as well as investment priorities.

As a result of these factors, there is a tremendous demand for training, tools, templates, and guidance on the implementation and use of asset management principles. In 2011, AASHTO published *Transportation Asset Management Guide: A Focus on Implementation*, which provides useful guidance in aligning an organization to support asset management. The document also introduces a TAMP as a communication tool and accountability mechanism that outlines the long-term financial plan for meeting an agency's stewardship responsibilities for its transportation network. A TAMP formalizes and documents the agency's strategic outlines, the nature of the assets required to deliver the services and their current performance, the planned asset improvements and expected performance, and how the assets will be managed cost-effectively through their life cycles. Thus, it can be thought of as a comprehensive business plan that consolidates other agency plans into a single business plan.

The implementation of asset management and the development of a TAMP are still relatively new concepts in the United States and so other initiatives have begun to address the knowledge and technology gaps that exist. For instance, the FHWA established a TAM ETG to identify outreach activities and other initiatives that will increase the awareness and use of asset management in transportation agencies. In addition, FHWA initiated a pilot study to develop TAMPs in three state transportation agencies to serve as examples as other agencies began work on the development of their TAMPs. The National Cooperative Highway Research Program (NCHRP) has also supported the development of guidance and tools to support TAM through the development of a Gap Analysis Tool, a TAMP Template, a TAM Portal, a Cross-Asset Allocation Tool, and a Guide to Enterprise Risk Management, to name just a few.

TODAY

The Committee is actively engaged in activities to advance the state of the art and state of the practice in transportation asset management. Since transportation asset management is, by its nature, a collaborative process, ABC40 works across all modes of transportation in partnership with other TRB committees; the American Association of State Highway and Transportation Officials (AASHTO); the Federal Highway Administration (FHWA); the FHWA's Transportation Asset Management Expert Task Group (TAM ETG); the Federal Transit Administration (FTA), state and local transportation agencies, Metropolitan Planning Organizations, transit agencies, and other partners to help accomplish our mission. While ABC40 will primarily focus on research and technology transfer related to the implementation and use of asset management concepts, data to support asset management, and tools to conduct asset management analyses, we will collaborate with and support the related engineering,

economic, policy, organizational development, and leadership activities that help to make asset management a success in transportation agencies.

The Transportation Asset Management Committee is actively engaged in supporting these efforts through the development of research problem statements; participation on research panels; and sponsorship of peer exchanges, conferences, and webinars for practitioners. To accomplish its goals, Committee ABC40 collaborates with a number of other TRB committees in its efforts, including committees representing the management of different types of assets (e.g., pavement management, bridge management, and maintenance management), diverse types of data and data collection strategies, a range of transportation modes (e.g., transit, rail, and airports), different investment strategies (e.g., asset preservation, safety, and mobility enhancements) and other agency demands (e.g., organizational).

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Committee Future Outlook

The Transportation Asset Management Committee aims to encourage the use of strategic and tactical decisions: 1) that are data-driven, that consider multiple modes, incorporate risk, and evaluate the long-term impacts of each option; 2) by fostering research that will expand and synthesize pertinent knowledge; and 3) to improve information exchange and dissemination about the use of asset management concepts.

Committee Goals

The committee has five major goals for the future:

1. Work with stakeholder groups to advance the development and use of asset management principles in transportation agencies representing both the highway and transit sectors.
2. Encourage and facilitate the use of asset management principles to improve the management of a broad range of transportation assets.
3. Foster the continued enhancement of asset management tools and techniques through the identification and advancement of research activities.
4. Support the development of guidance to advance the state of the practice.
5. Facilitate outreach activities to promote the use of Transportation Asset Management.

Committee Challenges - Emerging Issues Inside and Outside the Committee Scope

There are many emerging issues that are important to the Transportation Asset Management Committee. The three most critical transportation issues that have a direct connection to the committee's work include the following:

- Building organizational cultures and leadership that support the use of performance-based data for investment decision making.
- The availability of data and tools for agency investment decisions that support long-term financial plans that consider risk and that evaluate tradeoffs between multiple assets, different modes of travel, and alternate investment strategies.
- The development of processes that support collaborative decision making that considers engineering, financial, economic, environmental, and other factors in long-term investment decisions for highways and other modes of transportation.

Because of the cross-cutting and collaborative nature of these issues, the Transportation Asset Management Committee has established three subcommittees that focus on data, tools, and the implementation and use aspects of asset management.

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