

DHS Science and Technology Directorate

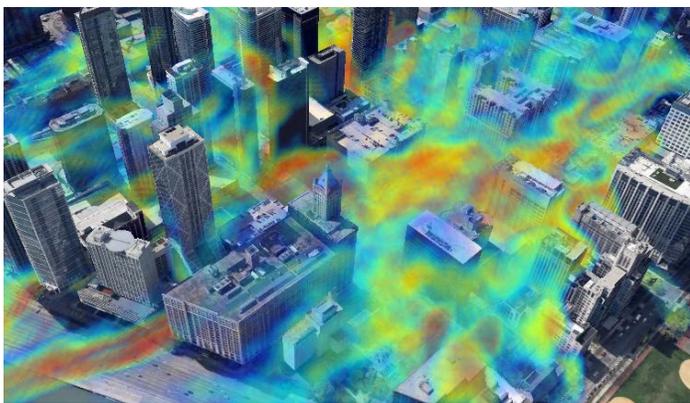
Radiological/Nuclear Response and Recovery Research & Development

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The National Urban Security Technology Laboratory (NUSTL) is a federal laboratory organized within the U.S. Department of Homeland Security, Science and Technology Directorate's First Responders Group. NUSTL manages a portfolio of Radiological/Nuclear Response and Recovery (RNRR) Research & Development (R&D) projects that work to improve radiological response capabilities at the local, state, and federal level, and advance the understanding of impacts and risks within first responder agencies nationwide. The RNRR R&D Program will increase preparedness and enhance responder capabilities in advance of an incident, as well as minimize the impact of a radiological or nuclear detonation.

The Need

The detonation of a Radiological Dispersal Device or an Improvised Nuclear Device would pose tremendous challenges to the first responder community and homeland security enterprise, and have high consequences to the economy and national security posture. The presence of radiation during an emergency drastically increases the complexity of response operations and requires advanced data collection and specialized capabilities to ensure the safety of the public and responders.



The visual output of a product that models the dispersion of radiological material after a detonation in an urban environment. This is part of a project at a Federally Funded Research and Development Center and is funded by the RNRR R&D Program.

The RNRR R&D Solution

By working with partner agencies, federal interagency working groups and first responders to identify impactful research and development opportunities, the RNRR R&D Program can address technology and capability needs in the areas of radiological response management, incident characterization, initial response capabilities, medical care/triage, casualty/evacuee care, impacted area stabilization/control and site cleanup/decontamination.

Capability Domains

The program capability domains below represent broad operational categories of emergency response and denote areas where operational needs are consistently identified. The RNRR R&D Program identifies projects that help fill these needs.



The capability domains come from a compilation of Federal Emergency Management Agency and other interagency documents that outline capability gaps across the first responder community.

Program Goals

- Increase capability at all government levels and characterize complex and catastrophic incidents.
- Improve responder ability to save lives during the initial response operations of a radiological incident.
- Minimize impacts to the community and economy through improved methods of incident stabilization, radiological clean-up and recovery.
- Transition R&D information, and integrate developed technology and knowledge products into preparedness and response activities.



Homeland Security

Science and Technology

To learn more about DHS S&T's Radiological/Nuclear Response and Recovery R&D Program at NUSTL, please contact Ben Stevenson at benjamin.stevenson@hq.dhs.gov or NUSTL@hq.dhs.gov.