

THE CHALLENGE

Communities lack a systems-level approach to identifying key infrastructure and the dependencies between these assets. Existing datasets and data capture programs are burdensome on local jurisdictions, become stale quickly, and fail to utilize publicly and commercially available data. Local Infrastructure, if damaged or destroyed, can have a debilitating impact on our communities, preventing the delivery of essential functions and services.

Without a baseline understanding of infrastructure connectivity and dependencies, local entities are severely limited in their ability to effectively plan for infrastructure impacts and validate the potential down-stream damage to other infrastructure. This also prevents local jurisdictions from conducting proactive outreach activities with infrastructure owners/operators.

SOLUTION

The Locally Significant Infrastructure (LSI) project, with support from the Department of Homeland Security (DHS) Science and Technology Directorate (S&T), will research existing processes and geospatial tools to inform the development of a comprehensive toolset to support both analytics and visualization of local infrastructure information. The emphasis will be on community data visualization and data relationships, allowing entities to understand which infrastructures exist in their jurisdictions and how an impact to one piece of infrastructure could have a cascading impact on other seemingly unrelated infrastructures.

This effort will assist in the development of planning processes and tools to support public safety stakeholders to forecast potential cascading impacts of damaged infrastructures. The stakeholder-driven solution will be decentralized and use publicly available data sets with existing commercial off-the-shelf software.

IMPACTS

- Enhance a community's understanding of its infrastructure vulnerabilities to bolster community awareness
- Uncover previously unknown relationships between interconnected infrastructure sectors

- Develop a planning processes and toolset to assist emergency managers with infrastructure-based decision support tools



ACCOMPLISHMENTS

- Project Kick-off (Q3, FY25)

UPCOMING MILESTONES

- Project Management Plan (Q3, FY25)
- Local Infrastructure Toolset Version 1.0 Release (Q3, FY25)
- Publish the Local Infrastructure Toolset Final Report (Q2, FY26)

PERFORMERS/PARTNERS

- National Alliance for Public Safety GIS Foundation
- Infrastructure Owners/Operators
- DHS Cybersecurity and Infrastructure Security Agency's Infrastructure Security Division
- DHS Federal Emergency Management Agency's Public Safety Stakeholders
 - State and Local Emergency Managers
 - Crime Prevention/Protective Security Advisors
 - Business Continuity/Continuity of Government Professionals