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TRB Webinar: Advancing the Art and Science of Decision-Making

March 12, 2026

12 – 1 PM



PDH Certification Information

1.5 Professional Development Hours (PDH) – see follow-up email

You must attend the entire webinar.

Questions? Contact Andie Pitchford at TRBwebinar@nas.edu

The Transportation Research Board has met the standards and requirements of the Registered Continuing Education Program. Credit earned on completion of this program will be reported to RCEP at RCEP.net. A certificate of completion will be issued to each participant. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the RCEP.



Purpose Statement

This webinar will highlight insights from NCHRP Research Report 1162: Advancing the Art and Science of Decision-Making: A Guide, which blends practical guidance, real-world experiences from transportation agency executives, and findings from cognitive science to support stronger, more intentional leadership decisions. The session will explore the foundations of human decision-making and examine practical strategies for navigating common challenges in complex environments.

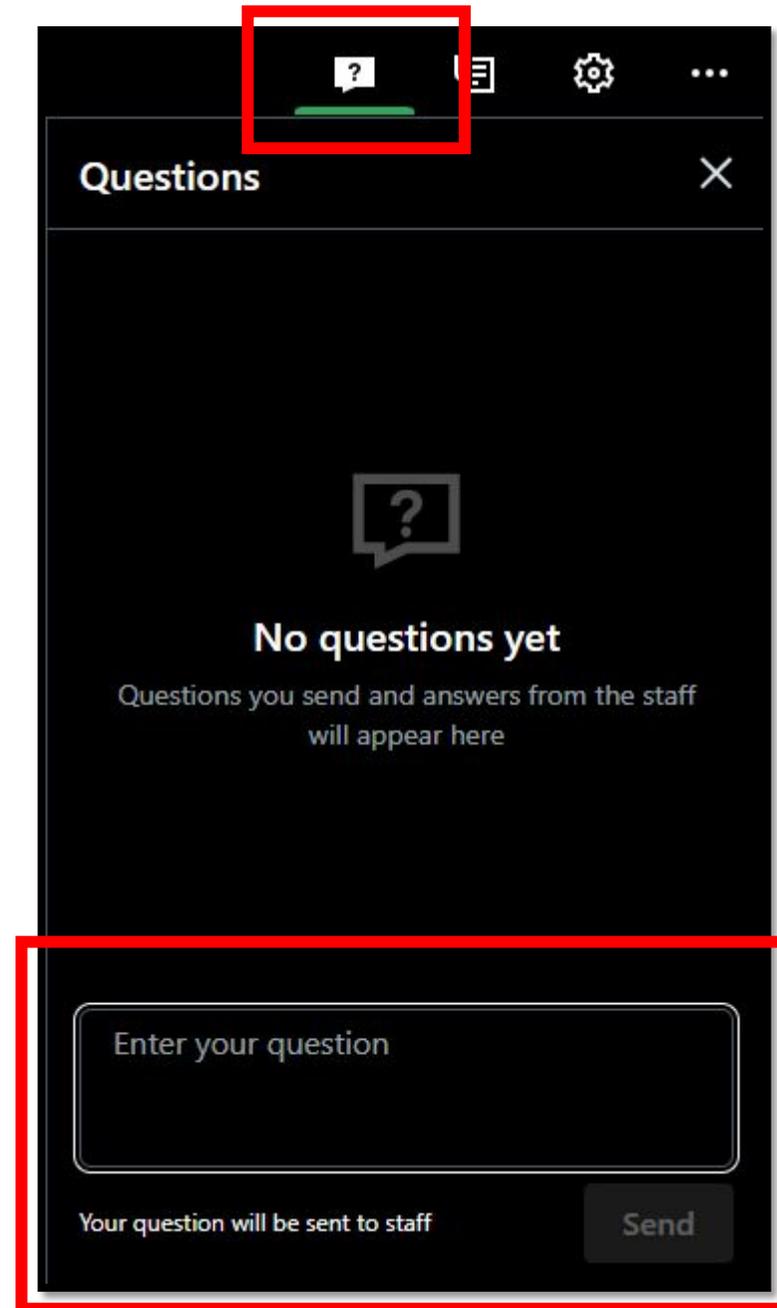
Learning Objectives

At the end of this webinar, you will be able to:

- (1) Define the foundations of decision-making and distinguish the characteristics of a “good” decision
- (2) Apply practical strategies to improve decision-making across a range of leadership situations
- (3) Analyze real-world decision scenarios faced by agency leaders and identify approaches they used to navigate difficult situations

Questions and Answers

- Please type your questions into your webinar control panel
- We will read your questions out loud, and answer as many as time allows



Today's Presenters



Anna Batista
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High Street Consulting



Kyle Schneweis
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High Street Consulting



Kirk Steudle
steudleseg@gmail.com
Steudle Executive Group

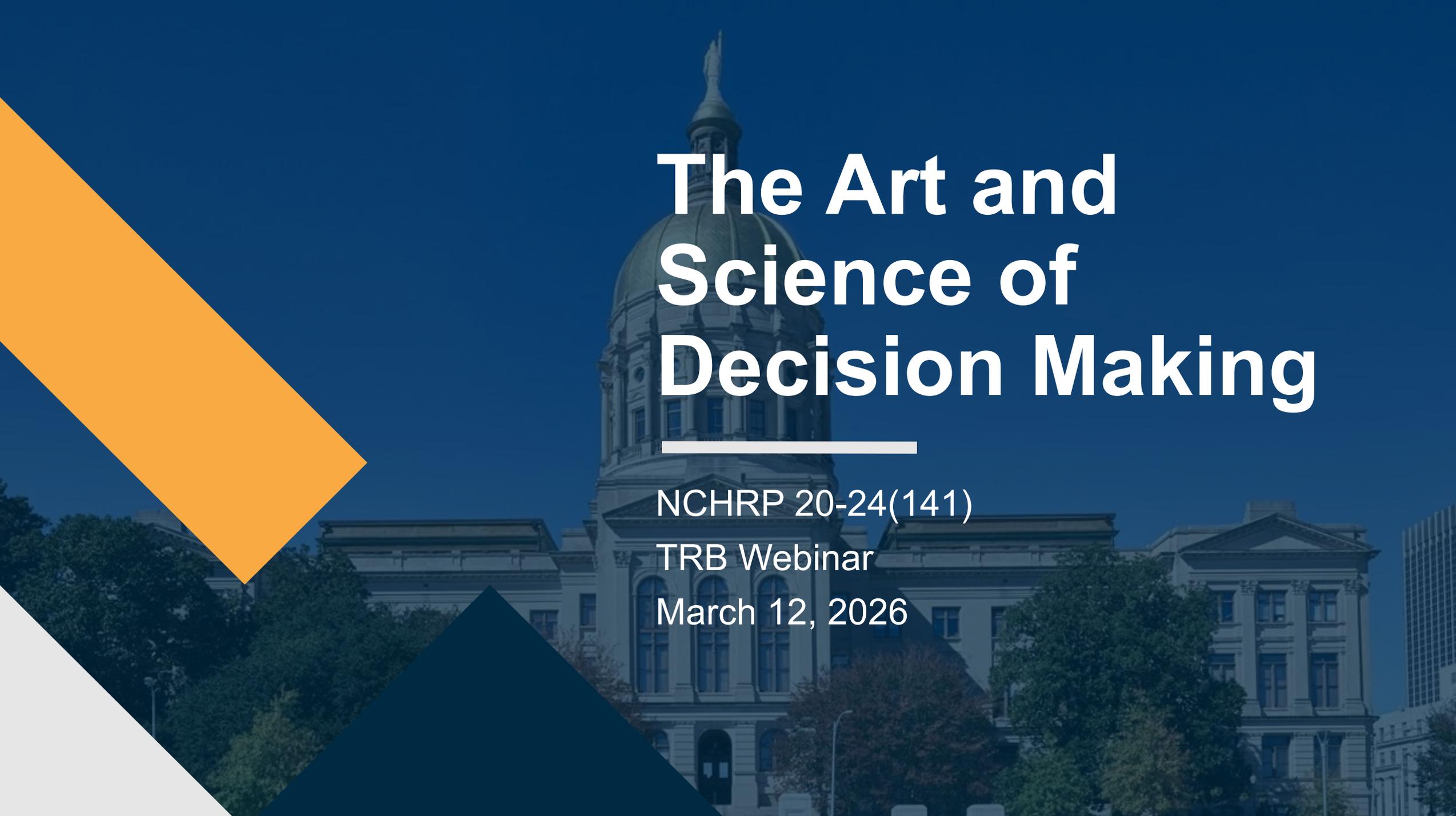
Panelists



Marc Williams
Texas DOT



Vicki Kramer
Nebraska DOT



The Art and Science of Decision Making

NCHRP 20-24(141)

TRB Webinar

March 12, 2026

Project Background

Purpose

Help leaders of transportation agencies improve decision-making capabilities.

Audience

The following practitioners at state DOTs, MPO, transit providers, or other transportation agencies:

- Executive leaders
- Senior leaders
- Managers
- Future leaders

The Research Team



Anna Batista
Principal Investigator



Kyle Schneweis
Executive Engagement



Kirk Steudle
Executive Engagement



Dr. Linda Moya
Decision Theory



Amy Link
Communications Expert



Sydney Tate
Researcher



Bryce Miller
Researcher

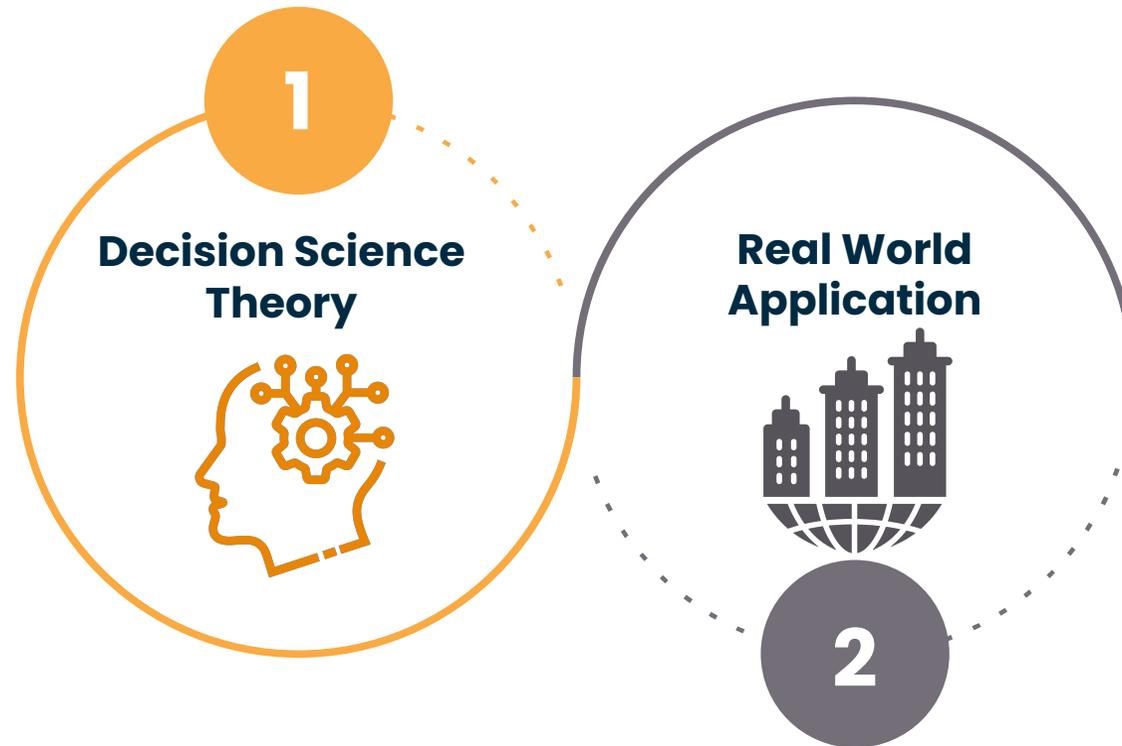
Research Approach

The research blended decision science theory with real-world application throughout all tasks

Academic literature across decision theory, cognitive science, behavioral economics, and psychology.

+

Scientific framework of how cognition functions and how we make decisions.



Executive Interviews with current and former leaders of transportation agencies.

+

Gray literature across management and business, government reports, and periodical articles.

Executive Engagement

Early and frequent engagement with transportation leaders shaped results

Early Focus Groups

Executive focus groups provided feedback on initial content and framework.

In-Depth Interviews

Additional interviews with leaders provided insights and advice on core topics and decision challenges.

Case Study Participation

Six leaders gave detailed accounts of a challenging situation.

Preliminary Guide Review

A small group of agency executives reviewed the preliminary guide to provide comments and suggestions.

Final Products

Foundations of Decision Making

Key insights from the science of decision making that form the foundation for real-world wisdom.

Strategies for Better Decisions

A compendium of strategies to navigate specific decision challenges and situations.

Case Studies of Decisions in Action

Stories of one notable decision situation encountered by an agency executive that showcase how the guide's strategies play out in a real situation.



Decision Foundations

Kyle Schneweis

Former Nebraska DOT Director

What Makes a “Good” Decision?

Decision science indicates four universal characteristics of “good” decisions



Factual

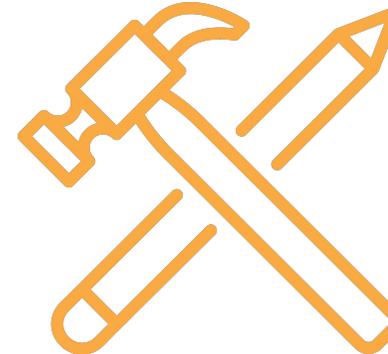
Competence

Gathers information
Examines beliefs
Creates accurate models



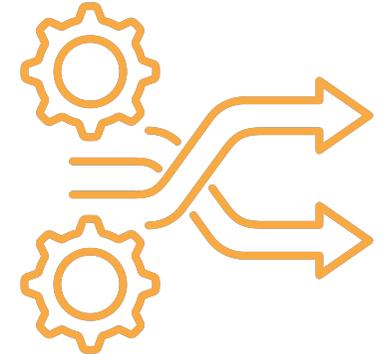
Value Competence

Align with values
Supports organizational goals
Is community oriented



Practicality

Acknowledges imperfection
Considers real-world constraints



Adaptability

Allows for shifts in strategy as new information is learned
Updates the other three elements

Good Outcome or Good Process?

Leaders and experts alike warn against focusing only on outcomes

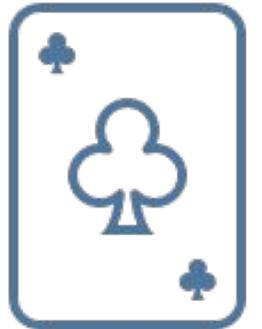
- Prioritizing outcome over process is a kind of bias: “Resulting” Bias
- How decisions are reached is a much more important aspect of decision quality.
- A sound process helps any decision hold up to public, legislative, media, or employee scrutiny later.

“Don’t be so hard on yourself when things go badly and don’t be so proud of yourself when they go well.”

-Annie Duke, Poker Champion

In poker, the “right” decision is the one that wins 51% of the time.

This means a good decision can result in bad outcomes almost half the time!



What Derails Good Decisions?

Challenges to Facts

- Misidentifying the problem
- Lack of data or analysis
- Bad data or analysis
- Input not sought
- Cognitive distortions and biases
- Ignoring risk

Challenges to Values

- Unexamined personal values
- Disconnect from organization's values
- Not getting others' values
- Inappropriately prioritizing others' values
- Undue influence by entities with misaligned values

Challenges to Practicality

- Not acting soon enough
- Acting too quickly:
 - When there is no urgency
 - When emotions are high
- Not including stakeholders along the way
- A process that isn't accepted and trusted
- Insufficient communication
- Not following through



Failure to Adapt as Circumstances Change

Your Gut: Helpful Shortcut or Harmful Bias?

We use two different systems to make decisions. Good decisions happen when they combine

System 1

- “Gut Instinct”
- Fast
- But...
- Risky
- Susceptible to Bias

**Good
Decision**

S

System 2

- Critical Thinking
- Complexity
- But...
- Leads to Fatigue
- Slow

Leverage Your Gut While Avoiding Bias

Default to System 1, but strategically rev up System 2 when needed

Ask yourself critical questions about the situation and how you came to your decision.

- **Novelty** – Is something about this situation new, and therefore my past experiences may not apply?
- **Complexity** – Is the situation more complex than usual? Am I avoiding the complexity because it seems too daunting?
- **Emotions** – I’m having a strong emotion. Is the emotion guiding me to something important missing from the data, or is it leading me to irrationally override irrefutable data?
- **Consequences** – If this is one of the times that intuitive thinking is wrong, how bad will the consequences be?

“Intuition is a very powerful thing, more powerful than intellect, in my opinion.”

*-Steve Jobs, Apple
Co-Founder*



Panel Discussion of Decisions in Action

Kirk Steudle

Former Michigan DOT Director

Panel Discussion of Real-World Decisions



Kirk Steudle
Moderator



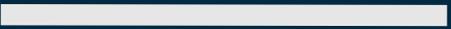
Vicki Kramer
Nebraska DOT Director



Marc Williams
Texas DOT Director



The Guide



Guidebook Strategies

**Get the Right
Information**

**Broaden Your
Perspective**

**Don't Run from
Emotions**

**When Information is
"Enough"**

Information

**Be Savvy to Politics
and External Forces**

**Connect with Staff
and Internal Forces**

**Monitor Group
Dynamics**

**Balance Multiple
Objectives**

People

**Manage Risk and
Uncertainty**

**Suspend Protocol
Strategically**

Navigate Crisis

Situations

**Communicate Your
Decision**

**Implement Your
Decision**

**Adapt Your
Decision**

***After the
Decision***

Get the Right Information from Your Team

Agency leaders must rely on staff to provide technical information and details across topic areas they are not an expert on.



Siloed Perspectives are Unavoidable

Your staff is—by design—bringing you information from their corner of the organization and lack the big picture view you must consider.



Become a Detective

Ask lots of questions and make sure your people have done their homework when bringing you information.



Ugly on the Table

From creating a safe environment to digging for dirt proactively, make sure your staff is willing to bring you difficult realities.

Other Strategies

- Be Ready for Staff's Unique, but Limited, Perspective
- Demand Multiple Solutions
- Ask a Lot of Questions
- Have Staff Start with Headlines
- Create Space for Unvarnished Honesty
- Cultivate Curiosity about Your Team's Expertise

Your Team

- **Executive Team** – These are your closest advisors with whom you need to be ready to bare it all in front of to grapple with difficult realities and get to the right decision.
- **Leadership Team** – This group includes division or district heads who are steeped in a specific topic area but serve as a bridge to the executive perspective.
- **Technical Staff** – These are staff further down the organization who may not interact with the executive team often.

“People are bringing you information from their own little cocoon. Be aware of this.”

***-Vicki Kramer,
Nebraska DOT Director***

Case Study Participants



Vicki Kramer
Nebraska DOT Director



Dr. Ricardo Martinez
NHTSA Administrator
(former)



Tok Omishakin
California DOT Director
(former, now CALSTA
Secretary)



Shawn Wilson
Louisiana DOT Secretary
(former)



Russel McMurry
Georgia DOT
Commissioner



Joyce Taylor
Maine DOT Chief Engineer

Case Study: Local Grant Success in Nebraska

Situation: Whether to establish a new office at NDOT dedicated to supporting local grants



Decision Maker:
Vicki Kramer, Nebraska Department
of Transportation Director

Key Players:
Local Governments, NDOT Staff,
Governor, University of Nebraska

The Stakes:
As one of the least successful states in
getting federal grants, Nebraska was
leaving significant money on the table

How the Decision Played Out



A New Role for NDOT– State leaders were looking to NDOT to fix the state’s lack of success in getting federal infrastructure grants. Before others could dictate her agency’s new role- and expect significant NDOT resource dedication – Director Kramer proactively sought options on their terms.



A Creative Solution – Having the DOT handle all grants would expand NDOT’s work beyond transportation and did not address an underlying issue: locals weren’t gaining expertise handling federal grants. The desire to build local capabilities led to a new partnership with the University of Nebraska-Omaha (UNO), which Director Kramer hoped to leverage as the permanent solution.



Adapting the Solution – While the director hoped for a solution outside of NDOT, circumstances soon made clear that an NDOT-based “Infrastructure Hub” was the best option. Director Kramer was able to negotiate for state funding to hire dedicate staff, solving resource concerns, and kept the involvement of UNO to help train and support local staff.

Decision Reception

Local staff are thrilled to have access to Hub resources. The governor is happy that a solution was found. And NDOT is relieved to no longer face responsibility for all local support.

Military Decision-Making Process

From her time in the National Guard, Director Kramer relied on the structure of MDMP:

Step 1: Receipt of Mission

Step 2: Mission Analysis

Step 3: Course of Action (COA) Development

Step 4: Course of Action Analysis

Step 5: Course of Action Comparison

Step 6: Course of Action Decision/ Approval

Step 7: Course of Action Execution

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Kirk Steudle
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Steudle Executive Group

Panelists



Marc Williams
Texas DOT



Vicki Kramer
Nebraska DOT

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March 25, 2026

TRB Webinar: Reducing and Managing Disruptive and Unruly Behavior in Airports

March 31, 2026

TRB Webinar: Using TRID to Find the Best Transportation Research

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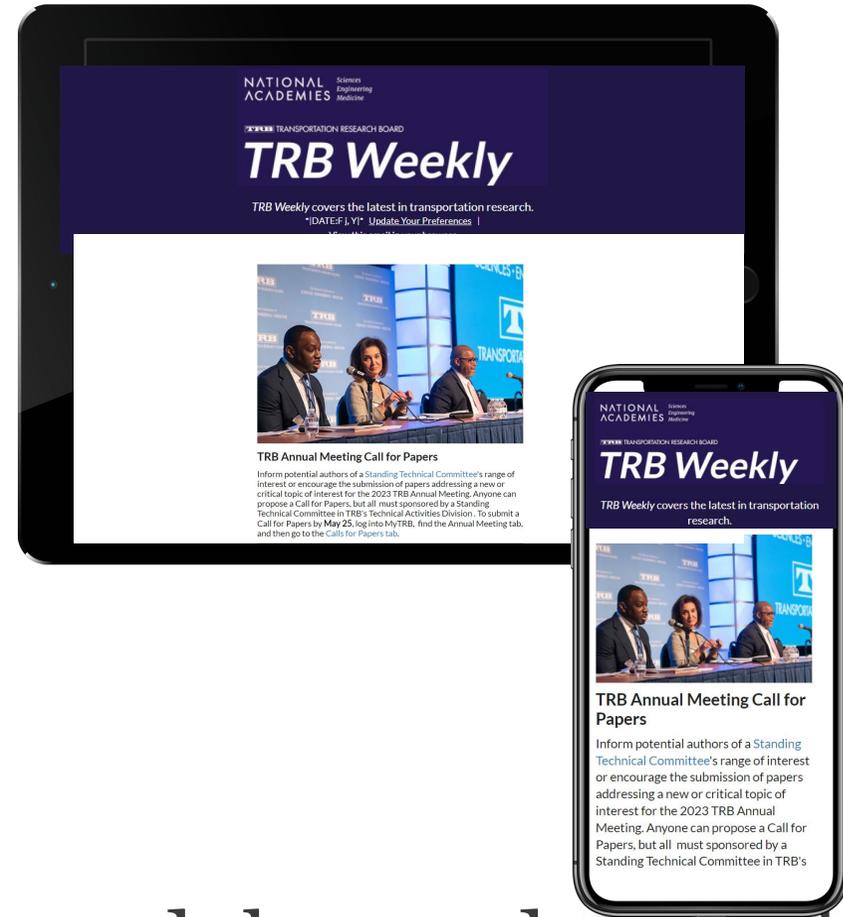


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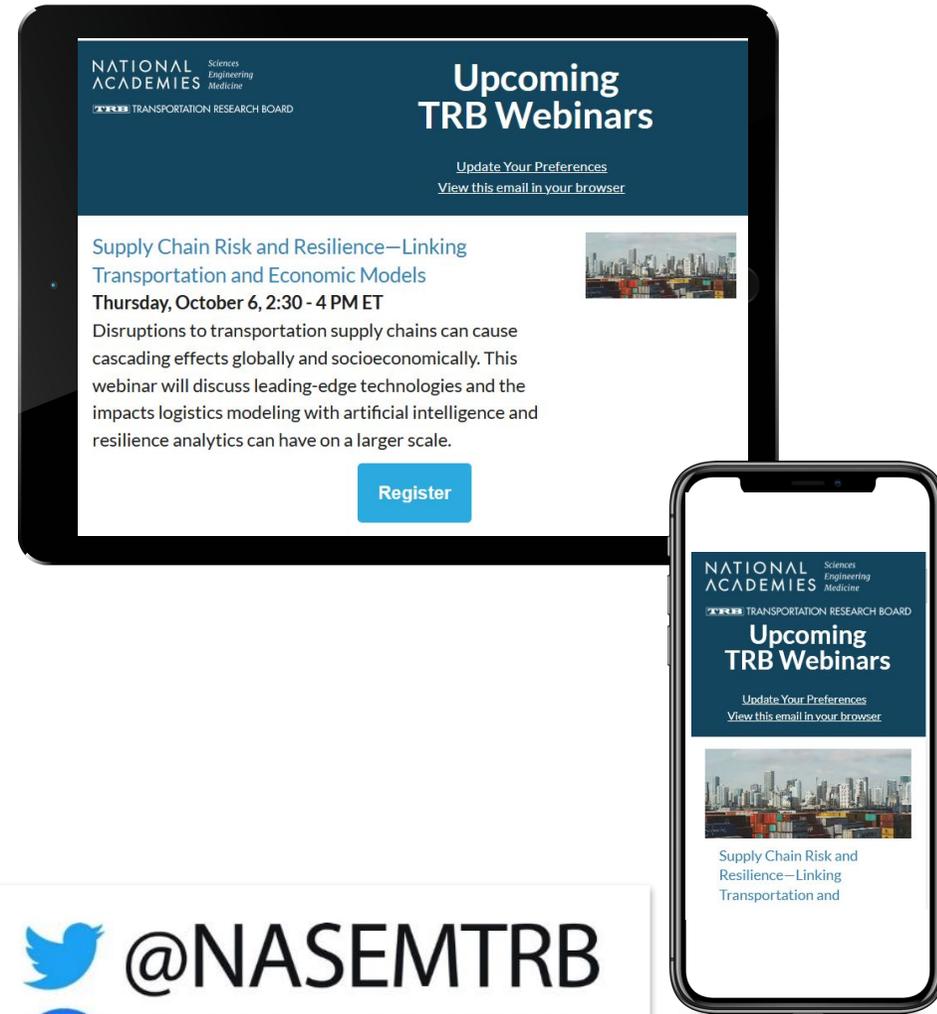
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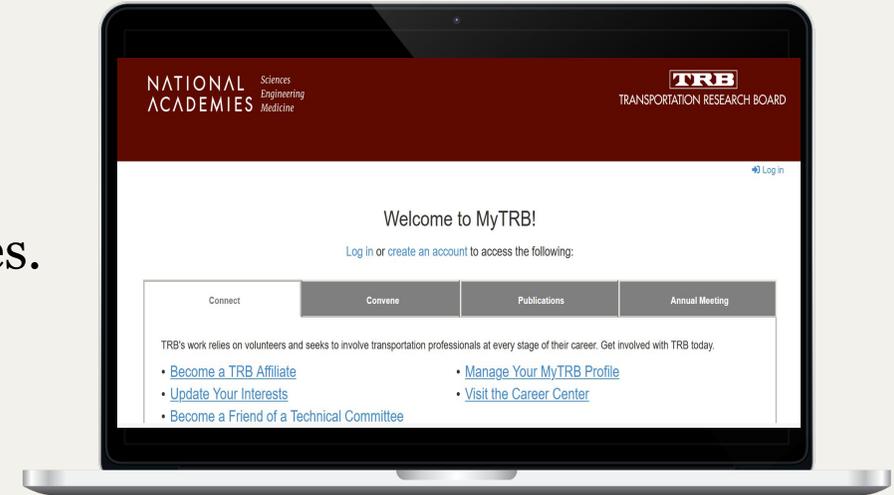


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