

NCHRP 08-137 AASHTO Digital TAM Guide Update *Hackathon Kick-Off*

June 5, 2023

Hackathon



***noun** hack • a • thon*

an event in which many people meet to engage in collaborative computer programming. Also known as a hack day, hackfest, datathon or codefest, a portmanteau of hacking and marathon—a hackathon is an event where people engage in rapid and collaborative engineering over a relatively short period of time such as 24 or 48 hours.

Welcome to the AASHTO Transportation Asset Management Guide. Whether you are new to asset management, a seasoned practitioner, or an executive, this Guide will help to further your understanding of asset management techniques and advance asset management practices at your agency.



What is Transportation Asset Management?

As defined by the American Association of State Highway Transportation Officials (AASHTO), transportation asset management is a strategic and systematic process focused on upgrading, maintaining, and preserving transportation assets through engineering, management, and financial practices, with the objective of maximizing the quality and performance of the transportation system.

TAM Guide Explore TAM About

Chapter 3 Quick Links

Chapters

Chapter 3 Sections

Chapter 3 Home Page

Chapter PDF

Finding Talent

Agencies can consider converting existing staff with a planning, financial, or engineering background. Candidates must be results oriented, able to communicate well, possess good presentation skills and be able to bring diverse people together for common goals.

TIP
Existing employees in an agency can be identified to build TAM competency. There are training opportunities in different TAM topics hosted by TAM organizations identified in Chapter 1.

Practice Example
Competencies and People - New Mexico

New Mexico DOT

The Capital Program and Investment Director led the NMDOT Asset Management effort and has spent her career in transportation, starting at the FHWA before moving to NMDOT. She has worked in various parts of the NMDOT organization in engineering, administration, and as a district engineer. This variety of experiences gives her the competencies needed to be a successful TAM lead.

Practice Example
Competencies and People - Minnesota

Minnesota DOT

The TAM lead at MnDOT came to the role from the maintenance side of the agency. The experience and understanding of maintenance business processes, data needs, and organizational culture help him lead and manage the implementation of TAM processes. Having direct responsibility for budgets and workplans related to maintenance assets, as well as experience in setting statewide performance measures for maintenance services, provided valuable skills and knowledge that now help him to deliver the TAM program at MnDOT.

Chapter Quick Links

Chapters

Chapter 1

Chapter 2

Chapter 3

Chapter 4

Chapter 5

Chapter 6

Chapter 7

AASHTO TAM

The guide is organized into seven chapters. Whether you are new to asset management or an experienced practitioner, the guide provides asset management techniques and advanced practices.

Chapter 1

Introduction

This chapter introduces transportation asset management concepts and describes the organization of the guide.

<p>What's Important</p> <p>Transportation Asset Management (TAM) is defined by the American Association of State Highway Transportation Officials (AASHTO) as a strategic and systematic process focused on business and engineering practices for allocating resources to assets throughout their lifecycles.</p>	<p>How the Guide Can Help</p> <p>The purpose of this guide is to further transportation agencies' understanding of asset management techniques and advance its practices. While the target audience for the guide is primarily State Departments of Transportation (DOTs), local agencies managing metropolitan, county, or mixed transportation networks will find it just as useful and appropriate to their needs.</p>	<p>Spotlight on TAM Plans and Policies</p> <p>The overall objective of asset management is better decision making in allocating resources based upon quality information and well defined objectives. The main benefits of asset management include:</p> <ul style="list-style-type: none"> Improved asset condition performance, resilience, and longevity Increased efficiency and effectiveness More benefit for each dollar invested Improved accountability Reduced risk exposure Improved coordination and efficiency 	<p>What's Inside</p> <p>1.1. TAM Basics</p> <p>1.2. About This Guide</p> <p>1.3. TAM Resources</p>
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[Read the Chapter](#)

Chapter 2

TAM Strategy and Planning

TAM Guide Resources

Access a searchable database of publications as well as the how-to guides, checklists, and examples included in the guide. Resources are linked to the relevant Guide content so that you can learn more about a particular topic.

Search Filters

Search Results

Sort By: [Resource Type](#) | [A to Z](#)

Topic

- Communication
- Data Management
- Financial Management
- TAM Fundamentals
- Life Cycle Planning
- Maintenance and Preservation
- Workforce
- Performance Management
- Risk Management
- Rules and Regulations

TAM Guide Chapters

- 1. Introduction
- 2. TAM Strategy and Planning
- 3. Organization and People
- 4. Asset Performance
- 5. Resource Allocation
- 6. Monitoring and Adjustments
- 7. Information and Systems

Resource Type

- Checklist
- How To
- Practice Example
- Reference

1. Checklist: TAM Roles /

2. Checklist: Assessing an Organization's Change Readiness /

3. Checklist: Ingredients in an Implementation Plan /

4. Checklist: Considerations to Support the Successful Implementation of a Life Cycle Approach to Managing /

5. Checklist: Work Planning and Delivery /

6. Checklist: Characteristics of Strong Performance Measures for Managing the Condition of Ancillary Assets /

7. Checklist: Monitoring External Considerations in Risk /

8. Checklist: Risk Management Process /

9. Checklist: Data Items to Standardize for TAM /

10. Checklist: Asset Data Collection Readiness Checklist /

11. Checklist: Preparing Data for Sharing, Reporting and Visualization /

12. Checklist: Preparing a TAM Financial Plan /

13. How To: Recruit Individuals for Asset Management Roles /

14. How To: Establish a TAM Steering Committee /

15. How To: Develop a Communications Plan /

16. How To: Manage Change and Prepare for a System Replacement /

17. How To: Develop an Asset Management Policy /

18. How To: Develop a Risk Register /

19. How To: Prioritize Assets for TAM Advancement /

20. How To: Establish Customer-Based Service Level Targets /

21. How To: Life Cycle Planning for Pavements /

22. How To: Determine What Data Is Needed to Support Life Cycle Management /

23. How To: Implement a Multi-Objective Decision Analysis (MODA) Approach /

24. How To: Benchmark Performance /

25. How To: Use RACI to Create a Responsibility Assignment /

[Next](#)

TAM Guide Hackathon

- **Overview**

- Dates
- Goals
- Focus Areas

- **Eligibility**

- **How do I get started?**

1. Brainstorm
2. Build Your Team
3. Ask Questions
4. Access Resources

- **Requirements**

- **Prizes**

- Grand Prize
- Focus Area Winners
- Honorable Mentions

- **Judging**

- Judges
- Submission Evaluation
- Evaluation Criteria

- **Resources**



Dates

- **Hackathon:** June 5-11, 2023
 - Kick-Off Meeting #1: June 5 at 2:00pm ET
 - Check-In Meeting #2: June 7 at 2:00pm ET
- **Submissions Due:** June 11, 2023 at 11:59pm
- **Judging:** June 12-June 23, 2023
 - Evaluation by Consultant Team: June 12-16, 2023
 - Evaluation by Judges: June 19-22, 2023
- **Winner Announcement:** June 26, 2023
- **Submission Presentations:** July 9, 2023 (TRB TAM Conference)



Goals

- **Innovation** in terms of new and different ideas for how the digital guide can provide users with the relevant content for them in a format and structure that is most useful.
- **Engagement** with a broader base of users from the industry including government, academia, private sector, and advocacy.
- **Collaboration** among transportation engineers, data scientists, practitioners, and designers.
- **Efficiency** with respect to developing new ideas and rapid prototyping and development.
- **Recognition** for those who participate and generated the new and innovative ideas for the digital guide.



Focus Areas

1. **Navigation enhancements** regarding moving around the digital guide better.
2. More **practice examples** that connect with real data and tools.
3. **Improved visualizations** and ways to communicate information and concepts in the digital guide better.
4. Linking **GIS/mapping** to the guide.
5. Use and application of **gamification**.
6. Introduction of **web-based training** functionalities.
7. Integration of **multimedia audio and video** into the delivery of content.
8. **Other ideas and concepts** to improve functionality.



Eligibility

- **Open to anyone interested in improving the AASHTO Digital TAM Guide.**
- **Examples**
 - Teams
 - Individuals
 - Student Groups



How do I get started?

1. **Brainstorm:** Which of the eight focus areas do you want to address? Read through the current digital [TAM Guide](#) and see where you think there are deficiencies that could be improved.
2. **Build Your Team:** Identify some other people, or work independently, to work with in addressing the focus area you want to work on. Register your team at: <http://www.tamguide.com/hackathon>.
3. **Ask Questions:** Email questions to hackathon@tamguide.com.
4. **Access the Resources:** <http://www.tamguide.com/hackathon/>



Requirements

- Complete the submission form.
 - <http://www.tamguide.com/hackathon/>
- Create and upload a simple/short video that includes footage that explains your Focus Area improvement
- Provide any supporting documentation.
- Submit not later than June 11, 2023 at 11:59pm
- Submission will be made through the AASHTO Digital TAM Guide website at:
<http://www.tamguide.com/hackathon> → *Resources*



Prizes

- **Grand Prize**

- Winner Presentation at the TRB TAM Conference
- Presentation During TAM Webinar
- Professional Recognition
- Write-Up for Distribution
 - TAM Portal
 - AASHTO publications
 - TRB publications

- **Focus Area Prizes (up to 5)**

- Winner Highlight at the TAM Workshop
- Presentation During TAM Webinar
- Professional Recognition
- Write-Up for Distribution
 - TAM Portal
 - AASHTO publications TBD
 - TRB publications TBD

Winners and entries will be used by the research team to identify ideas and models that can be integrated into the Digital TAM Guide. Recognition will be provided.



Judges

- **Matt Haubrich**, Iowa DOT
- **Meredith Hill**, Maryland State Highway Administration
- **J.P. O'Har**, Gannet Fleming
- **Cristina Torres-Machi**, University of Colorado: Boulder
- **Omar Smadi**, Iowa State University
- **Laura Zale**, SEPTA



Evaluation Criteria



Creativity



Quality



Implementation



Impact



Resources

- **AASHTO Digital TAM Guide**

- <https://www.tamguide.com/>

- **Workshop on Updating the AASHTO Digital TAM Guide**

- <https://www.tpm-portal.com/sessions/nchrp-08-137-project-workshop-update-of-the-aashto-digital-tam-guide-invitation-only/>

- **TAM Portal**

- <http://www.tam-portal.com>

- **Chapter Mock-ups in Development Environment**

- Email Conor Brown: cbrown@spypondpartners.com

- **Example audio files**

- https://drive.google.com/file/d/1tvXpU80J4tkMSdQs1L04e9_TygUH1GCL/view?usp=sharing



Questions?

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