

Practical advice and big ideas for tech-enhanced transportation resilience

On Wednesday, February 8, the Tech and Innovation Center Series hosted a webinar focused on transformative technologies for transportation resilience that explored how cities can leverage technology to take advantage of \$1.4 billion in forthcoming competitive grants through US DOT's [PROTECT program](#) to assess and mitigate climate-related transportation systems risks. Participants were introduced to two technologies that are transforming transportation resilience:

- **Sea level sensors.** Nick Deffley, Sustainability Director for the city of Savannah, Georgia shared the [Smart Sea Level Sensors](#) project, a partnership with Georgia Tech and environmental justice group Harambee House. This project seeks to fill the data gap needed to protect communities and infrastructure from weather and climate risks.
- **Distributed ledgers.** Looking into the future, Jaspal Singh, North America Director for the International Association of Public Transport, shared his organization's [research](#) on use cases for distributed ledgers (such as blockchain) to enhance resilience in urban mass transit systems, including supply chain tracking, securing mobility data, and NFT-based ticketing.

Practical advice and big ideas

In a discussion that ranged from how cities can build trust through co-design of transportation resilience technologies to ways that resilience investments can address cybersecurity risks, three practical takeaways emerged as cities prepare for the rollout of the PROTECT program stood out:

1. **Talk to your constituents. But listen twice as much.** Cities should identify and engage with potential stakeholders in transportation resilience projects. It's not necessary to be fully aligned at the start, as cities should be prepared to evolve their goals and approach. PROTECT funds will support planning activities that can provide the resources to co-create future transportation resilience projects.
2. **Build trust into all your technology efforts.** Savannah built trust by engaging with neighborhood associations, [legacy environmental justice organizations](#), and high school engineering academies to define needs, co-design solutions, and implement infrastructure deployments. Trust should also be a key requirement in the development of technology solutions themselves. Blockchain, for instance, can provide new capabilities for securing and auditing transportation data and systems. Better

cybersecurity and data controls also reduce barriers to inter-agency cooperation *within* government.

3. **Talk to your peers.** PROTECT funds will be available to individual cities as well as metropolitan planning organizations (MPOs) that can coordinate needs and solutions across regions. [Strong collaboration](#) helps build public support for transportation resilience solutions and leads to better-designed projects. Cities should leverage these peer networks early, and take advantage of national and global knowledge sharing networks including the Local Infrastructure Hub, [NACTO](#), and [UITP](#) to tap into the latest trends in transportation resilience technologies.

Links From the Discussion

Smart Sea Level Sensors (Savannah, Georgia)

- Website <https://www.sealevelsens.org/>
- Video https://www.youtube.com/watch?v=J6mO_q-qExA

Further Reading

“Distributed Ledger Technology in Public Transport: Use Cases for Blockchain” (International Association for Public Transport: March 2022) <https://cms.uitp.org/wp/wp-content/uploads/2022/04/Report-Blockchain-in-PT-March2022-web.pdf>

Kyle Funk and Brittney D. Kohler, “Get Ready to Apply for PROTECT Resilience Grants” (National League of Cities: May 2022) <https://www.nlc.org/article/2022/05/09/get-ready-to-apply-for-protect-resilience-grants/>

“Key Notices of Funding Opportunity”, U.S. Department of Transportation (n.d.) <https://www.transportation.gov/bipartisan-infrastructure-law/key-notices-funding-opportunity>

About Tech and Innovation Center Series (T&IC)

The T&IC series is dedicated to helping local leaders navigate and understand the large quantities of information from the federal government on the nearly 400 funding opportunities available through the Bipartisan Infrastructure Law. The series is focused on how cities can leverage technology to improve their federal infrastructure funding proposals by adopting state-of-art technologies, expanding their technology capacity, and integrating aspirational technology “moonshots” for their cities.

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