

Resilience in Your Pocket

for Outside Your Agency

Prepared by:
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The National Academies of
SCIENCES • ENGINEERING • MEDICINE



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External Talking Points

What “resilience” means in transportation:

- Resilient transportation systems improve safety, save the state money, and protect the agency’s respect and reputation.
- Resilience planning anticipates disruption, and resilient agencies know what to do next when disruptive events occur.

Where resilience fits in agency management and operations:

- Everything the agency does needs to be resilient. Core concepts of resilience—anticipate, adapt, prepare, then bounce back from disruption even stronger—apply to every major business function.
- “It’s not always about a huge investment. It’s about operating smart.”
- Resilience is an objectives multiplier—it lessens risks and can multiply safety, reliability, and cost savings.

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Overcoming major barriers to creating resilience in transportation:

- Tell a clear story of what resilience means to your state and be persistent. “Keep throwing seeds—even if they fall on hard ground.”
- Identify common causes or multiple benefits with other agencies, the business community, or other states.
- Partnerships with public- and private-sector organizations and government and civic leaders help overcome barriers.

What our agency is doing to be resilient:

- Exploring different approaches to ordinary activities because resilience needs flexibility.
- Encouraging adaptive practices and procedures—especially detecting problems before potential disruptions occur.
- Leveraging knowledge of operations and maintenance staff—hands-on understanding is crucial.
- Integrating performance measures tied to resilience into strategic and operations planning.
- Making resilience part of our discussions among ourselves, with transportation colleagues, with people who influence and make decisions about transportation in our region and nationally, and with the public.



External Action Steps

Embrace the CEO’s critical role in resilience:

Only you can provide leadership for transportation agency resilience and the technical and policy factors it depends on.

- Assess risks and vulnerabilities to support decisions, despite uncertainty and limited resources.
- Consider alternative strategies for adapting infrastructure and operations.
- Tweak daily activities toward a resilience focus to be ready for a catastrophic event.
- Be flexible in figuring out ways to keep going and come back better.
- Pursue resilience in ways that can endure when you eventually leave the agency.

Promote the importance of resilience:

- Make resilience part of the agency’s mission statement.
- Embed performance measures of resilience into strategic operations and capital planning.
- Be prepared to explain why resilience makes a difference to the agency and to the state.
- Work to convince your governor, legislature, and business community to support resilience efforts, even when impacts are not immediate and investments could be costly.

Engage actively in resilience work:

- Know the most likely things that could happen and what the impacts will be.
- Be alert and forward-looking to new realities and threats.
- Prepare for build-back strategies in planning, design, and construction, and acknowledge that sometimes not building back may be the best approach.
- Make resilience part of funding criteria.
- Seek partners in state and local governments and in public-, private-, and nonprofit-sector organizations.
- Provide your ideas for resilience to be part of the annual plan update(s) through your metropolitan planning organization(s).

Recognize that small changes have big results over time—resilience pays off in the long run!

To Be a Resilient Leader:

- Know risks, hazards, and time horizons.
- Plan proactively for “what-if” scenarios.
- Balance risk and costs in capital decisions.
- Maintain an owner mentality.

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Internal Talking Points

What resilience means to our agency:

- Resilience is how well our system can withstand disruptions from natural causes, catastrophic failures of the infrastructure, or cyber events and how quickly we can restore services.
- We need to forecast what could happen, cope with the consequences, and look ahead to be readier than before to face future disruptions.
- All our missions involve safety and customer service. Adding resilience creates a “three-legged-stool” balance that should be the agency’s foundation.

Where resilience fits in agency management and operations:

- Everything the agency does needs to be resilient. The basics of resilience apply to every major business function.
- Resilience can mean trying different approaches to ordinary activities.
- To reduce risk and improve outcomes of negative events, resilience belongs everywhere in the organization.

What our agency can do to be resilient:

- Support resilient practices in standard operating and maintenance procedures.
- Make resilience part of design and construction.
- Be intentional, deliberate, and systematic about keeping a resilience focus in both long-range planning and daily practices.
- Incorporate resilience into our performance measures.

What each of us can do to promote resilience:

- Understand that resilience isn’t always about big investments of money or time. It’s about operating smart.
- Encourage each other to be alert for risks, recognize and report issues, and share ideas about possible responses and adaptations.
- See resilience as an evolving capability that grows with experience, emphasizes preemptive action, and understands the value not just of bouncing back after a disruption, but “bouncing forward” to anticipate future events.



Internal Action Steps

Encourage resilience leadership throughout the agency:

- Model a steady commitment to resilience.
- Actively solicit and use ideas about resilience from everyone in the agency.
- Empower individuals to raise alarms when necessary.
- Encourage innovation, thoughtful risk-taking, and adaptive approaches to provide improved policies, procedures, and practices.
- Support cross-functional collaboration, coordinated decision-making, planning, and strategy development.

Support employees in exploring resilience tactics that help them do their jobs and improve outcomes:

- Be supportive of staff’s time spent on resilience; encourage discussions on issues and policies plus brainstorming with other organizations to guarantee interconnectedness.
- Welcome adaptive thinking and improvised solutions that permit quick action in a crisis.
- Allow employees to explore work-arounds to improve system interdependencies.
- Require that training and exercises include resilience along with preparedness.
- Celebrate resilience efforts in our agency.

Push for a resilience focus in existing operations and management structures, processes, and activities:

- Maintain an up-to-date continuity of operations plan (COOP) to help agency personnel think about the unthinkable.
- Conduct system and stress tests to ensure system resilience for overloads or breakdowns.
- Use crisis incidents to study lessons learned about resilience and corrective action plans and to help personnel practice collaboration between agencies and across jurisdictions.
- Treat cybersecurity as a continuous process with evaluation and monitoring as keys to managing changing systems, environments, and threats.
- View technology and materials through a resilience lens, exploring innovations and using materials that can better address current and future conditions.

To Be a Resilient Leader:

- Know risks, hazards, and time horizons.
- Plan proactively for “what-if” scenarios.
- Balance risk and costs in capital decisions.
- Maintain an owner mentality.