

# Transportation Asset Management Webinar Series

Webinar 64

## Highlights from the TRB TAM Conference

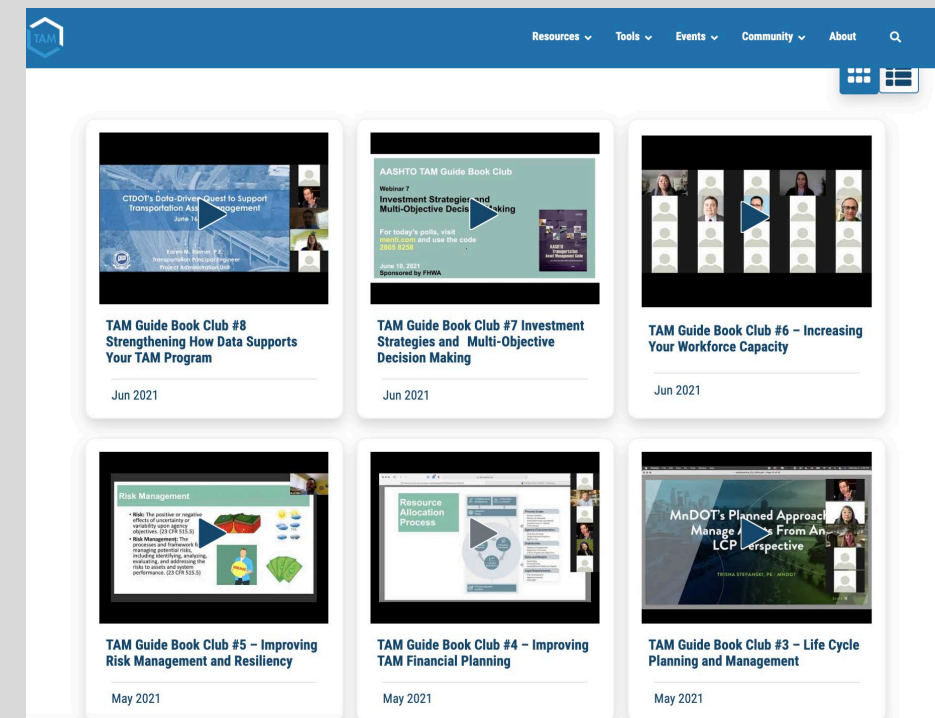
Sponsored by FHWA and AASHTO



August 16, 2023

# FHWA/AASHTO Asset Management Webinar Series

- This is the 64th in a webinar series that has been running since 2012
- Webinars are held every two months, on topics such as off-system assets, asset management plans, asset management and risk management, and more
  - 3rd Wednesdays, 2PM Eastern
- We welcome ideas for future webinar topics and presentations
- Submit your questions using Zoom’s chat feature



# Welcome

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FHWA and the AASHTO Sub-Committee on Asset Management are pleased to sponsor this webinar series

- Sharing knowledge is a critical component of advancing asset management practice
- FHWA Asset Management Hub: <https://www.fhwa.dot.gov/asset/pubs.cfm>

# Webinar Objectives

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- Hear about highlights of the 14<sup>th</sup> National Conference on Transportation Asset Management held July 2023
- Discuss implementing ideas from the conference

# Webinar Agenda

**2:00 Welcome, Overview, and Agenda**

Matt Haubrich, AASHTO  
Tashia Clemmons, FHWA  
Hyun-A Park, Spy Pond Partners

**2:10 Conference Summary**

Laura Zale, SEPTA

**2:25 Peer Exchange Highlights**

Mike Johnson, Caltrans

**2:40 Infrastructure and Risk/Resilience Innovations**

William Johnson, Colorado DOT

**2:55 Organizations and People Innovations**

Matthew Hardy, Spy Pond Partners

**3:10 Q&A**

Hyun-A Park, Spy Pond Partners

**3:20 Discussion and Wrap-up**

Hyun-A Park, Spy Pond Partners



# TRB 14<sup>th</sup> Conference on Transportation Asset Management: Summary

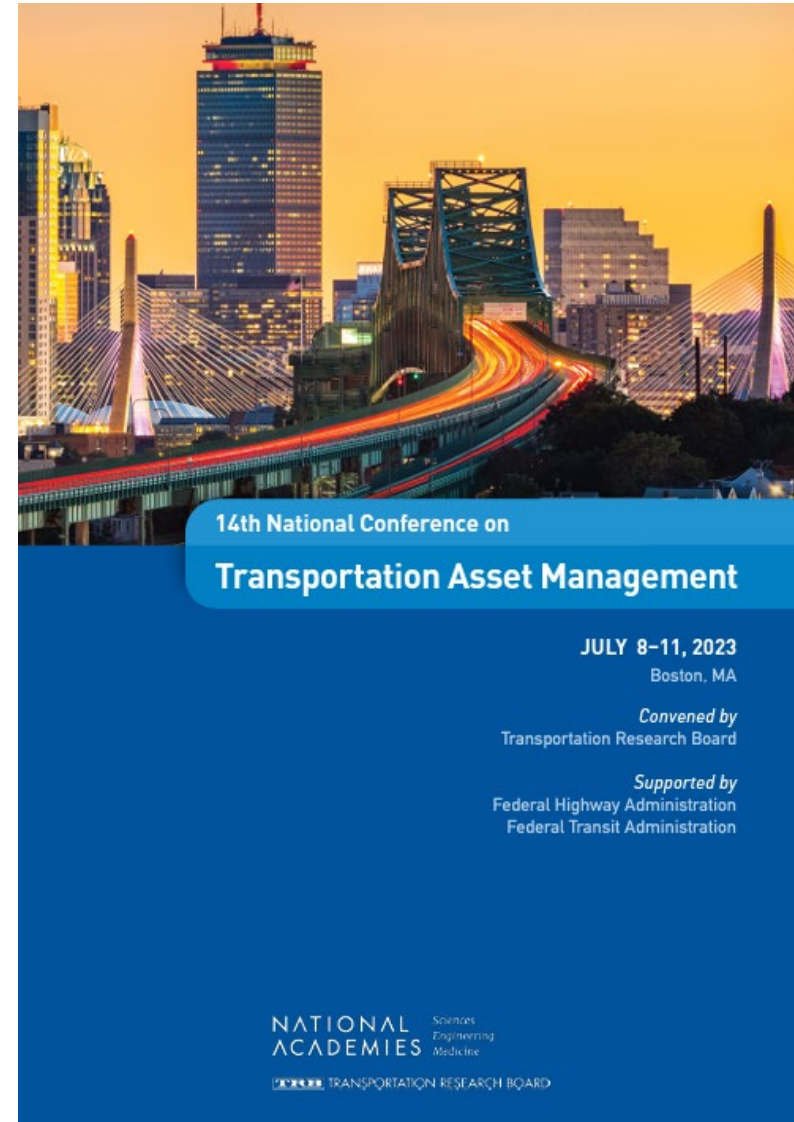
**Laura J. Zale – Senior Director, Capital Program Support**

July 11, 2023

# TRB TAM 2023

## Boston, Massachusetts

- 325 Attendees
  - DOT
  - Transit Agencies
  - Local Agencies
  - Practitioners
  - Students
- One Conference with Several Components
  - AASHTO Peer Exchange
  - FTA TAM Roundtable
  - Preconference Workshops
  - Sessions and Workshops
  - Hackathon
  - TAM Competition



# ○ Conference Goals

## Planning Committee Objectives

- Give attendees tools and techniques to advance their TAM Practice
- Demonstrate tactical successes
- Identify ways to advance the TAM field
- Interactive content





# ○ Conference Structure

## Planning Committee Objectives

- Four “traditional” tracks
  - Organizing for TAM
  - Actionable Plans
  - Risk
  - Sustainability
- One “Emerging Topics” track
- Guest speakers from other industries
- Balanced presentations with opportunities to be interactive





## Takeaways for Future Asset Management Events

# Showing Progress Takes Time.



# Advance the Conversation Outside of the “TAM” Silo



- **Encourage Participation from All Levels of the Practice.**



- Showcase the Host Agency

*Moving Massachusetts Forward.*  
**massDOT**



**Massachusetts Department of Transportation**

○ Find the “Bridgeable Gaps.”



# The Art of Project Selection

AAHSTO/FHWA sponsored Peer exchange

Boston, Massachusetts on July 8-9, 2023

Presented by - Michael Johnson

California Department of Transportation



# Acknowledgements

- ◇ FHWA and AASHTO for sponsoring the Peer Exchange
- ◇ TRB for supporting us appending this Peer Exchange on to the National conference
- ◇ Spy Pond Partners for supporting the development and documentation of the Peer Exchange
- ◇ A Peer Exchange presenters and participants

# Introduction

- ◇ Agencies are faced with competing priorities that require broader thinking when selecting projects
- ◇ Transportation Performance Management
  - ◇ Safety
  - ◇ Pavement and bridge conditions
  - ◇ Travel time reliability
  - ◇ Air quality
- ◇ Climate Adaptation
  - ◇ Agencies are experiencing transportation impacts across the nation.
- ◇ Equity
  - ◇ Agencies are looking to incorporate equity factors into their project decision making
- ◇ Funding
  - ◇ IIJA introduced new programs and funding opportunities

# Peer Exchange Participants

- ◆ Peer exchange participants include State DOT's, cities, oversight agencies, academics
- ◆ Approximately 65 attendees

# Opening Session

- ◆ Featured presentations from 4 agencies outlining how they currently select projects
  - ◆ Lina Chapman and Brad Sharlow (Michigan DOT),
  - ◆ Shaker Rabban (Minnesota DOT)
  - ◆ Justin Bruner (Pennsylvania DOT)
  - ◆ Jonathan Fok (Washington DOT)
- ◆ Take aways
  - ◆ Coordination across a broad stakeholder groups and gaining executive support
  - ◆ Develop a constrained investment plan to set reasonable expectations
  - ◆ Some agencies have established formulas or scoring methods to help prioritize projects

# Project Prioritization Exercise

- ◆ Teams were asked to prioritize 8 projects given a set of goals, performance targets and expected project outcomes.
- ◆ Teams were asked to apply a constrained budget to select projects
- ◆ Exercise was designed to spur discussion about trade-offs between safety, condition, climate adaptation, equity and usage.
  
- ◆ Take Aways:
- ◆ Varied selections from the teams
- ◆ Projects without quantified performance targets faired pretty well
- ◆ No consistent approach taken by teams and outcomes reflect the varied approaches

# Project Group Exercise

Selections varied significantly among the teams

Examples -

Project D was the only identified disadvantaged community project

Project A was a safety project

Project E was addressing climate adaptation need

Project G – Bike and ped project

Project H – Congestion reduction project

Project	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Avg. Rank	% Selected
A		2	3	1	1	1	1	1	1.4	88%
B	6							4	5	25%
C	5			1	5		5	5	4.2	63%
D			2		3		3		2.7	38%
E	3	4			4	3	4		3.6	63%
F	2	3		1		2		3	2.2	63%
G	1			1	2		2	2	1.6	63%
H	4	1	1	1		4			2.2	63%

# One Success Story

- ◇ We asked all participants to identify one area of success
- ◇ Themes:
  - ◇ Communication (Internal and External stakeholders)
  - ◇ Importance of a champion and leadership support
  - ◇ Following a data driven objective project selection process versus political choice
  - ◇ Use desired performance outcomes to tailor projects
  - ◇ Importance of asset preservation
  - ◇ Asset Management expanding beyond pavement and bridges

# Ways to Improve the Practice

- Work Type Tracking & Forecasting
  - Collect better data to develop better models
- Need More Opportunities to Learn Cross-discipline
- Leverage AASHTO to Develop Consistency
  - B.P. for TAMPs
- FMIS & Track Different Colors of Money to better understand how money is being spent on TAM
- Framework for Addressing Fed Grants in Long-Term Planning



# Peer Exchange Summary Report

- ◆ Summary report of the Peer Exchange is in the final review process
- ◆ The final report will be sent to all participants and posted on the TAM Portal

**2023 Transportation  
Asset Management  
Peer Exchange**

**The Art of Selecting  
Projects**



TRANSPORTATION RESEARCH BOARD

14th National Conference on

**Transportation Asset Management**

Boston, MA • July 8–11, 2023

# Infrastructure and Risk and Resilience Innovations Highlights

**William Johnson**

**Colorado DOT**

# Infrastructure and Risk and Resilience Innovations Highlights



## At-A-Glance:

- [Workshop: Risk & Resilience Visualization](#)
- [Uncertain Risks: Getting Comfortable with Uncertainty](#)
- [Sustainability and Resilience](#)
- [Building Infrastructure Resilience: How Do We Adapt to the Unknown Unknowns?](#)
- [The Buck Starts Here: Using Risks to Inform Decisions](#)
- [Visualizing and Communicating Risk: Telling the Story of Why it Matters](#)
- [It's What's For Dinner! Your One-stop Shop for Interdisciplinary Risk Management](#)
- [Resilience Planning Framework for Transportation Systems](#)
- [New Technologies will Revolutionize the use and Function of TAM in the Decision-Making Process: An Oxford-style Debate](#)

# Infrastructure and Risk and Resilience Innovations Highlights



## Workshop: Risk & Resilience Visualization



**Lead Presenter: Emily Burns**  
 Waterfront Asset Management Program Manager  
 Seattle Office of the Waterfront & Civic Projects

- 1:30: Introductions and Overview
- 1:40: Part 1—Research Findings
  - Visualization of Highway Performance Measures
  - Business Case and Communications Strategies for State DOT Resilience Efforts
  - North Road Project Overview
- 2:30: Part 2—Small Group Exercise
- 3:45: Part 3—Report Out
- 4:30: Review the Results – Tabulate Table Winners
- 4:45: Awards & Close Out

## NCHRP Synthesis 584 Visualization of Highway Performance Measures

### Visualization & Business Case Competition!

#### Approach

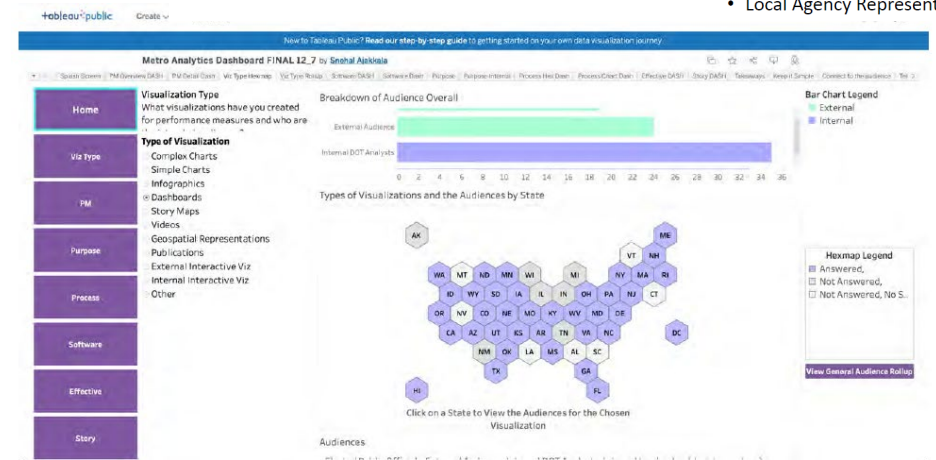
- Team up with a Table Captain
- Chose your roles
- Choose your audience
- Spend 75 minutes applying the Resilience Capability Maturity Model and Visualizing Highway Performance research to tell a compelling story on the importance of resilience using provided data

#### Audience Choices

- Community
- Internal executives and policy makers
- Technical / Professional staff (engineers, project managers, and planners)
- Elected officials

#### Player Roles

1. Performance Manager
  2. Risk Manager
  3. Asset Owner
  4. Maintenance Manager
  5. Communication Manager
  6. Governor's Office Representative
  7. Transit Agency Representative
  8. MPO Representative/Planner
- Oversight Board - External Stakeholder
  - Local Agency Representative



# Infrastructure and Risk and Resilience Innovations Highlights



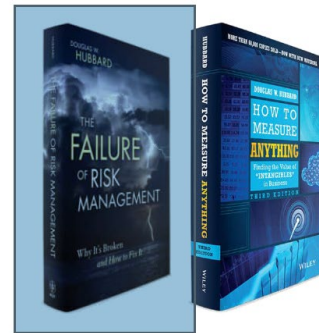
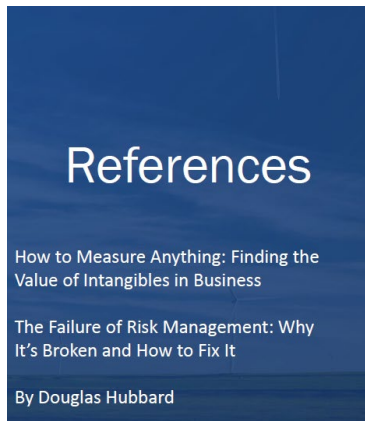
## Uncertain Risks: Getting Comfortable with Uncertainty



Lead Presenter: Todd Shepherd

### Five Principles to help you make better decisions

1. The act of measurement reduces uncertainty, which in turn helps us make better decisions.
2. When you know very little, even small measurements greatly reduce uncertainty.
3. By measuring something, you are paying for uncertainty reduction.
4. You can quantify the value of further measurement
5. You only need further measurements if you're uncomfortable with the risk of a wrong decision.



# Infrastructure and Risk and Resilience Innovations Highlights



## Sustainability and Resilience



**Lead Presenter: Gerardo Flintsch**  
Professor & CSTI Director  
Virginia Tech



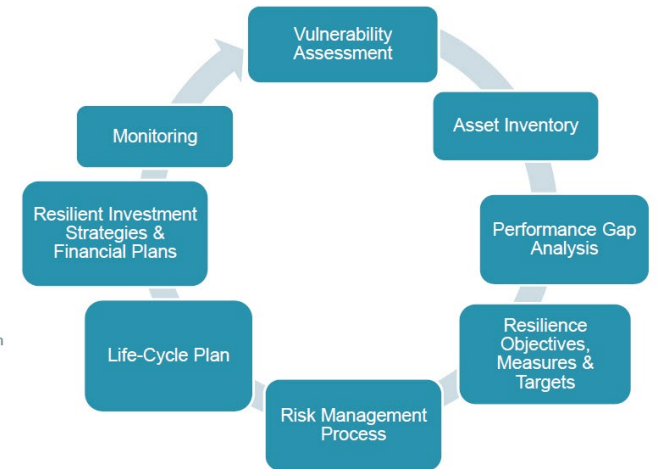
### Net Zero Highways 2030/2040/2050 Plan



### RESILIENCY FRAMEWORK



<https://fhwa-test.fhwa.dot.gov/asset/pubs/hif23010.pdf>



# Infrastructure and Risk and Resilience Innovations Highlights



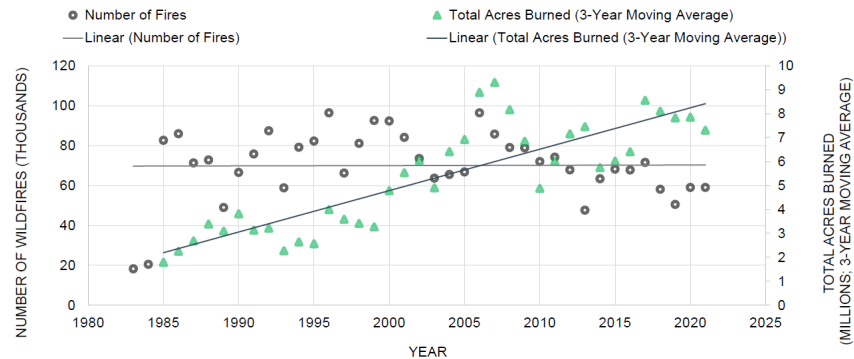
## Building Infrastructure Resilience: How Do We Adapt to the Unknown Unknowns?



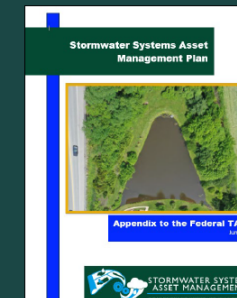
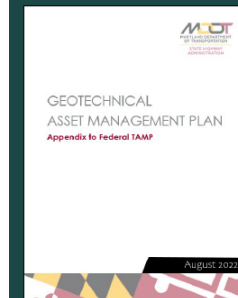
Lead Presenter: Prashant Ram

Applied Pavement Technology, Inc. (APTech)

### Intensity and Size of Wildfires are Increasing



### Critical (Ancillary) Assets



### Asset Resiliency Challenges

- ▶ Competing Philosophies of Resiliency & State of Good Repair
- ▶ Sustained Funding
- ▶ Flexible Funding

### Addressing the Challenges

- ▶ 2022 NHS TAMP included MDOT SHA AMPs
- ▶ Partnering with FHWA Maryland Office
  - ▶ Capitalize on current FHWA approved Resilience Funding
  - ▶ Statewide Planning & Research (SPR) funding for ancillary asset data technology and SGR Planning
  - ▶ Innovative project bundling for grant competitiveness

# Infrastructure and Risk and Resilience Innovations Highlights



## The Buck Starts Here: Using Risks to Inform Decisions



**Lead Presenter: William Johnson**  
Performance and Asset Management Branch Manager  
Colorado DOT

### Methodology



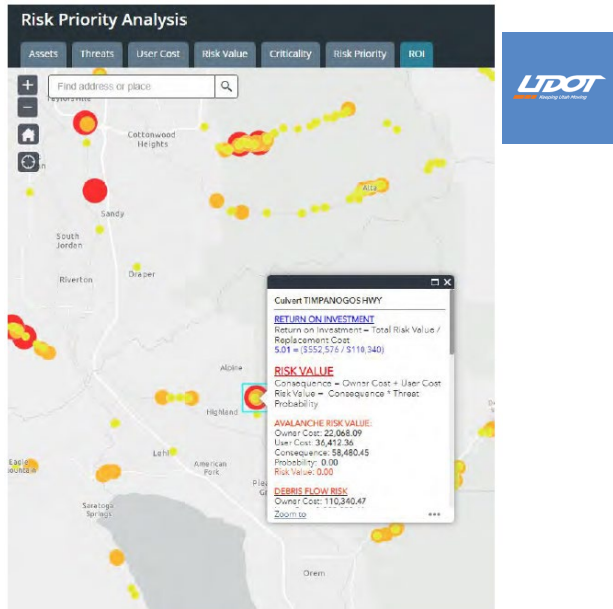
- Phase 1
  - Identify key stressors and their associated weather-related risk
    - Identify vulnerable assets
  - Identify impact to the system
  - Identify case study area(s)
  - Compile data
    - Identify proxy indicators
    - Identify root cause – consider different stages of asset lifecycle (creation, maintenance, preservation, rehabilitation/reconstruction)
- Phase 2
  - Identify response strategies and selection criteria
- Phase 3
  - Incorporate assessment results in decision making (prioritization and plan)



### RPTA (Bus) 20-Year Summary

<b>Baseline</b>	CAP \$750M	PRF 96%	<div style="width: 96%;"><div style="width: 96%;"></div></div>
Expected Funding	MAI \$680M	FTE 164	
<b>"Downpour"</b>	CAP \$350M	PRF 29%	<div style="width: 29%; background-color: red;"><div style="width: 29%;"></div></div>
Severely Reduced Capital & Maintenance	MAI \$180M	FTE 20	
<b>"Drizzle"</b>	CAP \$680M	PRF 70%	<div style="width: 70%; background-color: orange;"><div style="width: 70%;"></div></div>
Moderately Reduced Capital & Maintenance	MAI \$440M	FTE 118	
<b>"Partly Cloudy"</b>	CAP \$750M	PRF 83%	<div style="width: 83%; background-color: yellow;"><div style="width: 83%;"></div></div>
Reduced Maintenance Only	MAI \$440M	FTE 118	
<b>"Partly Sunny"</b>	CAP \$680M	PRF 88%	<div style="width: 88%; background-color: lightyellow;"><div style="width: 88%;"></div></div>
Reduced Capital Only	MAI \$680M	FTE 164	

CAP: 20-Yr Asset Capital Spend   MAI: 20-Yr Asset Maintenance Spend   PRF: Yr 20 Avg Asset Performance Score   FTE: Yr 20 Maintenance FTE Count





# Infrastructure and Risk and Resilience Innovations Highlights








## Visualizing and Communicating Risk: Telling the Story of Why it Matters

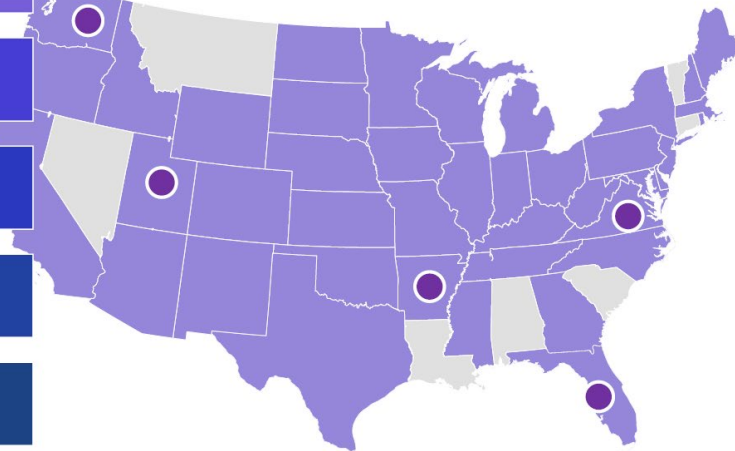


**Lead Presenter: Emily Burns**  
Waterfront Asset Management Program Manager  
Seattle Office of the Waterfront & Civic Projects

NCHRP Synthesis 584 Visualization of Highway Performance Measures

-  Keep it simple.
-  Tell a clear story.
-  Resonate with the audience.
-  Make data transparent.
-  Leadership matters.

### ● 5 State Stories



### Tell a clear story

A dashboard that supports the leadership's message can help focus the organization.



# Infrastructure and Risk and Resilience Innovations Highlights

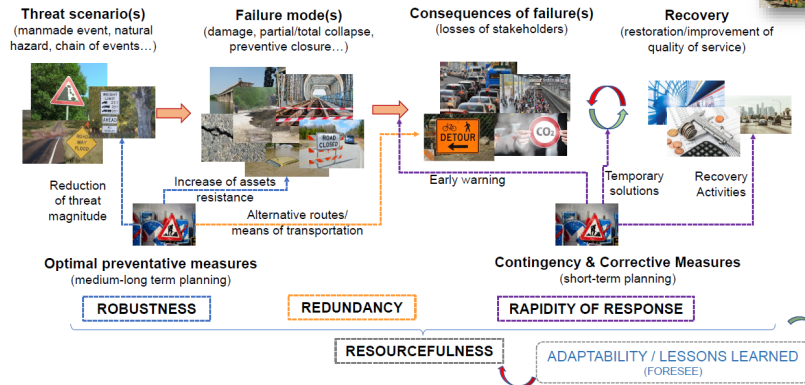


## It's What's For Dinner! Your One-stop Shop for Interdisciplinary Risk Management



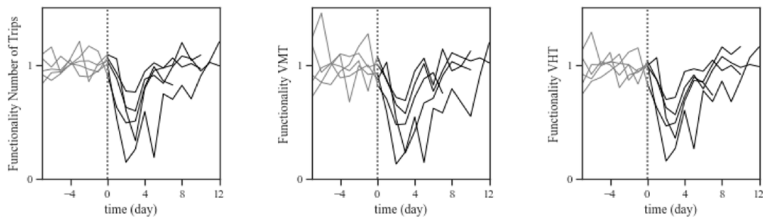
**Lead Presenter: Mara Campbell**  
Global Technology Leader  
Jacobs

### Risk & Resilience-based approaches in Asset Management



**TRANSPORTATION INSTITUTE** Center for Sustainable and Resilient Infrastructure

Flooding significantly reduces number of trips and cumulative metrics of time and distance traveled

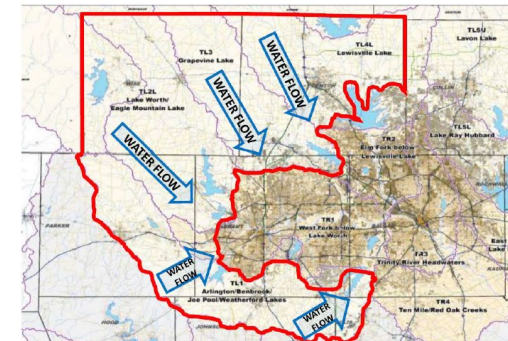


University of Colorado **Boulder**



### Integrated Transportation and Stormwater Infrastructure (TSI) Initiative

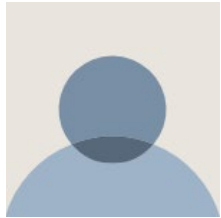
- Integrate stormwater management, urban development, transportation, and environmental planning
- Develop plan for risk awareness and resiliency
- Identify impacts and alleviate risks from flooding



# Infrastructure and Risk and Resilience Innovations Highlights



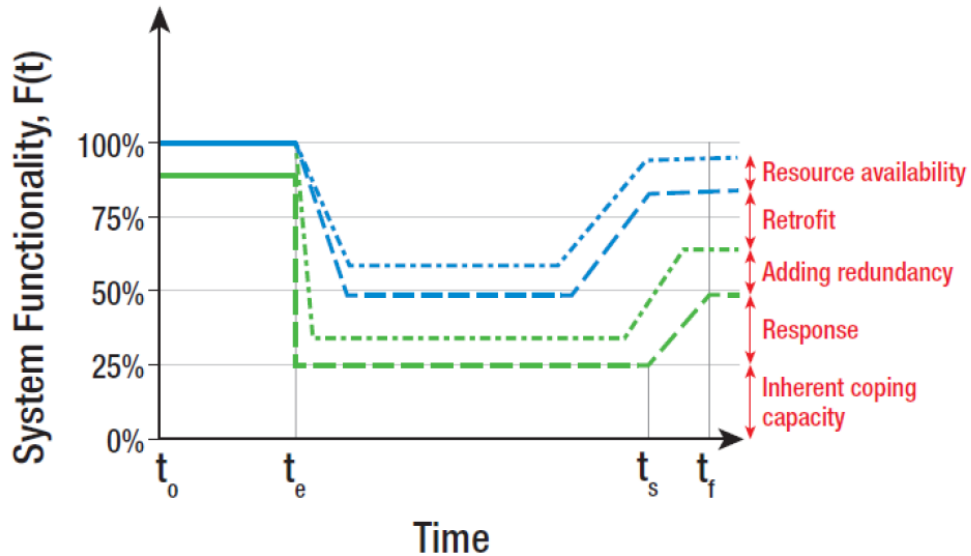
## Resilience Planning Framework for Transportation Systems



**Lead Presenter: Victor Rivas**  
Asset Management Consultant  
Jacobs Engineering Group Inc.



### Contribution to Resilience of Different Actions



Adapted from Faturechi, R., and E. Miller-Hooks. 2014. "Mathematical Framework for Quantifying and Optimizing Protective Actions for Civil Infrastructure Systems." *Computer-Aided Civil and Infrastructure Engineering Systems: Special Issue on Sustainability and Resilience of Spatially Distributed Civil Infrastructure Systems* 29:572–589.

### Systems approach to complexity: combining viewpoints

Complex environments are, by definition, too complicated for any one person to grasp fully..  
Each of us then draws conclusions based on incomplete pictures.  
[W]hen faced with complexity, ..the better approach...[is] to focus..on techniques to deal with combining different viewpoints.

Ed Catmull, Co-founder Pixar Animation Studios

Systems techniques map relationships, highlight interaction points

-- capturing and synthesizing cross-functional, diverse contributions

Systems approaches enable 'seeing differently'

# Infrastructure and Risk and Resilience Innovations Highlights



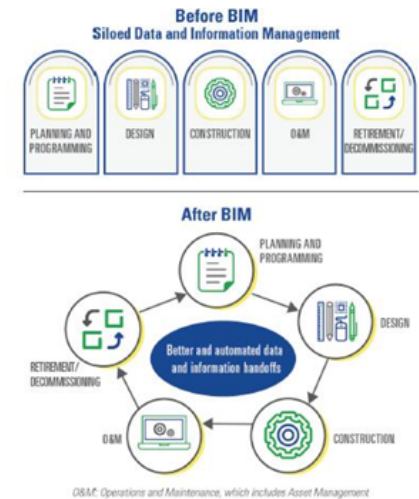
## New Technologies will Revolutionize the use and Function of TAM in the Decision-Making Process: An Oxford-style Debate



**Lead Presenter: Matthew Hardy**  
Senior Manager  
Spy Pond Partners

### Where's the Value?

- Is this data cycle realistic?
  - Depends on data maintenance over a long period, potentially decades.
  - Can we predict data needs 20+ years from now?
    - What is the cost to maintain the data?
- Does the Operations/Maintenance phase need the same level of detail as Design?



© HDR 2019.

Figure 1. Illustration. Silos versus collaborative use of interoperable data.<sup>1</sup>



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## **Organizations and People Innovations**

Matthew Hardy, Ph.D.  
Senior Manager  
Spy Pond Partners

# Organization and People Innovations Highlights

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## At-A-Glance:

- [Leveraging TAM to Drive Organizational Change](#)
- [TAM-Travel: A Conversation with the Past, Present, and Future of TAM](#)
- [Putting People at the Center of Your Program Implementation](#)
- [Achieving Goals through Effective Program Management](#)
- [The Role of the Asset Management Champion & Their Team](#)
- The Relational Coordination Factor
- [Turning Your Conference Learning into Organizational Change](#)
- Hot Tub TAM Machine



# Organization and People Innovations Highlights



## Leveraging TAM to Drive Organizational Change

TRB 14<sup>th</sup> Transportation Asset Management Conference

### Practical Experiences using the AASHTO TAM Data Guide to Sustain and Advance TAM Programs

July 2023  
Boston, MA

NMDOT's Asset Management Executive Steering Committee and the Development of the 2022 TAMP

Monday, July 10, 2023

Virginia Stubella  
NMDOT TPM Manager



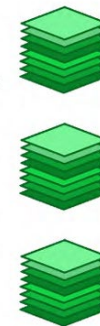



### TAM is Data and Analysis Intensive

Is your agency effectively using data and information systems to support its TAM program?

#### TAM Data Needs

- Asset Inventory
- Asset Condition & Performance
- Location Referencing
- Design Standards
- Maintenance and Project Information
- Agency Financials
- Demand Forecasts
- Environmental Data
- Decision-Maker Priorities
- Public Perception



#### TAM Data Uses

- Optimize Maintenance, Rehabilitation, and Improvement Strategies
- Prioritize TAM Resource Allocation
- Support Agency Planning and Programming
- Report Condition, Performance, and Accomplishments
- Ensure Decision-Making Accountability and Transparency



# Organization and People Innovations Highlights



## TAM-Travel: A Conversation with the Past, Present, and Future of TAM



**Lead Presenter: Simon Smith**  
Technical Director (North America)  
AMCL

In the decade since MAP-21 the application of AM within the transportation industry has increased significantly, but not without lessons learned along the way. This panel facilitates a discussion between industry practitioners in 2013, today, and 2033 to consider what they've learned and their aspirations for AM in the future.



# Organization and People Innovations Highlights



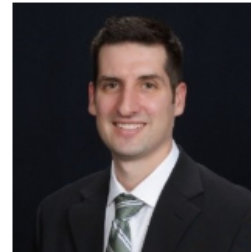
## Putting People at the Center of Your Program Implementation



**Lead Presenter: Laura Zale**  
Senior Director, Capital Program Support  
Southeastern Pennsylvania Transportation Authority



**Lead Presenter: Louis Feagans**  
Managing Director of System Performance and Transportation Policy  
Indiana Department of Transportation



**Lead Presenter: Cody Barrett**  
Principal Technologist  
HNTB Corporation



**Lead Presenter: Hugh Quinn**  
Deputy Director Configuration Engineering  
MBTA



**Lead Presenter: Mark Ricketson**  
Program Manager  
Massport

# Organization and People Innovations Highlights



## Achieving Goals through Effective Program Management



**Lead Presenter: Justin Barclay**  
Asset Management Manager  
JMT



**Lead Presenter: Jack Smith**  
Assistant Planning/Asset Management Engineer  
North Dakota Department of Transportation



**Lead Presenter: Maxwell Brown**  
Senior Consultant  
AMCL

## Integrating Long Range Transportation Plan Scenarios into TAMP Gap Analyses

**Alternative Future Scenarios**

**RURAL RENAISSANCE**  
Rural areas become communities of choice

**CITIES & CENTERS**  
Urban areas grow quickly and become the centers of the state

**SMART & CONNECTED**  
Innovation accelerates and we live in a tech-driven future

**GHOST TOWNS**  
Economic downturns greatly reduce quality of life for North Dakotans

**Planning for Uncertainty**  
We don't know what the future will hold. But we recognize that North Dakota is changing. Between now and 2045, we may see shifts in the places we live, the jobs we work, and the ways we choose to get around. Innovations in transportation will change our vehicles, our infrastructure, our information, and NDDOT's business model.

Through this planning process, we explored different alternative futures for North Dakota. These scenarios looked at what might happen should the future bring renewed opportunities for rural communities, continued growth in city centers, or rapid technological transformations in our daily lives.

**What is happening in North Dakota already?**

- Growing, aging, and more diverse populations
- Shifting industries and workplaces
- Emerging technology and transportation innovations
- Changing travel patterns and expectations
- Increasing e-commerce and goods movement

Transportation Connection provides a flexible framework to guide transportation decisions and investments that will shape North Dakota over the coming decades. NDDOT and our transportation planning partners will remain nimble, modernize how we operate, and invest in our data and our organizations in order to deliver a safe, innovative, and connected future.

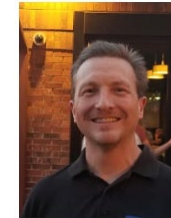
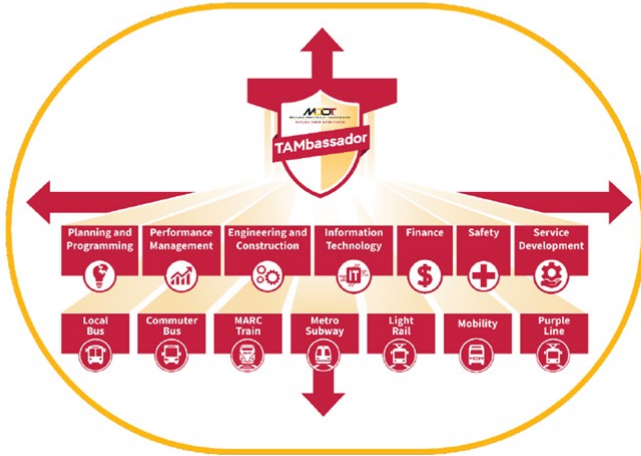
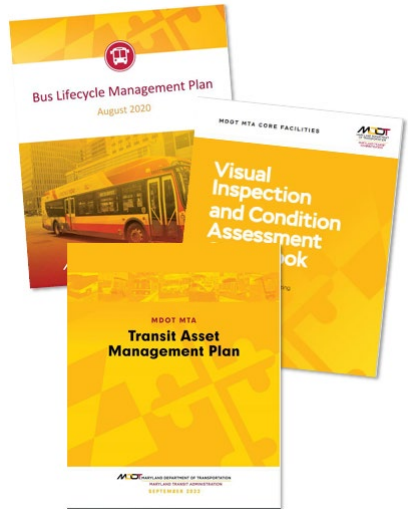
# Organization and People Innovations Highlights



## The Role of the Asset Management Champion & Their Team

### Takeaways

### TAMbassador Program



**Lead Presenter: Lou Cripps**  
Director, Asset Management  
RTD

1. Commitment Is Earned, Not Given
2. Stay Focused And Run The Script
3. Label and Manage Our Inputs
4. Do the Next Right Thing
5. Call To Action

### Takeaway 2 – Stay Focused & Run the Script



Purpose



#### "If only..."

##### Excuse

- We had more resources
- We had more staff
- We had more time

##### Blame

- They understood
- We had leadership commitment

Management System Deficiency



Detach



Run the Script



Adjust

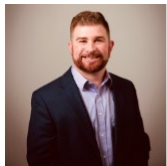


Action (when we...)

Trigger

Analyze

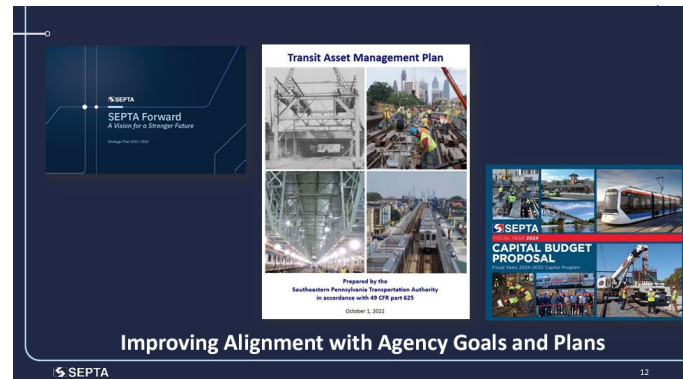
Execute



**Lead Presenter: Justin Barclay**  
Asset Management Manager  
JMT



**Lead Presenter: Laura Zale**  
Senior Director, Capital Program Support  
Southeastern Pennsylvania Transportation Authority



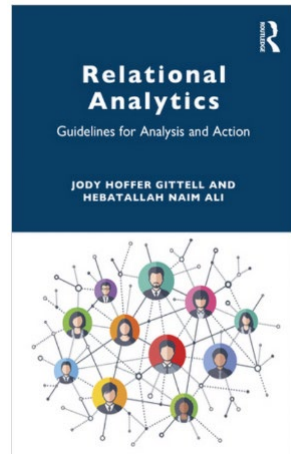
# Organization and People Innovations Highlights



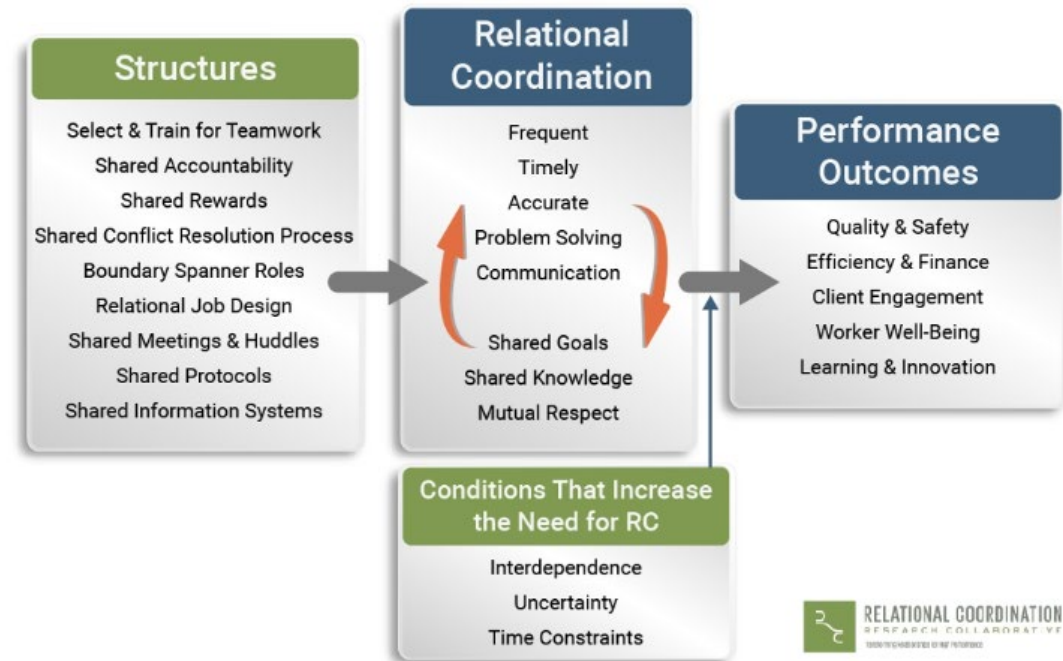
## The Relational Coordination Factor



Lead Presenter: Jody Hoffer Gittel  
Professor  
Heller School for Social Policy and Management, Brandeis University



## Theory of Performance



<https://heller.brandeis.edu/relational-coordination/index.html>



# Organization and People Innovations Highlights



## Turning Your Conference Learning into Organizational Change



### **Lead Presenter: Arthur Markman**

Professor and Vice Provost  
University of Texas, Austin

Art Markman is the Annabel Irion Worsham Centennial Professor of Psychology, Human Dimensions of Organizations, and Marketing and Vice Provost for Academic Affairs at the University of Texas at Austin. He has written over 150 papers on topics including reasoning, decision making, and motivation. Art brings insights from cognitive science to a broader audience through his blogs at Psychology Today and Fast Company as well as his radio show/podcast Two Guys on Your Head. He is the author of several books including Smart Thinking, Smart Change, Brain Briefs, and Bring Your Brain to Work.

# Organization and People Innovations Highlights



## Hot Tub TAM Machine



### Track Leads

Emily Burns

Laura Zale

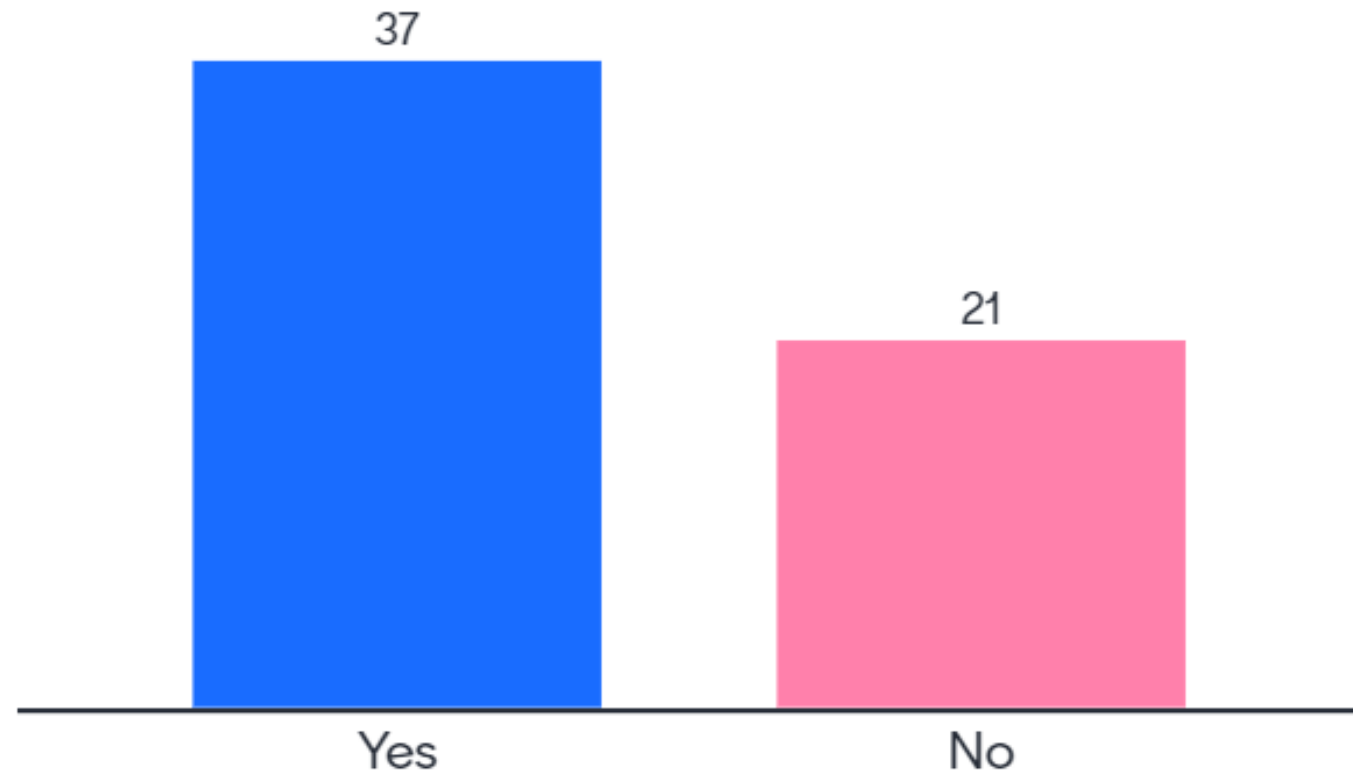
Jack Moran

William Johnson

Victor Rivas

Matt Haubrich

# 1 Is this your first National TAM conference?



## 2b. What other tools do you think are needed to be developed to support TAM implementation?

58 Responses

JIT training

Financial

Documentation/regulations that are more clear of what the goals of the TAM program are

Training

Ability to collect quality data

Full lifecycle model to include acquisition, disposition, and replacement.

AI

Resources demonstrating best practices

Sample graphics for convincing presentations

Data modeling standards

Academic training and certification

Guides



### 3b. What other research do we need to start now to support TAM implementation?

34 Responses

Innovative technology

Best practices

Methods for developing complex cost models

Utilize BIL funding

Approaches to calculating benefit to TAM

Some more fundamental research that help us move to the next level.

Partner with sister agencies

I need better data.

Impact of the past 2 TAM plans on the outcomes of the agency. Is it working? Can we evolve and go beyond the minimum

Innovative methods for developing decision trees

TAM/Maintenance Voter Research

## 4a. What do you see the TAM industry addressing five years from now?

61 Responses

Fiscal cliffs

Post BIL performance

Funding shortfalls.

People, process, technology.

The same issues with resource needs!

Risks

Data quality

Don't know

Small assets

Lack of funding

Airspace for flying cars

Organizational change management,  
still and always.

More robust w/ ancillary assets

Electric vehicle infrastructure

## 5a. What did you hear at this conference that you wished the TAM community at large could have heard?

29 Responses

Risk Tolerance

Process improvements can streamline our processes and make impactful changes

How robust GAM is, and its potential for resiliency management.

The ZEV Data Analytics session

Importance of incorporating sustainability and resilient consideration into asset management decisions making

Keep you message simple and transparent

Change management knowledge

More data is not necessarily better.

How to use gis

The story and impact to traveling public are what matter.

Needing to not silo information

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**Wednesday, October 18, 2023– 2:00 PM EST**  
Communicating Transportation Asset Management

**More to follow!**



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