

NATIONAL  
ACADEMIES

Sciences  
Engineering  
Medicine

**TRB** TRANSPORTATION RESEARCH BOARD

# TRB Webinar: Transport Agency Functional Resilience—Preparing for Severe Disruptions

*February 15, 2023*

*1:30 – 3:00 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](mailto: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.*

**ENGINEERING**



REGISTERED CONTINUING EDUCATION PROGRAM

# 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

Modern health, environmental, and social disruptions require transportation institutions to develop new skill sets for teams and preparations for extreme scenarios. This webinar will share approaches to equip teams with new skill sets in decision-making and preparing for modern crisis scenarios. Panelists will share experiences with changes in network demand, environmental catastrophe, and insufficient human resources that resulted in significant changes to institutional mission, protocol, and external engagement.

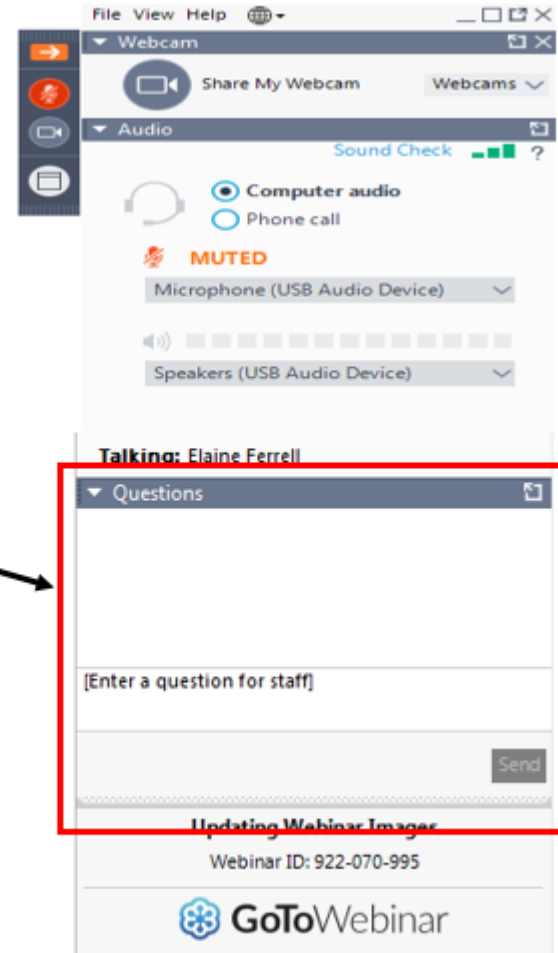
# Learning Objectives

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

- Identify the signals of coming disruption and lead teams through potential response scenarios
- Develop functional and protocol changes to manage risks associated with new environmental and social mandates
- Contemplate skill sets appropriate for new team members who will be required to perform appropriately during inevitable disruptions

# 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



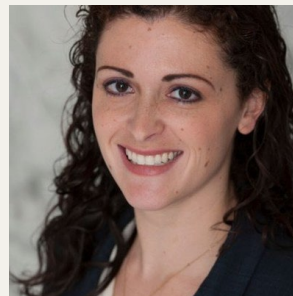
Clinton Bench  
[cbench@ts.ucla.edu](mailto:cbench@ts.ucla.edu)  
*University of California, Los Angeles*



Carrie Hotton-MacDonald  
[carrie.hotton-macdonald@edmonton.ca](mailto:carrie.hotton-macdonald@edmonton.ca)  
*Edmonton Transit Service*



Allison C. de Cerreño  
[allison.cdcerreno@mtahq.org](mailto:allison.cdcerreno@mtahq.org)  
*Metropolitan Transportation Authority*



Leah Fisher  
[leah.fisher@dot.ca.gov](mailto:leah.fisher@dot.ca.gov)  
*California Department of Transportation*



NATIONAL  
ACADEMIES

Sciences  
Engineering  
Medicine

# Standing Committee on Strategic Mgmt

---

- **Identification of long-range external and internal disruptions, issues, and trends** and their implications for transportation organizations;
- **Processes and structures organizations use** to consider these implications and to plan, implement, manage, and measure disruptions strategic changes; and
- **Policies, decisions, and institutional structures and relationships** that result from this strategic change.

# Learning Objectives For Webinar

---

- Increase awareness of the signals of coming disruption and lead teams through potential response scenarios
- Develop functional and protocol changes to manage risks associated with new environmental and social mandates
- Contemplate skill sets appropriate for new team members who will be required to perform appropriately during inevitable disruptions



# Key Topics Covered

---

- Project Delivery
- Planning for Climate Resilience
- Changing Landscape for Transportation Operations

# Key Topics Covered

---

- Institutional Resiliency
  - Organizational
  - Financial
  - Operational
  - Environmental
  - Health
- Leadership Skills
- Getting back to the way things *are!*

# Transportation Agency Functional Resilience

**Carrie Hotton-MacDonald**  
**Edmonton Transit Service**

**February 15, 2023**



# Changing Landscape for Transit Operations

- Fewer people in public spaces and in our downtown
- Shifting demand for public transit services
- Transit ridership and revenues declined, further constraining budget
- Increased number of people experiencing homelessness, and mental health challenges
- Workforce impacts reflect community trends



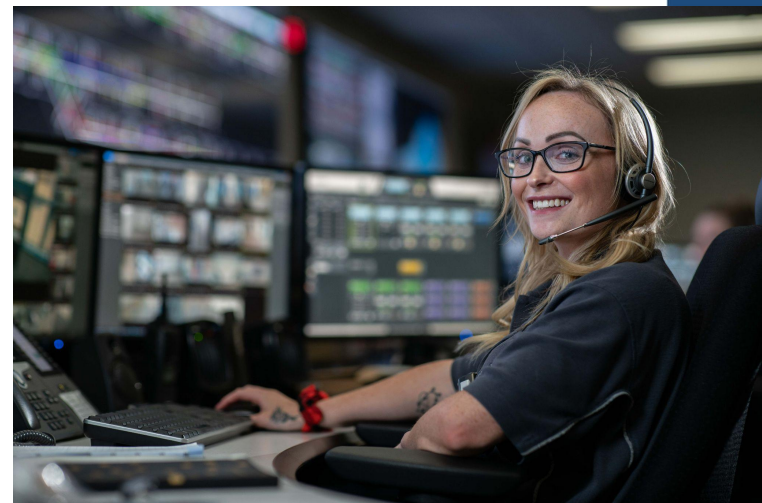
## Key Questions

- Do we have updated contingency and business continuity plans?
- What happens if we lose a large portion of our workforce?
- What other revenue sources should we consider? Is there a different way to fund public transit?
- What plans have we been contemplating that might be well suited to this changing environment?



## A Way Forward

- Invest in people and partnerships
- Stay focused on strategic plans (land use, climate, transit) and equity
- Test ideas, evaluate results and talk about it- what worked, what didn't work. Adapt and adjust
- Keep contingency and business continuity plans updated
- Deliver great service!







# PLANNING FOR CLIMATE RESILIENCE

CALTRANS DIVISION OF TRANSPORTATION PLANNING

TRB Webinar:  
Functional Resilience for Transportation Agencies  
February 2023

Leah Fisher





# INSTITUTIONALIZING ADAPTATION AND RESILIENCE

## State direction and leadership:

- Executive Orders → guidance from Governor's Office of Planning & Research
- State Climate Change Assessments
- Regulatory direction: California Coastal Commission

## Caltrans Implementation through Planning:

- Tools, Guidance
- Staffing
- Integration into funding



## Critical Infrastructure at Risk

Sea Level Rise Planning Guidance for California's Coastal Zone

Final Adopted Guidance  
November 17, 2021

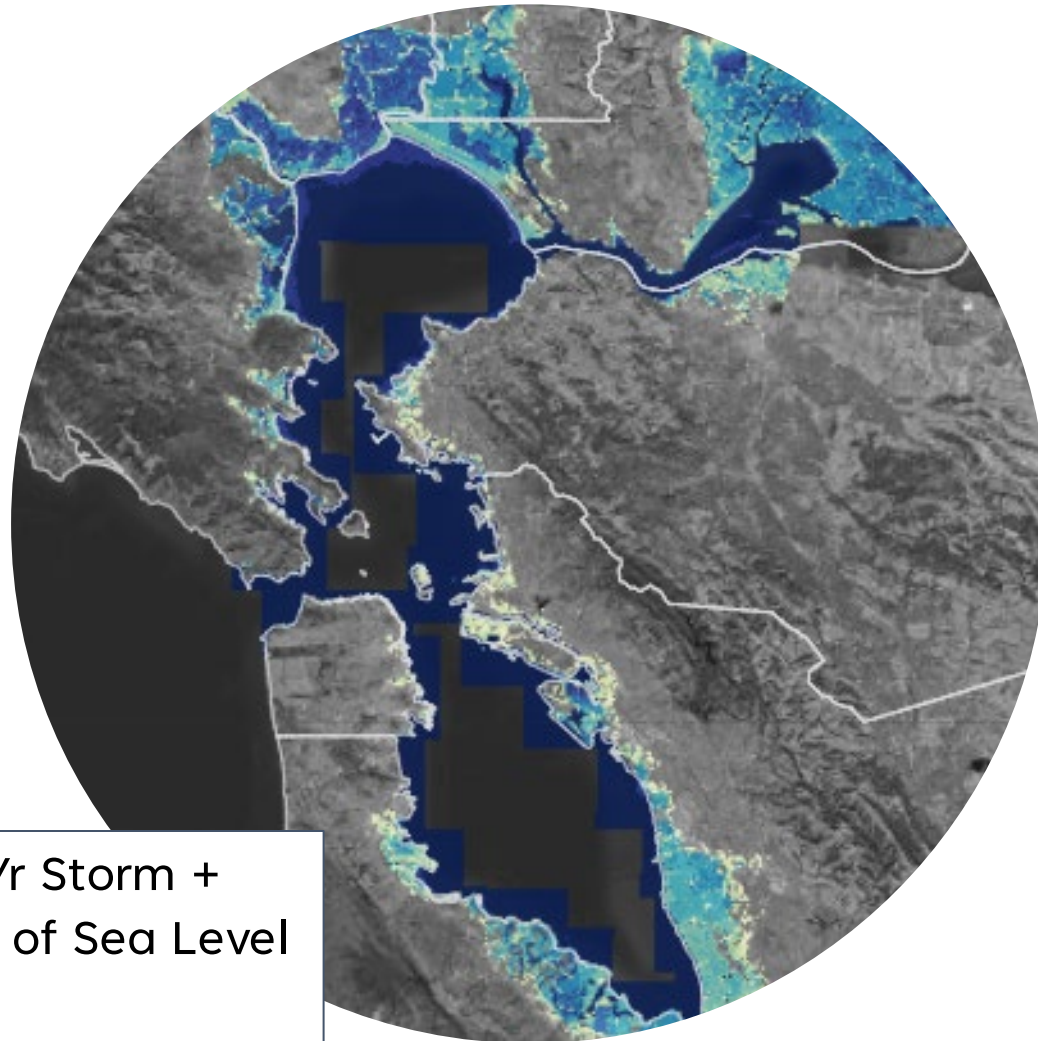


# CLIMATE ADAPTATION TOOLS & GUIDANCE

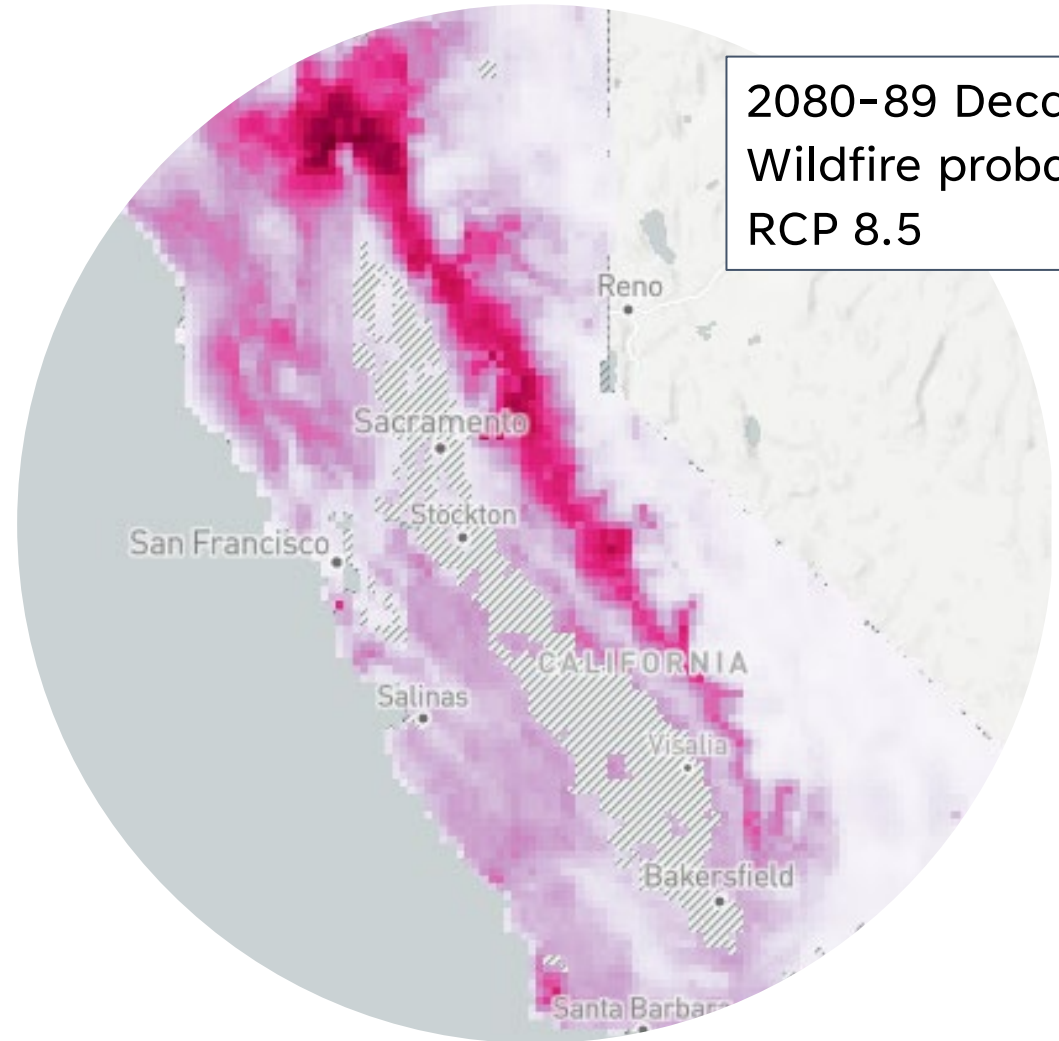


# Climate Risk Statewide

Cal-Adapt.org provides best available data on how climate change may affect California



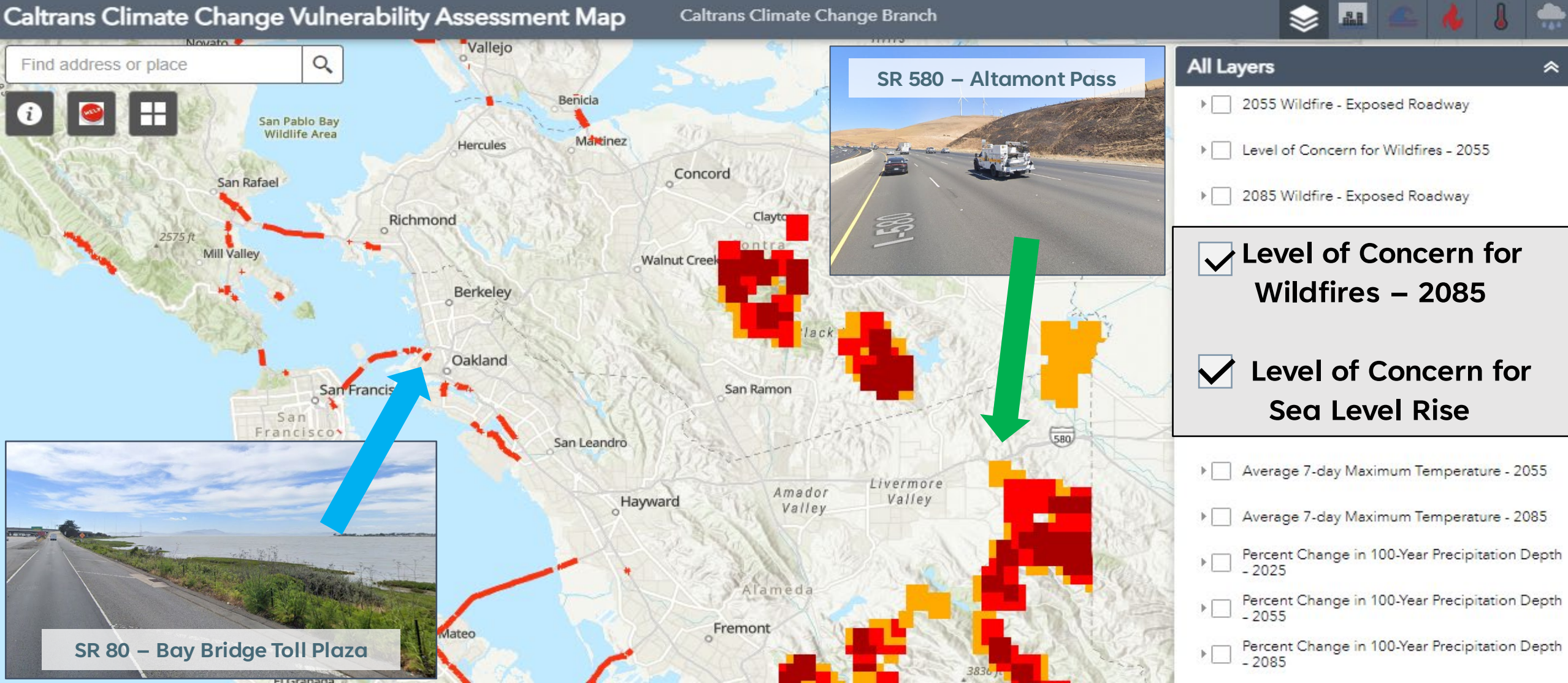
100 Yr Storm +  
1.4m of Sea Level  
Rise



2080-89 Decadal  
Wildfire probability,  
RCP 8.5

# Caltrans Climate Change Vulnerability Assessments

Gain understanding of the magnitude of climate change impacts statewide through 2100



# ADAPTATION PRIORITY REPORTS

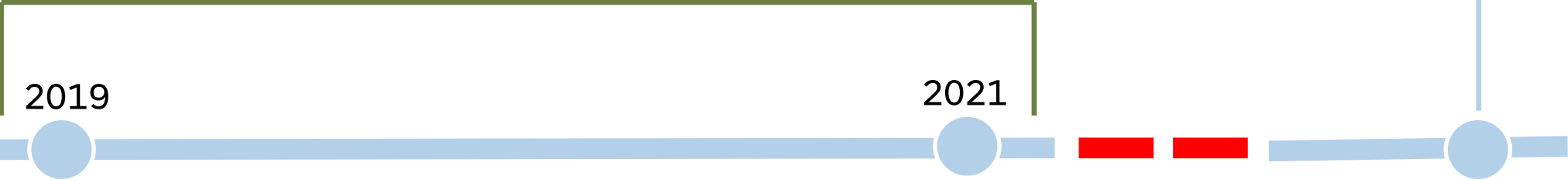
- Utilizing the Vulnerability Assessments, analysis prioritizes assets exposed to climate hazards.
- Multiple risk metrics:
  - **Exposure:** Extensiveness, severity, and timing of a hazard's projected impact on an asset.
  - **Consequence:** Condition of exposed asset and sensitivity to damage resulting from projected impact.



# WHERE WE'VE BEEN

Foundational climate  
planning data needs

Project Delivery



2019

2021



Caltrans Climate Change  
Vulnerability Assessments  
*Foundational data*



Climate Change  
Adaptation Priority Reports  
*Preliminary risk prioritization*

Project  
Planning

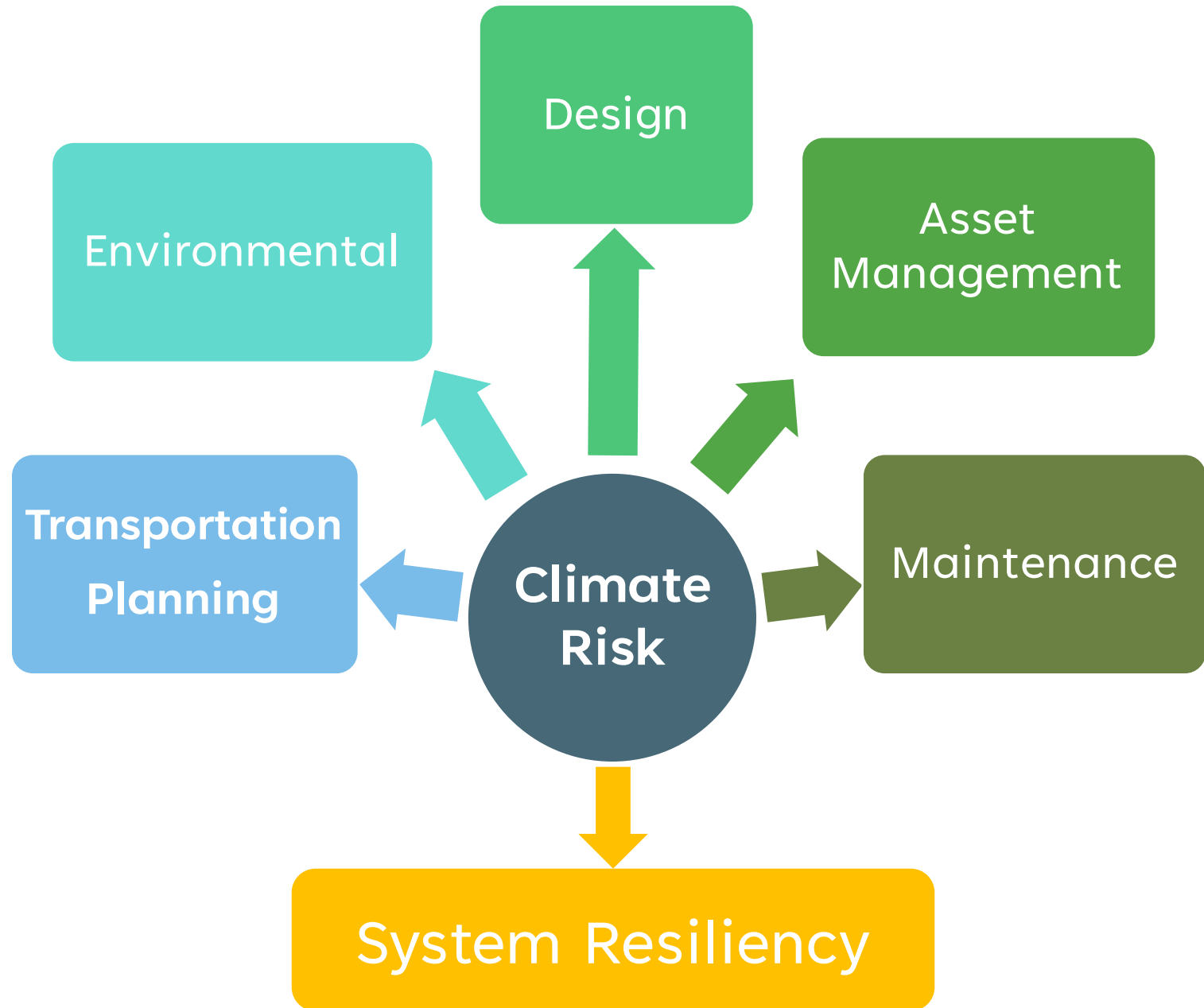
Gap between assessments  
and project planning →  
guidance

## MOVING FORWARD

Climate adaptation requires cross-divisional partners



integrate climate change considerations into all projects.







**THANK YOU**

Leah Fisher

[Leah.Fisher@DOT.CA.GOV](mailto:Leah.Fisher@DOT.CA.GOV)

# Functional Resilience—Preparing for Severe Disruptions: Project Delivery

---

ALLISON L. C. DE CERREÑO, PH.D.  
CHIEF OPERATING OFFICER  
TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY, MTA

FEBRUARY 15, 2023

# Actions Underpinning Success



MAINTAINING  
SITUATIONAL  
AWARENESS



IDENTIFYING  
OPPORTUNITIES



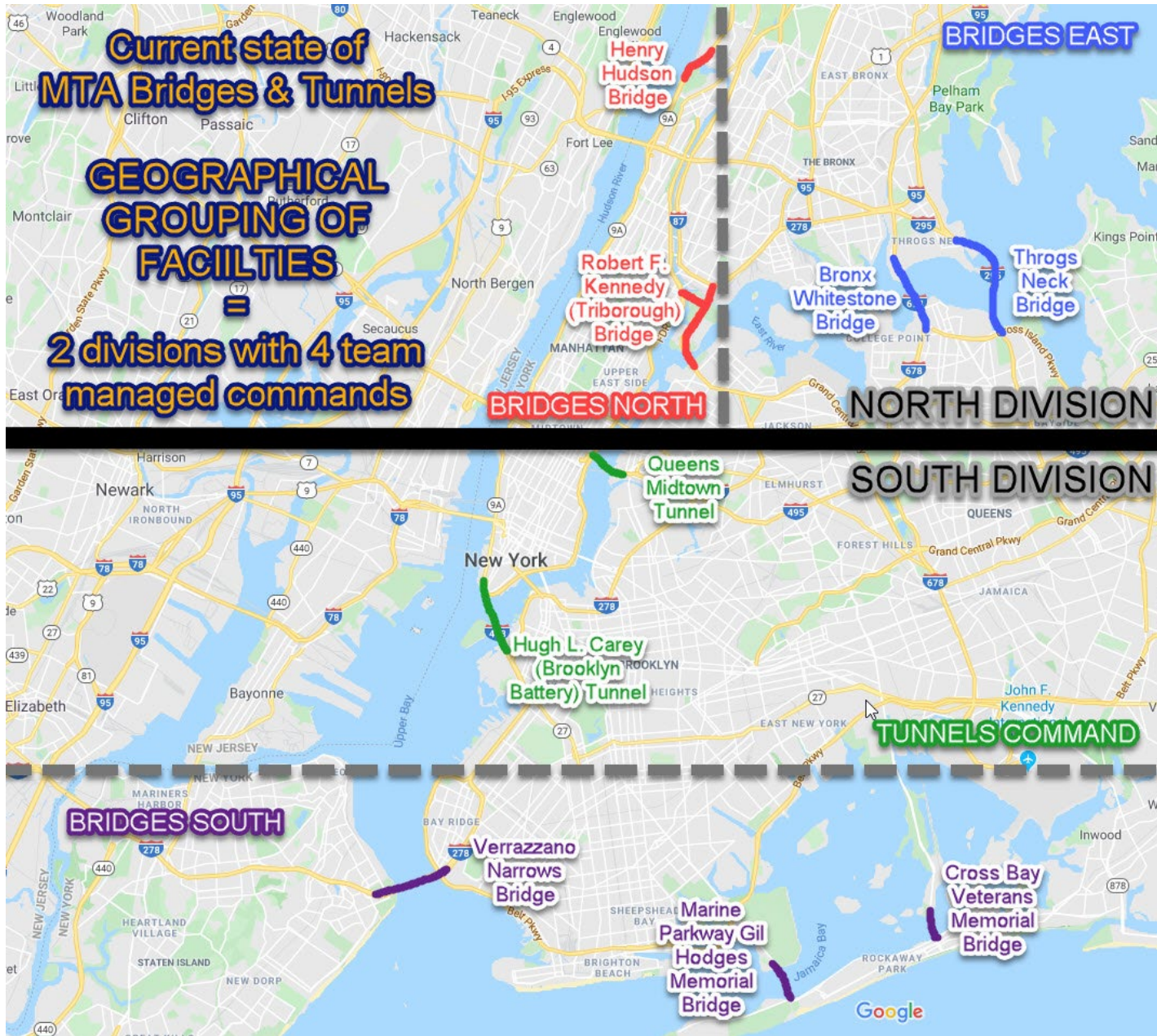
IMPLEMENTING  
DIFFERENT SOLUTIONS  
TO MEET NEW NEEDS



RECOGNIZING THAT  
NOT EVERYTHING WILL  
WORK



LEARNING FROM THE  
CRISIS AND RESPONSE



# Fundamental Organizational Change

*Identified opportunity*

## Change – Consolidated Operations

- Identified an opportunity during a larger organization change to move from 9 facility commands to 4 regional commands, with plan to further consolidate to 3

## Outcomes

- Streamlined operations
- Recognized that 3 commands were not as efficient; moved back to 4



# Rapid Policy Shift

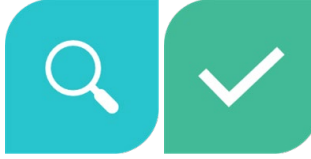
*Implemented different solution for new need*

## Change – Integrated Program Delivery

- Alternative procurement method
- Integrated packaging

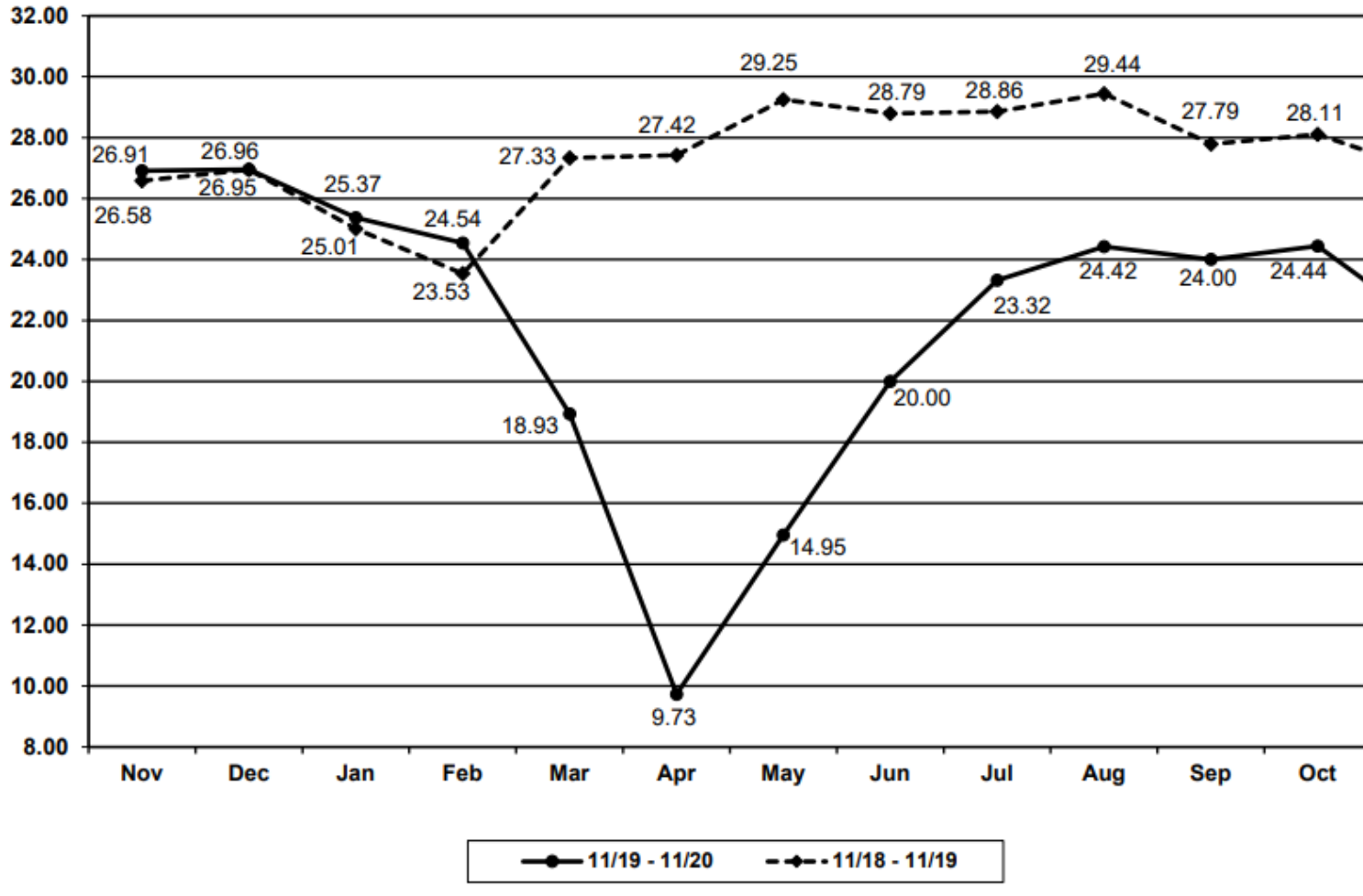
## Outcomes

- Created efficiencies
- Reduced costs
- Learned and refined approach for project delivery for other capital projects



# COVID Pandemic – Traffic Impact

*Identified opportunity*



## Change – Accelerated Projects

- Used lessons learned from the earlier rapid policy shift
- Took advantage of reduced traffic

## Outcomes

- 10 projects completed ahead of schedule



# COVID Pandemic – Telework

*Acted on situational  
awareness*

## **Change – Virtual Work/Virtual outreach**

- Ensured team set up for virtual work before orders to stay in place
- Pursued required public outreach virtually

## **Outcomes**

- No lost time for continuing projects and operations
- More access for participants
- Added benefit – finally moved off paper

*What did we learn  
in crisis moments  
that we can use in  
kinder, gentler  
moments?*

Disruptions can also bring opportunities for positive change

Taking a page from operations and using incident response techniques beyond the incident itself can be beneficial as it provides structure, helps people plan, and ensures communication

Some staff are more able to shift than others; recognizing this and finding ways to work with them is important in bringing them along



# Today's presenters



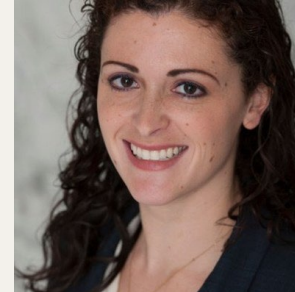
Clinton Bench  
[cbench@ts.ucla.edu](mailto:cbench@ts.ucla.edu)  
*University of California, Los Angeles*



Carrie Hotton-MacDonald  
[carrie.hotton-macdonald@edmonton.ca](mailto:carrie.hotton-macdonald@edmonton.ca)  
*Edmonton Transit Service*



Allison C. de Cerreño  
[allison.cdecerreño@mtahq.org](mailto:allison.cdecerreño@mtahq.org)  
*Metropolitan Transportation Authority*



Leah Fisher  
[leah.fisher@dot.ca.gov](mailto:leah.fisher@dot.ca.gov)  
*California Department of Transportation*



NATIONAL  
ACADEMIES

Sciences  
Engineering  
Medicine

# Upcoming events for you

**March 9, 2023**

Advancing Transportation Equity—  
Key Insights from 2021 and Looking  
to 2024

**April 25, 2023**

TRB Webinar: New Frontiers in  
Resilient Freight Planning—Ukraine  
and Puerto Rico

[https://www.nationalacademies.org/trb/  
events](https://www.nationalacademies.org/trb/events)

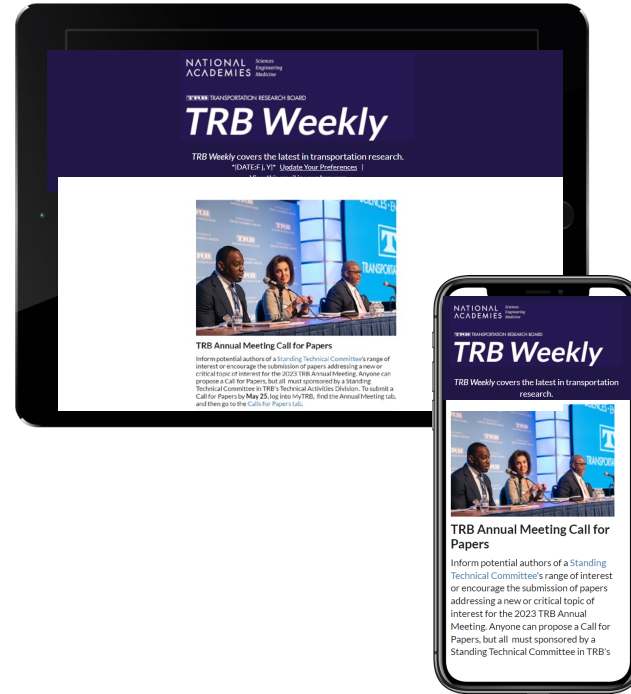


# Subscribe to *TRB Weekly*

If your agency, university, or organization perform transportation research, you and your colleagues need the *TRB Weekly* newsletter in your inboxes!

Each Tuesday, we announce the latest:

- RFPs
- TRB's many industry-focused webinars and events
- 3-5 new TRB reports each week
- Top research across the industry



Spread the word and subscribe!

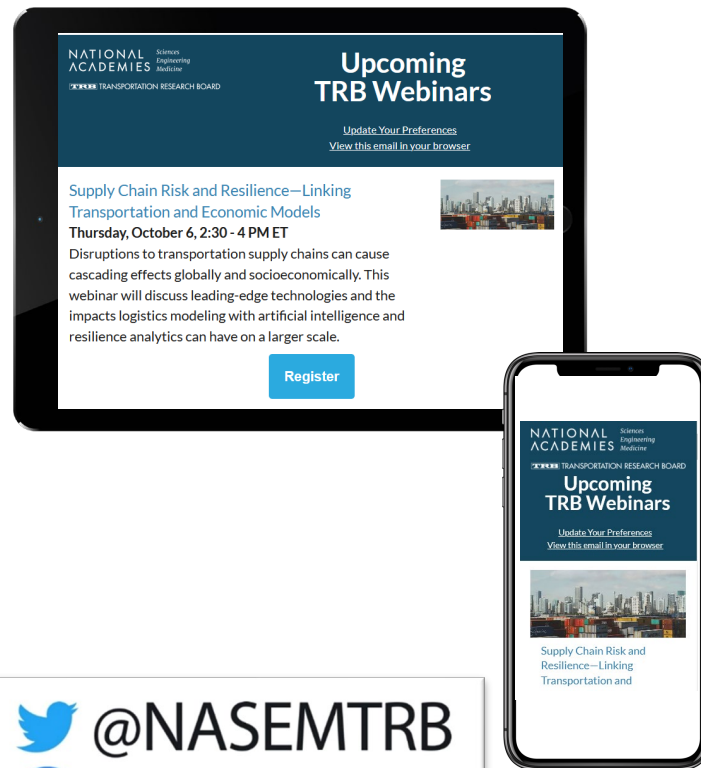
<https://bit.ly/ResubscribeTRBWeekly>

# Discover new TRB Webinars weekly

Set your preferred topics to get the latest listed webinars and those coming up soon every Wednesday, curated especially for you!

<https://mailchi.mp/nas.edu/trbwebinars>

And follow #TRBwebinar on social media



# Get involved

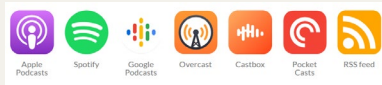
<https://www.nationalacademies.org/trb/get-involved>

- **Become a Friend of a Standing Technical Committee**

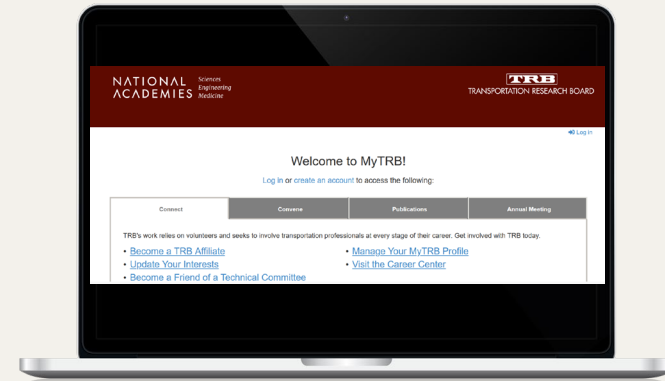
Network and pursue a path to Standing Committee membership

- **Work with a CRP**

- **Listen to our podcast**



<https://www.nationalacademies.org/podcasts/trb>



# We want to hear from you

- Take our survey
- Tell us how you use **TRB Webinars** in your work at [trbwebinar@nas.edu](mailto:trbwebinar@nas.edu)

