

Infrastructure Assurance Center

The primary focus of Argonne National Laboratory's Infrastructure Assurance Center (IAC) is to assure the security and reliability of critical US infrastructures and key resources. These can be threatened with disruption from natural events, accidents, or deliberate acts, such as terrorist attacks. The impacts of such disruptions, including impacts to human health and safety, the economy, and national security, must be understood in order to have effective risk management.

IAC Capabilities

The IAC's capabilities are varied and far-reaching. They include physical and cyber security analysis, databases and tools, modeling and simulation technologies, as well as capabilities to support the entire preparedness spectrum. The goal is to prevent, protect, respond to, and recover from all hazards, including conventional, chemical, biological, radiological, and nuclear terrorism.

IAC Expertise

Significant components of IAC expertise are listed below:

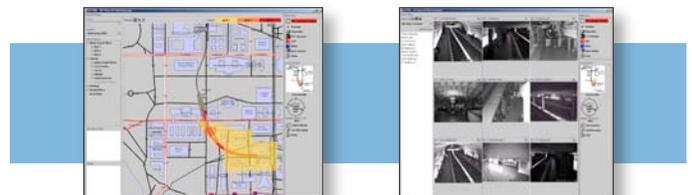
- Evaluation of the vulnerability of our nation's critical infrastructures and key resources. IAC staff members consider a wide range of threats to systems operation, physical and cyber security, operations security, and infrastructure interdependencies. This expertise includes comprehensive assessments and rapid response support.
- Integrated technologies to mitigate impacts from chemical or biological attacks on interior infrastructures at above-average risk, such as subways, airports, and public buildings. For example, the Argonne/IAC-developed PROTECT (Program for Response Options and Technological Enhancements for Chemical/Biological Terrorism) system, is an early-warning crisis-management system for response to chemical releases in a subway system. Its goal is to reduce response time and thus save lives. It has been implemented in a number of US cities.

The IAC leverages Argonne's expertise, knowledge, modeling and simulation capabilities, and technologies to solve infrastructure assurance and homeland security problems.

- Methods and tools to increase the awareness of infrastructure owners and operators about security issues. This capability includes sharing best practices and lessons learned in infrastructure assurance.
- Approaches for collaborating with community emergency planners and local utilities to develop plans and procedures that municipalities can use to prevent, respond to, and recover from major disruptions to infrastructures.



Conducting vulnerability assessments of critical infrastructure and key resources



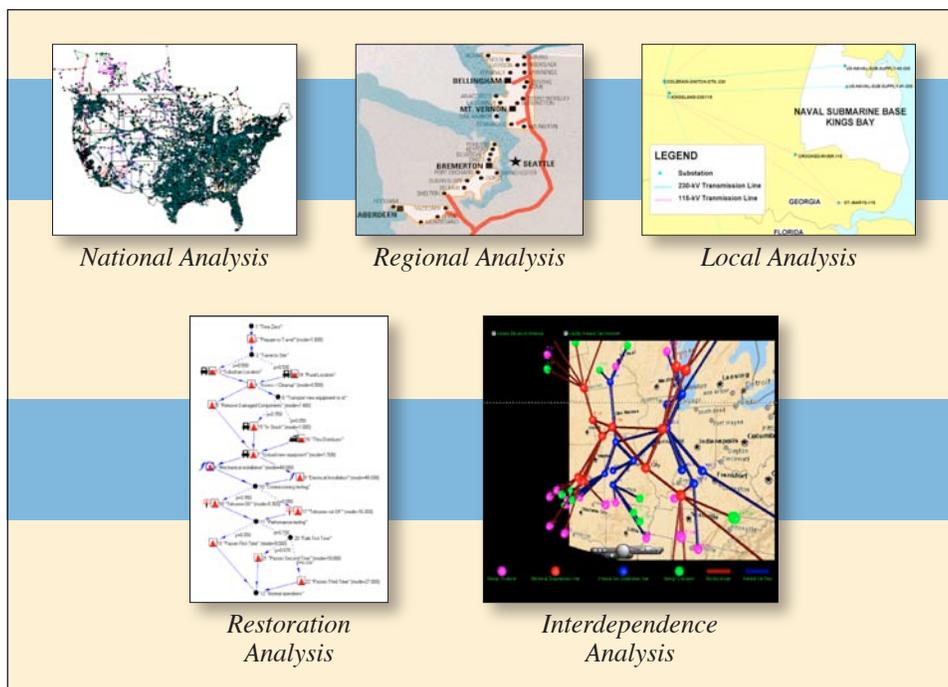
Developed and implemented a systems approach to interior infrastructure protection -- PROTECT



Member of DOE's Virtual Analytic Team to provide real-time oil and natural gas infrastructure impact analysis for energy emergencies (e.g., hurricanes, power outages)

- Tools that provide insights for making sound decisions about critical infrastructure protection. In looking at ways to protect our country's infrastructure, the IAC takes into consideration all critical infrastructures and key resources and their primary interdependencies.
- Analysis of infrastructure disruptions and system behavior, as well as examination of the interdependencies among various types of infrastructure, for example, between electric power and natural gas or between

electric power and telecommunications. The IAC has been, and continues to be, a leader in recognizing the potential for cascading impacts that can result from disruptions to one or more types of infrastructure. The IAC continues to develop better methods to detect events affected by infrastructure interdependency and to identify improved technologies and procedures to prevent, respond to, and recover from disruptions.



IAC models are used to analyze critical infrastructure and key resources

Learn more about the Infrastructure Assurance Center at:
<http://www.dis.anl.gov>

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