Argonne NATIONAL LABORATORY

ARGONNE SYSTEM **PROTECTS AGAINST CHEMICAL/BIOLOGICAL TERRORISM**

THE CHALLENGE

Since the 1995 sarin attack in a Tokyo subway, authorities have recognized that large interior structures are vulnerable to chemical and biological attacks.

At particular risk are venues like subways, airports, arenas, or convention centers, where people are concentrated in small areas and quick evacuation is difficult.

Without proper pre-planning that employs advanced technologies and techniques and provides an early warning, managers of these types of facilities aren't in a position to quickly and efficiently apply emergency management tools and protocols. As a result, hundreds more lives are in danger in a chemical agent incident and thousands more in a biological incident.

THE INNOVATION

The U.S. Department of Energy's Argonne National Laboratory has created a hardware/software system to address this threat.

The system, called PROTECT (Program for Response Options and Technology Enhancements for Chemical/Biological Terrorism), integrates chemical detectors, closed-circuit TV, dispersion modeling and optimal response protocols.

In 2007, Smiths Detection was selected by Argonne to commercialize PROTECT. The company deployed the system in several major urban transit systems as well as several other critical infrastructure applications. In 2016, the PROTECT commercialization license was assigned to KD Analytical Consulting, Inc. (Lexington, Ky.).

THE IMPACT

- In a 2001 exercise in a major transit system, Argonne and partners demonstrated that PROTECT could reduce the emergency response time from an estimated 31 minutes down to only five minutes.
- The PROTECT system is currently in use in several major metropolitan subway systems, dramatically improving safety for a ridership of more than 200 million people per year.

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