

TREE TRANSPORTATION RESEARCH BOARD

TRB Webinar:

Activating Organizational Change to Build Agency Capabilities

July 17, 2025

12:00 - 1:30 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.



AICP Credit Information

1.5 American Institute of Certified Planners Certification Maintenance Credits

You must attend the entire webinar

Log into the American Planning Association website to claim your credits

Contact AICP, not TRB, with questions

Purpose Statement

This webinar will offer practical strategies to help agencies strengthen their internal capabilities and navigate evolving demands. Presenters will explore why building organizational capacity is more critical than ever, introduce tools and resources from the Advancing Capability-Based (ACB) guidance, and share real-world examples of how agencies are applying the ACB framework in practice.

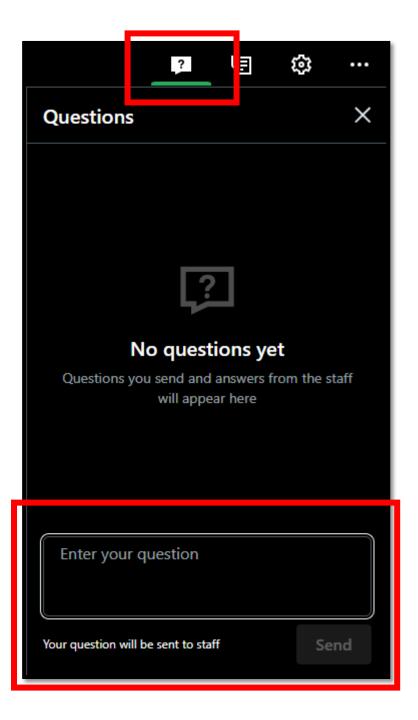
Learning Objectives

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

- Describe the components of the ACB framework, including change forces, capability needs, and practical adaptation strategies;
- Access and navigate tools and resources such as the ACB Guidebook, videos, toolkits, case studies, job descriptions, and shared library; and
- Apply guidance and successful practices from the ACB framework to build and enhance agency capabilities.

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



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NATIONAL Sciences Engineering

TRB Webinar: Activating Organizational Change to Build Agency Capabilities

Facing Future Challenges: Why Transportation Agencies Need to Build and Enhance Capabilities Now More Than Ever

NCHRP Project 20-44(40): Implementing the Agency Capability Building Framework to Activate Organizational Change

July 17, 2025





Objective

- Understand the nature of change forces/trends impacting transportation agencies
- How these trends affect agency capabilities
- Learn about practical strategies and methods developed through the research that agencies can use for adaptation

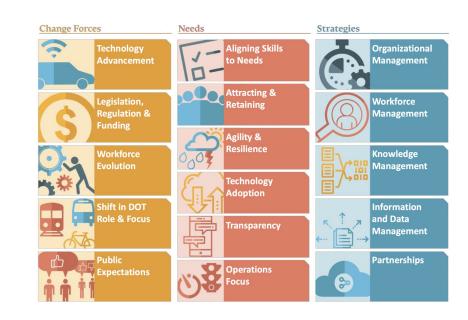
Background

NCHRP 20-24(95) Ensuring Essential Capability for the Future Transportation Agency

(completed in December 2019)

NCHRP 20-44(40) Implementing the Agency Capability Building Framework to Activate Organizational Change

(will be completed July 2025)



<u>Capabilities</u>: people and resources used to carry out the agency's work

Change Forces: trends facing agencies

Needs: impact of trends on agency capabilities

Strategies: mechanisms used to adapt

Agency Capability-Building Framework



Change Forces = Internal & External Trends Facing State DOTs



These trends impact the DOT's ability to fulfill its mission



Top Trends Identified During Recent Outreach

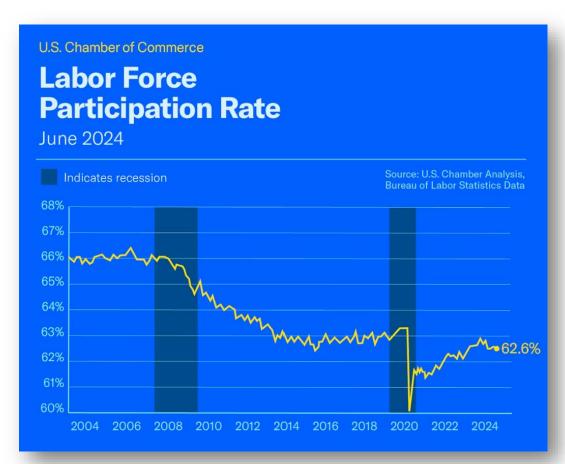
- Technology advancement, including Al & automation
- Workforce, including succession planning, evolution of workforce, pipeline, skill sets
- Funding uncertainties
- Climate change and resilience building



Top Trends: Combined Polling Results from AASHTO KM and former TRB Workforce Development and Organizational Excellence Committees

Workforce Trend

"The reality is that the labor force participation rates are unlikely to fully recover. In fact, experts estimate that the overall labor force participation rate will drop to 60.4% in 2030. Nearly three full percentage points less than the February 2020 rate."



Source: https://www.uschamber.com/workforce/data-deep-dive- theworkforce-of-the-future | U.S. Chamber of Commerce (uschamber.com)

Challenges Building Organizational Capabilities

Organizational resistance to change

Lack of resources

Clear vision or objectives

Inconsistent application of methods, processes

Insufficient funding

Lack of credible metrics

Identification of who is accountable for execution

Inability to gain attention and buy-in from line managers

Lack of senior management support

Ineffective training approaches

Project Activities

ACB Community of Practice (COP)

- COP member list, kickoff presentation with integrated agenda
- Kickoff October 2023

Fall 2023

Winter 2023

Portfolio of Informational & Promotional Materials

- Videos
- Presentations
- Job aids
- Web resources

Disseminate Info, Build Guidance, Conduct Outreach

- Presentations
- COP Meeting #2
- Enhance resources
- Technical Memo #1
 (Summary of Results of Interviews)

Summer 2024

Spring 2024

Virtual Peer Exchanges

- Information & Data Management
- Knowledge Management
- Workforce & Organizational Management

Project Activities

Fall 2024

Case Studies

- Project panel meeting
- Technical Memo #2: Summary of peer exchanges results
- Complete 3-5 deep dive case studies
- Plan workshop

Workshop

- In-person or virtual workshop
- Technical Memo #3: Workshop Summary
- TRB Summit on the Future of the Transportation Workforce

Winter-Spring 2025

July 2025

Final Deliverables

- Conduct of Research Final Report

Thank You

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TRB Webinar: Activating Organizational Change to Build Agency Capabilities

Exploring the ACB Guidance: Tools and Resources for Building Capabilities

NCHRP Project 20-44(40): Implementing the Agency Capability Building Framework to Activate Organizational Change

July 17, 2025



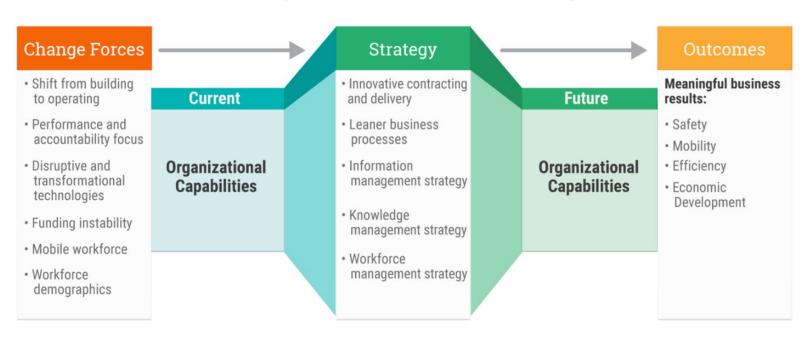


Objective

- Access the various tools and resources available:
 - ACB Guidebook
 - Videos
 - Toolkits
 - Case Studies
 - Job Descriptions
 - Shared Library

Implementing ACB Framework to Activate Organizational Change

Multiple forces create need for shift in organizational capabilities to produce meaningful business results



ACB Guide Chapters

- Chapter 1. Introduction
- Chapter 2. Agency Capability-Building Framework
- Chapter 3. Strategies
- Chapter 4. Role-Based Guidance
- Chapter 5. Situation-Based
 Guidance
- Chapter 6. Developing an Agency Capabilities Building Action Plan

Rok

Chief Human Resources Officer



Defined

The Chief Human Resources Officer is responsible for managing all human resource planning, management, policies, and operations for the agency.

Challenges and Opportunities

In your role, what are the most critical challenges and opportunities? Looking across the agency, what capabilities are required to successfully take them on? How can you help build the necessary capabilities? The first step is to understand these challenges and opportunities in terms of the major change forces that are driving them.

Change Forces	Challenge/Opportunity	Your Responsibility
Workforce Evolution	When tenured staff retire, it creates an experience gap in the agency, as well as opportunities for introducing new skills and perspectives. At the same time, new expectations of millennials in the workforce are creating a need for new ways of selling the benefits of working in a public organization.	Attracting and Retaining. Advance agency talent acquisition and retention strategies to close experience gaps when tenured staff retire and to understand and respond to the needs of the new generation of workers.
Technology Advancement	Technology advancements impact the skills and abilities needed by the agency, but acquiring these new skills is challenging because they are also highly sought after in the private sector.	Aligning Skills to Needs. Lead the agency in developing strategies to improve the agency's competitive advantage to recruit and retain staff with technology-focused skillsets.
Shift in Role and Focus	This shift in role and focus impacts the agency knowledge, skills and abilities needed and may affect the organizational structure.	Operations Focus. Help the agency's workforce to efficiently and effectively deliver on its new business direction.
Legislation, Regulation, and Funding	Responding to new legislative requirements may require new knowledge, skills and abilities.	Agility and Resilience. Lead the agency in developing mechanisms to quickly adapt its workforce to respond to new legislative requirements.

Strategies and Resources

What strategies can you apply now to meet today's challenges and prepare for future opportunities? What resources are available to help support these efforts?

When Will Agencies Use the Guidance?

- **Managing workforce transition**
- Planning for CAVs and other transformational technologies
- Undertaking a major system upgrade
- **Budget cuts**
- Improving data for decision making
- Response to increased flooding
- New multi-modal focus that requires partnerships

Situation-Based Guide

Situation

Response to **Increased Flooding**



Context

The state DOT is faced with more frequent flooding events. Environmental emergencies like flooding pose a threat to the public, DOT staff and transportation infrastructure and may result in detours, congestion and closures. They have economic impacts and are difficult to address programmatically because they occur without much warning, although some locations are starting to experience recurring flooding events. In addition, they require coordination among multiple organizations and agencies.

Change Forces

- · Shift in DOT Role and Focus. The changing DOT role creates a shared responsibility for emergency response with multiple other entities playing a first responder role, and the DOT involved as a part of the emergency response team before, during and after emergencies occur. This requires integrated flood warning and response systems among response partners.
- · Public Expectations. The public generally has little understanding of steps needed to prepare for an emergency, but an expectation for a seamless public infrastructure. They need to get event warnings for transportation and non-transportation issues via a coordinated and multi-faceted approach that includes sensors, media alerts. websites, and closure of at-risk or compromised facilities.
- · Technology Advancement. Technology for flood monitoring has been implemented to provide advanced warning capabilities, extending the amount of time for mounting a response effort.

What Capabilities Are Essential?

Transparency. The agency needs to communicate with the public and other stakeholders to provide warnresponse efforts.

Agility & Resilience. An organizational capability for agility and resilience is Partnerships. In times of emergenneeded to adjust for emerging issues cy, the public relies on multi-agency before, during and after the event and teams to restore their access to to improve future resilience.

Technology Adoption. The agency can assessment, and implement informa-

tion systems and tools for predictive with inventories of critical assets, facilitation of active flood response, and support for post-disaster recovery and reimbursement activities.

for adjusting construction approaches infrastructure networks for communications and transportation. Emergency response depends on coordination use Unmanned Aerial Vehicles for flood among federal agencies (for flooding,

Service, US Geological Survey, the modeling, risk assessment, integration Army Corps of Engineers, NOAA and FEMA), climate and research organizations and other public sector stakeholders (such as the State Emergency Management Offices, local units of government, law enforcement agencies and the State DOT).

Read more (\rightarrow)



Who Will Use the Guidance?

Role Chief Human Resources Officer

Role-Based Guidance

Defined

The Chief Human Resources Officer is responsible for managing all human resource planning, management, policies and operations for the agency.

Challenges and Opportunites

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		Read more

- · CEO/CIO
- CFO
- IT Director/CIO
- HR Director
- Operations Lead
- Planning Director
- Performance Management Lead
- Knowledge Management
 Lead

What Strategies are Included?

- Organizational Management
- Workforce Management
- Knowledge Management
- Information and Data
- Management
- Partnerships

Table 3.2 Workforce Management Strategies

Strategy subcategory	Sample Activities	Capabilities Addressed
Strategic workforce	Summarize likely future retirement trajectory for key position types	Aligning Skills to Needs
planning		Technology Adoption
		Operations Focus
Recruitment and	Modify position descriptions and job postings	Aligning Skills to Needs
retention		Attracting & Retaining Workforce
		Technology Adoption
		Operations Focus
Succession planning	Identify critical positions and potential successors	Aligning Skills to Needs
		Agility & Resilience
		Technology Adoption
		Operations Focus
Employee engagement	Employee satisfaction surveys	Attracting & Retaining Workforce
, , , , ,		Agility & Resilience
		Transparency
Professional development	Leadership training	Aligning Skills to Needs
		Attracting & Retaining Workforce
		Agility & Resilience
		Technology Adoption
		Transparency
		Operations Focus
Outsourcing	Identify functions to outsource	Aligning Skills to Needs
		Agility & Resilience
		Technology Adoption
		Operations Focus

FINAL Ian. 2020 Strates

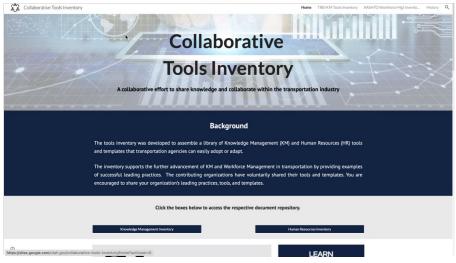
ACB Portal

- Shared Practices
- Library
- Tools
- Resources
- Community of Practice
- Online Guidebook
- Related Community
 Resources

Welcome to the Agency Capability Building Web Portal

Check out the latest videos introducing the ACB framework, portal, and guidebook:





https://agencycapability.com

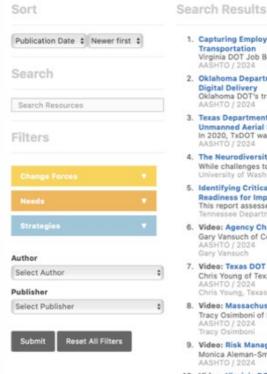
Curated Resource Library

- Filter by:
 - Change force
 - Need
 - Strategy
 - Sort by publication date
 - Search for a specific resource, author, publisher

https://agencycapability.com

The Resource Library

The Resource Library lets you browse and search for resources using the ACB Framework. Resources are indexed by the relevant Change Forces, Needs, and Strategies.



1. Capturing Employee Knowledge at the Virginia Department of Transportation

Virginia DOT Job Books online documentation bridges the gap between individu...

2. Oklahoma Department of Transportation Transitions to 3D Design with Digital Delivery

Oklahoma DOT's transition to the Digital Delivery Program includes the Digital ...

3. Texas Department of Transportation Prepares State Workforce for Unmanned Aerial Systems (UAS)

In 2020, TxDOT was officially charged with leading Texas' oversight and adopti... AASHTO / 2024

4. The Neurodiversity@Work Playbook Federal Edition

While challenges to staffing in mission-critical areas persist, many qualified ne... University of Washington Information School / 2024

5. Identifying Critical Knowledge Gaps and Assessing Organizational Readiness for Improved Knowledge Management

This report assesses TDOT's knowledge assets, KM practices, and organization... Tennessee Department of Transportation / 2024

- 6. Video: Agency Change Agents & the CDOT Innovation Challenge Gary Vansuch of Colorado's Department of Transportation, NCHRP 20-44(40) I... Gary Vansuch
- 7. Video: Texas DOT Training Program (Unmanned Aerial Systems) Chris Young of Texas's Department of Transportation. NCHRP 20-44(40) Imple... AASHTO / 2024

Chris Young, Texas DOT

8. Video: Massachusetts DOT Staffing Tool

Tracy Osimboni of Massachusett's Department of Transportation. NCHRP 20-4_ AASHTO / 2024 Tracy Osimboni

9. Video: Risk Management Community of Practice at Texas DOT

Monica Aleman-Smoot of Texas's Department of Transportation. NCHRP 20-44... AASHTO / 2024

10. Video: Virginia DOT Job Book Program

Jay Styles of Virginia's Department of Transportation, NCHRP 20-44(40) Imple... AASHTO / 2024

- 11. Video: Kentucky Transportation Cabinet Highway Knowledge Portal Jarrod Stanley of the Kentucky Transportation Cabinet, NCHRP 20-44(40) Impl., AASHTO / 2024
- 12. Video: Wisconsin DOT Knowledge Owl

Noteworthy Practice Videos

- Technology & Data practices:
 - Melissa Thompson, California DOT. 2024 California Transportation Asset Management System (TAMS) Technology Change Management.
 - Susan Thomas, Ohio DOT. Data Literacy Initiative.
 - Tara Cullum, Oklahoma DOT.
 Digital Delivery Pursuit.
 - Justin Bruner, Pennsylvania DOT.
 Using Technology to Make Better
 Decisions.

- Knowledge Management practices:
 - Monica Aleman Smoot, Texas DOT. Risk Management Community of Practice.
 - Jay Styles, Virginia DOT. Job Books.
 - Jarrod Stanley, Kentucky Transportation Cabinet.
 Knowledge Management Program.
 - Michele Grant and Tammie Rosenow, Wisconsin DOT. Knowledge Owl.

- Workforce & Organization practices:
 - Gary Vansuch, Colorado DOT.
 Agency Change Agents &
 Innovation Challenge.
 - Chris Young, Texas DOT.
 Texas DOT Training Program.
 - Tracy Osimboni,
 Massachusetts DOT. Staffing
 Tool.



Collaborative Tools Inventory - Workforce Management

- Scope: Human Resources
- Workforce Management tools for:
 - Workforce foundations
 - Talent lifecycle
 - Talent acquisition
 - Onboarding
 - Engagement & retention
 - Career learning & development
 - Offboarding
 - Workforce Management playbook

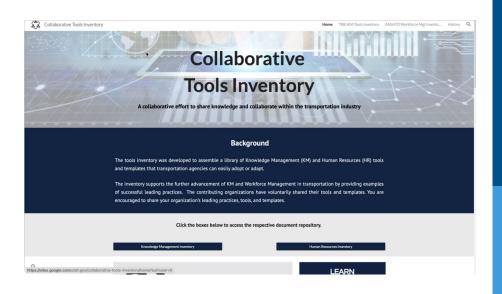


Collaborative Tools Inventory can be viewed at:

https://www.agencycapability.com/tools/

Collaborative Tools Inventory - Knowledge Management

- Scope: Knowledge Management
- Knowledge Management tools for:
 - Knowledge mapping
 - Knowledge capture
 - Process documentation & guidance
 - Taxonomies & ontologies
 - Personalized content delivery
 - Collaboration
 - Workforce development



Collaborative Tools Inventory can be viewed at:

https://www.agencycapability.com/tools/

Case Studies

- Three published case studies:
 - Texas Department of
 Transportation Prepares State
 Workforce for Unmanned Aerial
 Systems (UAS)
 - Capturing Employee Knowledge at the Virginia Department of Transportation
 - Oklahoma Department of Transportation Transitions to 3D Design with Digital Deliver
- Case studies can be viewed at:
 https://www.agencycapability.com/reso
 urce-type/case-study/

INNOVATION SUCCESS:

Capturing Employee Knowledge at the Virginia Department of Transportation







Thank You

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TRB Webinar: Activating Organizational Change to Build Agency Capabilities

Moving from Theory to Practice: Applying the ACB Framework

NCHRP Project 20-44(40): Implementing the Agency Capability Building Framework to Activate Organizational Change

Chris Young, Texas DOT

July 17, 2025

Objective

- Learn about TxDOT case study of a successful practices for building and enhancing capabilities
- Encourage agencies to adapt and adopt the guidance for their own use

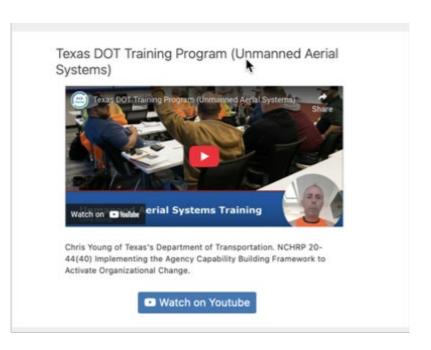
Case Study: Texas DOT Training Program (Unmanned Aerial Systems)

Case Study includes:

- Challenge
- Innovation
- Action
- Results
- Links to websites, resources, job aids, etc.

Related case study video can be viewed at:

https://www.agencycapability.com/video/tex as-dot-training-program-unmanned-aerialsystems/



Challenge

- TxDOT charged with leading oversight and adoption of Unmanned Aerial Systems (UAS) technologies
- Three primary issues
 - Drones as remote sensing platform
 - Civilian & commercial applications
 - Oversight
- Need for quick training program

INNOVATION SUCCESS:

Texas Department of Transportation Prepares State Workforce for Unmanned Aerial Systems (UAS)





TXDOT Uncommed Arrist System Training Program

III,000 Employees, Industry Partners

120 Licement Physic

CHALLENGE

The Taxon DST (ECOT) was officially changed with leading Taxon' oversight and acoption of Unmarrance Assist Systems (UAS) sectoologies. This entained three primary issues the emergence of demand as a remote sensing platform, sinitiar and townsemial applications leading the market, leading public pritting behind, and public simpace requiring public entity oversight. The approxy aims to establish its feating program as swiftly as possible to obscene key approxy safe participating in the program.

INNOVATION

NOOT created an agency-wide response to this new technology and gractics to address. His challenge.

The agency moved besond under a light constraint, where speed was paramount.

- Court : Autobiologi Navaho summer.
- Openity TribOT had no repartic cognitivity.
- Time Outrois provided as intrication contract with quality training provides.

The objective was to excelpted the training program within four weeks.



Texas Department of Transportation Training and Development







CASE STUDY - NOMEP-29-440-401

Innovation

- Agency-wide mobilization
- Used triple constraint
 - Cost
 - Quality
 - Time
- Goal 4 week implementation

INNOVATION SUCCESS: Texas Department of Transportation Propages State (INAS) ACTION and the public Links RESULT

factors now has retourn organizational capability in tard-operations and overright, meeting guide expectations. The program is self-communicated and authoritative, with NFI located Vision across the finite. This almost include Visionage' provided seamless integration of 'UAS' technologies into department operations. The program also madels new research.

TxDOT Training Program website

TxDOT Usmanned Aerial Systems website







CASE STUDY - NORM*20-44:40

Action

01 Develop internal support for the new agency-wide initiative

- SharePoint page
- · Application processes and e-forms
- Physical shipping process for support materials
- External access to a third-party Learning Management System (LMS)
- Frequent communications from the Aviation Division to participants
- Outreach and communications activities at conferences and industry events
- Ongoing support to contract managers overseeing training providers

Update policies, manuals, processes, and procedures

- Determine the decisions needed internally for contracting.
- Implement the knowledge and change management tasks.

Make organizational changes and designate functional responsibilities

Design Division –
 Engineering
 Operations managed
 by the Aviation
 Division

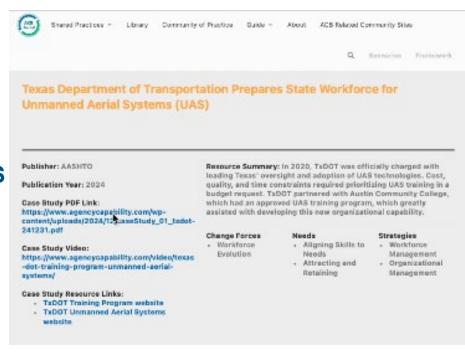
04 Harmonize with federal guidelines

 FAA represented an arguably new federal partner Publish a public-facing website for customers and the public

 Develop a robust TxDOT landing page, including an online flight plan webform O6
Develop new organizational capability in UAS operations

Results

- Robust organizational capability in UAS operations and oversight, meeting public expectations.
- Program is well-communicated and authoritative, with 121 licensed UAS pilots across the State
- Seamless integration of UAS technologies into department operations
- Enables new research



Additional Resources

- Case Study:
 - https://www.agencycapability.com/libra ry/txdot-unmanned-aerial-systems/
- TxDOT Training Program website:
 https://www.txdot.gov/business/resourc
 es/training.html
- TxDOT Unmanned Aerial Systems website:

https://www.txdot.gov/business/aviatio n/uas-services.html



Discover Texas ~

Data and maps

Do business

Explore projects

tay safe v Abo

Q

Home / Business / Project development resources

Training

Welcome to the Texas Department of Transportation Training and Development page

External training is available for various bridge, construction, design, development, environmental, maintenance, project, program and portfolio management, right-of-way, safety, and traffic courses. Training is open to consultants, contractors, government employees and those of other publicly funded organizations such as metropolitan planning organizations (MPOs), regional mobility authorities (RMAs), port authorities and councils of government (COGs).



TxDOT Training catalog

Non-TxDOT participants are welcome to visit the TxDOT Training Catalog page for more information and for steps on how to attend a TxDOT class. The page information is updated nightly.

Search current class sessions

Mate: To manifer attendance and make the most of our virtual training experiences. TUDOT training people a reliable internet connection, the us

NCHRP 20-44(40): Implementing the Agency Capability Building Framework to Activate Organizational Change

Thank You

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Today's presenters



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Chris Young cyoung1@txdot.gov



NATIONAL Sciences Engineering

Upcoming events for you

TRB Annual Meeting

January 11-15, 2026

Washington, DC

https://trb-annual-meeting.nationalacademies.org/



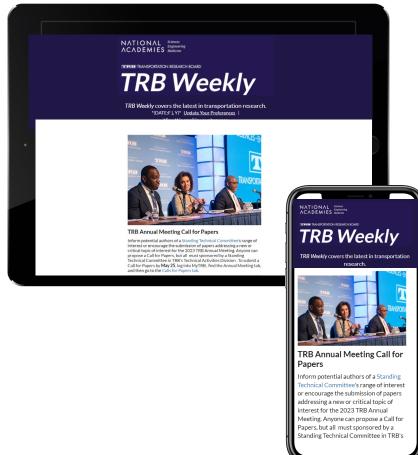


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- 3-5 new TRB reports each week
- Top research across the industry



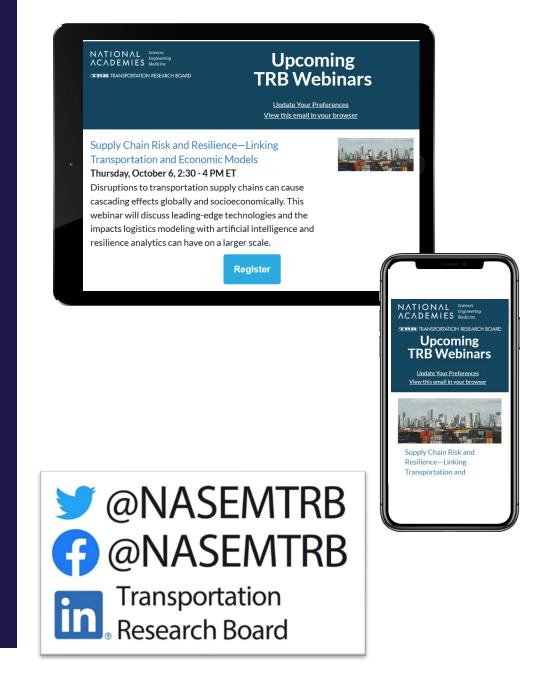
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